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## Note on Private Equity Deal Structures

### Introduction

**Term Sheets** are brief preliminary documents designed to facilitate and provide a framework for negotiations between investors and entrepreneurs. A term sheet generally focuses on a given enterprise's valuation and the conditions under which investors agree to provide financing. The term sheet eventually forms the basis of several formal agreements including the "Stock Purchase Agreement," which is a legal document that details who is buying what from whom, at what price, and when.

The process of arranging venture financing is challenging. Negotiating deals with terms that are satisfactory to both sides and ensuring that stakeholders' interests are properly aligned is crucial. This process begins with a term sheet.

The paragraphs below describe the key financial items in most term sheets, and numerical examples are included to illustrate the most important concepts. Typically, term sheets also contain additional control provisions.

### Valuation

Traditionally, companies in the industry assign value to enterprises as the result of a financing event. This approach is based on a per-share value and the valuation is on a fully diluted basis.

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*This case was prepared by George Bene T'02 under the supervision of Adjunct Assistant Professor Fred Wainwright and Professor Colin Blaydon of the Tuck School of Business at Dartmouth College. It was written as a basis for class discussion and not to illustrate effective or ineffective management practices.*

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**Pre-money value** is the valuation of a company immediately before an injection of capital occurs. The pre-money value may be calculated as follows:

$$\text{Pre Money Value} = \text{Total Number of Old Shares} * \text{Share Price}$$

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

**Post-money value** is the valuation of a company including the capital provided by the current round of financing:

$$\text{Post Money Value} = \text{Pre Money Value} + \text{Investment}$$

$$\text{Post Money Value} = \text{Investment} / \text{Percent Ownership Acquired}$$

$$\text{Post Money Value} = \text{Total Shares (includes old and new)} * \text{Share Price}$$

$$\text{Share Price} = \text{Investment} / \text{Number of new shares issued}$$

**Step-ups** describe the increase in share price from one financing round to the next. They also describe the increase in the value of the company since the last round of financing. Step-ups help motivate all the shareholders (both management and investors) to remain engaged in the enterprise’s effort to build value. Note that if options have been issued between financings, each of the two methods of calculating the step up will give different results. The method using share price is the one generally cited.

$$\text{Step-up} = \text{New round share price} / \text{Previous round share price}$$

$$\text{Step-up} = \text{New round pre-money valuation} / \text{Previous round post-money valuation}$$

**EXAMPLE**

Startup Company is a private company that is wholly owned by its founders, as shown below:

Owners/Investors	Security	Shares	Investment	Share Price
Founders	Common	6,000,000	\$50,000	\$0.0083

The founders need additional capital to expand the business and arrange venture capital financing:

Owners/Investors	Security	Shares	Investment	Share Price
Series A	Convertible preferred	4,000,000	\$2,000,000	\$0.50

What are the pre and post-money valuations of Round A?

Post-money = \$2,000,000 (investment) / 40% (ownership acquired) = \$5,000,000  
 Post-money = 10,000,000 (new total shares) \* \$0.50 (price per share) = \$5,000,000

Pre-money = 6,000,000 (previous total shares) \* \$0.50 (share price) = \$3,000,000  
 Pre-money = \$5,000,000 (post-money valuation) - \$2,000,000 (investment) = \$3,000,000

Step-up = \$0.50 (new round share price) / \$0.0083 (previous share price) = 60  
 Step-up = \$3,000,000 (new round pre-money) / \$50,000 (last round post-money) = 60

**Securities**

Different investments have varying risk/reward characteristics which call for different types of securities to accommodate investors' goals. The most common types used in venture capital transactions are described below.

**Common stock** is a type of security representing ownership rights in a company. Common stock is generally not convertible into any other type of security. It usually entitles the owner to one vote per share as well as any future dividend payments that may be issued at the discretion of the Board of Directors. Furthermore, no special rights (e.g. anti-dilution provisions, liquidation preferences, etc.) are generally associated with common stock. Usually, company founders, management and employees own common stock while investors own preferred stock. Claims of secured and unsecured creditors, bondholders and preferred stockholders take precedence over those of the common stockholders.

**EXAMPLE**

Startup Company is a private company that is wholly owned by its founders, as shown below:

Owners/Investors	Security	Shares	Investment	Share Price
Founders	Common	6,000,000	\$50,000	\$0.0083

The company arranges an A round of financing with a VC firm that agrees to provide \$2 million in exchange for a 40% ownership stake:

Owners/Investors	Security	Shares	Investment	Share Price
Founders	Common	6,000,000	\$50,000	\$0.0083
A	Common	4,000,000	\$2,000,000	\$0.50

Pre-money valuation: \$3,000,000

Post-money valuation: \$5,000,000

What are the implications to the VCs if they agree to accept common stock?

In the absence of restrictive covenants or a vesting period for the founders, the founders maintain a controlling stake and are free to sell the company under terms of their choosing. For example, if the founders sell the company for \$4,000,000, they would receive \$2,400,000 (a substantial return on their \$50,000 investment) while the Series A investor would get only \$1,600,000 for a \$400,000 loss.

**Convertible preferred stock** provides its owner with the right to convert to common shares of stock. Usually, preferred stock has certain rights that common stock does not have, such as a specified dividend that normally accrues and senior priority in receiving proceeds from a sale or liquidation of the company. Therefore, it provides downside protection due to its negotiated rights and allows investors to profit from share appreciation through conversion. The face value of preferred stock is generally equal to the amount that the VC invested. For valuation purposes, convertible stock is usually regarded as a common stock equivalent.

Typically, convertible preferred stock automatically converts to common stock if the company makes an initial public offering (IPO). When an investment banking underwriter is preparing a company to go public, it is critical that all preferred investors agree to convert so the underwriter can show public investors that the company has a clean balance sheet. Convertible preferred is the most common tool for private equity funds to invest in companies.

### **EXAMPLE**

In the example above, suppose that the Series A investor receives convertible preferred stock with senior priority in receiving all proceeds from sale or liquidation, up to the original investment amount (\$2 million).

Owners/Investors	Security	Shares	Investment	Share Price
Founders	Common	6,000,000	\$50,000	\$0.0083
A	Convertible preferred	4,000,000	\$2,000,000	\$0.50

Now, if the company were sold for \$4 million, the Series A investor would choose not to convert his shares to common and would receive:

Proceeds to Series A = \$2,000,000 (original investment)

Proceeds to founders = \$4,000,000 (sale price) - \$2,000,000 (to Series A) = \$2,000,000

When would a holder of convertible preferred stock choose not to convert?

If the company were sold for \$5 million, then the Series A investor would be indifferent to converting. He would receive \$2,000,000 (40% of \$5 million) through conversion to common or as shown above. At a sale price above \$5 million, or the \$0.50 per share that he or she paid, the VC would choose to convert.

**Participating preferred stock** is a unit of ownership that is essentially composed of two elements -- preferred stock and common stock. The preferred stock element entitles an owner to receive a predetermined sum of cash (usually the original investment plus any accrued dividends) if the company is sold or liquidated. The common stock element represents additional continued ownership in the company (i.e. a share in any remaining proceeds available to the common shareholder class). Like convertible preferred stock, participating preferred stock usually converts to common stock (without triggering the participating feature) if the company makes an initial public offering (IPO).

Participation can be *pari passu* or based on seniority of rounds. For example, if a C round has seniority, then rather than A, B and C rounds sharing in the equity in accordance with their percentage ownership of common, the C round will be paid first, then the B round, and if there is any cash left, the A round.

**EXAMPLE**

Now suppose that amid a weak IPO market, the Series A investor in Startup Company negotiates participating preferred shares with seniority over common up to the original investment amount:

Owners/Investors	Security	Shares	Investment	Share Price
Founders	Common	6,000,000	\$50,000	\$0.0083
A	Participating preferred	4,000,000	\$2,000,000	\$0.50

In this case, if the company were sold for \$4 million, the funds would be distributed as follows:

Proceeds to Series A = \$2,000,000 (original investment) + \$800,000 (40% \* \$2,000,000 remaining from sale) = \$2,800,000

Proceeds to founders = \$4,000,000 (sale price) - \$2,800,000 (to Series A) = \$1,200,000

**Multiple Liquidation Preference** is a provision that gives preferred stock holders of a specific round of financing the right to receive a multiple (2x, 3x, or even 6x) of their original investment if the company is sold or liquidated. A multiple liquidation preference still allows the investor to convert to common stock if the company does well, and it provides a higher return (assuming the selling price is sufficient to cover the multiple) if an IPO is unlikely.

**EXAMPLE**

Startup Company negotiates an A round of funding with the investor receiving 4,000,000 shares of convertible preferred stock with a 3x liquidation preference for \$2,000,000:

Owners/Investors	Security	Shares	Investment	Share Price
Founders	Common	6,000,000	\$50,000	\$0.0083
A	Convertible preferred	4,000,000	\$2,000,000	\$0.50

If the company were sold for \$4 million, then the Series A investor would receive all of the proceeds from the sale because the 3x liquidation preference entitles him to the first \$6 million (3 \* \$2,000,000 investment) generated by any sale or liquidation. The founders would get nothing.

If the company were sold for \$10 million, the Series A investor would once again choose the multiple over conversion, since he would receive \$6 million as opposed to \$4 million for his 40% share of the common stock. The founders would receive the remaining \$4 million.

Series A would be indifferent between the two options at a sale price of \$15 million, above which he would choose to convert and receive his 40% share.

**Redeemable preferred stock** can be redeemed for face value at the choice of the investor. Sometimes called straight preferred, it cannot be converted into common stock. Usually, the terms of the issue specify when the stock must be redeemed, such as after an IPO or a specific time period. Redeemable preferred gives the investor an exit vehicle should an IPO or sale of the company not materialize.

**Convertible debt** is a loan vehicle that allows the lender to exchange the debt for common shares in a company at a preset conversion ratio.

**Mezzanine debt** is a layer of financing that often has lower priority than senior debt but usually has a higher interest rate and often includes warrants.

**Senior debt** is a loan that enjoys higher priority than other loans or equity stock in case of a liquidation of the asset or company.

**Subordinated debt** is a loan that has a lower priority than a senior loan in case of a liquidation of the asset or company.

**Warrants** are derivative securities that give the holder the right to purchase shares in a company at a pre-determined price. Typically, warrants are issued concurrently with preferred stock or bonds in order to increase the appeal of the stock or bonds to potential investors. They may also be used to compensate early investors for increased risk.

**Options** are rights to purchase or sell shares of stock at a specific price within a specific period of time. Stock purchase options are commonly used as long-term incentive compensation for employees and management.

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## Anti-Dilution

Dilution occurs when an investor's proportionate ownership is reduced by the issue of new shares. Investors are primarily concerned with "down rounds," or financing rounds that value the company's stock at a lower price per share than previous rounds. Down rounds may occur due to a number of factors like economic conditions or company performance. Since investors cannot determine with certainty whether a company will undergo a down round, they negotiate certain rights, or anti-dilution provisions referred to as "ratchets," that may protect their investment. The two most common mechanisms are full ratchets and weighted average ratchets.

**Full Ratchets** protect investors against future down rounds. A full ratchet provision states that if a company issues stock to a lower price per share than existing preferred stock, then the conversion price of the existing preferred stock is adjusted (or "ratcheted") downward to the new, lower price. This has the effect of protecting the ratchet holder's investment by automatically increasing his number of shares. Of course, this occurs at the expense of any stockholders who do not also enjoy full ratchet protection.

### EXAMPLE

Assume that Startup Company has the ownership structure described in previous examples, and that the Series A investor's convertible preferred shares carry a full ratchet:

Owners/Investors	Security	Shares	Investment	Share Price
Founders	Common	6,000,000	\$50,000	\$0.0083
A	Convertible preferred	4,000,000	\$2,000,000	\$0.50

The company is not yet profitable and needs additional capital, but an IPO is not feasible and the Series A investor is unable or unwilling to provide more funding. Consequently, the company seeks funding from an outside investor, who is willing to invest \$1 million at \$0.10 per share:

Owners/Investors	Security	Shares	Investment	Share Price
B	Convertible preferred	10,000,000	\$1,000,000	\$0.10

The Series A ratchet reprices the Series A convertible preferred stock at \$0.10 per share, giving Series A 20 million total shares:

$$\text{Series A total shares} = \$2,000,000 \text{ (original investment)} / \$0.10 \text{ (new share price)} = 20,000,000$$

Startup Company's ownership now looks like this:

Owners/Investors	Security	Shares	Investment	Share Price
Founders	Common	6,000,000	\$50,000	\$0.0083
A	Convertible preferred	20,000,000	\$2,000,000	\$0.10
B	Convertible preferred	10,000,000	\$1,000,000	\$0.10

Note that the Series A investor now owns 56% of the company, Series B owns 28%, and the founders have been “crammed down” to only 17%.

Finally, the valuations of Startup Company after the second round of financing are calculated as follows:

$$\begin{aligned} \text{Post-money} &= \$1,000,000 \text{ (investment)} / 28\% \text{ (ownership acquired)} = \$3,600,000 \\ \text{Post-money} &= 36,000,000 \text{ (new total shares)} * \$0.10 \text{ (price per share)} = \$3,600,000 \end{aligned}$$

$$\text{Pre-money} = 26,000,000 \text{ (previous total shares, includes ratchet shares)} * \$0.10 \text{ (share price)} = \$2,600,000$$

$$\text{Pre-money} = \$3,600,000 \text{ (post-money valuation)} - \$1,000,000 \text{ (investment)} = \$2,600,000$$

**EXAMPLE**

Now suppose that instead of bringing in an outsider, the Series A investor decides to provide the additional \$1 million at \$0.10 per share. If the investor decides to implement the ratchet, the pre- and post-money valuations are calculated differently because there is no new outside money:

	Owners/Investors	Security	Shares	Investment	Share Price
	Founders	Common	6,000,000	\$50,000	\$0.0083
Same investor {	A	Convertible preferred	20,000,000	\$2,000,000	\$0.10
	B	Convertible preferred	10,000,000	\$1,000,000	\$0.10

Effective share price = \$1,000,000 (investment) / 26,000,000 (new and ratchet shares) = \$0.038 per share

Post-money = 36,000,000 (new total shares) \* \$0.038 (effective price per share) = \$1,384,615

Pre-money = \$1,384,615 (post-money valuation) - \$1,000,000 (investment) = \$384,615

In this case, the calculation is different because the same investor is acquiring both new and ratchet shares through the B round investment. Note that the conventional approach would value the company's shares at \$0.10 instead of \$0.038 per share. Understandably, this can be a sensitive issue.

**Weighted average** provisions are generally viewed as being less harsh than full ratchets. In general, the weighted average method adjusts the investor's conversion price downward based on the number of shares in the new (dilutive) issue. If relatively few new shares are issued, then the conversion price will not drop too much and common stockholders will not be crammed down as severely as with a full ratchet. If there are many new shares and the new issue is highly dilutive to earlier investors, however, then the conversion price will drop more. The actual mathematical equation used may vary from deal to deal, but a common form is as follows:

New conversion price =  $(A+C) / (A+D) * \text{old conversion price}$ , where

A = number of shares outstanding before the dilutive issue

C = number of shares that would have been issued at the old conversion price for the investment in the dilutive round

D = number of shares actually issued in the dilutive round

The weighted average protection may be broad-based, taking into account all shares outstanding before the new dilutive issue (A is calculated on a fully-diluted basis), or narrow based, where A may take into account only preferred stock or omit options outstanding.

**EXAMPLE**

Taking Startup Company as in the first ratchet example, now assume the Series A investor’s convertible preferred shares have broad-based weighted average anti-dilution protection:

<b>Owners/Investors</b>	<b>Security</b>	<b>Shares</b>	<b>Investment</b>	<b>Share Price</b>
Founders	Common	6,000,000	\$50,000	\$0.0083
A	Convertible preferred	4,000,000	\$2,000,000	\$0.50

A new, outside investor agrees to fund a B round of financing as before:

<b>Owners/Investors</b>	<b>Security</b>	<b>Shares</b>	<b>Investment</b>	<b>Share Price</b>
B	Convertible preferred	10,000,000	\$1,000,000	\$0.10

Applying the weighted average formula,

A = 10,000,000 (number of shares before the B round)

C = \$1,000,000 (new investment) / \$0.50 (old conversion price) = 2,000,000 (number of shares that would have been issued at the old conversion price)

D = 10,000,000 (new shares actually issued)

New conversion price = (12,000,000 / 20,000,000) \* \$0.50 per share = \$0.30 per share

Therefore, the Series A investor receives \$2,000,000 / \$0.30 – 4,000,000 = 2,666,667 new shares:

<b>Owners/Investors</b>	<b>Security</b>	<b>Shares</b>	<b>Investment</b>	<b>Share Price</b>
Founders	Common	6,000,000	\$50,000	\$0.0083
A	Convertible preferred	6,666,667	\$2,000,000	\$0.30
B	Convertible preferred	10,000,000	\$1,000,000	\$0.10

In this case, the Series A investor now owns 29%, Series B owns 44%, and the founders retain 26%

**Pay-to-play (aka Play or Pay) Provisions** are usually used with price-based anti-dilution measures, these provisions require an investor to participate (proportionally to their ownership share) in down rounds in order to receive the benefits of their anti-dilution provision. Failure to participate results in forced conversion from preferred to common or loss of the anti-dilution protection. This encourages VCs to support struggling portfolio companies through multiple rounds and increases the companies' chances of survival.

### **Other Issues**

In addition to the key financial provisions described above, term sheets usually include a number of other important items related to control, and a mix of financial and non-financial terms is common. Many of the provisions described in this paper, both financial and non-financial, tend to be used more often during difficult economic times. It should be noted that overly burdensome, shortsighted terms may misalign interests and invite the competition to provide a better deal. Some non-financial terms are discussed below:

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**Voting Rights.** Term sheets often address issues of control in order to allow investors in a company to add value and also to exercise control if things go wrong. While investors may not want majority board control if things are going well, they may negotiate provisions that give them control if certain events occur. The golden rule often applies: he who has the gold makes the rules.

**Board Representation.** Venture capitalists may negotiate control of part of the Board of Directors, generally to influence decision-making and to protect their investments rather than to run the company. Often, classes of stockholders are allowed to elect a percentage of the board members separately. If venture capitalists invest as a syndicate and board representation is not possible for all of the participating firms, then board observer rights are an option. These rights allow investors to monitor their portfolio companies and to influence decisions by being present at board meetings, but they are not allowed to vote.

**Covenants.** Most preferred stock issues and debt issues have associated covenants, or things that the portfolio company promises to do (positive covenants), and not to do (negative covenants). They are negotiated on a case-by-case basis and often depend on other aspects of the deal. Failure to comply with covenants can have serious consequences to the company such as automatic default and payments due.

**Vesting.** This provision states that a manager or entrepreneur earns ownership of common stock or options only after a predetermined period of time or after the company achieves certain milestones. The most important effect of vesting is that it motivates employees to stay with the company and may prevent them from leaving prematurely to pursue other opportunities.

**Bridge Loans.** Bridge financing can be used to prepare a company for sale or as a pre-round financing. A bridge is, in essence, short term financing designed to be either repaid or converted into ownership securities. In the sale case, a bridge is useful when a company needs a relatively small amount of capital to achieve its final targets and achieve maximum value in the eyes of potential buyers. A bridge is also useful to pump cash into a company quickly while investors are found to complete a formal round of financing. Bridge investors often insist on warrants or equity kickers to compensate them for the higher risk of lending money to high growth ventures. If the “bridge” becomes a “pier,” that is, no additional sources of funding step up to the challenge, then the bridge lenders have senior rights to any equity holders for the remaining assets of the company.

**Phased financing.** A venture capital firm may agree to phased financing, or incremental financing in tranches. In this case, the entrepreneur and his or her team must reach certain milestones in order for the venture capitalist to agree to invest

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more capital in the startup. This has the additional benefit of allowing the startup and the venture firms to trumpet the larger commitment amount, generating positive PR, while limiting the actual cash disbursements until the startup has proven itself.

Staged financing may also cause misalignment of goals, however, since management may be motivated to cut corners to achieve milestones rather than focusing on the long term health of the company, its customer relationships, and the value of its products and services.

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