

EFFECTIVE VS NOMINAL VALUATIONS IN VENTURE CAPITAL INVESTING

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INTRODUCTION

Any serious conversation between venture capitalist (VC) and entrepreneur¹ ultimately leads to the issue of valuation of the enterprise.² The discussions typically focus on some combination of:

- pre-money value, or the implied value of the company immediately before the financing occurs,³
- the amount of capital being raised, and
- post-money value, or the implied value of the company immediately after the financing.⁴

In turn, these values may be used to calculate a percentage of the company being sold.⁵ The entrepreneur will typically use these amounts to compare offers from different inves-

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1. The terms "entrepreneur" and "Founder" generally refer to one or more individuals who organize and operate a new business. Prior to raising capital from institutional investors, entrepreneurs may raise smaller amounts of capital from friends and family. For purposes of simplicity we use the terms "Founder" and "entrepreneur" to represent the entrepreneurial team as well as any friends and family investors prior to the first round of institutional financing.

2. CONSTANCE E. BAGLEY & CRAIG E. DAUCHY, *THE ENTREPRENEUR'S GUIDE TO BUSINESS LAW 440* (2003).

3. *Id.* at 442.

4. *Id.*

5. ALAN E. SALZMAN & L. JOHN DOERR, *The Venture Financing Process, Start-Up and Emerging Companies*, in *START-UP AND EMERGING COMPANIES: PLANNING, FINANCING AND OPERATING THE SUCCESSFUL BUSINESS 7-8 TO -9* (Gregory C. Smith ed., 2005). The percentage of the company sold equals the amount raised divided by the post-money value. This is the inverse of Formula 1. See *infra* note 21 and accompanying text.

tors,⁶ or, in the absence of multiple offers,⁷ as one of the primary items of negotiation.⁸

The focus on the nominal pre-money and post-money value and ownership percentage, though common,⁹ is misguided. All parties would be better served by observing the common sense advice to “follow the money” when evaluating the terms of any investment. By this, we mean that the participants should focus on the actual value that will flow to each party upon a monetization event (or exit),¹⁰ which will only partially be dependent upon the percentage ownership implied by the pre- and post-money valuation contained in the term sheet.¹¹ As obvious as this advice may seem, it typically

6. *Id.* In a study by Gordon Smith of companies that received “initial/seed” or “first stage” venture funding during the 12 month period ending March 31, 1998, almost 2/3 of the 97 companies that reported receiving offers from more than one VC accepted the highest offer. Smith believes that the results of his “survey support the widely held belief that valuation is extremely important to an entrepreneur’s decision to accept venture financing.” D. Gordon Smith, *How Early Stage Entrepreneurs Evaluate Venture Capitalists*, 4 J. Priv. Equity 33, 35 (2001).

7. Over 70% of the respondents to Gordon Smith’s survey reported receiving multiple offers, with a mean number of offers of 3.18. *Id.* at 33.

8. In addition to valuation, Smith suggests that entrepreneurs evaluate VCs on three other criteria: (1) performance of value added services, (2) the VC’s reputation, and (3) the VC’s attributes (for example, industry specialization). *Id.* at 35.

9. See, e.g., EDWIN L. MILLER, JR., PETER N. BARNES-BROWN & JEFFREY P. STEELE, *Venture Capital Financings of Technology Companies*, in INTERNET LAW AND PRACTICE § 3:6, 3-10 TO -11 (2002) (“The most important deal term in a venture capital investment is the valuation that the investors put on the company, frequently referred to as the ‘pre-money valuation’”); LEE R. PETILLON AND ROBERT JOE HULL, REPRESENTING START-UP COMPANIES § 7:4 (2003) (“The single most important aspect in any equity financing is the equity dilution, that is, the amount of equity to be issued to the investors”); STANDISH H. O’GRADY, *An Overview of Venture Capital*, in START-UP & EMERGING COMPANIES § 6, § 6.04[5] (Gregory C. Smith ed., 2005) (“Venture capitalists typically analyze the value of a particular deal on a ‘pre-money’ basis . . .”).

10. We use the term “exit” to refer to the event upon which a VC’s investment is monetized. The most common exits will be (i) a sale of the company, (ii) an initial public offering or (iii) a redemption or liquidation. See DANIEL I. DEWOLF AND ERIC M. ROTH, *Exit Strategies*, in START-UP & EMERGING COMPANIES § 19.01[2] (Gregory C. Smith ed., 2005).

11. As we demonstrate in Part II below, this is because the amount received upon exit is typically not allocated in accordance with the respective parties’ initial percentage ownership interests. The percentage ownership merely reflects how residual amounts will be allocated once certain other

goes unmentioned in even sophisticated discussions concerning the valuation of venture capital deals.¹² Indeed, some actually counsel against this advice, arguing that cash flows are not significantly affected by factors other than price, so these other factors should not be overemphasized.¹³

This Article explores how the structure of the typical venture capital transaction can significantly affect the distribution of value among various interested parties upon exit. The remainder of this Article is divided into four parts. Part I begins with a discussion of the valuation methodology typically used in venture capital transactions and goes on to introduce the distinction between nominal and effective valuation. Part II provides an overview of the terms of the typical preferred stock typically used in venture capital transactions, and explores how some common provisions of venture capital preferred stock can affect the cash flows upon an exit. Part III discusses the importance of these non-price terms.

I.

VENTURE CAPITAL VALUATION

The typical VC seeks to earn a target internal rate of return (IRR) across its investment portfolio.¹⁴ Of course, the inherently risky nature of venture capital inevitably leads to failed investments in even the most successful portfolio. Thus, the target IRR for any particular investment will be much higher than the target for the entire portfolio.¹⁵ The IRR re-

amounts are taken off the top. Furthermore, the parties percentage interest may change over time due to the terms of the VC's security.

12. See, e.g. THOMAS HELLMAN, A NOTE ON VALUATION OF VENTURE CAPITAL DEALS, Stanford University Graduate School of Business Note E-95 (2001), available at <http://www.business.uab.edu/studentdrive/danthony/Oct%2021/Note.VentureCapital.pdf>; MILLER ET AL., *supra* note 9, at § 3:6.

13. See, e.g., BAGLEY & DAUCHY, *supra* note 2, at 447-48 ("Many seasoned venture capitalists will tell you that no investor has ever made any significant money from [non-price provisions] and will argue that they receive far too much attention in the negotiation of a venture deal"); Ronald I. Gilson & David M. Schizer, *Understanding Venture Capital Structure: A Tax Explanation for Convertible Preferred Stock*, 116 HARV. L. REV. 874, 882-86 (2003) (discussing the general insignificance of dividend and liquidation preference provisions).

14. See O'GRADY, *supra* note 9, at § 6.03[1] (O'Grady uses the term return on investment ("ROI")).

15. *Id.*

quired for a particular investment will also be affected by a number of subjective factors, including the perceived risk of the investment (the greater the risk the higher the required IRR).

To determine the value of a particular investment opportunity, VCs often use some variation of a valuation technique known as the Venture Capital Method.¹⁶ Under this method, the VC first determines the amount that must be returned on a proposed investment at some future date (typically the projected exit date) to achieve the desired IRR for that investment.¹⁷ The VC then calculates a projected terminal value of the company by, for example, applying a price/earnings ratio to the projected earnings of the company at the projected exit date.¹⁸ Dividing the required return amount by the terminal value provides a percentage of the proceeds the VC must receive upon an exit to achieve the desired IRR.¹⁹

The VC will typically use this required percentage of exit proceeds as its required percentage ownership²⁰ to calculate a nominal post-money value, using the following formula:

FORMULA 1

Post-Money Value = Investment / VC Percentage Ownership²¹

The nominal pre-money value can then be calculated by using the following formula:

16. See HELLMAN, *supra* note 12, at § 1.1; WILLIAM A. SAHLMAN, A METHOD FOR VALUING HIGHER RISK LONG-TERM INVESTMENTS – THE “VENTURE CAPITAL METHOD,” Harvard Business School Note 9-288-006 (2003).

17. The method is sometimes described in terms of IRR and sometimes in terms of net present value. However described, it will lead to the same result. See HELLMAN, *supra* note 12, at 5.

18. The appropriate ratio is often a function of the industry being examined. See SAHLMAN, *supra* note 16, at 15-16.

19. See PETILLON & HULL, *supra* note 9, at § 7:4 (“The amount of equity required by the investors is a function of their desired return at the time in the future when the venture investors determine to sell their investment and realize their capital appreciation”).

20. We will make a simplifying assumption here that the VC believes there will be no future capital needs prior to exit. Otherwise, the VC will have to account for the future dilution from additional investments. *Id.*

21. See WILLIAM A. SAHLMAN, THE BASIC VENTURE CAPITAL FORMULA, Harvard Business School Note 9-804-642 at 3 (2004).

FORMULA 2

$$\text{Pre-Money Value} = \text{Post-Money Value} - \text{Investment}^{22}$$

The pre-money value represents the value attributable to all equity holders other than the VC,²³ and, together with the post-money value, is a mechanism for expressing the percentage of the company being purchased by the investor.

The pre-money value can be translated into a price per share by using the following formula:

FORMULA 3

$$\text{Price per share} = \frac{\text{Pre-Money Value}}{\text{shares deemed outstanding immediately prior to the financing}}^{24}$$

The following example illustrates these concepts. Assume that:

22. *See id.*

23. These holders include not only holders of shares actually outstanding prior to the investment, but holders of all other “fully diluted” shares then deemed outstanding. *See infra* note 24.

24. *See* MILLER ET AL., *supra* note 9, at § 3:6; Richard A. Mann, Michael O’Sullivan, Larry Robbins & Barry S. Roberts, *Starting From Scratch: A Lawyer’s Guide to Representing a Start-Up Company*, 56 ARK. L. REV. 773, 858 (2004). The shares outstanding are customarily calculated on a “fully diluted” basis. Subject to negotiations, fully diluted shares may be deemed to include (i) shares underlying any outstanding warrants and convertible securities, (ii) shares underlying outstanding employee stock options and (iii) shares reserved for issuance under employee options that are expected to be granted in the future pursuant to an agreed upon employee stock option pool (including any increase to this pool required by the VC). MILLER ET AL., *supra* note 9, at § 3:6. Including these shares in the calculation decreases the price per share (Mann et al., *supra* note 24, at 858) and therefore imposes the dilution caused by these shares on the Founders, even if they are never actually issued (for example, because options are terminated when an employee leaves the company or out-of-the money options expire unexercised). As a result, the VC may seek a large pre-money option pool, which in effect serves as a disguised valuation reduction. *Id.* Founders on the other hand will often seek a small pre-money option pool, since post-deal expansions of the option pool will dilute the Founders and the VC on a *pro rata* basis. *Id.* In comparing offers from different VCs, Founders should carefully evaluate the number of shares deemed outstanding that are used in calculating pre-money value.

- 15 million shares of common stock, representing 100% of a company, are owned by the company's Founder,
- the company needs to raise \$5 million today to achieve its goals, and
- after calculating a terminal value, the VC determines that, to meet its IRR requirement for this investment, it must receive 25% of the value of the company upon exit.

For the sake of simplicity, also assume no additional capital will be required²⁵ and no shares will be reserved for employee options.²⁶

The VC typically equates this required percentage with its desired percentage ownership and is thus able to calculate a post-money and pre-money value using Formulae 1 and 2 as follows:

$$\begin{aligned} \text{Post-Money Value} &= \$5 \text{ million} / 25\% \text{ (Formula 1)} \\ &= \$20 \text{ million} \end{aligned}$$

$$\begin{aligned} \text{Pre-Money Value} &= \$20 \text{ million} - \$5 \text{ million (Formula 2)} \\ &= \$15 \text{ million} \end{aligned}$$

A price per share can then be calculated using Formula 3 as follows:

$$\begin{aligned} \text{Price per share} &= \$15 \text{ million} / 15 \text{ million (Formula 3)} \\ &= \$1.00 \end{aligned}$$

This is the actual price per share the VC will pay for its investment.²⁷

An unstated assumption of the pre- and post-money value calculations is that the VC's percentage ownership equals the

25. See *supra* note 20.

26. See *supra* note 24.

27. An implicit assumption in calculating price per share is that each share of preferred stock is initially convertible into one share of common stock. This is typically the case for venture capital investments. See STEPHEN C. FERRUOLO, *Amended and Restated Certificate of Incorporation, in START-UP AND EMERGING COMPANIES: PLANNING, FINANCING AND OPERATING THE SUCCESSFUL BUSINESS* § 9A.03[5] (Gregory C. Smith ed., 2005). If the conversion ratio were other than 1:1, the price per share represents the price per share of common stock and the price per share of preferred stock would be adjusted accordingly.

percentage of the value the VC will receive upon exit. This assumption is rarely accurate, as a variety of features of the typical venture capital investment allocate the proceeds from an exit in a manner different than the initial percentage ownership interest.²⁸ The nominal pre- and post-money valuations ignore contractual provisions of the VC's investment that may (i) allocate value to the VC prior to dividing the residual value among the parties in accordance with their percentage ownership, or (ii) subtly change the parties' percentage ownership over time.

To better evaluate the terms of the investment, the participants should calculate "*effective*" values using the amount the participants expect to actually receive upon exit.²⁹ In other words, the effective values will take into account all value allocated to the VC upon the exit, including value allocated by reason of the contractual provisions of its investment. The nominal value will equal the effective value only if the terms of the investment do not provide for additional economics beyond the VC's original percentage ownership. The formulae for effective value are:

FORMULA 4

$$\text{Effective Post-Money Value} = \text{Investment} / \text{VC Percentage of Exit Proceeds}$$

FORMULA 5

$$\text{Effective Pre-Money Value} = \text{Effective Post-Money Value} - \text{Investment}$$

28. See *infra* Part III.

29. The effective value is a function of the percentage of proceeds received upon an exit. This percentage is often dependent upon a number of variables that cannot be determined until the time of exit. Thus, it is generally not possible to know the actual effective value at the time of investment. Nevertheless, the parties may examine the valuation as a function of these variables, weighting the probability of each outcome to calculate an expected effective value or range of effective valuations.

FORMULA 6

Effective Price per Share = Effective Pre-Money Value/shares deemed outstanding prior to the financing³⁰

Revisit the above example, in which the VC invests \$5 million in exchange for 25% of the company. As stated above, this investment implies a nominal pre-money value of \$15 million and a nominal post-money value of \$20 million.

Assume, however, that the terms of the investment provide that the VC will receive the first \$10 million of proceeds from any exit before the remainder is shared by all shareholders in accordance with their respective percentage ownership interests. This allocation is obviously better for the VC and worse for the Founder than an investment without such a provision, and the effective value should therefore be lower than the nominal value.

To calculate the effective value, the Founder must estimate the percentage of the proceeds that the VC will receive upon an exit.³¹ Thus, if the Founder estimates that the company will be sold for \$50 million, the VC will receive the first \$10 million *plus* 25% of the remaining \$40 million (or \$10 million), for a total of \$20 million. This is 40% of the \$50 million exit proceeds. In this case, the effective value formulae are:

$$\begin{aligned} \text{Effective Post-Money Value} &= \$5 \text{ million} / 40\% \\ &\quad (\text{Formula 4}) \\ &= \$12.5 \text{ million} \end{aligned}$$

$$\begin{aligned} \text{Effective Pre-Money Value} &= \$12.5 \text{ million} - \$5 \text{ million} \\ &\quad (\text{Formula 5}) \\ &= \$7.5 \text{ million} \end{aligned}$$

$$\begin{aligned} \text{Effective Price per Share} &= \$7.5 \text{ million} / \$15 \text{ million} \\ &\quad (\text{Formula 6}) \\ &= \$0.50 \end{aligned}$$

30. If a Founder had to pick a single variable to compare the valuation of competing offers of financing, the best choice is the Effective Price Per Share, because it takes into account both (i) the value allocated by reason of the contractual provisions of the investment and (ii) implicit valuation reductions due to changes in the size of the pre-money option pool. *See supra* note 24.

31. *See supra* note 29.

In other words, in a \$50 million exit, this investment structure (with a nominal pre-money value of \$15 million, in which the VC acquires 25% of the Company at \$1.00 per share) is equivalent to a structure with no special allocations at a pre-money value of \$7.5 million, in which the VC acquires 40% of the company at \$0.50 per share. Given this disparity, it should not be, as some find it, surprising that entrepreneurs are often amazed by the allocation of proceeds on exit.³²

A variety of provisions that affect the effective value are discussed below in Part II.

II.

CONTRACTUAL PROVISIONS

The investment security of choice in the vast majority of venture capital financed companies is convertible preferred stock.³³ In a study of over 200 financings from 1987 through 1999, over 94% used this investment vehicle.³⁴

Holders of preferred stock are entitled to certain rights, preferences or privileges that are not generally accorded to the holders of common stock. The most common of these are preferences in respect to the earnings or assets of the corporation, although the broad authority provided by governing corporation laws is such that virtually any combination of rights, preferences and privileges is possible.³⁵

The following discussion examines a number of features inherent in the typical venture capital preferred stock instrument that explain why the distribution of value is not necessa-

32. See, e.g., Timothy J. Harris, *Modeling the Conversion Decisions of Preferred Stock*, 58 BUS. LAW. 587, 589 n.6 (2002-2003).

33. Gilson & Schizer, *supra* note 13, at 875 ("The capital structures of venture capital-based U.S. companies share a remarkable commonality: overwhelmingly, venture capitalists make their investment through convertible preferred stock"); *Id.* at 878-879; MILLER ET AL., *supra* note 9, at § 3:10 ("The virtually universal structure for a VC investment is convertible preferred stock."); Joseph L. Lemon Jr., *Don't Let Me Down (Round): Avoiding Illusory Terms in Venture Capital Financing in the Post-Internet Bubble Era*, 39 TEX. J. BUS. L. 1, 5-6 (2003) ("In the vast majority of VC financings, VCs contribute funding in exchange for convertible preferred stock").

34. Steven N. Kaplan & Per Stromberg, *Financial Contracting Theory Meets the Real World: An Empirical Analysis of Venture Capital Contracts* 13 (Ctr. For Research in Sec. Prices, Working Paper No. 513, 2000), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=218175.

35. See, e.g., CAL. CORP. CODE § 400(a); DEL. CODE ANN. Tit. 8, § 151(a).

rily in proportion to the original percentage ownership implied by nominal value.

A. *Liquidation Preference*

Venture capital preferred stock (like most preferred stock) typically contains a liquidation preference.³⁶ This preference entitles the holder of preferred stock, upon liquidation (which typically includes a sale of the company),³⁷ to receive some specified value before holders of junior securities receive anything.³⁸ The preference thus establishes a minimum return for the investor before junior stakeholders share in the liquidation value of the enterprise.³⁹

1. *Basic Liquidation Preference*

In its simplest form, the liquidation preference is equal to the initial purchase price, insuring the investor will receive its money back before any value goes to junior stockholders.⁴⁰ In a downside scenario, where the liquidation preference is greater than the holder's percentage ownership interest of the exit proceeds, this protection can be quite valuable.

Upon an exit, holders of traditional (often called straight) convertible preferred stock have the option of either (i) receiving the liquidation preference or (ii) converting their shares into shares of common stock and receiving their percentage interest in the residual value (foregoing the liquida-

36. See Harris, *supra* note 32, at 588.

37. The definition of "liquidation" is a critical element of the liquidation preference. The parties will almost always negotiate the events that will constitute a "liquidation," typically including events such as mergers, or sales of the company or substantially all of its assets. MILLER ET AL., *supra* note 9, at § 3:11; Gilson & Schizer, *supra* note 13, at 884. In some cases, a liquidation will include an initial public offering, although it is more common for an initial public offering to result in forced conversion, effectively eliminating the liquidation preference. See *id.* at 885. This leads many commentators to dismiss the effect of liquidation preference on valuation. See, e.g., *id.*, at 883-885. We disagree with this view, among other things because it overstates the likelihood of exit through initial public offering. See *infra* notes 81-90 and accompanying text.

38. Harris, *supra* note 32, at 588-89; BAGLEY & DAUCHY, *supra* note 2, at 49.

39. Lemon, *supra* note 33, at 9.

40. BAGLEY & DAUCHY, *supra* note 2, at 449.

tion preference).⁴¹ They do not receive both. As a result, each holder of non-participating preferred stock has an indifference value; a total exit value for the entire enterprise at which the holder is indifferent between the amount it would receive with respect to its liquidation preference and the amount it would receive with respect to the underlying common stock receivable upon conversion. If the exit value is below the indifference value, the rational holder will not convert and thus take its liquidation preference; if the exit value is above the indifference value, the rational holder will convert.⁴² The indifference value is calculated as follows:⁴³

FORMULA 7

Indifference Value = Liquidation Preference / VC Percentage
Ownership

In the example above, if the VC purchased \$5 million of non-participating preferred stock with a simple liquidation preference at a \$15 million pre-money valuation, the indifference value would be calculated as follows:

Indifference Value = \$5 million / 25% (Formula 7)
= \$20 million

This means that for any exit resulting in total proceeds of less than \$20 million, the VC will choose to receive its liquidation preference and forego participation. For any exit resulting in total proceeds greater than \$20 million, the VC will convert its preferred stock into common stock and receive its 25% of the proceeds.

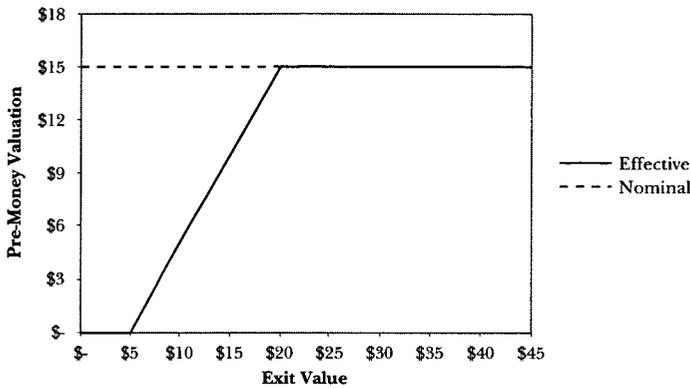
The graph below uses the above example to demonstrate the effect of a liquidation preference on effective valuation.

41. MILLER ET AL., *supra* note 9, at § 3:11. Sometimes the instrument will provide that the holder will receive the greater of the two amounts without having to go through the formality of converting. *Id.*

42. See Harris, *supra* note 32, at 589.

43. This formula assumes no other series of preferred stock. Additional series of preferred stock complicate the formula and require an adjustment to account for value distribution to other securities. See Harris, *supra* note 32.

GRAPH 1: BASIC LIQUIDATION PREFERENCE



As the graph demonstrates, if the total exit proceeds are greater than the indifference value (\$20 million in this example), the rational holder will convert the preferred stock into common stock upon a liquidation. Thus, for all total exit values at or above the indifference value, the effective pre- and post-money value will equal the nominal pre- and post-money value.

If the total exit value is less than or equal to the liquidation preference (\$5 million in this example), 100% of the exit value will go to the holder of preferred stock. Since the VC receives 100% of the exit proceeds, the denominator of Formula 4⁴⁴ is 100%, and the effective post-money value thus equals the amount of the investment (in our example, \$5 million versus the \$20 million nominal post-money value). As a result, the effective pre-money value will be \$0.⁴⁵

If the total exit value is greater than the liquidation value but less than the indifference value (that is between \$5 million and \$20 million), the effective pre- and post-money value will be some fraction of the nominal value (which is evidenced by the upward sloping portion of the effective value line).

44. Effective Post-Money Value = Investment / VC Percentage of Exit Proceeds.

45. Under Formula 5, Effective Pre-Money Value = Effective Post-Money Value - Investment. Since the Effective Post-Money Value equals the amount of the Investment, the Effective Pre-Money Value is thus \$0. In other words, since the Founders received none of the proceeds from the liquidation, the effective value of the Founders share of the company prior to the investment was \$0.

As a result of the foregoing, the liquidation preference will have its greatest effect until the exit value equals the liquidation preference. Above that amount, it will have a decreasing effect until the exit value equals the indifference value, at which point it will have no effect at all. This effect is illustrated in the table below:

Exit Value	% value received by VC upon Exit	Effective Pre-Money	% of \$15 mm Nominal Pre-Money
\$ 5 or below	100%	\$ 0	0%
\$ 10	50%	\$ 5	33%
\$ 15	33%	\$ 10	67%
\$ 20 or above	25%	\$ 15	100%

2. Multiple Liquidation Preference

In venture capital transactions, the liquidation preference is sometimes equal to a multiple of the initial purchase price.⁴⁶ For example, if the VC invests \$5 million in a preferred stock with a 2x liquidation preference, upon a liquidation the VC will receive the first \$10 million of proceeds before junior stakeholders receive anything. Although 1-2x is more common, investors have received liquidation preference multiples of five times or more.⁴⁷

Increases to the multiple will increase both the liquidation preference and the indifference value. For example,

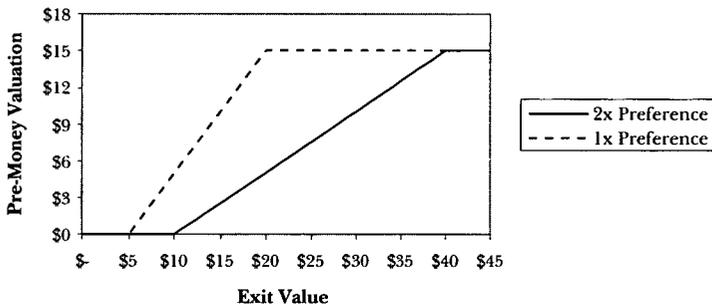
46. The law firm of Fenwick & West found that multiple liquidation preferences were contained in 12-44% of northern California venture capital deals contained in an unscientific quarterly survey conducted by the firm from April 2003 through March 2005. See FENWICK & WEST LLP, TRENDS IN TERMS OF VENTURE FINANCING IN THE SAN FRANCISCO BAY AREA (FIRST QUARTER 2005) 3 (2005), http://www.fenwick.com/docstore/VCSurvey/Q1_05_VC_Survey_Trends_Report.pdf.

47. Colin Blaydon & Michael Horvath, *Liquidation Preference: What You May Not Know*, VENTURE CAPITAL JOURNAL, Mar. 1, 2002, at 45. See also MILLER ET AL., *supra* note 9, at § 3:11; See GEORGE BENE, NOTE ON PRIVATE EQUITY DEAL STRUCTURES, Tuck School of Business at Dartmouth Case No. 5-0006 at 6 (2005), available at http://mba.tuck.dartmouth.edu/pecenter/research/pdfs/Deal_Structure_Note.pdf

doubling the multiple, say from 1x to 2x, will (i) double the liquidation preference, and (ii) by doubling the numerator of Formula 7,⁴⁸ double the indifference value. This means, among other things, an exit would have to yield twice the aggregate proceeds it otherwise would before the Founder will receive any value in a downside scenario or a rational holder will convert in an upside scenario.

The graph below compares the effective valuation for two different \$5 million investments, each of which buys 25% of the company. The first investment has a 1x liquidation preference, and the second investment has a 2x liquidation preference (i.e., the first \$10 million of value is distributed to the VC).

GRAPH 2: 1X VS 2X LIQUIDATION PREFERENCE



As the graph indicates, the indifference value doubles from \$20 million for the investment with the 1x multiple (\$5 million/25%) to \$40 million for the investment with the 2x multiple (\$10 million /25%). Implicitly acknowledging the dramatic effect multiple liquidation preferences can have on effective value, many commentators warn against their use because of the significant negative effects these provisions can have on the Founder's economics.⁴⁹ VCs often justify the use of liquidation preferences to protect against downside risk or to bridge a gap in valuation perceptions.

48. Indifference Value = Liquidation Preference / VC Percentage Ownership.

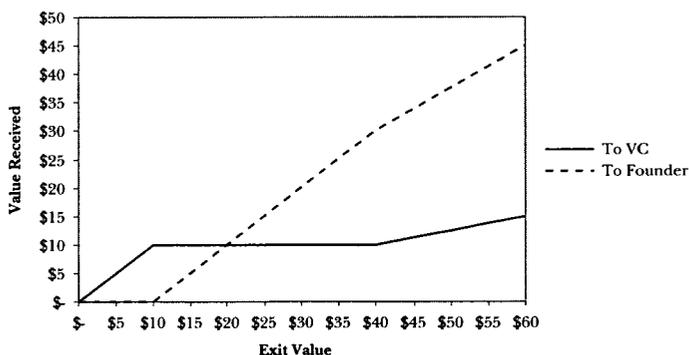
49. See MILLER ET AL., *supra* note 9, at § 3:11.

3. *Effect of Catch-Up*

As Lerner and Hardymon note, “[c]onceptually, traditional convertible preferred stock allows the entrepreneur to ‘catch up’ after the investor’s liquidation preference is secured.”⁵⁰ In other words, all increases in exit value greater than the liquidation preference but less than the indifference value go to the Founder. The VC does not participate at all. Once the entrepreneur catches up to his percentage interest (which happens for all exits with proceeds at or above the indifference value), the parties split the aggregate exit proceeds in accordance with their respective ownership interests.

This catch-up effect is demonstrated in the graph below, which is based on a \$5 million investment that buys 25% of the company and carries a 2x liquidation preference. The graph demonstrates that the value received by the VC remains flat between the liquidation preference (\$10 million) and the indifference value (\$40 million).

GRAPH 3: EFFECT OF CATCH-UP



This allocation scheme creates a misalignment of interest between the VC and the Founder with respect to exits with values in the range between the liquidation preference (\$10 million in this example) and the indifference value (\$40 million in this example). Unless the VC believes that the exit value can be increased above its indifference point, it will have no incentive to seek a higher exit value and may therefore (i) seek an exit prematurely, before the value of the enterprise is

50. JOSH LERNER & FELDA HARDYMON, A NOTE ON PRIVATE EQUITY SECURITIES, Harvard Business School Case Study No. 9-200-027 at 3 (2001).

maximized and (ii) once an exit decision has been made, seek terms other than increased monetary value (for example, certainty to close, form of consideration, indemnification caps). On the other hand, the Founder will favor a riskier course of action by postponing an exit, and once an exit decision has been made, will likely be unwilling to give up any increase in exit value in this range, which accrues 100% to the Founder, for these other items, the benefit of which are split with the VC.⁵¹

B. *Participating Preferred Stock*

In some venture capital transactions, upon a liquidation, after receiving their liquidation preference, the holders of preferred stock “participate” in the distribution of the remaining assets of the company as if they had converted their shares of preferred stock into common stock.⁵² According to one survey, this participation feature is found in the vast majority of venture capital deals.⁵³ This participation feature provides

51. See Jesse M. Fried & Mira Ganor, *Common Shareholder Vulnerability in Venture-Backed Startups* 34 (UC Berkeley Public Law Research Paper Group, Paper No. 784610, 2005), available at <http://ssrn.com/abstract=784610>, which describes the misalignment this way:

Because of the preferred shareholders’ liquidation preference, in certain situations they will gain less from increases in firm value than they lose from decreases in firm value. This effect may cause a board dominated by preferred shareholders to choose lower-risk, lower-value strategies over high-risk, high-value investment strategies. Preferred shareholders’ payoff asymmetry is likely to affect not only investment decisions but also the choice between (a) steering the company toward a liquidity event and (b) continuing to run the company as an independent business. In particular, the difference in payoffs will bias preferred-dominated boards in favor of immediate “liquidity events” (liquidation, merger, IPO) even if expected firm value would be higher when operating the firm as a private growing concern. The reason is simple. Liquidity events promise a certain payout. Continuing to operate the firm as an independent company may expose the preferred-owning VCs to risk without sufficient opportunity for gain.

52. Harris, *supra* note 32, at 589.

53. The law firm of Fenwick & West found that participation provisions were contained in 60-81% of northern California venture capital deals contained in an unscientific quarterly survey conducted by the firm from April 2003 through March 2005. See FENWICK & WEST LLP, *supra* note 46, at 3.

holders of the preferred stock additional value upon an exit above what would otherwise be their indifference value.

To see the effects of the participation feature, revisit the example above, in which the VC invests \$5 million in exchange for a straight (that is, non-participating) preferred stock with a 2x liquidation preference that is convertible into 25% of the company. If the company is sold for \$50 million and the VC does not convert its shares of preferred stock, the first \$10 million of proceeds go to the VC to satisfy the liquidation preference, and the remaining \$40 million go to the Founder. If the VC foregoes this liquidation preference and converts its shares of preferred stock into common stock, the VC will receive 25% of the \$50 million exit proceeds (or \$12.5 million) and the Founder will receive the remaining \$37.5 million. As a result the rational VC will convert.

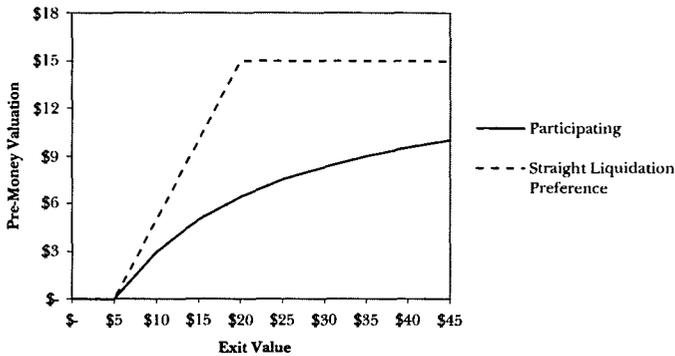
If the security is a participating preferred stock, however, the VC will receive the initial \$10 million plus 25% of the remaining \$40 million (or \$10 million), for total proceeds of \$20 million in the aggregate. The Founder will receive the remaining \$30 million.

The following table illustrates the effect of a participation feature at a \$50 million exit, giving effect to both a 1x and 2x liquidation preference multiple:

	1x Liquidation Preference		2x Liquidation Preference	
	No Participation	Participation	No Participation	Participation
Liquidation Preference	\$ -	\$ 5.0	\$ -	\$ 10.0
Participation Amount	\$ 12.5	\$ 11.3	\$ 12.5	\$ 10.0
Total Value to VC	\$ 12.5	\$ 16.3	\$ 12.5	\$ 20.0
% of \$50 exit proceeds	25.0%	32.5%	25.0%	40.0%
Effective Pre-Money	\$ 15.0	\$ 10.4	\$ 15.0	\$ 7.5
% of Nominal Pre-Money	100.0%	69.2%	100.0%	50.0%

The graph below uses the above example with a 1x liquidation preference to demonstrate the effect of a participation feature on effective valuation.

GRAPH 4: EFFECT OF PARTICIPATION FEATURE



If the exit value is less than the liquidation preference (\$5 million in this example), the participation feature will not apply and will therefore not alter the effective value. Once the exit value exceeds the liquidation preference, the greater the exit value, the less relevant the liquidation preference becomes on a percentage basis, and the higher the effective value.⁵⁴ As the graph shows, with a non-participating (straight) preferred stock, for all exit values above the indifference value (\$20 million in this example), the effective value will equal the nominal value.⁵⁵ The effective value for participating preferred stock, on the other hand, will approach (but never equal) the nominal value.

One advantage to the participation feature is that the VC and the Founder always participate in increases in exit value above the liquidation preference. Consequently their interests are better aligned for any exit with aggregate values above the liquidation preference but below what would otherwise be the VC's indifference value.⁵⁶

Many entrepreneurs complain about the "double dip" they believe to be inherent in participating preferred stock, arguing that the VC should get either its liquidation preference or the distribution it would receive by converting into common stock.⁵⁷ As a result, they will sometimes negotiate for

54. See MILLER ET AL., *supra* note 9, at § 3:11.

55. See *supra* Part II.A.1.

56. See *supra* note 51 and accompanying text.

57. BAGLEY & DAUCHY, *supra* note 2, at 451. See MILLER ET AL., *supra* note 9, at § 3:11.

a ceiling or cap on the level of participation.⁵⁸ Where a ceiling is placed on the participation, upon liquidation, the VC receives the liquidation preference plus the as-converted value up to a certain multiple (say 3-5x) of the initial investment, at which point the preferred security will stop accruing additional value.⁵⁹ The VC will once again face an indifference point at which it will convert the security into common stock and forego the liquidation preference and participation amount. The ceiling on participation thus reintroduces a gap during which the VC does not participate in any increase to the exit value. As a result, it also reintroduces the misalignment of interest between the preferred and common shareholders with respect to exits in this range.⁶⁰

C. Cumulative Dividends

Given the limited cash available to most start-up companies, current cash dividends are generally considered undesirable, and therefore rarely declared or paid.⁶¹ Nevertheless, depending on whether a dividend is cumulative or non-cumulative, it may have an effect on the distribution of proceeds upon an exit, and therefore upon effective valuation.

If a dividend is non-cumulative it is not due unless declared.⁶² If not declared for a particular period, the company owes no dividends for that period. Because boards are unlikely to declare a dividend when not required to,⁶³ non-cumulative dividends will typically not alter effective valuations.⁶⁴

58. The law firm of Fenwick & West found that of the financings that had participation, caps were contained in 34-53% of northern California venture capital deals contained in an unscientific quarterly survey conducted by the firm from April 2003 through March 2005. See FENWICK & WEST LLP, *supra* note 46.

59. See MILLER ET AL., *supra* note 9, at § 3:11; BAGLEY & DAUCHY, *supra* note 2, at 451-452.

60. See Fried & Ganor, *supra* note 51, at 34.

61. Gilson & Schizer, *supra* note 13, at 261; BAGLEY & DAUCHY, *supra* note 2, at 449. See also Michael D. Klausner & Kate Litvak, *What Economists Have Taught Us About Venture Capital Contracting*, in BRIDGING THE ENTREPRENEURIAL FINANCING GAP: LINKING GOVERNANCE WITH REGULATORY POLICY (Michael Whincop ed., 2001).

62. Mann et al., *supra* note 24, at 819.

63. MILLER ET AL., *supra* note 9, at § 3:12.

64. See BAGLEY & DAUCHY, *supra* note 2, at 450.

VCs will sometimes require a provision calling for cumulative dividends in their preferred stock instrument.⁶⁵ A cumulative dividend that is not paid (whether or not declared) is still owed to the preferred shareholders.⁶⁶ In other words, an unpaid cumulative dividend increases the VC's claim to the proceeds from an exit. This is typically accomplished by adding the accrued but unpaid dividend to the liquidation preference.⁶⁷ For example, if the \$5 million investment from the above example bears a cumulative dividend of 10%, compounded annually,⁶⁸ and the company is sold in two years, the liquidation preference will be \$6.05 million, assuming there is no multiple liquidation preference.

The magnitude of the effect of adding cumulative dividends to liquidation preferences is a function of a number of variables, including the dividend rate and time to exit. The effect of the cumulative dividend is equivalent to that of a multiple on liquidation preference that increases over time. For example, a 10% quarterly compounding cumulative dividend will double a 1x liquidation preference in approximately 7 years. If the company were liquidated at the end of that period, the effect would be the same as a constant 2x liquidation preference.⁶⁹

Cumulative dividends may also have an effect on the percentage ownership of the VC depending on the nature of the

65. The inclusion of a cumulative dividend is subject to substantial regional variation. For example, the law firm of Fenwick & West found that dividends were cumulative in 4-12% of Northern California venture capital deals contained in an unscientific quarterly survey conducted by the firm from April 2003 through March 2005. See FENWICK & WEST LLP, *supra* note 46, at 3. The law firm of Fish & Richardson conducted a similar survey in the Mid-Atlantic, New York Metro, New England, Southwest and Southern California regions and found that dividends were cumulative in 43-48% of the deals in these regions from April 2004 through March 2005 (noting a significant regional variation in the use of cumulative dividends). See FISH & RICHARDSON P.C., Q1 '05 MULTIMARKET VENTURE CAPITAL SURVEY 1 (2005), available at <http://www.fr.com/news/articleDetail.cfm?articleid=462>.

66. ROBERT J. HAFT, VENTURE CAPITAL AND SMALL BUSINESS FINANCING § 1:20 (2005).

67. BAGLEY & DAUCHY, *supra* note 2, at 450.

68. The more frequently a dividend is compounded, the faster the liquidation preference will increase, and the greater the effect on effective value. A 10% dividend compounded annually is equivalent to a 9.6% dividend compounded quarterly.

69. See *supra* Part II for the economic effects of this event.

conversion formula contained in the preferred stock instrument. Typically, shares of convertible preferred stock issued in venture capital transactions convert into a number of shares of common stock calculated by dividing (i) the initial purchase price (often called the stated value) by (ii) a fixed conversion price.⁷⁰ Because it does not cause the VC's percentage interest in the company to change over time, this provision will not alter the effective value of the investment.

Sometimes, however, the numerator in the conversion formula will equal the stated value plus accrued but unpaid cumulative dividends.⁷¹ Under this formula, the VC's percentage interest in the company increases over time, which can have a significant effect on the fully diluted capitalization and effective value, equivalent to the effect of paying PIK dividends described in Part II.D below.

D. *Pay-in-kind (PIK) Dividends*

Sometimes, instead of dividends being paid in cash or added to the liquidation preference, they will be paid in additional shares of preferred stock,⁷² generally valued at the same price per share paid in the original investment. For example, if preferred stock with an initial aggregate liquidation preference of \$5 million has a 10% cumulative dividend payable annually, the preferred holder will be issued additional preferred stock with an aggregate liquidation preference of \$500,000 at the end of the first year. This additional preferred stock will also bear dividends, so both the liquidation preference and the VC's percentage of the company grow at a compounding rate.

70. BAGLEY & DAUCHY, *supra* note 2, at 455.

71. See PETILLON & HULL, *supra* note 9, at § 4:3. Alternatively, the numerator may equal liquidation preference, which in turn will equal the stated value plus accrued but unpaid dividends.

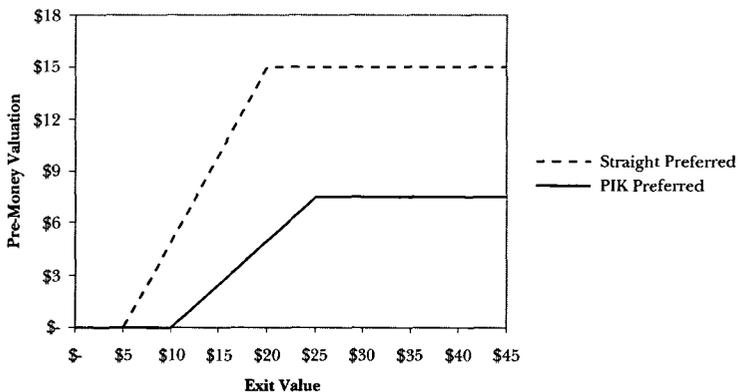
72. MILLER ET AL., *supra* note 9, at § 3:12. Alternatively, the PIK dividend may simply be added to the liquidation preference of the share of stock on which it was declared. PETILLON & HULL, *supra* note 9, at § 4:3. In this instance (which is equivalent to a passed cumulative dividend), if the conversion formula is based on the liquidation preference rather than the initial purchase price (see *infra* note 75) the holder will receive additional common shares based on the amount of the PIK dividend. PETILLON & HULL, *supra* note 9, at § 4:3. The economic effect of the two forms of PIK dividends is identical.

To demonstrate the effect of a PIK dividend, revisit the example above, in which the VC purchases \$5.0 million of non-participating preferred stock with a 1x liquidation preference at a \$15.0 million pre-money valuation. Assume that each share of preferred stock has a \$1 liquidation preference and that the preferred stock bears PIK dividends, payable quarterly, at an annual rate of 10%. The following table shows the capitalization of the company immediately following the VC investment and upon exit, seven years later.

	Post-Investment			At Exit (7 years)		
	Shares	Liquidation Preference	Percentage	Shares	Liquidation Preference	Percentage
VC	5	\$5	25%	5	\$5	20%
PIK Dividends	—	—	—	5	\$5	20%
Founder	15	N/A	75%	15	N/A	60%
Total	20	\$5	100%	25	\$10	100%

The graph below uses the investment described above assuming a non-participating preferred stock and an exit in 7 years, to demonstrate the effect of a PIK dividend on effective valuation.

GRAPH 5: EFFECT OF PIK DIVIDEND



Regardless of the amount of exit proceeds, PIK dividends effectively:

- increase the aggregate liquidation preference (from \$5 million to \$10 million in this example);
- transfer percentage of residual exit value from the Founder to the VC (from 25% to 40% in this example); and
- because the liquidation preference increases at a faster rate than the VC's percentage ownership, increase the VC's indifference value (from \$20 million to \$25 million in this example).⁷³

As a result, PIK dividends will lower the effective value for any exit with proceeds above the original liquidation preference. Until the aggregate exit proceeds equal the new indifference value, the VC will have the benefit of the additional liquidation preference. Once the aggregate exit proceeds exceed the indifference value, the VC will have the benefit of the additional percentage interest.⁷⁴

Thus, unlike straight convertible preferred stock, the effect of PIK dividends does not disappear for exits yielding aggregate proceeds above the indifference value. Indeed, because the PIK dividend effectively transfers exit value, unlike a participating feature, the effect on effective value does not diminish with increases in aggregate exit proceeds.

E. Warrants

A warrant is a contractual right, typically exercisable over a specified period of time, that entitles the holder to buy a stated number of shares of common stock at a specified price, typically called the "exercise" or "strike" price.⁷⁵ Venture capital companies sometimes issue warrants to purchasers of preferred stock as a "sweetener" that provides extra value.⁷⁶ The

73. Under Formula 7, Indifference Value = Liquidation Preference / VC Percentage Ownership. An x% dividend on a series of preferred stock that is convertible into y% of the issuer will increase the Liquidation preference by x%, but will only increase the Percentage Ownership by x% of y%.

74. Of course if the preferred stock is participating, the VC will have the benefit of both the additional liquidation preference and the additional percentage interest. See *supra* part II.B.

75. Haft, *supra* note 66, at § 1:20.

76. See Bene, *supra* note 47, at 7. (Sometimes the company will actually issue a warrant. Sometimes a right to invest additional cash in the company at some price is set forth in some other agreement [for example, a purchase

issuance of warrants as a sweetener is often referred to as warrant coverage.

Unlike the holder of other equity securities, the holder of a warrant has no interest in the earnings of the corporation. Such an interest is acquired only upon exercise of the warrant, when the underlying common stock is acquired.⁷⁷ The rational holder of a warrant will not exercise unless the value of the underlying common stock exceeds the exercise price.⁷⁸ As a result, a warrant will shift value to the investor only if the value per share of common stock received at the exit event exceeds the exercise price.

The net exercise value of a warrant to purchase a share of common stock at any time equals the implied value per share of common stock on that date less the per share exercise price.⁷⁹ This can be expressed arithmetically:

FORMULA 8

$$\text{Net Warrant Value} = ((\text{Common Stock Value}) - (\text{Exercise Price})) \\ \times \text{number of warrant shares}^{80}$$

The implied per share value of the common stock will increase as the aggregate exit value increases. Thus, an increase in aggregate exit value will cause more value to be shifted to the VC by reason of the warrants. As a result, the higher the exit value, the greater the warrants' impact on effective value.

The graph below demonstrates this point by comparing the following two investments:

1. A \$5 million investment at a \$15 million nominal pre-money valuation in a non-participating preferred stock with a 1x liquidation preference; to

agreement or investor rights agreements]. The analysis in either case is identical.)

77. JEROME L. COBEN & MICHAEL A. WORONOFF, *Types of Securities, in START-UP AND EMERGING COMPANIES: PLANNING, FINANCING AND OPERATING THE SUCCESSFUL BUSINESS* 8-29 (Gregory C. Smith ed., 2003).

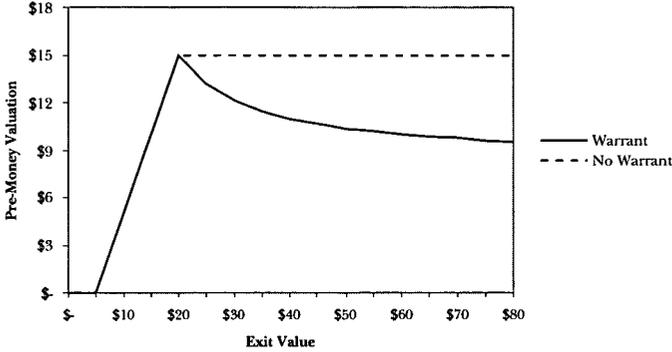
78. In this circumstance the warrant is said to be "in-the-money."

79. Stephen I. Glover, *Solving Dilution Problems*, 51 *BUS. LAW.* 1241, 1250 (1996).

80. The additional exit proceeds a VC will expect to receive is the Net Warrant Value less the dilution imposed on the initial investment by reason of the exercise of the warrant.

2. An identical investment in which the investors also receive 20% warrant coverage (that is, warrants exercisable for \$1 million of common stock) at a strike price equal to the per share conversion price of the preferred stock.

GRAPH 6: EFFECT OF WARRANTS



Until the aggregate exit proceeds equal the indifference value (\$20 million in this example) the warrants are out-of-the-money and have no effect. Once the aggregate exit proceeds exceed the indifference value, the warrants become in-the-money and they begin to have an effect on effective value. Similar to PIK dividends, and unlike straight convertible preferred stock, the effect of the warrants does not disappear above the indifference value. Indeed, unlike PIK dividends and the participation feature, increases in aggregate exit value above the indifference value continue to result in lower effective value, approaching the effective value that would exist if the VC had initially been issued the shares underlying the warrants for free.

III.

IMPORTANCE OF NON-PRICE PROVISIONS ON VALUATION

Some commentators and market participants minimize the importance of the non-price contractual provisions of venture capital investments.⁸¹ For example, some argue that the

81. See, e.g., Gilson & Schizer, *supra* note 13, at 882 (“[T]he core preferences that define convertible preferred stock – a preference over common stock in dividend payments and liquidation – have only limited significance in the venture capital context”).

effects of these provisions are only material in downside (or sideways) cases, and because VCs do not make their money in these circumstances, the provisions are irrelevant.⁸² There are at least three responses to this view.

- First, although some of these provisions (for example, liquidation preferences and cash dividends) do indeed have a greater effect in downside (or sideways) cases, others (for example, PIK dividends and warrants) have a more significant effect in upside cases.
- Second, even for provisions where the percentage effect is low, the effect in terms of absolute dollars can still be large, at least for some of the parties. For example, at a \$200 million exit even a transfer of five percent of the ownership of the company will transfer \$10 million of value from Founder to VC.
- Finally, the argument is premised on the view that the non-price terms will not matter to the VC across its portfolio because even one grand-slam investment will create wealth that outweighs the relatively minor value given up in the portfolio's downside cases. Even accepting this premise, the effect will still matter to the Founder, who after all has only one company (or at best, a few). Thus, the Founder cannot count on a portfolio effect and, as a result, allocation of value in the downside or sideways case does matter to the Founder.

Others are willing to concede that these non-price provisions potentially have significant economic effects even in upside cases. These commentators argue that the provisions are nevertheless irrelevant because, in success, the special allocations will likely go away upon the company's initial public offering.⁸³

82. See BAGLEY & DAUCHY, *supra* note 2, at 447-48.

83. See Gilson & Schizer, *supra* note 13, at 883-85. See also BAGLEY & DAUCHY, *supra* note 2, at 446:

When negotiating the rights and privileges afforded the preferred stock, entrepreneurs should keep in mind that if all goes well and the venture performs as projected, the venture capitalists will convert their preferred stock into common stock (upon an initial pub-

This view has at least two flaws. First, it vastly overstates the likelihood of exit through initial public offering. By an overwhelming majority, venture capital exits are accomplished through sales rather than public offerings.⁸⁴ For example, according to Thomas Venture Economics and the National Venture Capital Association, there were 132 venture backed initial public offerings in the United States from January 2003 through March 2005,⁸⁵ compared to 705 merger and acquisition transactions during that same period.⁸⁶ Thus, about 85% of the time, the special allocations will be of consequence rather than eliminated.⁸⁷ Second, although some of these provisions (for example, liquidation preferences and cash dividends) are typically (although not always) eliminated upon conversion in connection with an initial public offering, several others (for example, PIK dividends and warrants) generally survive.

Contrary to these views, our experience is more consistent with that of Bagley and Dauchy, who note that “[e]xperienced venture capitalists are acutely aware of the economic value of the rights and preferences of the stock they agree to buy.”⁸⁸ Furthermore, while many Founders apparently are not so aware of the economic effects of these non-price terms at the time of the initial investment,⁸⁹ they often become painfully

lic offering or, in some cases, upon a successful sale of the company). Upon conversion, most, if not all, of the bells and whistles go away. As a result, if the company is successful, all the protective devices will have had little or no effect on the return to the founders and the other holders of common stock.

84. See Harris, *supra* note 32, at 587.

85. National Venture Capital Association, *Venture-Backed IPO Market Remained Weak in Q2 2005*, VENTURE ECONOMICS NEWS, June 30, 2005, http://www.ventureeconomics.com/vec/news_ve/2005VEpress/VEpress06_30_05.pdf.

86. National Venture Capital Association, *Venture Backed M&A Valuations Rose 56% in Q1 2005*, VENTURE ECONOMICS NEWS, May 4, 2005, http://www.ventureeconomics.com/vec/news_ve/2005VEpress/VEpress05_04_05.pdf.

87. Of course if, as extremely likely, the form of exit will have an effect on cash flows, the probability of each outcome should be assessed to calculate a weighted effective value.

88. BAGLEY & DAUCHY, *supra* note 2, at 472 (noting that if the Founder insists on a high valuation, the VC will in turn impose tough terms, including such terms as a participation feature and high cumulative dividends).

89. Blaydon & Horvath, *supra* note 47, at 45.

aware of the effects when the pie is ultimately split⁹⁰ – leading to the conclusion that these provisions are indeed often quite important. As a result, it is in both parties interest to quantify the economic value of the non-price terms of the investment at the outset to allow entrepreneurs to better evaluate various investment proposals and VCs to better structure their investments to achieve their desired IRR.

IV.

CONCLUSION

In evaluating any offer of funding, the participants should focus on the actual value that will flow to each party upon an exit, which will be only partially dependent upon the percentage ownership implied by the pre- and post-money valuation contained in the term sheet. As discussed above, cash flows can also be significantly affected by terms other than price contained in the typical venture capital investment.

As described in the table below, different non-price provisions will have more or less value depending on the relative success of the deal. The table below uses the following definitions, which are typical for the industry⁹¹: upside deals, defined as deals that work out in accordance with the optimistic expectation of the parties and produce large gains, often in the 5-10x range; sideways deals, defined as deals that produce no or insignificant gains, say in the range of 1-2x; downside deals, defined as deals that turn out badly where the company is shut down or sold for less than the money invested.

90. Harris, *supra* note 32, at 589.

91. See Posting of Valuation to http://avc.blogs.com/a_vc/2004/07/valuation.html. (July 6, 2004).

	<u>Upside Deal</u>	<u>Sideways Deal</u>	<u>Downside Deal</u>
Straight Liquidation Preference	<i>None</i>	<i>None</i>	<i>Great</i>
Multiple Liquidation Preference	<i>Some (depends on multiple)</i>	<i>Great</i>	<i>None</i>
Participation Feature	<i>Some (decreases with increase to exit value)</i>	<i>Great</i>	<i>None</i>
Cumulative Dividends	<i>Depends on conversion ratio</i>	<i>Great</i>	<i>None</i>
PIK Dividends	<i>Great</i>	<i>Great</i>	<i>None</i>
Warrants	<i>Great (increases with increase to exit value)</i>	<i>Depends on strike price</i>	<i>None</i>

As a result of the consequences, these terms should not be evaluated individually in a vacuum. Various combinations can result in equivalent effective valuations depending on various exit assumptions. As a result, the parties should use the effective value method introduced in this Article as a means to measure the potential effect of the relevant combination of terms being proposed. At the least, use of the effective value method should ensure better understood outcomes and prevent surprises and misunderstandings at the time of exit.⁹²

92. In addition, by carefully examining the types of non-price provisions the VC proposes, entrepreneurs can learn a great deal about how the VC views the risks inherent in the particular investment. Likewise, the VC can gain insight into the entrepreneur's true thoughts by gauging an *informed* response to the proposed provisions. Thus, the contractual provisions may act as a signal to each party of the unspoken assumptions of the other.

