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Contents

Emerging Growth Companies — Interpolation Considerations for Valuing Share-Based Compensation

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Introduction

ASC 718[1] requires the use of a fair-value-based measurement method for share-based payment arrangements. In the absence of an observable market price, an entity will generally use a valuation technique such as the Black-Scholes-Merton model to estimate the fair-value-based measure. While ASC 718 does not require the use of a particular model, it does require, at a minimum, that the selected valuation model incorporate certain inputs. One input that may be subject to significant management judgment is the fair value of the underlying shares as of the grant date.

For tax purposes, entities will often hire a specialist to perform independent valuations to assist in determining the value of the underlying shares. (Such valuations are often referred to as "Section 409A valuations" since they are subject to the requirements of that Internal Revenue Code section.) Early-stage companies often obtain the independent valuations only once per year. However, as illustrated in Figure 1, the dates of the valuations do not always coincide with the grant date for a share-based payment award. As a result, management will need to assess the current fair value of the underlying shares as of the grant date.

[1] FASB Accounting Standards Codification Topic 718, *Compensation — Stock Compensation*.

Figure 1 — Valuation Dates of Independent Evaluations

Given the facts in Figure 1, management will need to determine the fair value of the underlying shares as of September 1, 2017, to calculate the grant date fair value of the share-based payment arrangement.

This first installment in our special *Financial Reporting Alert* series for start-up companies discusses factors for management to consider when determining the fair value of the underlying shares in circumstances such as those presented in Figure 1. Additional installments in the series will be issued as warranted.

Qualitative and Quantitative Factors

Management should consider qualitative and quantitative factors when assessing the current fair value of the underlying shares as of the grant date if a current independent valuation is not readily available. A current independent valuation could be based on a recent arms-length willing buyer, on a willing seller transaction (an "orderly transaction"[2]), or on value indications under the income and market approaches that are reconciled to a value estimate. The relevance of qualitative and quantitative factors becomes greater as the period between the most recent valuation and the grant date increases.

We believe when management performs its assessment of fair value, it should consider the factors outlined in the AICPA's Accounting and Valuation Guide *Valuation of Privately-Held-Company Equity Securities Issued as Compensation* (the "AICPA Guide"). However, those factors are not all-inclusive since an entity's specific circumstances may affect valuation. In the absence of an orderly transaction or the data needed for an entity to apply the income and market approaches, the entity should work with its auditor and an independent valuation specialist to ensure that it has properly identified all relevant factors that could affect the fair value of the underlying share price.

When evaluating the factors in the AICPA Guide, management should determine whether there have been any positive or negative changes to the fair value of the underlying shares since the most recent independent valuation. Accordingly, management may consider the following in making its determination:

- *Material changes in milestones established by the entity* — Enterprise milestones factored into the previous valuation might include expectations and timing of achieving proof of concept, establishing certain strategic relationships, securing key resources, obtaining regulatory approval, or achieving breakeven operations or profitability.
- *Material changes in management's forecast* — Changes in forecasted revenue, margins, or profitability assumed as of the last valuation.

[2] FASB Accounting Standards Codification Topic 820, *Fair Value Measurement*, defines an orderly transaction as a "transaction that assumes exposure to the market for a period before the measurement date to allow for marketing activities that are usual and customary for transactions involving such assets or liabilities; it is not a forced transaction (for example, a forced liquidation or distress sale)." In private-company financing transactions, the usual and customary marketing activities generally include time for the investors to perform due diligence and to discuss the company's plans with management, the board of directors, or both.

- *Material changes in strategic relationships with major suppliers or customers* — A loss or gain of a major supplier or customer can materially affect the entity if it was not factored into the previous valuation. Further, changes in the financial health and profitability of strategic suppliers or customers can also affect the entity's valuation.
- *Material changes in enterprise cost structure and financial condition* — A change in the cost structure flexibility (i.e., relationship between fixed and variability cost) may affect the entity's previous expectations regarding its cash burn rate and future financial strength.
- *Material changes in competence of management team* — A change in the experience and competence of the management team may affect the future strategic objectives and direction of the entity.
- *Material changes in existing proprietary technology, products, or services* — The nature of the industry, patents, exclusive license arrangements, and enterprise-owned and developed intellectual property may significantly affect an entity's valuation. Rapidly changing technology and a high likelihood of product obsolescence should be evaluated when the entity does not have proprietary technology.
- *Material changes in workforce and workforce skills* — For certain entities, the quality of the workforce as a result of specialized knowledge or skills of key employees can be a significant input into an entity's valuation and should be evaluated.
- *Material change in the state of the industry and economy* — Local, national, and global economic conditions may adversely or positively affect an entity.
- *Material third-party arm's-length transactions in the entity's equity*[3] — These types of transactions should be evaluated since they may indicate that the fair value of the underlying shares have fluctuated.
- *Material changes in valuation assumptions used in the last valuation* — The likelihood of achieving a liquidity event, such as an initial public offering or a merger or acquisition of an entity or significant changes in the financial metrics or the valuations of the entity's publicly traded comparable companies.

Interpolation Considerations for Valuing Share-Based Compensation

Entities should evaluate the use of an interpolation or extrapolation framework to estimate the fair value of the underlying shares when the entity grants equity between two independent valuations or after an independent valuation. In Example 1 below, a linear interpolation framework is used; however, management should not necessarily analogize to the facts in that example. Entities should evaluate the appropriateness of using an interpolation framework and should consider the factors outlined above when using such a framework.

The examples below illustrate when the use of an interpolation framework may be appropriate.

Example 1 — Linear Interpolation

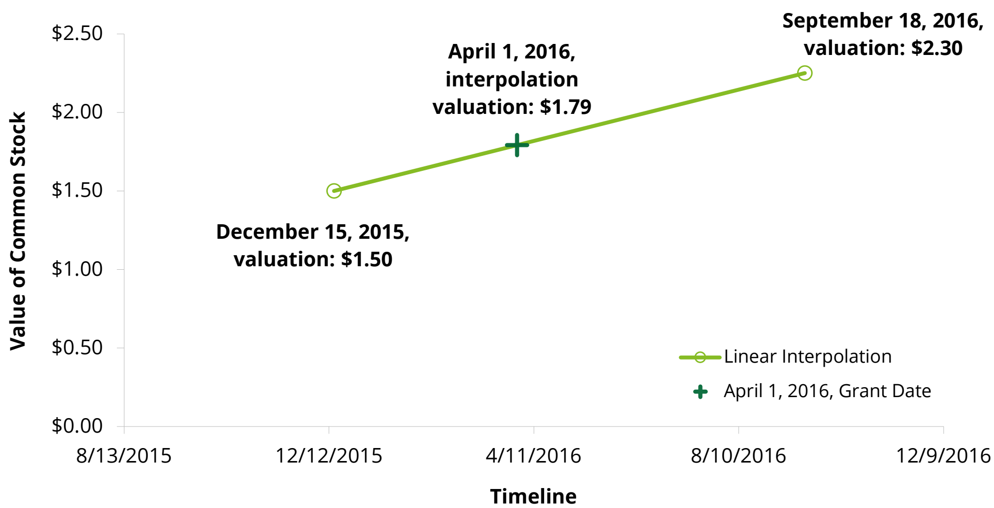
Company X performed an independent valuation of its common stock as of December 15, 2015, and September 18, 2016. Company X's common stock value increased from $1.50 to $2.25 between December 15, 2015, and September 18, 2016. On April 1, 2016, X granted 500,000 options on its common stock to its employees, with an exercise price of $1.50. Company X evaluated the qualitative and quantitative factors discussed above and did not identify any significant events that occurred during this interim period that would have caused

[3] For additional information about considering secondary transaction, see Chapter 8, "Inferring Value From Transactions in a Private Company's Securities," of the AICPA Guide.

a material change in fair value of the common stock. Further, over this period, management monitored its industry and peer group multiples and observed that these valuation inputs did not suggest a change in the fair value of X's common stock.

We believe that in the absence of an orderly transaction or data necessary for an entity to apply the income and market approaches, it is acceptable for management to perform a linear interpolation between the December 15, 2015, and September 18, 2016, valuation dates to determine the fair value of the common stock as of April 1, 2016. After performing a linear interpolation, X concluded that the fair value of the common stock as of April 1, 2016, was $1.79. Management would use a fair value of $1.79 for the common stock when valuing the 500,000 options granted on April 1, 2016. Figure 2 below illustrates X's linear interpolation.

Figure 2 — Linear Interpolation

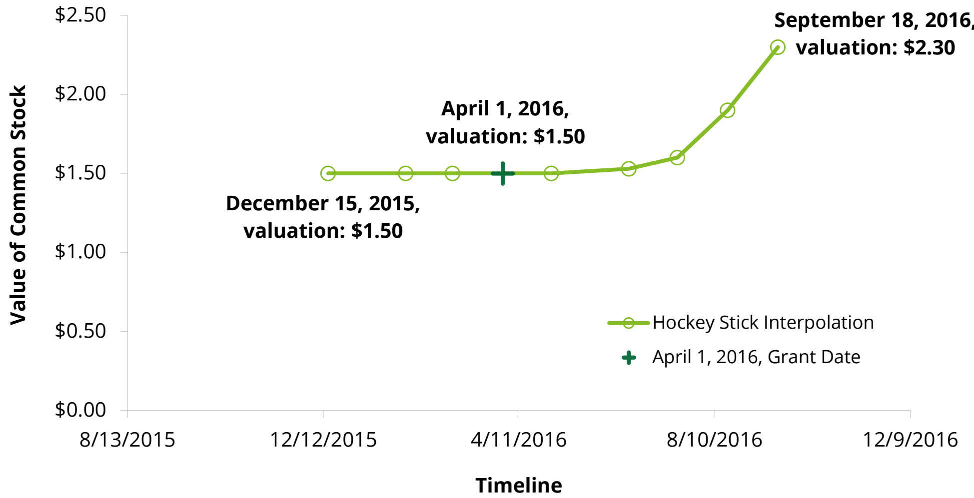


Example 2 — Hockey Stick Interpolation

Assume the same facts as Example 1 above; however, X's operating results were higher than originally forecasted in the December 15, 2015, valuation model. Specifically, X performed above expectations during the interim period July 1, 2016, through September 18, 2016. Its performance was primarily driven by higher than expected customer acquisitions and improved pricing. Before July 1, 2016, management evaluated the qualitative and quantitative factors discussed above and did not identify any significant events that occurred before July 1, 2016, that would have caused a material change in fair value of the common stock. Management therefore concluded that the common stock valuation was flat over this period.

We believe that in the absence of an orderly transaction or of the data necessary for the application of the income and market approaches, it is acceptable for management to perform a "hockey stick" interpolation between the December 15, 2015, and September 18, 2016, valuation to determine the fair value of the common stock as of April 1, 2016. This is because management has evidence that the increase in the fair value of the common stock was primarily attributable to better-than-expected growth from July 1, 2016, through September 18, 2016. Figure 3 below illustrates X's interpolation.

Figure 3 — Hockey Stick Interpolation



As suggested in Figure 3 above, X concluded that the fair value of the common stock as of April 1, 2016, was $1.50. However, if management had granted options on its common stock between July 2016 and September 2016, management would use the interpolation framework above to determine the fair value of the common stock.

Example 3 — Equity Granted After the Most Recent Valuation (Extrapolation)

After performing an independent valuation of its common stock as of July 1, 2016, Company Y, which has a calendar year-end, concluded that the fair value of the common stock was $2.00. On December 1, 2016, Y granted 500,000 options that can be exercised on Y's common stock. On March 1, 2017, Y will issue its financial statements without having an updated independent valuation of its common stock (i.e., it will only have the July 1, 2016 valuation).

Company Y is generating revenue but is currently operating at a loss. At the time of Y's July 1, 2016, common stock valuation, management forecasted FY16 revenue of $10 million and FY17 revenue of $25 million. As of December 1, 2016, management revaluated its actual and forecasted revenue and concluded that there were no material changes to its original revenue forecast. Management considered the qualitative and quantitative factors discussed above to determine whether the common stock fair value had changed. On the basis of its assessment as well as its unchanged revenue forecast, management concluded that the common stock fair value had remained flat and that there was no evidence that the fair value of the common stock had materially increased or decreased since the July 1, 2016, valuation. As a result, management used a common stock fair value of $2.00 for the December 1, 2016, options.

Assume the same facts as above; however, FY16 revenue and the forecasted FY17 revenue is 10 percent above the July 1, 2016, forecast that was assumed in the previous valuation. In this scenario, management should develop a reasonable method to reflect an increase in the fair value of the common stock between July 1, 2016, and December 1, 2016. For example, on the basis of Y's July 1, 2016, valuation, management can approximate the incremental impact on its common stock due to the additional increase in revenue during FY16 and FY17. Using this amount as a benchmark, management could approximate the fair value of the common stock as of December 1, 2016.

Disclosure Considerations

Below are excerpts from the Form S-1 registration statements of certain public companies that have disclosed the use of an interpolation method.

Facebook Inc.:

> The fair value of the RSUs granted in February 2011 was determined using a straight-line calculation, with the benefit of hindsight, between the fair value determined as of December 31, 2010 of $20.85 per share and the $25.00 per share offer price for the tender offer described above that commenced on March 1, 2011. The fair value of the RSUs granted in March 2011 was determined using a similar straight-line calculation between the tender offer price of $25.00 per share as of March 1, 2011, and the fair value determined as of March 31, 2011 of $25.54 per share. We determined that the straight-line calculation provides the most reasonable basis for the valuations for the RSUs granted on the interim dates because we did not identify any single event that occurred during this interim period (other than the March 2011 tender offer) that would have caused a material change in fair value.

New Relic Inc.:

> In some cases, we also considered the amount of time between the valuation date and the grant date to determine whether to use the latest common stock valuation determined pursuant to one of the methods described above or a straight-line calculation between the two valuation dates. This determination included an evaluation of whether the subsequent valuation indicated that any significant change in valuation had occurred between the previous valuation and the grant date.

Palo Alto Networks Inc.:

> For financial reporting purposes, we applied a straight-line calculation using the contemporaneous third-party valuations of $5.39 per share as of December 31, 2010 and $7.84 per share as of April 30, 2011 to determine the fair value of our common stock granted in February 2011. Using the benefit of hindsight, we determined that the straight-line calculation would provide the most reasonable conclusion for the valuation of our common stock on this interim date between valuations because we did not identify any single event or series of events that occurred during this interim period that would have caused a material change in fair value. Based on this calculation we assessed the fair value of our common stock for awards granted in February 2011 to be $6.62 per share.

FireEye Inc.:

> For financial reporting purposes for the awards granted in May 2012, we applied a straight-line calculation between the $1.65 per share determined in the contemporaneous third-party valuation as of December 31, 2011 and the $2.48 per share determined in the contemporaneous third-party valuation as of June 30, 2012 to determine the fair value of our common stock on the grant date. Using the benefit of hindsight, we determined that the straight-line calculation would provide the most appropriate conclusion for the valuation of our common stock on the interim dates between valuations because we did not identify any single event or series of events that occurred during this interim period that would have caused a material change in fair value. Based on this calculation, we assessed the fair value of our common stock for awards granted in May 2012 to be $2.21 per share.

Aerohive Networks Inc.:

> The increase in the fair value of the underlying common stock from August 2012 to December 2012 primarily resulted from an increase in the enterprise value as a result of an increase in actual and forecasted revenue utilized in the valuation approaches and our progress towards an IPO as the revenue multiples of our comparable industry peer companies were relatively consistent as of both valuation dates. As noted above, the Board granted stock options in . . . December 2012 with an exercise price of $6.00 per share based in part on the fair value of our common stock determined in the August, 2012 valuation because the Board was not aware of any events, or series of events, which would have clearly resulted in an increase in the fair value. However, for financial reporting purposes, we reassessed the fair value of our underlying common stock to be . . . $6.80 per share for the December 2012 grant. We determined the fair value on the grant date using a linear interpolation on the basis that there was no single event or series of events that caused the increase of the fair value of the common stock from August 2012 through December 2012.

Arista Networks Inc.:

> Due to continued sales of our common stock in private transactions, we determined that a retrospective valuation of the fair value of our common stock as of February 15, 2013 was appropriate for financial reporting purposes. In connection with the preparation of our retrospective common stock valuation as of February 15, 2013, we noted that the fair value of our common stock increased from $4.18 per share on November 15, 2012 to $9.48 per share on February 15, 2013, which indicated that there was an increase in the fair value of the underlying common stock for our January 7, 2013 option grants. Accordingly, we determined on a straight-line basis that the fair value of the underlying common stock for the options granted on December 27, 2012 was $6.60 per share rather than $4.18 per share as previously determined, and the fair value of the underlying common stock for the options granted on January 7, 2013 was $7.23 per share rather than $4.18 per share as previously determined.