

Complex Securities Demand Sophisticated Valuation Techniques

Preferred stock redeemable with common stock was deemed to be an embedded derivative by the auditors and valuing it required a binomial lattice model

A venture backed company had several series of redeemable preferred stock in its capitalization, plus some warrants exercisable into those series of preferred. The company's audit firm required valuation of these complex securities under a variety of Financial Accounting Standards for inclusion in the company's audited financials.

CHALLENGE

As it grew over several years, an Internet services company raised four rounds of preferred stock. Some of the later series of preferred stock contained a redemption feature and investors were given the option to request redemption in cash or shares of common stock. The company's audit firm required that the "fair value" of these redemption-and-conversion options be calculated for the date of issuance of each series of preferred and then recalculated annually thereafter. These values were recorded on the company's balance sheet.

In addition, the Internet services company had issued to lenders two series of warrants exercisable into two series of the redeemable preferred stock. The company's audit firm also required that the "fair value" of these warrants be determined for the balance sheet.

SOLUTION

The Internet services company historically had obtained IRC 409A reports from a valuation firm which outsourced its analytical work to a back office overseas. However that valuation firm lacked the ability to value the complex securities. The audit firm suggested changing valuation firms and introduced the Internet services company to Teknos.

Analysis of Situation

The redemption-and-conversion option in the preferred stock was classified as an "embedded derivative" under FASB Accounting Standards

Codification Topic 815, *Derivatives and Hedging* (ASC 815, formerly FAS 133). Its value had to be modeled separately from the value of the entire company or any individual security.

The preferred warrants exercisable into the redeemable preferred stock were classified as hybrid debt-equity securities under FASB Accounting Standards Codification Topic 480, *Distinguishing Liabilities from Equity* (ASC 480, formerly FAS 150) and a related Financial Accounting Standards Board staff position (FSP 150-5).

Sophisticated Valuation

In addition to preparing a standard valuation report for option issuance (in compliance with IRC 409A and ASC 718), we separately valued the redemption-and-conversion options and the preferred warrants.

The “fair value” of redemption-and-conversion options was modeled using a binomial lattice model encompassing more than 1,600 nodes to cover the period from the issue date to the possible redemption date. An assumption was made about the capital structure on the possible redemption date and this was used to calculate the value of each security. The future securities values were discounted back to their present values using a risk-adjusted discount rate and these values were cross-checked using a Black-Scholes model.

In a similar fashion, the “fair value” of the preferred warrants was calculated using a Black-Scholes option pricing model, once the values of the underlying series of preferred stock were established.

Teknos will be ready to provide the same sophisticated valuation services in a year’s time, when the Internet services company again needs to “fair value” the redemption-and-conversion options and the warrants for the next set of audited financial statements.

Teknos Associates is a valuation firm which serves emerging growth companies and their venture capital backers. We are a team of experienced and credentialed valuation professionals with backgrounds in appraisal, accounting, investment banking, and venture capital.

We provide appraisals to facilitate compliance with a variety of tax and accounting requirements, including option issuance and portfolio valuation. We support merger and acquisition activities with independent fairness opinions. And we offer valuations of intangible assets and liabilities after an acquisition.

We have produced hundreds of valuation reports quickly and economically, without sacrificing quality. Our reports have stood up to scrutiny by Big Four audit firms, the IRS, and the SEC. Contact us at to see how we can help you.

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