

INTRODUCTION

A Convertible Note is short-term debt instrument that converts into equity in the future, typically in conjunction with a future financing round where a valuation is established and equity issued. In the 90's convertible notes were often referred to as promissory notes which were used sparingly and were typically a single page in length. In the 2000's the use of convertible debt, or notes, increased as angel investors, incubators and accelerators grew in number. According to law firm, Fenwick & West, the percentage of convertible notes used in seed financings grew from 31% in 2010 to 33% in 2012, which was down from a peak of 41% in 2011.¹

Convertible notes have several advantages for entrepreneurs, the first of which are speed and expense. A note can be issued quickly because it requires little legal work and defers the, often contentious, discussion of valuation until a later date. Although the notes themselves have grown beyond the one page promissory note, they remain a simple and inexpensive alternative to a financing round where equity is issued. The legal costs involved in issuing a convertible note range from hundreds to a few thousand dollars, while the legal costs of an equity financing range in price from \$25,000 to \$50,000 or more depending upon the complexity of terms.

As for advantages for the investor, sometimes they also want to move quickly to lock in a seat at the table for a future equity financing, especially if the deal is competitive. Friends and family almost always prefer debt, since they either don't know how to set a valuation, or don't want to get into what can be a difficult debate over the value of the equity at the inception of the business. Kicking the valuation discussion can down the road has become standard in about one third of deals done in California between 2010 to 2012 (see Exhibit 1).

PRIMARY FEATURES OF CONVERTIBLE DEBT

Principle Amount:

The amount of cash being provided by the convertible note investor (or "face amount").

Interest Rate:

The annual rate at which interest accrues during the term of the convertible note. Interest may be either *compounding* (the interest turns into principle on a regular basis and accrues its own interest) or *simple* (no compounding). The note should specify how accrued interest will be repaid in connection with a conversion event. Interest can be either converted into additional shares on the same terms as the principle amount, or repaid in cash. The interest rate is typically 5% - 6%, but can range from as little as 0.25% to as much as 14%.²

Maturity Date:

The term of the convertible note before it becomes due and payable. The median maturity is typically between 15 - 18 months, but can be as long as 72 months (see Exhibit 2). The maturity

¹ [Fenwick & West, Seed Financing Survey, 2012](#). (see Exhibit 1)

² [WilmerHale 2016 Venture Capital Report](#). (see Exhibit 2)

date also sets expectations for the investor as to when the company expects to close an equity round of funding. A longer maturity is favorable for the founders.

Repayment Terms:

A question that often comes up in conversation is, “What happens if the maturity date is reached prior to an equity financing round?” In some cases, investors may require language in the note that allows for flexible repayment terms which would allow the holders of the majority of the note to request payment before the maturity date. Notes can also incorporate a provision that requires *automatic conversion* of the note amount plus accrued interest to convert into either common or preferred stock. While this might allow the company to avoid filing for bankruptcy, investors may not agree to automatic conversion in favor of a provision that would allow them to recoup some or all of their investment. More recently, convertible note investors have begun to ask for *security interest* in some or all of the company’s assets. Therefore, if the note is not repaid or converted into equity, the pledged assets would become available to the note holders (see Exhibit 2). Another option is for the founders to negotiate a note *extension* to the maturity date and possibly a bridge financing by reopening the note for additional capital investment. It is best to discuss adding the provision for an extension during the origination of the note, since adding it later can be difficult and may require additional legal costs.

Another concern that is often raised is, “What happens if the company is sold prior to a qualified financing?” The majority of convertible notes now have a provision for sale in which the principle amount is converted into equity either at the option of the note holder or it may be mandatory. About half the time, the note holders request a premium, or multiple, of the principle amount of the convertible note upon a sale of the company. The median multiple is 2x the principle amount, but can range from 1.5x - 4x.

Conversion:

As noted above, the topic of conversion is one that requires careful consideration by the founders and investors alike. The basic concept of conversion as it relates to convertible notes is that the principle amount of the note will convert into the company’s stock in connection with the company’s next financing. This concept can be further defined in three additional ways:

- **Qualified Financing:** Apart from the provision for automatic conversion described above, conversion can be triggered by an equity financing in which a minimum amount of new capital is raised in that financing. The amount can vary, but is typically 2x the principle amount of the note or notes outstanding. The reason for the minimum threshold is to protect note holders from having to give up their leverage as debt holders in any financing that does not leave the company adequately capitalized.
- **Conversion Discount:** Convertible note holders often require that the notes convert at a discount to the price paid by new investors in a qualified financing as a reward for shouldering seed stage risk. A typical discount off the price of new shares being issued is between 15% - 25%, but can range widely depending upon the perceived risk of the investment. For example, if a 20% discount is specified in the convertible note and a new

financing is completed where shares are offered at a par value of \$1.00, the holders of the note would convert their debt into equity and pay \$0.80 per share ($\$1.00 \times (1 - 20\%)$). Therefore, the investor would be awarded 625,000 shares ($\$500,000 / \0.80). Had there not been a discount the investor would have been awarded 500,000 shares ($\$500,000 / \1.00) (see Exhibit 3).

In some circumstances, *warrants* are used in lieu of a discount. A warrant is an option to purchase equity at a later date for a pre-specified price or discount. Using the above example, the convertible note could have just as easily been written to substitute the standard conversion discount for 20% warrant coverage. In this case the investor would be awarded an additional \$100,000 at the time of conversion ($\$500,000 \times 20\%$ warrant coverage). This amount would be added to the \$500,000 convertible note, so that \$600,000 would convert into equity. Conversion discounts may also be combined with conversion caps (see below) on the valuation at which the notes convert.

- Conversion Cap:** The feature of a conversion cap was introduced to convertible notes as an additional way to reward investors for assuming seed stage investment risk. In certain circumstances where companies were able to close a qualified financing at a particularly

The Reason for Conversion Caps

While delaying the often-difficult valuation negotiation, convertible notes can create a misalignment of interests between investors and entrepreneurs. It is in the interest of the entrepreneur to negotiate as high a valuation as possible when closing the Series A financing in order to minimize dilution, yet at very high valuations the convertible note holders feel as if they have not been adequately rewarded for taking the seed start-up risk.

Convertible Note \$500,000	Shares to Note Holder at Conversion (\$1 per share)	
	Pre-money Valuation	20% Discount / No Cap
\$5m	625,000	500,000
\$6m	625,000	600,000
\$6.25m	625,000	625,000
\$10m	625,000	1,000,000
\$15m	625,000	1,500,000
\$20m	625,000	2,000,000
\$30m	625,000	3,000,000

The chart above shows how a \$500,000 convertible note would convert into shares given a price per share of \$1.00. With a discount and no cap, the note holder would receive the same number of shares ($625,000 = \$500,000 / \0.80). However, with a cap given a pre-money valuation of \$10m the note holder's \$500,000 investment would convert into 1,000,000 shares ($\$5m \text{ cap} / \$10 \text{ pre-money} = \$0.50 \text{ per share}$; $\$500,000 / \$0.50 = 1,000,000 \text{ shares}$). If the company is very successful and obtains a valuation of \$20m pre-money then the number of shares rewarded is 2 times the \$10m valuation. This is significantly higher than the number of shares that would have been rewarded under discount only scenario. These calculations do not include any accrued interest.

It is worth noting that the math here is not as straight forward as you might imagine. For example, even though the cap is set at \$5m, it is not in the interest of the note holder to convert at a valuation below \$6.25m since the price per share at or below \$6.25m would be less than the \$0.80 per share the holder would convert to with just the discount.

founder favorable valuation (in excess of the 2x threshold), the early note holders did not feel adequately compensated by the conversion discount alone. To address this “fairness issue” a feature known as a conversion cap was introduced to convertible notes as a way for investors to lock in a range of share ownership. The cap, as its name indicates, is an upper limit on the valuation at which the convertible note will convert into equity. According to law firm WilmerHale, both a conversion cap and conversion discount appear more than half the time (see Exhibit 2). Typically, the cap and the discount operate in such a way that permits the investor to convert at the lowest price possible considering either the use of the cap or the discount but not both. The Fenwick & West Seed Financing Survey estimates that in 2012 90% of convertible notes included a cap and a discount, and the median cap was \$6 million. However, the WilmerHale study shows that the number of deals including a cap had declined to 55% in 2015.

The use of caps and discounts can have a magnifying effect on returns to investors. For this reason, it is imperative for founders to understand the potential pitfalls of convertible notes in particular and learn how to model capitalization tables and outcome analysis to understand the effects of economic terms on payouts at the time of exit. Though it is difficult to imagine how various series of financing rounds will unfold in the future, the knowledge gained through sensitivity analysis will help make more informed decisions with regard to amounts raised and the terms employed at each step along the journey.

POTENTIAL PROBLEMS WITH CONVERTIBLE NOTES

Promissory, or convertible, notes were first used by entrepreneurs and investors alike for their simplicity, speed and cost. Using convertible debt to seed fund the company had another advantage in that it allowed everyone involved to delay pricing, or setting a valuation, for the company. Over time the notes have become more complex, longer in duration, and more troublesome for entrepreneurs and sometime seed investors alike. Escalating valuations created misaligned interest between note holders and entrepreneurs, which led to the creation of the conversion cap. Even worse, some entrepreneurs are choosing to layer multiple convertible notes, with differentiated pricing for various investors often creating confusion and confrontation at the time of conversion and exit.

Convertible Notes Can Behave Like Full Ratchet Anti-dilution

One issue that entrepreneurs rarely consider is how convertible notes can act like anti-dilution provisions³ which almost always are part of standard VC term sheets. Consider an investor making a \$500,000 investment with a \$5 million cap. The company achieves a qualified financing, but unfortunately the valuation is \$2.5 million or half that of the cap. In this case the cap is not

³ Anti-dilution provisions protect investors from excess dilution which can occur when subsequent financing rounds are closed at a lower valuation than the past financing round. Weighted Average Anti-dilution (WAAD) is most often used to convert a portion of a past investor’s stock to the price of the new stock. Full Ratchet anti-dilution converts all of the past investor’s stock to the new price and is therefore more dilutive to the entrepreneur’s ownership.

triggered and the investor, or note holder, will instead employ the discount of 20% and would be awarded 625,000 shares ($\$500,000/\0.80). This might not seem like a big deal except when the agreed upon cap was set at \$5 million, the investor was probably thinking that their \$500,000 would purchase 9% - 10% post the financing round. At a valuation of \$2.5 million, the note holder would now own 20% ($\$625,000/\$3,125,000$ post- $\$$). The effect is similar to full ratchet anti-dilution. The reason is that while the convertible note specified a cap (a maximum), it did not specify a floor (a minimum). There you have it. A convertible note with a cap acts just like a full ratchet (see Exhibit 3).

From Fairness to Windfall – The Effect of Liquidation Preferences

Recall that the conversion cap was created to address a fairness issue for investors who felt that they were not being adequately rewarded for the risk that they were taking and hard work that resulted in a high valuation at the time of the Series A. Using our earlier example, of a \$500,000 convertible note with a \$5 million cap, should the valuation at the time of the Series A investment be set at \$10 million pre-money, the note holder would convert at a 50% discount to price per share. One might think that a 50% discount is a reasonable reward for the time and risk taken by the note holder, however, the note holder will get both a larger ownership stake for the \$500,000 investment and a *liquidation preference*⁴. In our example if we assume a liquidation preference of 1.5 times, which is common in venture capital investments, the note holder would achieve a 3x investment on invested capital. How can this be? Well, liquidation preferences are calculated on the number of preferred shares. The note was converted at \$0.50 per share, a 50% discount off the price per share of \$1.00, yielding 1,000,000 preferred shares and a 1.5x liquidation preference or \$1.5 million at exit. Remember, this preference is paid to investors before common shareholders get paid. Sounds like a windfall for the note holder to me (see Exhibit 3).

What Can Entrepreneurs Do?

It has been my experience that most novice entrepreneurs do not truly understand what they are giving away when they negotiate either convertible notes or term sheets. One of the first things that you can do is to first create a realistic integrated set of pro forma financial statements and try to understand how much capital you may need in total to build your company. Next, think about how the total amount of capital can be raised over a series of rounds. Last, create a capitalization table and a waterfall, or outcome, analysis that models each round under different scenarios and how much you stand to gain under a variety of exit scenarios. This can be used prior to and during negotiations to best understand ownership and economics under a variety of terms and potential outcomes.

Just Don't Do It - You may come to the conclusion not to use convertible notes at all. When you consider the reasons for convertible notes – speed, simplicity, cost – there is an argument for each of these points that supports not doing notes. With regard to speed, it is entirely possible to negotiate a reasonable valuation at the time of a seed provided that you've done what is recommended above with regard to do the math. Many VCs and law firms are using

⁴ A Liquidation Preference determines the payout order and amount that investors are paid at the time of an exit.

Series A Light documentation that focuses primarily on the economic terms, leaving topics of governance and control for the full Series A. These documents can be done at a price that is competitive with convertible notes.

If you have a ceiling, then have a floor – If you find yourself in a situation where a convertible note with a conversion cap is your only option, then consider setting a minimum to avoid the full ratchet effect discussed above. Then again, if you are setting a maximum (the conversion cap) and then a minimum, aren't you really just setting the valuation? Why not just do a priced round?

You get common and like it – To address the windfall issue, you can agree with investors to issue both preferred shares with a liquidation preference that more fairly represents the dollars invested, and the remainder of shares as common stock. This will add complexity, which means adding cost.

You're not that special – You can issue a separate class (Series A Primed) of preferred shares to note holders that are identical to the preferred shares being issued to the new investors. These shares would vote together with that series of all matters, but the aggregate liquidation preference of the separate class would equal the principle amount of the note only.

Exhibit 1

<u>Financing Structure</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Preferred Stock:	69%	59%	67%
Convertible Debt:	31%	41%	33%

Average Size of Investment

Average size of investment for investors who invested at least \$100,000, broken down by type of investor and between Preferred Stock financing and Convertible Note financing.

Preferred Stock	<u>2010</u>	<u>2011</u>	<u>2012</u>
Professional angels:	\$310,000	\$163,000	\$185,000
Seed funds:	\$392,000	\$423,000	\$458,000
Venture capital funds:	\$591,000	\$516,000	\$624,000
Convertible Notes	<u>2010</u>	<u>2011</u>	<u>2012</u>
Professional angels:	\$182,000	\$244,000	\$165,000
Seed funds:	\$140,000	\$424,000	\$277,000
Venture capital funds:	\$290,000	\$501,000	\$391,000

Analysis of Convertible Note Seed Financings

	<u>2010</u>	<u>2011</u>	<u>2012</u>
Median amount raised:	\$662,500	\$1,000,000	\$918,000
Median size of future financing in which note converts:	\$1,000,000	\$2,000,000	\$1,750,000
Percentage of deals in which valuation on conversion is capped:	83%	82%	90%
Median valuation cap:	\$4,000,000	\$7,500,000	\$6,000,000
Percentage of deals that convert at a discount to the next equity round valuation:	67%	82%	90%
Median initial discount:	20%	20%	20%
Percentage of deals with discount in which discount increases over time:	25%	5%	0%
Percentage of deals without discount that have a valuation cap:	100%	75%	100%
Percentage of deals having warrants:	0%	0%	0%
Treatment of note if company is acquired prior to an equity financing:			
<i>Receive return of investment plus a premium:</i>	50%	61%	50%
<i>Median premium:</i>	0.75x original principle amount	1.0x original principle amount	1.0x original principle amount
<i>Right to convert at an agreed upon valuation:</i>	33%	65%	65%
<i>Percentage that have neither conversion right nor premium:</i>	17%	9%	5%
<i>Percentage that have both conversion right and premium:</i>	0%	35%	20%
Median interest rate:	6.0%	5.5%	5.5%
Median term:	18 mos.	18 mos.	18 mos.
Percentage in which notes are secured:	0%	4%	0%
Percentage in which investors received a board seat:	8.3%	4%	0%

Source: Fenwick & West, Seed Finance Survey 2012

Exhibit 2

Term		2013	2014	2015
	Median	15 mos.	18 mos.	18mos.
	Range	1-48 mos.	1-72 mos.	4-60mos.
Interest Rate				
	Median	6%	6%	5%
	Range	0.25%-20%	0.33%-15%	2%-14%
Deals with Security Interest				
	% Secured	25%	20%	15%
	% Unsecured	75%	80%	85%
Deals with Conversion Discount				
	% of Deals	66%	72%	89%
	Range of Discounts	10%-50%	10%-50%	10%-50%
	% with 20% of Less Discount	71%	76%	74%
	% with Greater Than 20% Discount	29%	24%	26%
	% with Valuation Cap	67%	74%	55%
Deals with Conversion upon Maturity				
	% of Deals	59%	57%	60%
	% with Optional Conversion	80%	90%	89%
	% with Mandatory Conversion	20%	10%	11%
	% that Convert into:			
	Common	31%	54%	32%
	Preferred	69%	46%	68%
Deals with Conversion upon Sale				
	% of Deals	66%	66%	74%
	% with Optional Conversion	95%	86%	91%
	% with Mandatory Conversion	5%	14%	9%
	% that Convert into:			
	Common	55%	60%	49%
	Preferred	45%	40%	51%
Deals with Conversion Premium upon Sale				
	% of Deals	51%	52%	55%
	Median Premium	2x	2x	2x
	Range of Premiums	2x-4x	1.5x-3x	1.5x-4x
Deals with Warrant Coverage				
	% of Deals	5%	11%	4%
	Coverage Range	4%-25%	1%-50%	n/a
	% that Cover Common	0%	20%	50%
	% that Cover Preferred	100%	80%	50%
Deals with Note Purchase Agreement				
	% of Deals	65%	64%	74%

Source: WilmerHale 2016 Venture Capital Report

Exhibit 3

Convertible Note Math

Principle Amount: \$ 0.500
 Discount: 20%
 Cap: \$ 5.00
 Price Per Share: \$ 1.00
 PPS w/ Disc.: \$ 0.80
 Liquidation Pref: 1.50

Pre-\$ Valuation (M)	Post-\$ Valuation (M)	Disc / No Cap	Ownership	Liquidation Preference	Return on Liq. Pref.	PPS	Disc. / Cap	Ownership	Liquidation Preference	Return on Liq. Pref.
\$2.00	\$2.63	625,000	23.8%	937,500	1.88	\$ 0.80	625,000	23.8%	937,500	1.88
\$2.50	\$3.13	625,000	20.0%	937,500		\$ 0.80	625,000	20.0%	937,500	1.88
\$3.00	\$3.63	625,000	17.2%	937,500		\$ 0.80	625,000	17.2%	937,500	1.88
\$3.50	\$4.13	625,000	15.2%	937,500		\$ 0.80	625,000	15.2%	937,500	1.88
\$4.00	\$4.63	625,000	13.5%	937,500		\$ 0.80	625,000	13.5%	937,500	1.88
\$4.50	\$5.13	625,000	12.2%	937,500		\$ 0.80	625,000	12.2%	937,500	1.88
\$5.00	\$5.63	625,000	11.1%	937,500		\$ 0.80	625,000	11.1%	937,500	1.88
\$5.50	\$6.13	625,000	10.2%	937,500		\$ 0.80	625,000	10.2%	937,500	1.88
\$6.00	\$6.63	625,000	9.4%	937,500		\$ 0.80	625,000	9.4%	937,500	1.88
\$6.25	\$6.88	625,000	9.1%	937,500		\$ 0.80	625,000	9.1%	937,500	1.88
\$6.50	\$7.13	625,000	8.8%	937,500		\$ 0.77	650,000	9.1%	975,000	1.95
\$6.75	\$7.38	625,000	8.5%	937,500		\$ 0.74	675,000	9.1%	1,012,500	2.03
\$7.00	\$7.63	625,000	8.2%	937,500		\$ 0.71	700,000	9.1%	1,050,000	2.10
\$10.00	\$10.63	625,000	5.9%	937,500		\$ 0.50	1,000,000	9.1%	1,500,000	3.00
\$15.00	\$15.63	625,000	4.0%	937,500		\$ 0.33	1,500,000	9.1%	2,250,000	4.50
\$20.00	\$20.63	625,000	3.0%	937,500		\$ 0.25	2,000,000	9.1%	3,000,000	6.00
\$30.00	\$30.63	625,000	2.0%	937,500		\$ 0.17	3,000,000	9.1%	4,500,000	9.00
\$50.00	\$50.63	625,000	1.2%	937,500		\$ 0.10	5,000,000	9.1%	7,500,000	15.00

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