The Case Against Conversion Discounts for Convertible Debt: How to Properly Structure Your Seed Round Financing

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Summary

Entrepreneurs often turn to economic development organizations or angels for pre-seed or seed funding for start-ups when they're not yet ready for institutional venture capital. A large proportion of these pre-seed or seed financings are structured as convertible debt which is, at first glance, surprising. Looking deeper into this market anomaly provides understanding of why debt is used for early round financings, and also of the strengths and weaknesses of different approaches.

Investors in start-ups are really taking the earliest equity risk in a company, and a debt instrument doesn't provide them with a reward commensurate with that risk. However, for a variety of reasons the market has evolved such that pre-seed and seed investments are commonly structured as debt. These reasons include delaying the challenging valuation discussion that accompanies an equity investment and providing seed investors with balance sheet seniority. Optimally structuring the terms of the debt will make it easier for the company to later raise venture capital; alternatively, certain structures can be an obstacle to a successful later financing.

Specifically, structuring a pre-seed or seed financing to include a heavily discounted conversion price to the first institutional round of financing (typically Series A) may interfere with the successful completion of the Series A financing, or create dissonance and misalignment among investors and entrepreneurs. Pre-seed and seed investors are certainly entitled to compensation for the high-risk capital they provide. However, for the reasons described below these angel investors should be compensated for extra risk through warrants convertible into common stock at a nominal exercise price, instead of the conversion of the convertible debt into equity at a discounted conversion rate.

The Conceptual Argument Against Debt Converting At A Discount

A number of hypothetical examples are presented below that numerically demonstrate why a pre-seed or seed debt financing should not be structured to convert to a later equity round at a discounted share price. For those readers disinclined to wade through the math, here is a simpler conceptual argument:

Let's assume that angel investors and an entrepreneur agree on a debt round that converts into next round equity at a 50% discount. This means that if a next round investor buys Series A Preferred shares for $1.00 per share, the angel will be able to convert its debt and buy Series A shares for 50 cents per share.

Under these terms, angel investors can make money if the company is sold at any price that values the Series A shares at more than 50 cents per share, whereas the Series A investors can lose money at any price that values the Series A shares at less than $1.00 per share. This means that a portion of the upside for the angels who invested in the convertible debt round is loaded into the preferred shares, whereas all the upside for the venture investors and entrepreneurs is loaded into the common shares. This creates a misalignment of interests among the investors in the same class of shares—generally not a good idea.

The optimal capital structure for a business aligns the interests of all the parties around the same goal which, in early stage venture-backed companies, should be increasing the equity value of the enterprise for the good of all shareholders. Without the discount, the Series A shares would have represented what they were intended to represent—the return of investor capital plus a dividend representing the cost of capital. Paying preferred back first plus a dividend acknowledges that investors have alternative, lower risk investments that they could have made.

Another effect of a discounted conversion price is the immediate dilution incurred by the new Series A investors. They are paying $1.00 per share for the same Series A Preferred shares that angels are buying for $.50 per share, yet the liquidation preference is still $1.00 per share. This dilutes the new Series A investors instead of placing the dilutive effect of the preceding convertible debt financing where it should be: on the founders. Pre-seed and seed investors certainly are entitled to compensation for taking the highest capital risk. The cost of that compensation should be borne by people who benefit most from it. That group is the founders, not the later Series A investors.

Why are pre-seed and seed financings structured as debt?

Why is debt used to finance pre-seed and seed stage companies? In the traditional capital continuum, debt is traditionally made available to "bankable", less risky, later stage companies with revenues or assets that can serve as collateral, and equity is used to finance more risky early stage companies…except for an anomaly that has developed in the market for pre-seed and seed companies whose first round is financed by debt.

The primary reason that entrepreneurs prefer debt is to avoid the valuation event that would occur with an equity financing. At the pre-seed and seed stage, entrepreneurs believe in their ideas and in the ultimate value of their companies, but often do not have a completed product or customers. An equity investment would require the entrepreneur and investor to agree on the percent of the company that the investor would own for the money invested—a valuation event. At this stage, the valuation is likely to be lower than the entrepreneur would find to be palatable, resulting in the entrepreneur having to sell a large share of the business for a relatively small amount of capital.

Alternatively, a convertible debt financing is not a valuation event. It's a loan which, the entrepreneur hopes, will advance product development and customer acquisition enough to enable the company to attract next round institutional venture capital at a higher valuation. The expectation is that the debt will convert into that later round's (presumably higher) valuation. This is advantageous to the entrepreneur because capital is obtained to advance the business plan without diluting the entrepreneur's equity.

Why are seed investors willing to accept debt for what is an equity risk?

Pre-seed and seed investors often consist of economic development organizations and angel investors. They often have different motives for accepting debt for what is essentially an equity risk. The former are in the business of bridging the gap between entrepreneurs and institutional venture capital and are less concerned about returns. The latter typically are concerned about returns, and want to get an early position in companies with a big potential upside. Both groups share the motive of wanting to help entrepreneurs. Both also want to get into what could become a hot company early because, if they don't, they may never be able to get in. An additional and overlooked motive for accepting debt for what is an equity risk is that, if the business doesn't work, debt holders, as creditors, will have first priority claims on the liquidation of the company's assets over equity holders. Debt holders also avoid the potential liabilities that can be associated with being an equity investor and board member.

Despite the seeming unsuitability of early stage companies to debt financing, the market for pre-seed and seed financings has evolved such that debt is commonplace. However, a traditional debt structure—repayment of principal plus interest—does not accurately reflect or compensate investors for the equity risk they are taking in an early stage company. To convince investors to accept a debt product, early stage companies often offer a "kicker" as extra compensation to enhance investor returns. This kicker can take several forms, including a discount to the next round of equity financing, or the issuance of warrants to buy additional shares of stock. Each form assumes that the debt will convert into the securities issued by the company in the next round of financing, typically Series A Convertible Preferred equity. This pushes the valuation event into the future, when professional investors can place a value on the enterprise.

What is the optimal structure for seed debt?

To answer that question, let's first look at the likely structure of the next round into which the debt will convert: Series A Convertible Preferred equity. Series A investors will buy convertible preferred shares in the company that have certain preferences over other shares (typically common shares owned by founders and employees). The Series A financing also constitutes a valuation event: to determine the price per share of the Series A Convertible Preferred and the percentage of the company new investors will own, an enterprise value must be assigned to the company.

Let's look for a moment at the structure of standard Series A Convertible Preferred shares. The economic terms of those shares typically include a one-time (1x) liquidation preference, plus a dividend that is usually between 6% and 10% and accumulates without being paid currently. The liquidation preference requires that, on the sale or IPO of the company, investor capital is repaid first, plus accrued dividends, before any other shareholders receive any payments. This is an industry standard term, and not the unique invention of any particular venture capital firm.

The liquidation preference and the cumulative dividend are designed to be an incentive for investors to choose an illiquid security in a risky company with a long timeline to liquidity, instead of a tradable security in a safer public company. These two features ensure that as long as the company is sold for at least the amount of capital raised and the dividend, investors will be made whole relative to other choices they had with the capital.

Even in a downside scenario, the "preference" part of the investment protects investors by giving them the first right to the proceeds of a liquidation (after creditors are paid) before founders and management (the holders of common shares).

In an upside scenario, the "convertible" part of the security enables holders of Series A Convertible Preferred shares to collect their liquidation preference and accumulated dividend and then convert their preferred shares into common shares. Investors then share pro rata in the distribution of the remaining proceeds from a sale or IPO of the company along with the holders of common shares. This feature loads investor upside into the common shares of the company, creating an alignment of interests among entrepreneurs, management, and investors: to create equity value in the company's common shares. Only if a company is sold for less than invested capital will investors take a loss.

Quantifying the Results of Different Seed Round Structures

Before proceeding further, let's develop a hypothetical case to assess what happens on a liquidation or sale event. This is the best way to evaluate the consequences of different ways of structuring the seed debt round. The following example is simplified for illustrative purposes. The great likelihood is that the company will need to raise additional capital in a Series B and perhaps Series C round, and will take between five

and eight years to mature. The consequences of the capital structure of a business are manifest at the time of exit, so the following series of cases carries through to the sale of the company.

Case A1

Assumptions:

- The company raises Series A Convertible Preferred equity of $4 million, from venture capital investors with a pre-money valuation of $6 million and a post-money valuation of $10 million, a 1x Liquidation Preference, and an 8% annual dividend; and
- The company is sold for $20 million after three years.

The distribution of proceeds with the preceding assumptions is shown in Table 1.

Table 1
Distributions: Case A1

Item	Amount
Amount of Sale	$20,000,000
Minus: Est. Transaction Fees	-$250,000
Minus: Series A Liquidation Preference	-$4,000,000
Minus: Series A Dividend ($4 million x 8% x 3 years)	-$960,000
Remainder	$14,790,000
Common Distribution, Venture Capital Investors (40%)	$5,916,000
Common Distribution, Common Holders (60%)	$8,874,000
Total Distributions	$20,000,000

Now let's consider what happens if the company raised a seed round of $600,000 one year prior to the Series A (Case A2).

Case A2

Assumptions:

- The company raises $600,000 in seed convertible debt from angel investors at an 8% interest rate;
- One year later, the company raises Series A Convertible Preferred equity of $4 million from venture capital investors, with a pre-money valuation of $6 million and an 8% annual dividend;

- The convertible debt, plus interest of $48,000, converts into Series A shares; and
- The company is sold for $20 million four years after the seed round and three years after the Series A.

The distribution of proceeds with the preceding assumptions is shown in Table 2.

Table 2
Distributions: Case A2

Item	Amount
Amount of Sale	$20,000,000
Minus: Est. Transaction Fees	-$250,000
Minus: Series A Liquidation Preference, Angel Investors	-$648,000
Minus: Series A Liquidation Preference, Venture Capital Investors	-$4,000,000
Minus: Series A Dividend, Angel Investors (8%)	-$192,000
Minus: Series A Dividend, Venture Capital Investors (8%)	-$960,000
Remainder	$13,950,000
Pro Rata Distribution	
Common Distribution, Angel Investors (5.22%)	$777,935
Common Distribution, Venture Capital Investors (34.78%)	$4,802,065
Total Investor Pro Rata Distribution	$5,580,000
Common Holder Share Distribution (60%)	$8,370,000
Total Distributions	$20,000,000

There is something missing from this scenario, however: The seed investors received the same security with the same terms as the Series A investors but took an extra year of risk for which they weren't compensated (except for 8% interest, which would be more typical of the cost of low risk capital, such as a loan). This leads to the question:

How should seed investors be compensated for their extra risk?

This is where the risk premium, or "kicker" must be structured into the pre-seed or seed debt security offered to compensate the angel investor for taking the higher risk.

A very common alternative is to give angel investors a discount on their conversion to Series A Convertible Preferred shares. A typical structure could be something like this:

If a Series A round of $2 million or more is raised within 6 months of the seed round, the convertible debt converts at a 10% discount to the Series A price;
At 9 months, the discount is 15%; and
At 12 months, the discount is 20%.

This would mean that if venture capital investors buy Series A shares at $1 per share, the angel investors would buy those same shares for $0.90, $0.85, or $0.80, depending on how long it takes for the company to raise institutional capital. On the surface, this seems fair because:

1. a valuation event was avoided in the seed round;
2. seed investors are compensated for their extra risk; and
3. nobody is damaged by the extra compensation the seed investors received…or are they?

To answer the above question, let's examine the consequence of a discounted conversion of the seed debt in both a downside scenario (Case A3) and an upside scenario (Case A4).

Effect of A Conversion Discount on a Downside Scenario

Case A3

Assumptions:

- The company raises $600,000 in convertible debt at an 8% interest rate;
- One year later, the company raises Series A Convertible Preferred equity of $4 million, with a pre-money valuation of $6 million and a post-money valuation of $10.648 million, including the principal and interest of the convertible debt;
- The convertible debt, plus interest, converts into Series A shares at a 20% discount; and
- The company is sold for $4 million four years after the seed round and three years after the Series A.

The distribution of proceeds with the preceding assumptions is shown in Table 3. At a $4 million sale price, only invested capital is returned. However, because the angel capital, plus interest, converted into Series A shares at a 20% discount, placing a value of $810,000 on their shares (($600,000 + $48,000) / 80%), the angels own 16.84% of the Series A securities, even though they supplied only 13.04% of the capital ($600,000 / $4,600,000).

Table 3
Distributions: Case A3

Item		Amount
Amount of Sale		$4,000,000
Minus: Est. Transaction Fees		-$150,000
Subtotal		$3,850,000
Minus: Series A Liquidation Preference, Angel Investors	16.84%	$648,337
Minus: Series A Liquidation Preference, Venture Capital Investors	83.16%	$3,201,663
Total		$4,000,000

In this scenario, as can clearly be seen, angel investors receive a full return of their $600,000 in capital, and a gain of $48,337, whereas the venture capital investors lose nearly $800,000. In a downside scenario, therefore, venture capital investors are indeed disadvantaged by the terms of the seed financing—even though they were not a party to the agreement that was struck between the angel investors and entrepreneur before the venture capital investors were involved in the company. The discounted conversion price of the seed round satisfied the needs of the entrepreneur to avoid an early valuation event and of the seed investors to be compensated for their extra risk, but offloaded the consequences of that decision onto future investors.

Why should venture capital investors accept this risk? And why should venture capital investors bear the cost of the higher risk seed financing, and not the holders of common shares?

Effect of A Conversion Discount on an Upside Scenario

Let's now consider the effect of the discount in an upside scenario.

Case A4

Assumptions:

- The company raises $600,000 in convertible debt at an 8% interest rate
- One year later, the company raises Series A Convertible Preferred equity of $4 million, with a pre-money valuation of $6 million and a post-money valuation of $10.648 million;
- The convertible debt, plus interest, converts into Series A shares at a 20% discount; and
- The company is sold for $20 million four years after the seed round and three years after the Series A.

The distribution of proceeds with the preceding assumptions is shown in Table 4. Note that the conversion of the angel capital, plus interest, at a discount again results in the angels owning 16.84% of the Series A securities ($810,000 / $4,810,000), even though they supplied only 13.04% of the capital ($600,000 / $4,600,000).

Table 4
Distributions: Case A4

Item		Amount
Amount of Sale		$20,000,000
Minus: Est. Transaction Fees		-$250,000
Minus: Series A Liquidation Preference, Angel Investors		-$810,000
Minus: Series A Liquidation Preference, Venture Investors		-$4,000,000
Minus: Series A Dividend, Angel Investors		-$194,400
Minus: Series A Dividend, Venture Investors		-$960,000
Remainder		$13,785,600
Pro Rata Distribution		
Series A Distribution, Angel Investors	6.74%	$928,593
Series A Distribution, Venture Investors	33.26%	$4,585,647
Total Series A Distribution	40%	$5,520,192
Common Holder Share Distribution (60%)	60%	$8,271,360
Total Distributions		$20,000,000

As can be seen, in an upside scenario the seed investors do very well. For the $600,000 they invested, they receive back a total of $1,932,993 ((810,000 + 194,400 + 928,593). This is 3.22 times their original investment and, over four years, equates to an ROI well over 20%. The venture investors do less well, receiving 2.39 times their investment, and a smaller ROI. On its face this shouldn't be objectionable to anybody; the seed investors received compensation for the extra year of risk they took, the venture investors made out just fine, and the entrepreneurs and management team have a nest egg for their kids' college funds and retirement…

What is the effect of the discount to the Series A?

…except that the venture investors return was lower due to the discount given to the angels than it otherwise would have been (or should have been), as can be seen by comparing the columns "Case A2" and "Case A4" below (Table 5).

Table 5
Distributions: Case A2 v. A4

Payout by Investor Class	Investment	Case A2	Multiple	Case A4	Multiple	Difference
Angels	$600,000	$1,617,935	2.70	$1,932,993	3.22	$315,059
VC	$4,000,000	$9,762,065	2.44	$9,545,647	2.39	-$216,419
Common		$8,370,000		$8,271,360		-$98,640
		$19,750,000		$19,750,000		
		$1,617,935		$1,932,993		

As Table 5 shows, the effect of the discounted conversion increases payouts to angels by $315,059, two-thirds of which comes at the expense of venture capital investors. This is a clear example of how the discount given to angel investors on their conversion to Series A shares was mostly taken from venture capital investors. The bigger the discount, the bigger will be the magnitude of this effect. This is why later investors should object to such discounts.

Renegotiating the Terms

Given the above analysis, the Series A term sheet may very well require a renegotiation of the pre-seed and seed debt structure to do away with the discounted conversion to the Series A shares. Entrepreneurs will have to go to their pre-seed or seed investors and explain that venture capital investors object to the discount that was already granted. This can create tension between the pre-seed or seed investors and the entrepreneur, between the pre-seed or seed investors and the venture capitalist, and between the entrepreneur and the venture capitalist. Beginning a long-term investment relationship with shareholder and board tension is seldom in anybody's best interest.

This tension can be avoided, however, by structuring the seed investment to apportion risk and return among the parties to that original agreement—the entrepreneur and the seed investors—without unduly disadvantaging later investors in the company. This also places the cost (or dilutive effect) of the equity kicker paid to the angel investor on existing common shareholders, not on the future venture capitalist.

Another response used by venture capitalists when angel investors have been promised conversion into the Series A at a discount is to reduce the pre-money valuation of the company, which has the effect of transferring back to the founders the majority of the risk premium for angels that they tried to transfer to the Series A investors. This still creates misaligned incentives among holders of Series A shares, however, but is a method the authors have seen used to counter the discounted seed round.

This brings us full circle to the question asked at the beginning of this section:

What is the optimal structure for seed debt?

Seed investors who want compensation for the extra risk they bear should receive warrants instead of a discounted conversion to the preferred shares. Warrants are the right to purchase common shares at some future date at an agreed price. The term of the warrant is negotiable and it generally can be exercised by the holder at any time. Depending on the exercise price of the warrants (the price at which common shares can be purchased), it's possible that they may be exercised only at the time of exit in an upside scenario, and gains may be treated as ordinary income instead of capital gains. In any event, warrants compensate angel investors for additional risk, but only in an upside scenario. This structure properly loads angel upside into common shares, side-by-side with founders, management, and venture investors, instead of loading a portion of angel upside into the preferred shares.

Let's consider case A5, and observe the economic effects of warrants in Table 6.

Case A5

Assumptions:

- The company raises $600,000 in convertible debt at an 8% interest rate
- One year later, the company raises Series A Convertible Preferred equity of $4 million, with a pre-money valuation of $6 million and a post-money valuation of $10.648 million;
- The convertible debt, plus interest, converts into Series A shares on a dollar-for-dollar basis;
- The seed investors receive 80% warrant coverage—the right to purchase a dollar value of warrants equal to 80% of the original principal amount of the seed investment) with a nominal exercise price, representing 2.4% of the common shares of the company; and
- The company is sold for $20 million four years after the seed round and three years after the Series A round.

The distribution of proceeds based on the preceding assumptions is shown in Table 6. Please note that the effect of the warrants is to reduce the percent ownership of all common shareholders after the preferred shares and accumulated dividend are paid and preferred shares are converted into common shares. However, this dilutive effect only occurs at the level of the pro rata distribution among common shareholders, and

does not affect the liquidation preference of the preferred shares. This has loaded the angel investor upside into the common shares, side-by-side with the upside for the venture capital investors and the entrepreneurs, and has aligned the interests of all parties. This is shown by comparing the percentage ownership in column A and column B.

Table 6
Distributions: Case A5

Item	A	B	Amount
Amount of Sale			$20,000,000
Minus: Est. Transaction Fees			-$250,000
Minus: Series A Liquidation Preference, Seed Investors			-$648,000
Minus: Series A Liquidation Preference, Venture Investors			-$4,000,000
Minus: Series A Dividend, Seed Investors			-$155,520
Minus: Series A Dividend, Venture Investors			-$960,000
Remainder			$13,986,480
Pro Rata Distribution			
Common Distribution, Seed Investors	5.58%	5.44%	$760,865
Warrants, Seed Investors		2.40%	$335,676
Common Distribution, Venture Investors	34.42%	33.60%	$4,699,457
Common Holder Share Distribution	60%	58.56%	$8,190,483
Total Distributions			$20,000,000

The number of warrants by which seed investors are compensated can be calibrated to replace the gain they would have had with a discounted conversion to the Series A. The effect of replacing the discount with warrants is shown in Table 7. Angels receive nearly the same gain as they would have in Case A4. To achieve this, they require 80% warrant coverage, or warrants with a $480,000 face value along with their original $600,000 investment. The difference with warrants instead of a discounted conversion rate is that nearly two-thirds of the angels' risk premium is borne by the common holders, and only one-third by the venture capital investors. Venture investors are more likely to accept this slight dilution because the structure of the seed debt protects their downside. In a downside scenario, the warrants are valueless and the venture investors will receive all their capital back before angels receive a gain. In exchange for this downside

protection, venture investors are likely to be willing to bear one-third of the dilutive effect of the warrants in an upside scenario.

Table 7
Payout by Investor Class
Comparing Warrants to Discount Conversion Pricing

Payout by Investor Class	Investment	Case A2	Multiple	Case A4	Multiple	Case A5	Multiple
Angels	$600,000	$1,617,935	2.70	$1,932,993	3.22	$1,900,060	3.17
VC	$4,000,000	$9,762,065	2.44	$9,545,647	2.39	$9,659,457	2.41
Common		$8,370,000		$8,271,360		$8,190,483	
		$19,750,000		$19,750,000		$19,750,000	

Conclusion

Pre-seed and seed debt instruments that are structured to convert to next round securities at the same price new investors pay are less likely to be obstacles to successful institutional funding than debt that converts at a discount. Seed investors can be compensated for their extra risk with warrants for common shares. This structure places the cost of the deal made between the entrepreneurs and the angel investors mostly with the entrepreneurs, and not the future venture capitalist.