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LIQUIDATION RIGHTS AND INCENTIVE MISALIGNMENT IN START-UP FINANCING

Michael Klausner† *&* *Stephen Venuto*††

INTRODUCTION

This Article analyzes how the accumulation of liquidation rights in a start-up can result in a suboptimal contract among the company's investors and its management team. Liquidation rights determine the allocation of the proceeds when a start-up is sold. Because a sale is the most common form of exit for investors, these rights are a key factor in determining the return to investors, the return to the company's management team and employees, and the incentives of all parties involved.

As a start-up grows and negotiates multiple rounds of financing, liquidation rights accumulate. In the aggregate, these rights can create a misalignment of interests and a suboptimal outcome for investors, the management team, and employees. The source of this

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problem is the sequential nature of the contracts involved;[1] each round of investment involves a new negotiation of liquidation rights. As new investors negotiate their rights, however, earlier investors' rights are rarely renegotiated. In order to protect themselves from the impact of later investors' liquidation rights, earlier investors often seek rights that turn out to be counterproductive.[2] This Article analyzes this phenomenon and suggests a contractual mechanism to coordinate liquidation rights over time so that the sequential negotiation of liquidation rights is less likely to result in a reduction in firm value.

I
THE PARTIES AND THEIR INTERESTS

One challenge to producing an optimal set of liquidation rights for a start-up is the divergence of interests among the parties from the start.[3] To simplify slightly, the parties include founders and other members of the management team, individual angel investors, and venture capital funds. Investors' interests, which tend to be related to the stage at which they invest in a start-up, are reflected in the liquidation rights they seek to negotiate and in their decisions regarding exit.

Founders and the Management Team. Founders typically found start-ups because they want to place a very large bet on their ideas and their abilities. They are willing to work very hard, for low pay and for many years, and to take very high risks for the chance to become rich and famous.

1 We use the term "contract" to refer both to the terms governing a particular investor's investment and to the aggregate arrangement among all investors, the founder, and key employees.

2 We are not claiming that renegotiations of earlier investors' rights do not occur, only that there are impediments. In their study of venture capital financings, Kaplan and Strömberg found renegotiation of dividend or liquidation rights in nine percent of subsequent rounds. *See* Steven N. Kaplan & Per Strömberg, *Financial Contracting Theory Meets the Real World: An Empirical Analysis of Venture Capital Contracts*, 70 REV. ECON. STUD. 281, 313 (2003). Fried and Broughman studied a sample of fifty start-ups that were sold and found that renegotiation occurred in thirteen out of seventy-eight financing rounds. They also found that, in the context of a pending sale, renegotiation of liquidation rights occurred in eleven out of fifty transactions. Brian Broughman & Jesse Fried, *Renegotiation of Cash Flow Rights in the Sale of VC-Backed Firms*, 95 J. FIN. ECON. 384, 389 (2010). The number of start-ups that are not sold due to a failure to renegotiate these rights is unknown and probably not precisely knowable, but in the experience of one of us (Venuto), this is a common occurrence. Bengtsson and Sensoy also study renegotiation of venture capital rights, which they define to include later venture capitalists taking senior cash-flow rights over existing investors. They in fact find that renegotiation of existing venture capitalists' rights is very rare. Ola Bengtsson & Berk A. Sensoy, *Changing the Nexus: The Evolution and Renegotiation of Venture Capital Contracts*, 2–3, 11, 30 (Ohio St. U., Fisher C. of Bus., Working Paper No. 2009-03-019, 2013), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1475347.

3 *See, e.g.*, Luis Villalobos, *Valuation Divergence*, ENTREPRENEURSHIP.ORG, http://www.entrepreneurship.org/en/resource-center/valuation-divergence.aspx (last visited July 11, 2013).

Over time, other talented individuals often join a start-up's management team and fill key technical positions. In some cases, they replace founders. These individuals' interests are typically similar to those of the founders; they are willing to take very big risks for the possibility of reaping very large returns. Rather than differentiate between founders on the one hand and key managers and technical employees who join later on the other, we will refer to all as the "management team" and, despite potential differences, treat their interests as alike.

Angel Investors. Angel investors, as we use the term here, are wealthy individuals[4] who invest because they are intrinsically interested in the business and technology of a start-up, and because they believe that they can pick companies that have the potential to provide a very high return on their investment over a long term.[5] Angels realize they are taking extremely high risks on a remote possibility of a high return. They are commonly well-known and respected members of the start-up community who make many investments and interact repeatedly with entrepreneurs, other angel investors, and venture capitalists.

Venture Capital Funds. Venture capital funds are limited partnerships with a term of roughly ten years. Their investors are institutions and wealthy individuals who are passive with respect to the management of the fund. A venture capital firm, run by a group of partners or the equivalent, manages the fund. The venture capital firm's compensation is determined by two factors: the profitability of the fund and the size of the fund.[6]

Venture capital firms ultimately have a strong interest in showing high returns for their funds over time. This general interest, however, does not mean that venture capitalists representing a fund on the board of a portfolio company or in voting the fund's shares will want to maximize the value of the portfolio company at each moment in time. Rather, there are situations in which venture capital firms have overriding interests. Venture capital firms continually raise new funds while at the same time investing a current fund in a portfolio of start-ups, liquidating those investments, and distributing the proceeds to a fund's investors. As the term of one fund ends, another fund has already begun making investments. Demonstrable success in a cur-

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4 There are also funds that describe themselves as angel-investment funds. We treat them as early-stage venture capital funds.

5 *See* Colleen Debaise, *What's an Angel Investor?*, WALL ST. J. (Apr. 18, 2010, 11:39 PM), http://online.wsj.com/article/SB10001424052702303491304575188420191459904.html.

6 For a thorough explanation of the mechanics of venture capital funds, see generally William A. Sahlman, *The Structure and Governance of Venture-Capital Organizations*, 27 J. FIN. ECON. 473 (1990).

rent fund is therefore essential for the venture capital firm to raise a new fund.[7] Consequently, at key moments when a venture capital firm is raising a new fund, the firm may want to show results by selling a portfolio company early at the expense of long-term value. Or, in order to avoid disclosing the value of a portfolio company, the venture capital firm may want to delay selling a firm that should be sold.[8]

Typically, venture capital firms specialize in investing at a particular stage in the lifecycle of a start-up. Firms' interests differ depending on the stage at which they invest.[9] Again, simplifying somewhat, we divide venture capital funds into three categories.

Early-stage (or "Series A") funds are similar to angel investors. They invest at the earliest stages of a start-up's lifecycle. An early-stage fund faces high risk and seeks high returns. The companies in which the fund invests are young and unproven, and initial investment valuations are low.[10] Relatively few of these funds' portfolio companies will survive, but those that do can provide very high returns. As a result, if a portfolio company has increased substantially in value on the fund's books, depending on how other firms in the fund's portfolio are doing, the fund may become quite conservative and try to preserve the value of the firm for a successful exit. Such an early-stage investor may resist the company's efforts to take risks—even if the potential upside is high—and may favor an early sale rather than holding out for a higher price later.

Mid-stage (or "Series B" and "Series C") funds invest in firms with operating histories and perhaps even revenues.[11] Valuations for mid-

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7 *See, e.g.*, Robert P. Bartlett, III, *Venture Capital, Agency Costs, and the False Dichotomy of the Corporation*, 54 UCLA L. REV. 37, 72 (2006); Ronald J. Gilson, *Engineering a Venture Capital Market: Lessons from the American Experience*, 55 STAN. L. REV. 1067, 1090 (2003); Hatim Tyabji & Vijay Sathe, *Venture Capital Firms in America: Their Caste System and Other Secrets*, IVEY BUS. J., July/Aug. 2010, *available at* http://www.iveybusinessjournal.com/topics/the-organization/venture-capital-firms-in-america-their-caste-system-and-other-secrets#.ULQwboc83To.

8 Bartlett, *supra* note 7, at 73–74. Venture capital firms typically provide limited partners with annual reports on the fund's results. *See* Sahlman, *supra* note 6, at 492. These reports contain key pieces of information about portfolio investments, including the current valuation of each investment (with information regarding whether or not the investment has gone up or down since the investment was made), the current status of the board and executive officers, and other information about the success or failure of the investment. In some funds, these reports are more frequent (quarterly or even monthly). A limited partner of the fund can get a good idea from these reports of how well the venture fund is doing. In effect, the reports serve a dual role of providing information to current investors and promoting the next fund to current and potential investors.

9 Early investors may invest alongside new investors in later rounds of financing as well, but these investments tend to be small and we ignore them here. Robert Bartlett has written generally about conflicting interests among venture capitalists. *See* Bartlett, *supra* note 7.

10 *See* Sahlman, *supra* note 6, at 479 tbl.2 ("Startup investments usually go to companies that are less than one year old.").

11 *See id.*

stage venture capital investments are higher and risk is lower than valuations and risk for early-stage investments. The limited partners of mid-stage funds, and thus their funds, tend to be less tolerant of losses than are early-stage funds, but they do take large risks. Mid-stage funds can be risk averse, however, when they are raising a new fund.

Later-stage ("Series D" and later) funds are less risk tolerant than mid-stage funds. Later-stage funds typically invest in companies where they see a sale or IPO as likely within a few years, and they expect returns of two to five times their investment. [12] In order for their investment model to work, they need to avoid total failure on most, if not all, of their investments.

In sum, funds that specialize in investing at different stages of a start-up's lifecycle accept different risk-return profiles for their investments. Those differences translate into different preferences for liquidation rights. Most importantly, later investors tend to seek more certain returns and may try to use expansive[13] liquidation rights to achieve that objective. These differences are reflected in investors' preferences regarding exit as well.

II
LIQUIDATION RIGHTS

The capital structure of a start-up consists of common and preferred stock. The management team and employees hold common stock, and investors hold preferred stock that is convertible into common stock. The preferred stock provides for liquidation rights, which determine the allocation of proceeds among investors and the management team and employees if the company is either sold or liquidated.[14] Because a sale is the most common exit for investors,[15] these rights are an important determinant of the returns on an investment and on the efforts of the management team and employees. Liquidation rights can have a detrimental effect on the incentives of the management team and employees, and they can create conflicting interests among investors, resulting in a failure to maximize the firm's value.[16]

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12 *See id.*

13 By "expansive" liquidation rights, we mean liquidation rights greater than a liquidation preference equal to the amount of an investor's investment. This includes initial liquidation rights greater than 1x and any participation rights.

14 In this Article, we discuss liquidation preferences only in the context of a sale.

15 Of the 522 exits of venture-backed U.S. companies in 2011, only 45 were IPOs. Robin Wauters, *Report: 522 Exits of Venture-Backed US Companies Netted $53.2 Billion in 2011*, TECHCRUNCH (Jan. 3, 2012), http://techcrunch.com/2012/01/03/report-522-exits-of-venture-backed-companies-netted-53-2-billion-in-2011/.

16 Preferred stock with cumulative dividends can have a similar effect. While these provisions are sometimes found in start-ups, they are rare in technology companies, and we do not address them here. For more information on dividends and their effects, see gener-

A. The Mechanics of Liquidation Rights

Liquidation rights can take two forms: an initial liquidation preference and participation rights. Preferred stock can carry an initial liquidation preference alone or an initial liquidation preference plus participation.

Initial Liquidation Preference. An initial liquidation preference provides that, in the event of a sale, the holders of preferred stock receive a specified amount per share prior to any payments to the holders of common stock. In some cases, a later-stage investor negotiates an initial liquidation preference that is senior to the preferences of earlier investors. If the proceeds from a sale are less than or equal to the aggregate amount payable under the preferred shareholders' initial liquidation preferences, the common shareholders get nothing. If this happens, proceeds are allocated among the preferred shareholders in proportion to their liquidation rights and not their percent ownership.

The initial liquidation preference for a series of stock is typically, but not always, set to equal the initial price paid for the series.[17] For example, if a company raises $100,000 in the sale of Series A Preferred stock at a price per share of $1.00, each share of Series A would typically have an initial liquidation preference of $1.00. If the company is then sold for $75,000 before any additional rounds of financing, that entire amount would be paid to the holders of the Series A shares, and the holders of common stock would get nothing (absent negotiated revisions to the terms). On the other hand, ignoring for the moment conversion and participation rights (discussed below), if the company were sold for $10 million, each share of Series A would be entitled to receive $1.00 per share for an aggregate payment of $100,000, and the common shareholders would receive the remaining $9.9 million.

The sum of initial liquidation preferences for all investors sets the valuation at which holders of common stock—the management team and employees—can begin to reap a return on their efforts upon the sale of the company. With the initial liquidation preference for each series of preferred stock set equal to the amount invested in each series, the common will reap a return so long as the company sells for

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ally Brad Feld, *Term Sheet: Dividends*, FELDTHOUGHTS (Mar. 23, 2005), http://www.feld.com/wp/archives/2005/03/term-sheet-dividends.html.

17 *See* Broughman & Fried, *supra* note 2 at 389 (observing liquidation preferences greater than initial investment in twenty-two out of seventy-eight post-first-round financings); Jesse M. Fried & Mira Ganor, *Agency Costs of Venture Capitalist Control in Startups*, 81 N.Y.U. L. REV. 967, 982 (2006) (noting that liquidation preferences can far exceed investors' original purchase price of shares); Kaplan & Strömberg, *supra* note 2, at 288, 290 (noting that more than ninety-eight percent of financings sampled had an initial liquidation preference of at least the amount invested).

an amount above the aggregate amount of cash that investors have put into it. Initial liquidation preferences can thus create an incentive for the management team to add value to the company. A higher initial liquidation preference of, say, two times an investor's investment drives up the point at which the management team and employees will share the proceeds of a sale. This too may create sufficient incentives, but as discussed below, if the possibility of a payoff for the management team and employees is too remote, their incentives to build the company will be low.[18]

Participation Rights. Once all preferred stockholders' initial liquidation preferences are fulfilled, the preferred shareholders' participation and conversion rights determine the allocation of the remaining proceeds of a sale.[19] Participation rights allow a preferred shareholder to share the proceeds of a sale on a pro rata basis with the common shareholders as though the preferred shares are common shares. Such rights, when uncapped, are referred to as "fully participating preferred stock." Often, the sum of initial liquidation preferences and participation rights is capped at between two and five times the initial price of the preferred share,[20] in which case the shares are referred to as "participating preferred stock with a *x*-times cap"—or, for example, a "4x" cap. In some cases, preferred shares are "nonparticipating,"[21] meaning that the only liquidation rights are the initial

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18 *See* Brad Feld, *Term Sheet: Liquidation Preference*, FELDTHOUGHTS (Jan. 4, 2005), http://www.feld.com/wp/archives/2005/01/term-sheet-liquidation-preference.html ("There's a fine balance here and each case is situation specific, but a rational investor will want a combination of 'the best price' while insuring 'maximum motivation' of management and employees."); *see also infra* Part II.B.

19 *See generally* Timothy J. Harris, *Modeling the Conversion Decisions of Preferred Stock*, 58 BUS. LAW. 587, 589–90 (2003) (discussing the various types of participation rights available with preferred stock).

20 *See, e.g.*, Duncan Davidson, *Venture 101: Participating Preferred*, BULLPEN CAPITAL (Apr. 6, 2011), http://bullpencap.com/2011/04/06/venture-101-participating-preferred/. In Bengtsson and Sensoy's sample, forty-six percent of financings included participation rights with no cap, and twenty-three percent included participation rights with a cap. *See* Bengtsson & Sensoy, *supra* note 2, at 29.

21 An example of a "Fully Participating Preferred" provision:

__Remaining Assets.__ Upon the completion of the distribution required by Section x above, the remaining assets of the Corporation available for distribution to stockholders shall be distributed among the holders of Series A Preferred Stock, Series B Preferred Stock, and Common Stock pro rata based on the number of shares of Common Stock held by each (assuming conversion of all such Preferred Stock into Common Stock).

An example of a "Participating Preferred with an *x* times cap" provision:

__Remaining Assets.__ Upon the completion of the distribution required by Section x above, the remaining assets of the Corporation available for distribution to stockholders shall be distributed among the holders of Series A Preferred Stock, Series B Preferred Stock, and Common Stock pro rata based on the number of shares of Common Stock held by each (assuming conversion of all such Preferred Stock into Common Stock) until the holders shall have received an aggregate of $[x times initial purchase price] per share (as adjusted for stock splits, stock dividends, reclassification and the like) of Series A Preferred Stock and $[x times initial purchase price] per share (as adjusted for stock splits, stock dividends, reclassification and the like) of Series B Preferred Stock then held by them (including amounts liquidation preference. More often than not, liquidation rights negotiated at the earliest stages of a company's lifecycle tend to be nonparticipating preferred.[22] However, a substantial number of preferred-stock financings at the first and second investment rounds include participation rights. Later financing rounds at higher valuations tend to have more expansive participation rights than earlier rounds. [23]

If an investor's initial liquidation preference and participation rights offer a smaller share of a company's sale proceeds than would the same number of shares of common stock, the preferred shareholders will exercise their right to convert to common stock, sharing the proceeds of sale pro rata with the common stockholders. Whether conversion offers holders of preferred stock a larger portion of the proceeds will depend on the sale price, the size of the liquidation preference that the preferred shares provide, and whether the preferred shares carry participation rights. For example, if the preferred shares do not provide for participation rights and the company is sold for an amount far greater than the aggregate initial liquidation preferences, the preferred shareholder would convert to common. At the other extreme, if the company is sold for an amount equal to or lower than the aggregate initial liquidation preferences, the preferred shareholder will not convert and will instead collect whatever amount is payable under its initial liquidation preference (while the common shareholders get nothing). Figure 1 illustrates the interplay of initial liquidation preferences, participation, and caps on participation for a company that has only a single series of preferred shares outstanding. We explain below the complications that arise when new investors with different liquidation rights enter the picture.

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paid pursuant to Section X above); thereafter, if assets remain in the Corporation, the holders of the Common Stock of the Corporation shall receive all of the remaining assets of the Corporation pro rata based on the number of shares of Common Stock held by each.

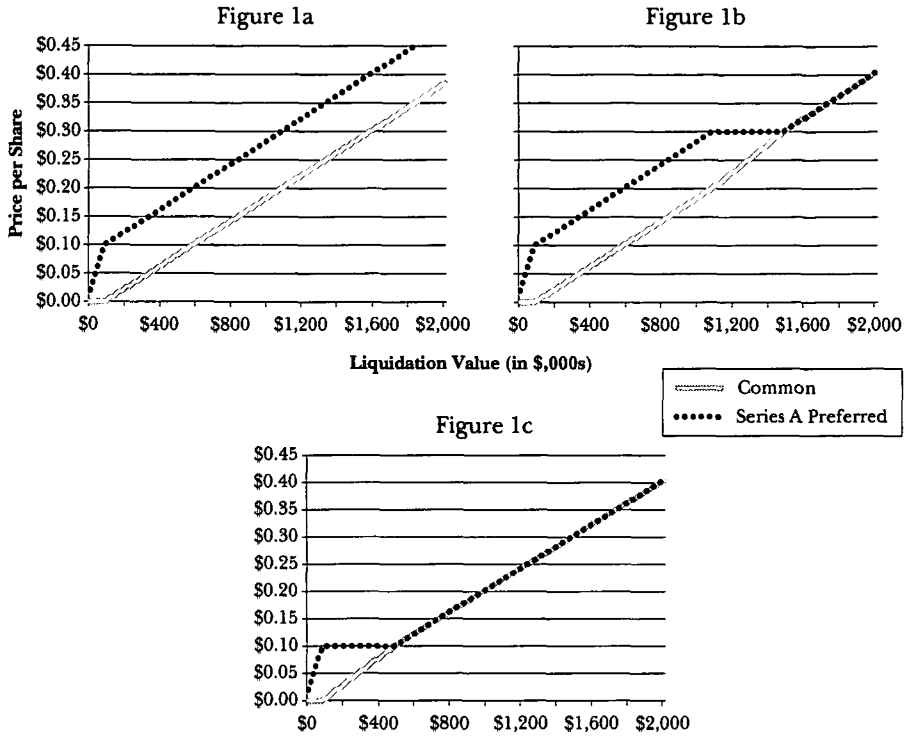
An example of a "Nonparticipating Preferred" provision:

Remaining Assets. Upon the completion of the distribution required by Section x above, if assets remain in the Corporation, the holders of the Common Stock of the Corporation shall receive all of the remaining assets of the Corporation.

22 *See* David Young, Answer to *Is It Common for Angel Investors to Get Participating Preferred Stock?*, QUORA, http://www.quora.com/Is-it-common-for-angel-investors-to-get-participating-preferred-stock (last visited July 11, 2013).

23 *See From the WSGR Database: Financing Trends for 2012*, THE ENTREPRENEURS REPORT: PRIVATE COMPANY FINANCING TRENDS (Wilson Sonsini Goodrich & Rosati, Palo Alto, Cal.), Q3 2012, at 1, 2–3, http://www.wsgr.com/publications/PDFSearch/EntrepreneursReport-Q3-2012.pdf (reporting that in 2012, the proportion of deals including participation rights increased in later rounds and attributing this to increasing valuations); Bengtsson & Sensoy, *supra* note 2, at 32 (finding that participation rights became stronger in subsequent rounds eight percent of the time and weaker nine percent of the time).

FIGURE 1. DISTRIBUTION OF SALE PROCEEDS WITH A SINGLE INVESTOR



In Figure 1a, the company has sold 100,000 shares of Series A Preferred at a price of $1.00 per share and a premoney valuation of $400,000, meaning that there will be 400,000 shares of common stock after the investment. The Series A shares are fully participating and have an initial liquidation preference of $1.00 per share. The dashed black line shows the payoff to the preferred shareholders, and the solid grey line the payoff to the common as the sale price increases. With a liquidation preference and full participation, the payoff to the preferred is always above that of the common, so the preferred shareholders will never convert, regardless of the amount for which the company is sold.

Figure 1b adds a 3x cap on the liquidation rights of the preferred, which includes the sum of the initial liquidation preference and participation. With the cap, any sale at or above $1.1 million will yield a payoff to the preferred shareholders of $3.00 per share (three times the initial investment of $1.00 per share) for an aggregate of $300,000. For a sale price above $1.5 million, the common shareholders will receive more than $3.00 per share. Consequently, if the company sells for over $1.5 million, the preferred shareholders will convert to common stock. For sales between $1.1 million and $1.5 million, the payoff to the preferred is constant at $300,000.[24]

Figure 1c shows nonparticipating preferred shares. Here, the preferred shareholders have only the initial liquidation preference of $1.00 per share. The result is that the proceeds of sale for the preferred shareholders are greater than the proceeds for the common shareholders in sales under $500,000. For sales over $500,000, the payment on the common shares will exceed that of the preferred, so the preferred shareholders will convert to common.

B. Incentives Created by Liquidation Rights

The examples above, though simple, begin to illustrate how liquidation rights can result in divergent interests between the management team and investors. In each of the examples, a sale at $100,000 will result in all proceeds going to investors and nothing going to the management team or employees. Although a sale at this level would not be a win for the investors—at $100,000, they just get back their initial investment—it could be their best alternative, or as discussed in Part I, they may have other reasons to sell the company early rather than taking a risk on a later sale at a higher price. The management team, however, has no incentive to cooperate in such a sale unless the investors or the acquirer provides an additional inducement.

In Figure 1a, where the preferred shareholders have full participation rights, preferred and common shareholders have the same interests in selling the company for the highest price they can get above $100,000. Unless a sale price substantially above $100,000 is a reasonable possibility, however, the management team and employees could have limited enthusiasm for working hard to build the company in this scenario.[25] But for sales at prices over $100,000, liquidation rights do not create divergent interests.

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24 In a sale for $1.1 million, the Series A shareholders will get their initial liquidation preference of $100,000 plus 20% of the proceeds above that, which comes to $200,000. Accordingly, their share of the proceeds comes to $300,000, which is $3.00 per share for their 100,000 shares. At sales for more than $1.1 million, the Series A shareholders get nothing more. They are capped at $3.00 per share. So for sales between $1.1 million and $1.5 million, the common shareholders will get 80% of proceeds between $100,000 (the Series A liquidation preference) and $1.1 million (with the preferred getting 20% of proceeds in that range) plus all proceeds above $1.1 million. (There is a slight change in the slope of the payment curve at $1.1 million for the common.) At $1.5 million that comes to $800,000 plus $400,000 for a total of $1.2 million or $3.00 per share for each of the 400,000 common shares. Consequently, for sales above $1.5 million, the Series A shareholders will convert their shares to common shares.

25 *See* D. Gordon Smith, *The Exit Structure of Venture Capital*, 53 UCLA L. REV. 315, 347–48 (2005) (discussing the role of liquidation rights in venture capital financings and the associated incentives).

Figure 1b, where participation rights are capped, shows another way in which liquidation rights can create misaligned incentives between investors and the management team. Here, there is a range of valuations—between $1.1 million and $1.5 million—in which the proceeds to the investors will not increase but the proceeds to the common shareholders will. In this range, the holders of the common shares will want to seek a higher price, but the holders of preferred will have no incentive to do so. If there is a reasonable possibility of selling the company at a higher price after building it further for, say, one more year, the common shareholders may want to take the gamble while the investors will want to sell immediately.[26]

In Figure 1c, which illustrates nonparticipating preferred shares, there is also a range in which the management team has an interest in seeking a higher price but the preferred shareholders do not. Here, the range is toward the lower end of valuations, from $100,000 to $500,000. Above $500,000, both the management team and investors alike will want to build the company.

These examples, all of which involve a single investor, show how the interests of an investor and the management team can diverge. The divergence of interests becomes more complex when the company issues a new series of preferred stock to new investors as it grows and its valuation increases. Each investor invests a different amount at a different valuation and has different objectives for its investment. The result is not only divergent interests between the management team and investors but divergent interests among investors as well.

We set out below a hypothetical case of a late-stage start-up with four rounds of financing. For simplicity, we assume there is a single investor in each round and that each investor invests only in a single round. We later discuss complications that arise if investors invest in multiple rounds.[27] The terms of each financing round are as follows:

Series A Financing

- The company raises $100,000, selling 1,000,000 shares of Series A Preferred at a price of $0.10 per share with a premoney valuation of $400,000.
- The company negotiates an initial preference of $0.10 per share and participation rights with a three-times ($0.30-per-share) cap.

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26 As Fried and Ganor explain, at certain valuations, the investor's interest is debt-like. Accordingly, an investor may favor a sale that is not value maximizing, while the management team and employees, who have common stock, favor remaining independent. Fried & Ganor, *supra* note 17, at 994.

27 *See infra* Part III.C.1.

Series B Financing

- The company has progressed nicely since the Series A and can now command a higher valuation. Everything is going well, but it isn't quite as easy to convince the venture capitalists to invest without a higher participation cap.
- The company now raises $1,000,000, selling 1,250,000 shares of Series B Preferred at a price of $0.80 per share with a premoney valuation of $4,000,000.
- The company negotiates an initial preference of $0.80 per share with a five-times ($4.00-per-share) cap.

Series C Financing

- The company has now experienced a tenfold increase in value. The Series C terms mirror the Series B terms.
- The company raises $15,000,000, selling 2,340,000 shares of Series C Preferred at a price of $6.40 per share with a premoney valuation of $40,000,000.
- The company negotiates an initial preference of $6.40 per share with a five-times ($32.00-per-share) cap.

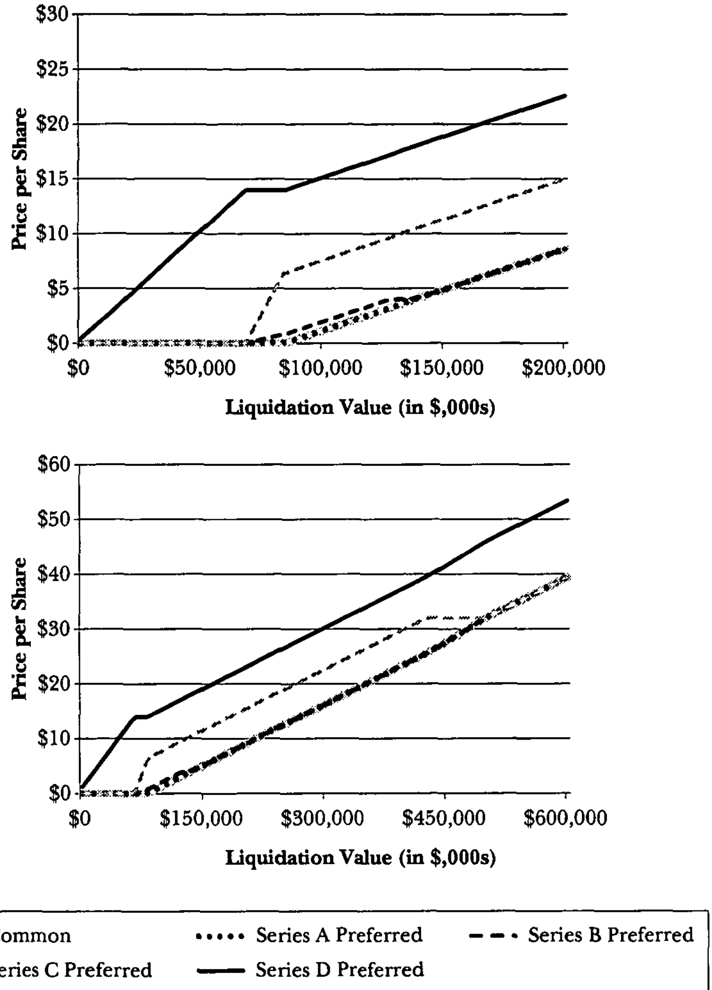
Series D Financing

- When it comes time to do the Series D financing, the company's financial model is under pressure. The company is clearly successful—a reasonable valuation shows a fifty percent increase since the Series C round. But the company's success has increased its burn rate as each new hire arrives, and it needs to raise more than it has before—more than twice the cumulative investment so far.
- The company raises $35,000,000, selling 5,000,000 shares of Series D Preferred at a price of $7.00 per share with a premoney valuation of $60,000,000.
- Being a late-stage investor and preferring more certain returns, the Series D investor negotiates an initial preference of two times its initial investment at $14.00 per share and full participation. Furthermore, its initial liquidation preference will be paid prior to the preferences payable on the earlier series of preferred shares.

The liquidation rights in this example are somewhat extreme for purposes of illustration, but they are well within the realm of possibility.

Figure 2 plots the payoffs to each series of preferred and common stock as the potential sale price increases. The graph on the top provides a closer look at payoffs at valuations of up to $200 million, and the graph on the bottom shows payoffs at valuations of up to $600 million.

FIGURE 2. DISTRIBUTION OF SALE PROCEEDS WITH MULTIPLE SERIES OF PREFERRED SHARES



As these figures show, the interests of the management team and the investors radically diverge from one another at different valuations. Focusing first on the management team, which holds common stock (in solid grey lines), they and their employees will not get any payoff unless the company sells for approximately $86 million or more. Their first dollar begins to accrue at that point, and from that point on, they share essentially *pari passu* with the preferred shareholders.[28] Regardless of the risk, their financial incentive is to resist a sale at any valuation close to $86 million and to take risks in the hope of realizing a better outcome in the future.

28 Their share increases slightly when the caps on the Series B and C participation take effect.

Among the four series of preferred shares, Series D gets all the proceeds in any sale up to $70 million, receiving twice its investment. This is the result of the priority that the Series D investor negotiated. The other investors will not get a penny unless the company is sold for over $70 million. At that point, the other preferred shareholders' liquidation preferences are triggered and consume all of the proceeds of sales up to a valuation of approximately $86.1 million. These liquidation preferences are paid pro rata based on their size, so the Series C investor gets a much higher portion than does the Series A or B investor in this range of valuations.[29] One would thus expect serious disagreement among the investors regarding a sale for up to $86.1 million or more. A similar level of disagreement would occur at valuations of about $420 million and $486 million, where the cap on the Series C shares' participation takes effect and renders the Series C investor indifferent to sales within that range. Above $486 million, the Series C investor will convert to common shares and share *pari passu* in sales above that level. For sales above that level, there will be no disagreement.

To make this more concrete, the payoffs for a sale at $75 million are as follows:

- Common Stock: Zero
- Series A Preferred: $31,000
- Series B Preferred: $311,000
- Series C Preferred: $4.65 million
- Series D Preferred: $70 million

Assume that if the company is not sold now for $75 million, it has a reasonable but uncertain possibility of being acquired a year later at $100 million, but there is also the possibility that the company will slide downhill in the next year.[30] The division of $100 million in proceeds would be as follows:

- Common Stock: $4.1 million
- Series A Preferred: $1 million
- Series B Preferred: $2.3 million
- Series C Preferred: $17.4 million

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29 Series A's liquidation preference of 30¢ per share, totaling $100,000, and its participation are not visible on the graph. The Series A investor's share of sale proceeds is essentially the same as that of the common stock. It converts to common at a sale price of $90.1 million. Series B has a liquidation preference of 80¢ and then participates up to its 5x cap and converts to common at a valuation of $139.4 million.

30 There is no need to add detail to this set of hypotheticals, but one could set this up, for example, as a 95% probability of selling the company for $100 million and a 5% probability of it being worth zero. In this case, the Series D investor would be slightly better off than in a sale at $75 million, but because of other factors, including risk aversion of the individuals making the decision for the fund, that investor may prefer an immediate sale. Alternatively, if the Series D investor places a 90% probability on a sale at $100 million, then the expected value of an immediate sale at $75 million is better for it.

- Series D Preferred: $75.2 million

Whereas the Series D investor does only slightly better by holding out for a $100 million sale, the differences in returns for the other investors are substantial. As explained in Part I, the late-stage Series D investor is relatively risk averse. Its 2x senior liquidation preference reflects and reinforces this risk aversion by providing the Series D investor with the first claim to proceeds from a sale but then providing it with no more until the other investors receive their initial liquidation preferences. As a result, the Series D investor's return on a sale at $100 million is only slightly higher than its return on a sale at $75 million. Depending on the probabilities it places on a sale at $100 million and depending on other the other factors discussed in Part I, the Series D would probably prefer a definite sale at $75 million over an uncertain possibility of a sale at $100 million later on.

In contrast, the Series A investor would receive a thirtyfold greater return by holding out for a sale at $100 million. At $75 million it would lose two thirds of its investment, but at $100 million it would reap a 10x return on its investment. This is below the target return for the most successful investments in its high-risk portfolio, but it is an attractive outcome nonetheless. The early-stage investor with Series A shares would clearly oppose a sale at $75 million—putting it at odds with the Series D—but it could well favor a sale at $100 million.

The Series B investor, like the Series A investor, takes a loss at $75 million and would prefer holding out for a sale at a higher valuation. But it is unclear whether the Series B investor would go along with the Series A investor in favoring a sale at $100 million if a sale at a yet higher price in the future is in the cards. The Series B investor would more than double its investment in a sale at $100 million, but such a return falls substantially below its expectations and those of its investors for a successful portfolio company.

The Series C investor would roughly quadruple its proceeds in a sale at $100 million compared to a sale at $75 million. Still, the Series C investor might want to hold out for an even higher sale price in the future, depending both on its assessment of the risk and return and on the factors discussed in Part I.

For the management team, a sale at $100 million gets them something rather than nothing, but at this stage in the company's development, a $4 million payoff to the common stockholders will not be attractive to them. By the fourth round of financing, the outstanding common stock is likely to be widely held among employees and ex-employees, so the management team will receive only a fraction of the $4 million. Consequently, the management team will likely resist a sale and would be willing to bet the company on a much better outcome down the road. Even with a sale at $200 million, the management team does not do all that well, considering its ambitions from the start, and it might have an incentive to take extreme risks for the remote possibility of a greater reward.

If the company were sold for $200 million, the proceeds would be divided as follows:

- Common Stock = $33.8 million
- Series A Preferred = $8.5 million
- Series B Preferred = $10.6 million
- Series C Preferred = $34.8 million
- Series D Preferred = $112.4 million

A $33.8 million payoff to the common shareholders may be an attractive outcome for the management team, depending on how widely held the shares are. But perhaps not.

These examples illustrate two problems. First, if the company is sold, liquidation rights slice up the proceeds of a sale among investors in ways that produce conflicting interests. We discuss below how these interests translate into action, but it is clear from what we have shown that the cash flows created by liquidation rights like the ones in this example provide no assurance that investors and management considering a sale of the company will make a value-maximizing decision.

Second, the accumulation of liquidation rights can result in the management team and employees reaping too small a share of the proceeds if the company is sold. This can result in incentives that run counter to the investors' interests and that are inconsistent with maximizing firm value. One danger is that the management team and its employees, foreseeing such a prospect, will have insufficient incentive to remain with the company and to continue working hard to maximize its value. In the example above, if a sale at $100 million—for a return on aggregate invested capital of roughly 100%—is the best foreseeable outcome, the prospect of a $4.1 million payoff to common shareholders is unlikely to be enough to keep the management team and employees with the company.

Alternatively, rather than leaving the company, which could impair an entrepreneur's reputation, the management team may instead bet the company on a low-likelihood strategy for a "home run." Or it may resist efforts to sell the company and instead direct the company toward an IPO. The terms of preferred stock provide that the shares will automatically convert to common if the company goes public. [31] As a result, liquidation rights will become irrelevant, and each party's interest in the post-IPO company will be determined by its percent

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[31] *See* Smith, *supra* note 25, at 354. Although the preferred shareholders generally have the right to veto a low-value IPO, they generally cannot prevent moderate-value IPOs from occurring even if sale opportunities are present.

ownership of common stock on an as-converted basis. For example, if the company were to go public at a valuation of $100 million, the value of each class of stock would be as follows:

- Common Stock = $29.4 million
- Series A Preferred = $7.3 million
- Series B Preferred = $9.1 million
- Series C Preferred = $17.2 million
- Series D Preferred = $36.8 million

The management team is thus far better off with an IPO than a sale at $100 million.

There are a number of ways in which the management team can prevent a sale. Most directly, if an acquirer would need members of the management team to stay with the company following an acquisition, the team could simply make it clear that they will not do so. Even if members of the management team are less essential, they can decline to meet with potential acquirers or drag their feet with respect to due diligence. The management team could also enter into contracts with parties that compete with one another, thereby making it difficult for any party to acquire the company, or it could enter into other sorts of long-term contracts that would be unattractive to acquirers.

There is empirical support for the proposition that, in a substantial number of cases, suboptimal liquidation rights accumulate as we have illustrated in this example and that there are impediments to renegotiating all liquidation rights when this has occurred. Studies have shown that liquidation rights increase as financing rounds continue and that earlier liquidation rights are infrequently renegotiated.[32]

C. Governing with Conflicting Interests

Conflicting interests and incentives affect firm value only if they translate into action or inaction. So the next question is whether the potentially conflicting interests created by liquidation rights actually result in premature sales, avoidance of sales, excessive risk taking, and the failure of start-ups that could have been sold. These are empirical questions that warrant further investigation, but they would be difficult to answer systematically with data. A premature sale would be nearly impossible to identify, data on risk taking by private companies would be difficult to collect and more difficult to analyze, and sales avoided would pose similar challenges—especially if the result is fail-

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32 Bengtsson & Sensoy, *supra* note 2, at 30, 32; Broughman & Fried, *supra* note 2, at 389, 391 (reporting that thirteen out of seventy-eight post-first-round financings had renegotiations).

ure.[33] We therefore rely on the limited data available and on the experience of one of us as a basis for making some generalizations.

From an a priori perspective, the accumulation of liquidation rights raises doubt as to whether a decision to sell the company will be a value-maximizing decision. Because liquidation rights subject different parties to different marginal payoffs, it would not be surprising to find that they induce sale decisions based on one or more of the parties' payoff functions rather than on collective shareholder welfare.

Whether a company with expansive liquidation rights is sold—and if it is, at what price—will depend on a number of factors. These include the range of valuations that potential acquirers are willing to pay, expectations regarding sale options in the future, the importance of management-team cooperation in selling the company, whether potential acquirers need the management team to stay with the company, whether investors are motivated to sell by factors other than their return on this investment, which investors control the board and the payoff available to those investors,[34] and whether investors are willing to sell (and a buyer is willing to buy) the company without high levels of support from other investors and the management team.

Often, a company can be sold only if there is a consensus among investors, and the management team's agreement may be necessary as well.[35] Although boards act by majority vote, as a practical matter, sales commonly require the unanimous support of the board.[36] This is true for three reasons. First, in the typical acquisition of a start-up, the acquiring company will require, as a closing condition in the acquisition agreement, that the board of directors of the company unanimously approve the acquisition. The company's board will typically be comprised of venture capitalists whose funds have invested in the company, the CEO and perhaps another member of the management

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33 Broughman and Fried addressed this challenge by conducting surveys and interviews with entrepreneurs involved in fifty start-ups that were sold in 2003 and 2004. *See* Broughman & Fried, *supra* note 2, at 385, 387–88. They focused on the relatively objective question of whether payoffs were renegotiated prior to a sale. The questions raised here, however, would be substantially more difficult to answer with information obtained in interviews. For example, how reliable would answers to the following questions be: "Your company failed in 2011. Could you have sold it prior to its failure? What risks did you take in choosing not to sell? Did you have in mind the possibility of an IPO? How likely was that? At what valuation?" Even if entrepreneurs would answer these sorts of questions, their answers would be infected by self-serving and hindsight biases.

34 *See generally* Smith, *supra* note 25, at 318–30 (investigating the relationship between board control and venture capital exit options in venture capital–backed companies).

35 *See, e.g.*, Robert V. Hawn, *Your Company Has Just Signed an Acquisition Agreement – Now What?*, SAN JOSE BUS. LAW. BLOG (Aug. 6, 2012), http://www.sanjosebusinesslawyersblog.com/2012/08/your-company-has-just-signed-an-acquisition-agreement---now-what.html. Bartlett discusses litigation that has occurred in the context of venture capitalists' disputes regarding acquisitions. *See* Bartlett, *supra* note 7, at 89–95.

36 *See* Hawn, *supra* note 35.

team, and one or more directors upon whom the investors and the management team have agreed. Second, every board member has a fiduciary duty to promote the interests of all shareholders, not just the investor that, in effect, placed him or her on the board. If an investor that opposes a sale brings a lawsuit for breach of fiduciary duty, the sale can be delayed indefinitely, and damages can be awarded against board members, the venture capital funds behind them, and the acquirer. A sale will rarely go forward with even a threat of litigation. This is one reason an acquirer makes unanimous board approval a condition to a sale. Finally, all parties want to build and maintain reputations in the start-up and venture capital communities. Forcing a sale over the objection of an investor could put reputations at risk, especially if the objecting investor is a prominent fund with a good reputation. Forcing a sale over the objection of the management team is generally less risky, but as explained above, it can be difficult to do as a practical matter.

When expansive liquidation rights are involved, consensus does not necessarily mean a value-maximizing decision making. It can mean delayed sales in the hope that a company's valuation will grow high enough for all investors to get a sufficiently attractive return pursuant to their liquidation rights. Companies that should be sold earlier are not sold. In addition, as explained above, to the extent investors need the management team's cooperation, liquidation rights can lead to further delay or to no sale at all. The management team will share in the proceeds of a sale only if the valuation is high enough to cover all investors' liquidation preferences; even then, to the extent that the investors have participation rights and a high percentage of the company's shares, the amount going to the management team can be a small percentage of the total proceeds.

Experience and empirical evidence confirm that expansive liquidation rights do in fact lead to suboptimal outcomes. The empirical evidence relates to the conflicting interests between investors and management in sale decisions. Professors Broughman and Fried found that when a sale is being negotiated, a separate payment to management is sometimes negotiated.[37] These management "carve outs," as they are referred to in practice, are provided in order to induce management to support the sale. They are not, however, a solution to the problem we describe—they are evidence of it. The side payments that Broughman and Fried found are sometimes necessary to induce the management team to support a sale, but they are not an ideal arrangement to rely on. They do not promote *ex ante* incentives because the management team and employees cannot anticipate in

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[37] *See* Broughman & Fried, *supra* note 2, at 389–91 (finding that eleven out of fifty-one sales involved separate payments to management).

advance that a carve out will be forthcoming. They are also contentious and difficult to negotiate in the midst of a sale. In addition, they are taxed as ordinary income. If, instead, the management team received a gain on their shares as a result of a sale, the gain would be taxed as a capital gain.

III
THE CONTRACTING CHALLENGE AND A PROPOSED SOLUTION

The analysis above raises two questions. First, why do investors in start-ups commonly negotiate liquidation rights that can lead to suboptimal outcomes? Second, why is there no renegotiation of liquidation rights that accumulate to a point at which the possibility of a suboptimal outcome appears on the horizon?

A. The Dynamics of Sequential Contracting

Start-ups go through successive rounds of financing over a period of years. Investors negotiating one round do not know what the next round of investors will demand, nor do they know what the balance of bargaining power will be in the next round. Bargaining power with respect to financing can vary dramatically from one round to another.[38] In this setting, investors in earlier rounds may negotiate expansive liquidation rights in an effort to protect themselves from the impact of liquidation rights that later investors negotiate. The example in Part II in which the Series A and B shares provide participation with 3x and 5x caps is just for illustrative purposes, but financings similar to this occur in a significant number of cases.[39] What is nearly universal, however, is that later investors take the liquidation rights of current investors as a floor and negotiate rights that are at least as generous—and sometimes more generous—to themselves, just as the Series C and D did in our example.[40]

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38 *Cf.* Yrjö Koskinen, Michael J. Rebello & Jun Wang, *Private Information and Bargaining Power in Venture Capital Financing*, J. ECON. & MGMT. STRATEGY (forthcoming) (manuscript at 2–5), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=891192 (discussing the shift in bargaining power between management and venture capital investors over the life cycle of a start-up).

39 *See* Smith, *supra* note 25, at 347–48 (reporting that 98.37% of sampled deals contained a liquidation preference and 83.92% contained participating preferred liquidation rights); Kaplan & Strömberg, *supra* note 2, at 284–86 (reporting that 38.5% of the sample used participating preferred liquidation rights). Kaplan and Strömberg's data shows an increase between rounds in the size of a venture capital liquidation claim relative to the venture capital investment. *See id.* at 313.

40 Bengtsson and Sensoy find that the terms of most rounds are the same as the terms of the prior round. Bengtsson & Sensoy, *supra* note 2, at 32; *see also* Brad Feld, *To Participate or Not (Participating Preferences)*, FELDTHOUGHTS (Aug. 24, 2004), http://www.feld.com/wp/archives/2004/08/to-participate-or-not-participating-preferences.html; *The Early Stage Investment Blog: Understanding the Liquidation Preference*, FIRST ASCENT VENTURES, LLC (Aug. 29, 2009), http://www.firstascentventures.com/blog/?p=37. Kaplan and Strömberg find

Later-round liquidation rights have a detrimental effect on earlier investors—an effect that is not counterbalanced by the value of early investors' own liquidation rights. As illustrated in our example, the amounts invested in a start-up increase substantially over the company's lifecycle.[41] In our example, the Series D investor invested $35 million, compared to $1 million from the Series B and $100,000 from the Series A. The Series D liquidation rights provide the investor with $70 million off the top if the company is sold, in addition to a pro rata share of the proceeds remaining after the company has satisfied all liquidation preferences. Once the Series A, B, and C investors begin sharing proceeds in sales above $70 million, they share in proportion to their preferences, and the Series C investor's share dwarfs the shares of the Series A and B. Note in Figure 2 that the liquidation rights of the Series A and B investors are essentially the same as that of the common shareholders. (The Series A and B investors will convert to common shares at valuations of $90.1 million and $139.4 million, respectively, but their payoffs at lower valuations are only slightly above the payoffs to common shareholders.) This compression of the payoffs to the early investors is attributable to the expansive liquidation rights of the later investors combined with the size of the later investors' investments. Even ignoring the adverse impact that liquidation rights can have on the incentives of the management team and on the coordination of investors' decision making, the Series A and B investors would gladly give up their liquidation rights if the later-stage investors would give up theirs.

For early investors, liquidation rights provide essentially no benefit if a company is reasonably successful. And, to the extent that they lead to a chain reaction of stacked and conflicting liquidation rights, they can produce positive harm. So why do early- and mid-stage investors seek and obtain expansive liquidation rights? There are a few possible answers. One is that they believe liquidation rights will preserve their fair share of the sale proceeds once later investors extract liquidation rights for themselves. This is not true for early-stage investors and is often not true for mid-stage investors, but it is a plausible misunderstanding. A second possible answer is that investors believe liquidation rights will be valuable if the company is not successful and is sold relatively early for relatively little. Here, they are right: liquidation rights can in fact enhance an early- or mid-stage investor's return in this scenario. But this is not what the early- and mid-stage investors

that liquidation rights expand over successive rounds. *See* Kaplan & Strömberg, *supra* note 2, at 313. Broughman and Fried also find that liquidation preferences increase. *See* Broughman & Fried, *supra* note 2, at 389.

41 *See From the WSGR Database: Financing Trends for 2012*, *supra* note 23, at 2 (summarizing amounts raised in Series A, Series B, and Series C and later rounds in the third quarter of 2012).

are typically in business for. To the extent that they expect many losses in their portfolios and few big gains, the creation of problems in success scenarios in exchange for protection in scenarios of relative failure is out of line with their business model. A third possibility is that investors put little thought into the matter. They may just insist on what they perceive to be, or what their lawyer tells them, is either "market" or "pro-investor."[42]

Regardless of the liquidation rights given to earlier investors, it is the accumulation of liquidation rights for large mid- and late-stage investors that directly causes the problems discussed in Part II. The accumulation of liquidation rights that threaten to impair the value of the firm raises the question of why investors cannot renegotiate all liquidation rights together in order to optimize the firm's capital structure. At a certain point, the management team and investors can predict the range of prices for which the company might be sold over some relevant time horizon. They may, for example, look ahead and foresee a sale at $100 million to $200 million in the next twelve to eighteen months. At that point, the impact of current and future liquidation rights will be clear with respect to the incentives of the management team and to the conflicting interests of the investors in selling the company in that projected range. At that point, if the accumulated liquidation rights are so large that the management team's prospect of a payoff is too low to motivate them, or if the payoff functions created by the current mix of liquidation rights for the investors will lead to conflicting interests regarding a sale and potentially to excessive delay, the investors and the management team can in theory renegotiate their liquidation rights in advance. This does happen, but it is rare.[43] The question is, why?

The renegotiation of liquidation rights involves several investors and the management team in a setting of great uncertainty and asymmetric information. This is not a zero-sum negotiation since the goal is to improve incentives for all parties involved in order to maximize the value of the company in a sale. But the prospect of a sale, the

42 The concept of "market," to which practitioners frequently refer, is odd in the context of contracting generally. What does it really mean, especially when it changes from year to year?

43 *See* Bengtsson & Sensoy, *supra* note 2, at 30 (reporting that eight percent of transactions involved renegotiation and reduction of earlier investors' rights and that most of those involved only loss of antidilution protection). Broughman and Fried found that in thirteen out of seventy-eight post-first-round financings, existing investors had their liquidation rights reduced. Broughman & Fried, *supra* note 2, at 389 tbl.1, 391 n.6. Valuations of the acquisitions in their sample, however, were on average only slightly greater than aggregate initial investments, presumably as a result of the proximity of their sample period to the tech bust. *Id.* at 389 tbl.1. Bartlett also provides a qualitative discussion of both the accumulation of liquidation rights and the difficulty of renegotiating them. *See* Bartlett, *supra* note 7, at 85–90.

price at which the company may be sold, and the impact on incentives would be uncertain and subject to disagreement. Consequently, the amount of potential surplus available will be uncertain and, to at least some investors, it could feel like a zero-sum negotiation. To complicate matters further, there are no principles upon which the investors can agree to guide their negotiation. How much upside should they provide to the management team? How should early-, mid-, and late-stage investors share the burden of scaling back aggregate liquidation rights in order to provide management with more upside? How should they adjust their payouts so that their incentives are compatible with one another? There are no right answers to these questions, so the negotiation could be contentious. Add to this the fact that all parties will be concerned about the impact that the negotiation will have on their reputations, and one can understand that investors are extremely reluctant to reopen deals that have already been negotiated, even if reopening them holds the prospect of making all parties better off.[44]

In sum, the source of the problem of accumulated liquidation rights is twofold. First, earlier investors cannot accurately anticipate the liquidation rights that later investors will negotiate. Second, as a company proceeds through multiple rounds of financing, investors apparently face impediments to global renegotiation of existing liquidation rights.

B. A Proposed Contractual Solution

The analysis above has focused on how liquidation rights create conflicting interests among a start-up's investors and between its investors and management team, and how those conflicts can lead to suboptimal outcomes. This section proposes a contractual solution to this problem. The goal is to provide the management team with enough upside potential to keep it motivated and to reduce flat segments of the investors' payoff functions (within relevant ranges of valuation). Consider the share allocations in the example in Part II, but instead of the complex liquidation rights, assume 1x *pari passu* preferences. In this scenario, shown in Figure 3, the management team and employees share in the proceeds of any sale over $51.1 million, the aggregate amount invested. For sales below $51.1 million, the investors recoup their investments in proportion to the amount that they invested.[45] For sales above $51.1 million, the management team and

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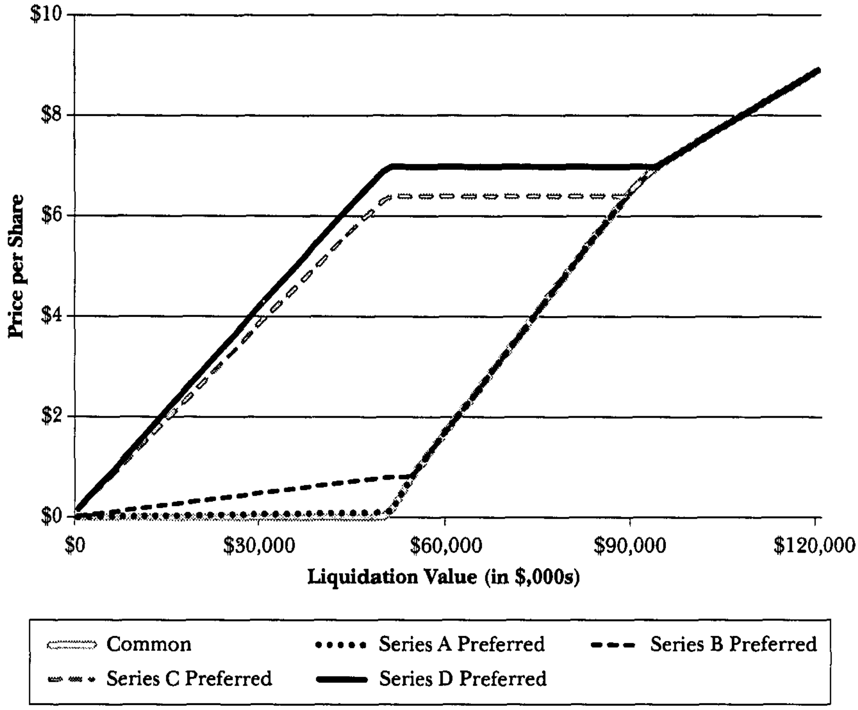
44 Other impediments such as unfavorable tax treatment may also play a role in certain situations.

45 The payoffs to the Series A shareholders are not visible on the graph. For a sale below the total amount of cash invested, the proceeds are distributed according to the ratio of the investors' liquidation preferences and hence their investments. Because the

employees share proceeds with the investors, seeing a sharp increase in their payoff initially and then a declining rate of increase as each investor converts to common shares.

FIGURE 3. DISTRIBUTION OF SALE PROCEEDS WITH 1x INITIAL LIQUIDATION PREFERENCE



With this structure of liquidation rights, the incentives of the management team and investors are closely aligned. The management team has a strong incentive to add value to the company beyond the amounts invested and to continue increasing the company's value. In addition, unlike the scenario described above in Figure 2, at valuations of approximately $95 million and higher, the management team has no incentive to favor an IPO over a sale. Furthermore, the investors' interests are better aligned in this scenario than they are when liquidation rights differ among investors. For sales above $95 million, all investors will convert to common stock, so there is no divergence of interest in that range of valuation. The only divergence occurs at low valuations—between approximately $52 million and $95 million—where the Series A and B investors have converted to common shares and would prefer a sale higher in that range, while the Series C and D

Series A investor invested far less than the Series B, C, and D investors, it receives relatively little as a result of its liquidation preference, and its participation rights on a per-share basis are only slightly higher than the return to common shareholders.

are indifferent.[46] The proceeds allocated to the Series C and D investors are flat until a valuation of $89 million and $95 million, respectively, where each converts to common. Compared to the divergence of interests that occurs where liquidation rights differ across investors as in Figure 2, above, these divergences are mild, and they occur at valuations that reflect a relatively unsuccessful company.

We propose a contractual mechanism designed to promote (but not guarantee) the adoption of this structure. Such a contractual mechanism would be drafted into a start-up's charter before the first outside investment in the company. The mechanism is designed to respond to the source of the problem: the inability of investors to coordinate their liquidation rights over time. The objective of the mechanism is to have investors adopt liquidation rights that minimize divergent interests among themselves and between investors and the management team. The solution is not perfect. Because it is contractual, it requires consent as each investor negotiates the terms of its preferred shares. Even if early investors adopt this mechanism, there is a danger that later investors will have the bargaining power to force them to give it up. Moreover, there will be situations in which it is collectively optimal to amend the mechanism in order to allow a later investor to have enhanced liquidation rights. We therefore suggest a way to strike a balance between preventing a new investor from using bargaining power simply to extract wealth from existing investors and allowing investors to grant a later investor enhanced liquidation rights in order to enhance firm value.

Our proposal is, in effect, a default rule that would be included in a start-up's initial charter and therefore apply to the firm's future investors. As explained below, however, there is an opportunity for a collective opt out. The proposal has three parts: first, an assurance that all proceeds of a sale will be paid to the preferred shareholders up to the amount of their investment (a 1x liquidation preference) before any other payments are made; second, a most favored nation (MFN) clause applicable to liquidation rights beyond the 1x preference; and third, a distribution of proceeds to common shareholders so long as the sale price is greater than the amount needed to satisfy the 1x preference for the preferred shares. This charter provision could be amended by a supermajority of votes of the preferred and common shareholders.

The 1x initial preference is a bow to reality in that investors will demand it. Even if early investors do not, later investors will, and the MFN clause described below would then apply it to all investors. For this reason, we suggest that companies simply adopt it in their charter

46 The Series A shareholders will convert at $51.4 million and the Series B at $53.2 million.

at the outset. Moreover, holding back any return for the common shareholders until the investors get their capital back may well enhance the incentive for the management team and employees to add value to the start-up.[47]

The MFN clause addresses the need to coordinate investors over time. It would provide that any liquidation rights accorded to one series of preferred shares would automatically be provided to all other series of preferred shares. So, for example, regardless of the liquidation rights that an early investor negotiates, that investor will get the same rights that any later investor negotiates above the 1x provided to all investors. The early investor, therefore, will feel no pressure to take expansive liquidation rights as protection against the unknown demands of a future investor. Because the early investor does not take these rights, later investors will be less inclined to ask for expansive liquidation rights. Conversely, any liquidation rights provided to an early investor will also be provided to later investors. Since later investors typically invest at higher valuations, this aspect of the MFN clause would discourage early- and mid-stage investors from taking expansive liquidation rights if they expect a higher valuation at later rounds.[48] The MFN clause will work in the other direction as well. A later investor that demands expansive liquidation rights will in effect be "taxed" as a result of giving the same rights to earlier investors.[49] By insisting on a liquidation right beyond its 1x preference, a later investor would provide the same right to all other investors—past and future.

The third element of our proposal is a "Common Stock Participation Right," which would apply only if the MFN clause fails to limit the

47 We cannot say, however, that the absence of a 1x initial preference would necessarily weaken incentives. The management team and employees would still have the upside reward to increasing value. The initial preference simply limits their payoff in less successful scenarios, which may or may not have an impact overall.

48 For example, consider the benefits to an early-stage investor of participating preferred stock with a 5x cap in a company where all future rounds have the same participation rights to the benefits. Compare this to the same early-stage investor where neither it nor any future investor has such participation rights. If the early-stage investor invested $200,000 at, for example, an $800,000 premoney valuation, then at all exits in excess of $5 million, the early stage investor would lose all of its participation rights because it would receive more in proceeds by converting to common stock. At the same time, a later-stage investor in the same company who put in $20 million at an $80 million premoney valuation would not convert to common shares until an exit in excess of $500 million. In other words, for exits between $5 million and $500 million, the existence of participation rights for all investors would harm the early-stage investor because proceeds that would otherwise have been allocated to common shareholders would go to preferred shareholders.

49 The purpose of the MFN clause is to provide a combination of assurance and deterrence so that investors do not adopt any liquidation rights beyond the 1x preference. If it fails and investors adopt expansive rights despite the clause, the fact that all investors have the same rights does not mean that they will have consistent interests. Differences in the amounts they invest and the number of shares they hold can create kinks in their payoff functions that result in divergent interests.

investors to 1x liquidation preferences as of the time of a sale. The Common Stock Participation Right addresses the potentially divergent interests among investors as a group, on the one hand, and the management team, on the other hand. The Common Stock Participation Right will be triggered if, as a result of whatever liquidation rights have been negotiated, a sale would result in (a) the preferred shareholders receiving proceeds equal to their investment and (b) the common shareholders receiving less than a minimum amount of the total sale proceeds. That minimum amount would be a percentage of what the common shareholders would receive based on their percent ownership of the company (calculated as though all preferred shares are converted to common). We will refer to this as the "Trigger Threshold." It would be a negotiated amount; for illustrative purposes, we will set it at fifty percent. If the company is sold, and according to whatever liquidation rights the investors have negotiated, the preferred shareholders would receive an amount greater than their initial purchase price and the common shareholders would receive less than fifty percent of their pro rata share of the company, then the Common Stock Participation Right would take effect *prior* to the fulfillment of the liquidation rights that the preferred have negotiated.[50]

Following the payment of the 1x liquidation preference to the holders of preferred stock, the Common Stock Participation Right would give common stockholders the right to participate with the preferred stock according to the percent ownership of each (calculated as though all preferred are converted to common). The common stockholders' participation right, however, would be capped. The cap would be the same as the Trigger Threshold—fifty percent of the common shareholders' pro rata share of the company for purposes of this discussion. Once the cap is reached, to the extent there are remaining sale proceeds, those proceeds would be distributed to the preferred shareholders according to the liquidation rights that they negotiated.[51] (We refer to those liquidation rights as "Later-Added

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50 In other words, the Trigger Threshold compares (a) the funds that would be distributed to common shareholders after all preferred shareholders have received their priority distributions under previously negotiated liquidation rights, with (b) fifty percent of the funds that would be payable to Common Shareholders based solely on their pro rata ownership (assuming the conversion of preferred shares). If the amount distributed to the common under (a) is less than the negotiated threshold in (b), then the Common Stock Participation Right is triggered.

51 This fifty percent cap is different from, and will take effect at lower valuations, than the fifty percent Trigger Threshold. The Trigger Threshold determines whether the common shareholders would receive fifty percent of their pro rata share of proceeds if sale proceeds are distributed according to the Later-Added Liquidation rights. If they are not, the Common Stock Participation Right will apply. In that case, the common shareholders will fully participate after the preferred shareholders have received their initial preference. They will fully participate, however, only up to the point at which they receive fifty percent of their pro rata share. Any remaining sale proceeds go to the preferred shareholders

Liquidation Rights" because, if they exist, they would be written into the charter when an investment was made, which would be after this set of provisions is adopted.) Thus, subject to the 1x preference for the preferred shareholders and to the availability of sale proceeds, the common shareholders will get a (soft) guaranteed return in the event of a sale.[52]

As discussed in Section C, below, situations may arise in which it is necessary to amend this arrangement. Companies should make an amendment where necessary to attract new investment that would enhance firm value. In order to make it difficult for new investors to induce an amendment to these provisions that is not value maximizing, however, a consensus among current investors and the management team should be required to amend the arrangement. We therefore propose that the charter require the approval of a supermajority of the preferred shares for an amendment to the MFN clause and a supermajority of the common shares to amend the Common Stock Participation Right.

Figure 4, below, illustrates how the Common Stock Participation Right would work if the preferred shareholders each take 2x liquidation preferences with no participation and no priority among them. We assume the same shareholdings as above. This scenario could arise, for example, if a later investor insists on a liquidation preference that is higher than the 1x provided for in the initial charter but the investors do not opt out of the MFN clause. The Common Stock Participation Right becomes important in this scenario from the perspective of management and employee incentives.

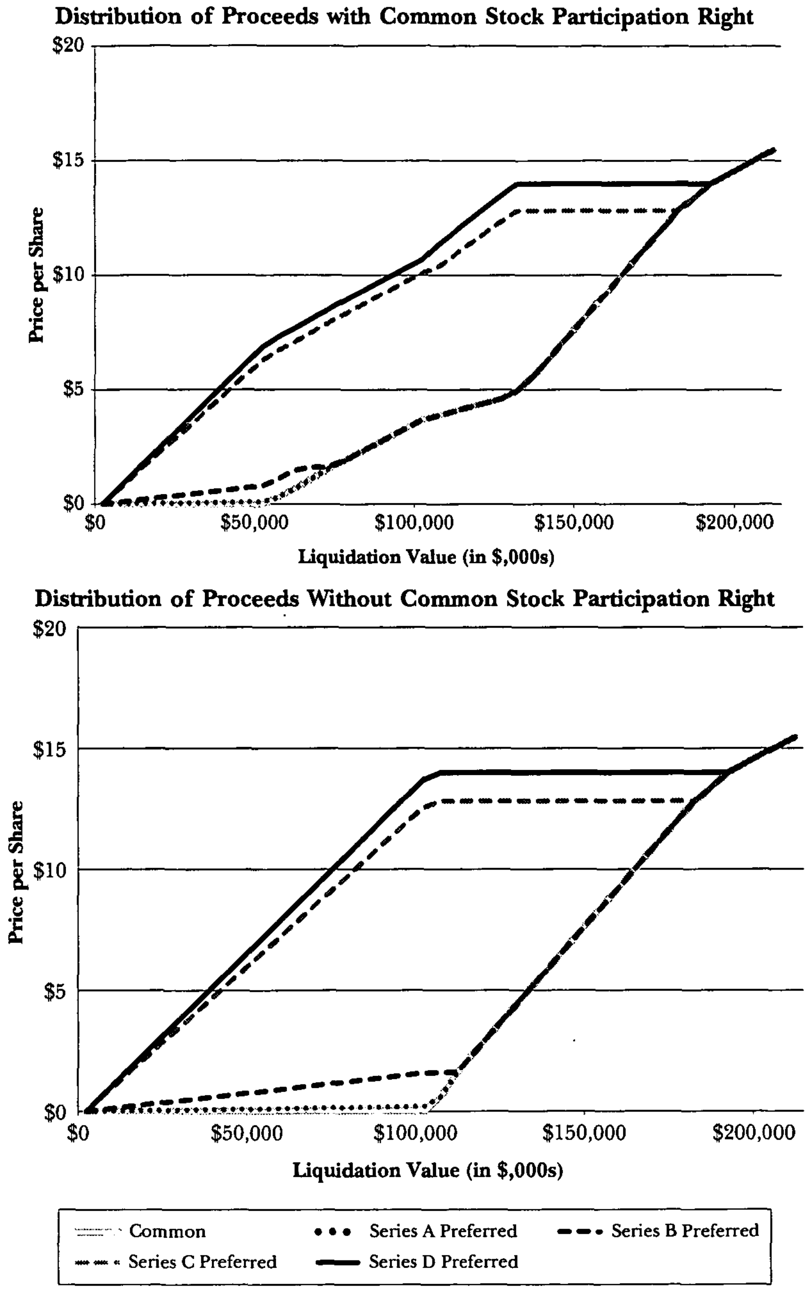
In Figure 4, the graph at the top illustrates the effect of the Common Stock Participation Right, and the graph at the bottom shows the payoffs to the preferred and common shareholders in the absence of the right. The effect of the Common Stock Participation Right is to provide the common shareholders with proceeds beginning at a sale at $51.1 million, as opposed to $102.2 million. They participate with the preferred shareholders for sales of up to $130 million.[53] For sales above $130 million, the Trigger Threshold is met—the common shareholders will receive more than half of what they would receive based on their pro rata share ownership—and the Common Stock

according to their Later-Added Liquidation Rights. Thus, as valuations rise, the common shareholders will hit their cap on participation, but continue participating at the fifty percent capped rate, until the preferred shareholders receive the full amount they are due under their Later-Added Liquidation Rights.

52 An example of a Common Stock Participation Right provision including these features is given in the Appendix, *infra*.

53 The common stock hits its cap on participation at $102 million, so for valuations between $102 million and $130 million, its participation rate is 14.7% (50% of the common stock's 29.4% ownership).

FIGURE 4. EFFECT OF COMMON STOCK PARTICIPATION RIGHT — PREFERRED SHARES WITH 2x INITIAL LIQUIDATION PREFERENCES



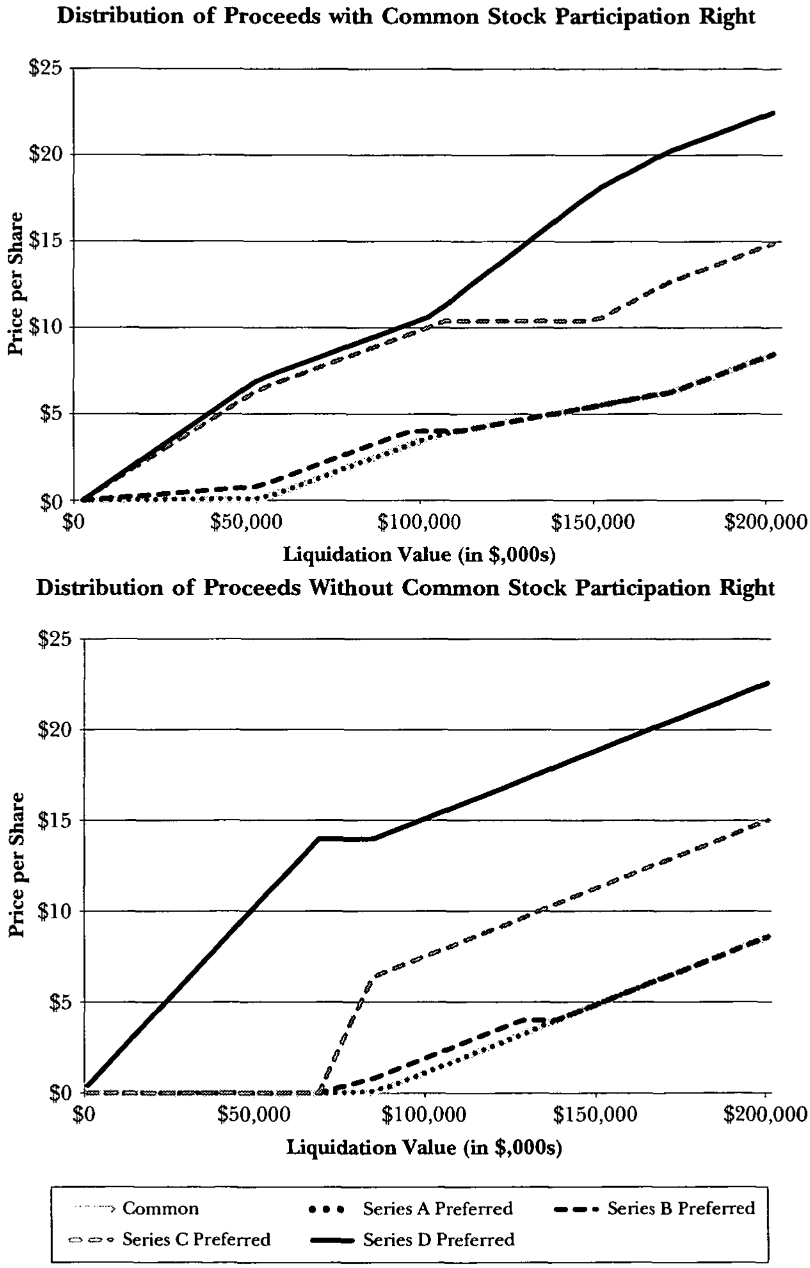
Participation Right does not apply. This Figure also reflects the fact that the Series A and Series B shareholders will convert to common shares in order to take advantage of the Common Stock Participation Right. The Series A shareholders convert for sales above $52.3 million, and the Series B convert for sales above $71.7 million. In comparison, if there were no Common Stock Participation Right, these series of preferred shares would convert for sales at $104.7 million and $110 million, respectively, as shown in the bottom graph. The most important impact of the Common Stock Participation Right in this scenario, and its primary rationale, is to improve the incentives of the management team and employees by providing a payoff to common shareholders at lower valuations. In addition, the right reduces the extent to which interests among investors holding preferred stock diverge. The extent to which this will occur in general, however, depends on the specific terms of the Later-Added Liquidation Rights.

Figure 5 illustrates the impact of the Common Stock Participation Right on the more complex liquidation rights shown in Figure 2. This scenario, in which the participation right is superimposed on Later-Added Liquidation Rights, will occur only if the arrangement proposed here has been amended so that the MFN clause is not followed but the Common Stock Participation Right remains intact. We present it here solely to illustrate how the participation right would be applied in the presence of differing and complex liquidation rights. As in Figure 4, the impact of the Common Stock Participation Right is to allow the common stock to receive proceeds of sales beginning at $51 million, the point at which all preferred shareholders have received their initial investment back.[54] Again, the Series A and B Preferred shares will be converted to common at lower-priced sales in order to take advantage of these rights, and a relatively small amount comes out of the proceeds allocated to the Series C and D shareholders. As shown in Figure 5, when the complex and conflicting liquidation rights of our example are present, the Common Stock Participation Right brings the interests of the common and preferred shareholders into greater alignment at lower valuations. Conflicting interests among preferred investors are also reduced at lower valuations, but they reappear at higher valuations, where the Series B and C shares have flat portions of their payoff functions. It is thus not clear, on balance, whether the Common Stock Participation Right should

54 The Series A and B Preferred shares reach their participation caps (3x and 5x) at valuations of $53.8 million and $94.5 million, respectively. Those caps on participation limit the Series A and B shares' pro rata participation under the terms of the Common Stock Participation Right. The Series A and B shares convert to common at valuations of $55.1 million and $108.7 million, respectively. For Series B, this is evident in the flat portion of the Series B payout function. It is not visible for the Series A. The additional proceeds going to the Series A and B shareholders as a result of their conversion come out of the proceeds that would go to the Series C and D shareholders were it not for the Common Stock Participation Right. This is reflected in a slight decline in the slope of the Series C and D payoff functions at the points at which the Series A and B convert. The Trigger Threshold is $170 million, and the common stock hits its cap on participation at a valuation of $102 million, which means that the slope of its payoff function drops from its full pro rata ownership percentage to 50% of the ownership percentage.

remain in place if the MFN clause is amended and expansive liquidation rights are negotiated. This will depend on the specific terms of the liquidation rights provided and the range of valuations at which a sale is foreseen.

FIGURE 5. EFFECT OF COMMON STOCK PARTICIPATION RIGHT WITHOUT MFN



C. Qualifications and Limitations

There remain two issues to address. First, why is this contractual arrangement an improvement on the status quo? Second, why is the Common Stock Participation Right not targeted more narrowly toward the management team?

1. *Changing the Contracting Environment*

As stated above, this proposal is, in effect, a default arrangement established in a start-up's charter before the company seeks outside financing.[55] Liquidation rights would remain a matter of contract, but the contracting environment would change so that there is a thumb on the scale of consistency among investors' liquidation rights and the promise of a return to the management team if they add value. The contract can be amended, however, and should be under some circumstances.

This default arrangement is an improvement over the status quo, in which situations can arise where accumulated liquidation rights become suboptimal but the parties are unable to renegotiate them effectively. The 1x liquidation preference and the MFN clause that we propose are consistent with what already occurs in the majority of venture capital financings. Studies of venture capital financings report that most liquidation preferences equal the amount initially invested.[56] In addition, in the majority of firms, liquidation rights provided for in later financing rounds are the same as those in early rounds.[57] Thus, these elements of our proposal are majoritarian defaults. Studies also show, however, that there is substantial deviation from the majority pattern. Our proposal is targeted at those exceptions.

The Common Stock Participation Right is a new concept, but it performs the same function as a management carve-out, and it avoids the disadvantages of a management carve-out explained above.[58] It is, in effect, a standby management carve-out that allows the parties to avoid last minute negotiation in the heat of an impending sale and that provides great tax efficiency as well. The fact that management carve outs are used and the Common Stock Participation Right that we propose is not used suggests either that our proposal is inferior or

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55 Just to be clear regarding vocabulary, we are not proposing a default rule in the sense that term is typically used—we are suggesting no change in the law. By "default," we simply mean that an early charter term will set the initial ground rules, subject to later amendment (or, to continue the analogy, opting out).

56 Bengtsson & Sensoy, *supra* note 2, at 29; Broughman & Fried, *supra* note 2, at 389.

57 Bengtsson & Sensoy, *supra* note 2, at 32.

58 *See supra* Part II.C. In addition, if the amount allocated to management under a Common Stock Participation Right is insufficient in a particular case, then there is nothing to stop the parties from adding a management carve out as well.

that there have been impediments to adopting it. In our view, the latter is the case. The right is designed to provide incentives for management in future scenarios in which the company is sold for a price that is low relative to aggregate liquidation rights. When a start-up is seeking early rounds of financing, if the management team were to propose this right, it could be seen as a signal of a lack of confidence in the company's success.[59] This is especially true initially, when the Common Stock Participation Right is unfamiliar. Start-up financings, like many transactions, follow a pattern that is familiar to lawyers and businesspeople involved in the business. Proposing a new, complex liquidation right would certainly meet resistance and limit the number of investors willing to invest in the company. If, however, the right were championed by respected venture capitalists or lawyers specializing in start-up financings—and we are correct that it has the potential to enhance firm value—this resistance could be overcome. In our view, therefore, the fact that this arrangement has not been developed already is not evidence of its lack of value.

There will be situations in which our proposed arrangement should be overridden in order to enhance firm value. We expect that in these situations, investors and the management team will have no difficulty amending it. The primary situation in which efficiency would require amendment is one in which the company's performance has declined and the company needs outside financing. In that situation, current investors' liquidation rights may be underwater, in which case new investors would effectively subsidize existing investors. This is analogous to a debt overhang situation.[60] The optimal response to this situation would be for investors to give an outside investor senior liquidation rights or to scale back their own rights. It may also be optimal for the common shareholders to give up a portion of the Common Stock Participation Right as well in order to bring in new financing. Either concession would require amending the charter, but under these circumstances, the consensus needed should be present. The company is in trouble, and without new investment, it is in danger of failing.

This proposal is not perfect, however. A late-stage investor might exert bargaining power to extract expansive liquidation rights, an exception to the MFN, and perhaps even an exception to the Common Stock Participation Right. It is also possible that a less-than-unanimous consensus will form among existing investors at the expense of

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59 Later on, after the company has received one or more rounds of financing, it would get even more difficult to propose this right since later round investors might perceive early round investors as seeking the right in part for themselves since they could convert to common shares and receive the benefit of the right.

60 Bengtsson & Sensoy, *supra* note 2, at 2.

another investor, and that investors will amend the arrangement when doing so is suboptimal. One way this could occur would be if some investors from prior rounds invest in a new round and seek an exception to the MFN clause for expansive liquidation rights. It is possible that the benefit to those investors in the current round will outweigh the cost they bear with respect to their investment in past rounds and that just enough investors will reap a net benefit to support a charter amendment.[61] Thus the arrangement that we propose is not airtight.

In sum, this is largely a majoritarian default arrangement that would enhance both coordination of liquidation rights among investors and the motivation of the management team while still allowing parties to respond to situations in which deviations are needed.

2. *Targeting of the Common Stock Participation Right*

The Common Stock Participation Right, if triggered, not only allocates proceeds of a sale to common shareholders but also allocates proceeds pro rata to the preferred shareholders. In addition, because it is a right attached to the common stock, holders of preferred shares may take advantage of the right by converting to common stock. The preferred shareholders that convert will be early investors whose investment and therefore liquidation preferences are relatively small.

One could instead design the Common Stock Participation Right so that only the original common shareholders—primarily founders and employees—get it. The advantage of doing this would be to concentrate the benefit on the individuals whose incentives are the concern. The disadvantage of this approach, however, is that it would create a range of valuations at which the interests of the preferred shareholders would diverge from one another (depending on the Later-Added Liquidation Rights that would instead govern) and from the interests of the common shareholders. The Common Stock Participation Right, as we have defined it, would broaden support for a sale at the relatively low valuations at which it applies. These are the same reasons why our proposal is superior to a management carve-out.[62]

Another approach would be to provide these rights only to current employees as of the time of the sale. This approach, however,

61 For simplicity, we have assumed throughout this Article no overlap in investors across financing rounds. In reality, however, there is some overlap. In Fried and Broughman's sample, forty percent of companies had inside rounds with some, but not necessarily all, existing investors participating. *See* Brian J. Broughman & Jesse M. Fried, *Do VCs Use Inside Rounds to Dilute Founders? Some Evidence From Silicon Valley*, 18 J. CORP. FIN. 1104, 1112 (2012) (finding that twenty-one firms out of a sample of forty-five used inside rounds). They find, however, that inside rounds tend to be at relatively high valuations, suggesting that investors in these rounds do not exploit their bargaining power. *See id.* at 1112–15.

62 *See supra* Part II.C.

would ignore the incentives of employees prior to the sale. If employees see the possibility of being fired and losing these rights, their incentives will be impaired long before a sale materializes. In addition, if former employees hold a significant percentage of the company's shares, providing this right to them would help achieve the level of shareholder support often needed for a sale.

Conclusion

This Article has analyzed how the accumulation of liquidation rights in venture capital financings can be detrimental to firm value, both because they can create conflicting interests among investors and because they can undermine the incentives of the management team. Even when it is evident that accrued liquidation rights are suboptimal, investors in a start-up rarely renegotiate them. This dual phenomenon—the accumulation of dysfunctional rights and a failure to renegotiate them—is familiar to practitioners and has been documented in empirical studies of venture capital financings. We propose a contractual arrangement that would reduce the likelihood of suboptimal liquidation rights accumulating over the course of a series of financings. The arrangement would be drafted into a start-up's charter. The arrangement includes three elements: a liquidation preference for preferred shareholders equal to their initial investment; an MFN clause providing that any additional liquidation right given to a series of preferred shares will be automatically extended to all series of preferred shares; and a Common Stock Participation Right that would provide a start-up's management team, employees, and other common shareholders with a specified portion of sale proceeds, up to a limit, so long as the preferred shareholders receive their initial preference. A sale would trigger the Common Stock Participation Right only if its proceeds are too low to provide common shareholders with a minimum payment that the parties would specify in the company's initial charter.

There are circumstances in which investors or a management team will want to modify the mechanism we propose in order to attract investment that would increase firm value. A situation in which the value of the company is lower than its aggregate liquidation rights is an example. On the other hand, there is a danger that a late-stage investor will attempt to exert bargaining power simply to extract value from existing investors by insisting on a modification. We propose that a supermajority vote of the preferred shares be required to modify the MFN provision and a supermajority of the common shares be required to amend the Common Stock Participation Right. While not perfect—no contractual arrangement can be—this will allow flexibility while providing some ability to resist a modification that would not increase firm value.

APPENDIX

COMMON STOCK PARTICIPATION RIGHTS

Notwithstanding the foregoing or any other liquidation provisions contained herein (including the "Later-Added Liquidation Rights"), in the event that (1) the Later-Added Liquidation Rights would result in the Common Stock receiving less than fifty percent* of the amount per share that the Common Stock would have been entitled to receive had all shares of Preferred Stock been converted to Common Stock immediately prior to distributions under the Later-Added Liquidation Rights and (2) the following liquidation provisions would provide the holders of Common Stock with a greater amount per share than they would receive with the Later-Added Liquidation Rights in effect, then the following liquidation provision shall apply in lieu of the Later-Added Liquidation Rights.

(a) *Preferred Stock Preference.* In the event of any liquidation, dissolution, or winding up of the Corporation, either voluntary or involuntary, the holders of Preferred Stock shall be entitled to receive, prior and in preference to any distribution of any of the assets of the Corporation to the holders of Common Stock, by reason of their ownership thereof, an amount per share equal to the initial purchase price per share paid to the Corporation by the original purchaser of such share (as adjusted for stock splits, stock dividends, reclassification and the like) for each outstanding share of Preferred Stock then held by them. If, upon the occurrence of such event, the assets and funds thus distributed among the holders of Preferred Stock shall be insufficient to permit the payment to such holders of the full aforesaid preferential amounts, then the entire assets and funds of the Corporation legally available for distribution shall be distributed ratably among the holders of Preferred Stock in proportion to the preferential amount each such holder is otherwise entitled to receive.

(b) *Common Stock Participation.* Upon the completion of the distribution required by Section (a) above, the remaining assets of the Corporation available for distribution to stockholders shall be distributed among the holders of Preferred Stock and Common Stock pro rata based on the number of shares of Common Stock held by each (assuming conversion of all such Preferred Stock into Common Stock) until the holders shall have received an amount per share equal to fifty percent of the amount the Common Stock would have been entitled to receive had all shares of Preferred Stock been converted to Common Stock immediately prior to the distributions described, pro-

** Here and below, the proportions would be negotiated thresholds and need not be fifty percent.

vided, however, that no series of Preferred Stock shall receive such a pro rata distribution that is greater that the amount per share that such series of Preferred Stock would have been entitled to receive under the participation provisions of the Later-Added Liquidation Rights. If, upon the occurrence of such event, the assets and funds thus distributed among the holders of Preferred Stock and Common Stock shall be insufficient to permit the payment to such holders of the full aforesaid amounts, then the entire assets and funds of the Corporation legally available for distribution shall be distributed ratably among the holders of Preferred Stock and Common Stock in proportion to the number of shares of Common Stock held by each (assuming conversion of all such Preferred Stock into Common Stock).

(c) *Remaining Assets.* Upon completion of the distribution required by Section (b) above, the remaining assets of the Corporation available for distribution to stockholders shall be distributed among the holders of Preferred Stock using the method and formula described under the Later-Added Liquidation Rights, provided, however, that the distributions made under the Later-Added Liquidation Rights shall be calculated to take into account the distributions to Preferred Stock already made under these Common Stock Liquidation Rights as if they had been made via the Later-Added Liquidation Rights and provided, further, however, that any further distributions that may otherwise have been payable to the Common Stock under the Later-Added Liquidation Rights shall not be payable to the Common Stock thereunder.