



Considering the Equity Blocker: Effects on Fair Value and Potential Dilution

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INTRODUCTION

The complexity of financial instruments tends to increase as time passes. The market is constantly developing novel avenues to transfer risk or speculate on price movements, which necessitates a greater understanding of the intricacies and nuance contained in the contractual provisions of these instruments. Executives and their advisors can lose themselves in the hustle of fundraising and audit but neglecting to consider all possible scenarios during the life of a derivative instrument can have far reaching effects. Consider the simple equity blocker.

An equity blocker is a provision of derivative instruments that caps the potential ownership position in the underlying security that the holder can obtain when the instrument is exercised. Although often overlooked, the effect an equity blocker has on the fair value of the instrument and potential dilution can be substantial. This article demonstrates the effect of an equity blocker by providing a hypothetical with or without scenario analysis of one such complex financial instrument.





CASE STUDY

01 Fair Value Considerations

Not all equity blocker provisions have an effect on the fair value of the instrument or potential dilution. Certain legal rights and restrictions must also be in place to consider an equity blocker as a fair value provision. If an equity blocker is specific to the note issuance, and not the entity that is the note holder, then the provision should be considered.

If an equity blocker is specific to the note holder, then the equity blocker would be nullified if the holder were to sell a portion of their note to another market participant. However, an equity blocker tied to the note holder should be considered if there are provisions that prevent the transfer of the note, in whole or in part. If the note cannot be transferred in part, then it is subject to the equity blocker restriction as only one entity could hold the note.

02 The Hypothetical Fundraising Event

Our analysis considers a microcap company traded on OTC markets with 2,000,000 shares outstanding (on a fully-diluted basis) and a traded price of \$5.00 per share on the measurement date. OTC traded entities often lack sufficient funds from their float to the public market and require additional fundraising in the form of private investments in a public entity (PIPE's). Investors in these fundraising events may compensate for the additional investment risk by including complex provisions.

We assume a fundraising event where the hypothetical OTC traded entity raises a PIPE in the form of a convertible note, also known as a convertible bond. A convertible note is a hybrid debt instrument that includes the traditional aspects of a bond, but also allows the note holder the option to require repayment in the form of an underlying equity security instead of cash.

03 Description of Convertible Note

This hypothetical convertible note has a principal of \$100,000 and accrues interest at a rate of 10% per year. The principal and interest on this note may be converted into shares of common stock at any time from the issuance date until the maturity date, with the maturity date being the 6-month anniversary of the issuance date. The conversion price is initially \$5.00, but it is subject to adjustment as outlined below.

04 Potential Adjustments to the Conversion Price

The conversion price for this convertible note is not fixed at \$5.00. The conversion price at the date of conversion is determined to be the lower of i) The initial conversion price of \$5.00; or ii) the product of a) the lowest closing price of the underlying stock during the 30 trading days immediately preceding the conversion date multiplied by b) 50%, the conversion discount.

05 Key Inputs & Assumptions

For demonstration purposes, we have made various simplifying assumptions in our analysis. We assume that the volatility of the underlying stock, the risk-free rate, and the fully-diluted shares outstanding will remain constant over the measurement period. We also assume that the convertible note will be held to maturity prior to converting.

The key inputs used in the simulation are delineated in the table below

Principal	Interest Rate	Stock Price	Initial Carry Price	Volatility	Years to Maturity	Risk Free Rate	Equity Blocker	Principal & Interest at Maturity	Conversion Discount
\$100,000	10.0%	\$10.00	\$10.00	100.0%	0.50	2.50%	5.00%	\$104,932	50.0%
\$100,000	10.0%	\$10.00	\$10.00	100.0%	0.50	2.50%	N/A	\$104,932	50.0%

06 Valuation Methodology

// A Monte-Carlo Simulation is a numerical valuation methodology that randomly generates the path of a stock price at given dates using Geometric Brownian motion.

We performed a Monte-Carlo Simulation to capture the complexity and path-dependency of the variable conversion price in our analysis. A Monte-Carlo Simulation is a numerical valuation methodology that randomly generates the path of a stock price at given dates using Geometric Brownian motion.



CONCLUSION

Valuation Results

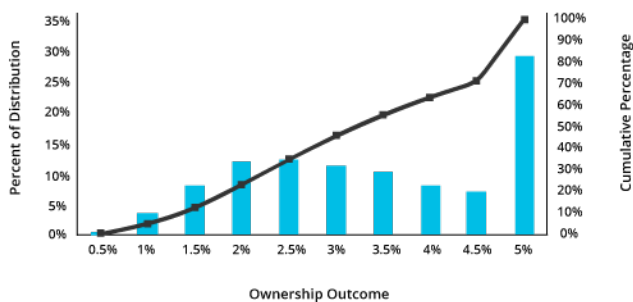
The concluded fair value of the conversion feature, expected shares, and ownership percentage are summarized in the following table:

Equity Blocker	Conversion Feature Fair Value	95th Percentile Dilutive shares	Percent Ownership
5.00%	\$147,988	52,105	5.00%
N/A	\$158,164	96,067	8.85%

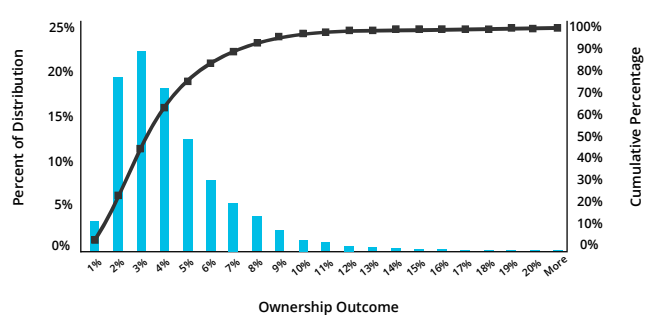
Discussion

Our analysis demonstrates that an applicable equity blocker, if applicable based on the Fair Value Considerations discussion above, can have a significant effect on Fair Value and dilution. The Fair Value of the liability incurred from the conversion feature decreases by 6.4% if the equity blocker is considered, and potential dilution increases nominally for the 95th percentile. However, special consideration should be given to outliers, where the note holder's conversion could result in an ownership level as high as 27.42%.

Distribution of Ownership Outcomes With Equity Blocker



Distribution of Ownership Outcomes Without Equity Blocker



Alternative areas of interest for additional research and future discussion could include sensitivity around inputs in the analysis, alternative conversion price adjustments, or corporate events that cause large jumps in the traded price.

Conclusion

As investors continually adjust to shifting risk in financial markets by creating additional complexity, it becomes imperative that fundraisers and Fair Value professionals obtain an understanding of these complexities. Our analysis indicates that the effects of an equity blocker are sufficient to be considered by both management and valuation professionals. Management should consider potential dilutive adjustments and the existence of a contractually restrictive equity blocker when fundraising. Additionally, valuation professionals performing or reviewing the analysis of certain complex securities with an equity blocker should consider whether the equity blocker could be a component of Fair Value and if the restriction should therefore be included in the valuation methodology.