Equity Compensation Issue Brief

Employee Stock Purchase Plans: Financial Reporting Complexity

March 2016
Introduction

Employee stock purchase plans (ESPPs) are making a comeback. The optimist might see it as companies embracing the importance of share ownership. The pessimist might chalk it up to the larger trend away from broad-based granting. Either way, ESPPs are on the rise, and not only that, they’re becoming more exotic.

Compared with other stock based compensation vehicles, ESPP financial reporting has attracted little scrutiny. Maybe for that reason, the consensus has been that a sophisticated financial reporting process isn’t worth the effort. But the accounting is complex. And with ESPPs becoming more popular than broad-based granting, their ASC 718 expense might be too material to roll into a simplified process.

Among simplified approaches, the most popular has been the pool-based method. This involves estimating employee contributions at an aggregated level (such as by department), then building an expense waterfall off the pooled contribution amounts. Forfeitures are also usually modeled at whatever unit of measurement is applied, and true-ups are necessary only when the aggregate forfeiture level clearly departs from expectations. This approach works when individual contributions are insignificant and imprecision ends up in a wash.

Lately we’ve run into cases where a pool-based approach fails to produce reliable expense estimates. What’s needed is a more advanced process that operates at the employee level. This is more involved than a pool-level calculation, and requires estimating purchases based on how the plan design interacts with each employee’s salary and contribution percentage. In this issue brief, we highlight some of the reasons for complexity and discuss ways to manage them.
Factors Driving Complexity in ESPP Reporting

Our experience in other areas of stock-based compensation has taught us to take a risk-based approach to ESPP reporting. We do this by looking at the design and reporting elements that drive complexity. With fewer of these elements, a simpler process may work just fine. As complexity grows, so does the benefit of added precision.

On top of this, there’s the data. Unlike other areas of equity reporting, ESPP reporting data does not live in a single system. Purchases usually happen in the administration platform, whereas pre-purchase contributions generally only live in the payroll system. So, after introducing the different types of program complexity, we’ll shift to the underlying data considerations that any ESPP reporting process needs to address.

Lookback Features

Lookbacks have become quite common among ESPPs. They essentially give the employee the ability to purchase shares at a discount from the lower of the purchase date price or the offering date price. The longer the lookback (e.g., extending from 6 months to 24 months), the higher the ESPP fair value, just as a longer term on an option results in a higher fair value.

By themselves, lookback features generally don’t complicate financial reporting, because the lookback is factored into the upfront grant-date fair value. Nonetheless, the overall expense materiality of the program grows as lucrative features like a lookback are incorporated.

A brief overview of ESPP valuation follows. It’s intentionally simple here so that we can focus further on program features that add complexity after the ESPP is set up.

The value—or potential value—of an ESPP is driven by different features of the plan. Mechanically, the fair value of an offering is computed by independently estimating fair value for, and then summing up, the following components:

- **The discount.** This is the value that the participant receives by paying less than the face value of the stock.
The call option value. For plans with a lookback feature, the employee can purchase stock at a discount from the grant-date stock price even if the purchase-date stock price is much higher, which represents a call option.

The put option value. For plans where a participant can purchase more shares with their fixed contribution when the price decreases, they effectively have a put option that limits their downside by guaranteeing a certain minimum dollar gain no matter the stock price.

For most lookback plans in the market, whether they simply have one purchase per offering or multiple purchases with other complexities layered in, the fair value is simply the sum of components 1, 2, and 3. For most plans, the challenges really begin after estimating fair value.

Appropriately Handling True-Ups at Purchase

Since ESPP expense is initially based on share purchase estimates, rather than a fixed number of shares like other awards, even the most vanilla ESPPs require expense to be trued-up at the time of the purchase. An intuitive reaction would be to simply true-up the expense based on shares actually purchased—akin to the ASC 718 accounting model for handling performance conditions.

However, this isn’t quite right, because some differences between the estimated shares to be purchased and the actual number of shares purchased are already accounted for in the upfront valuation. In other words, truing-up would result in double-counting. Table 1 provides insight into the different factors that can create a wedge between actual and estimated purchase shares, and what the accounting treatment is for each situation.
<table>
<thead>
<tr>
<th>Reason Actual Shares Purchased Differs From Estimated Quantity</th>
<th>Expense Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decrease in stock price between offering date and purchase date</td>
<td>None; the ability to purchase additional shares if the price decreases is part of the fair value</td>
</tr>
<tr>
<td>Salary change or bonus paid during enrollment</td>
<td>True-up to share estimate based on new contribution amount</td>
</tr>
<tr>
<td></td>
<td>Adjust expense as if the new total expected contribution amount had been the estimated contribution amount all along. In other words, no remeasurement or modification is triggered</td>
</tr>
<tr>
<td>Employee termination, resulting in no shares being purchased</td>
<td>Reverse all previously recognized expense (analogous to forfeiture)</td>
</tr>
<tr>
<td>Employee withdrawal from the program, resulting in no shares being purchased</td>
<td>Do not reverse previously recognized expense (analogous to not exercising an option)</td>
</tr>
<tr>
<td>Increase in contribution percentage</td>
<td>Modification accounting and incremental cost</td>
</tr>
<tr>
<td></td>
<td>Unique program design feature; modification accounting is triggered only when a participant uses the feature</td>
</tr>
<tr>
<td>Decrease in contribution percentage</td>
<td>Do not reverse or decrease expense (analogous to a modification resulting in a lower value; consistent with withdrawal case above)</td>
</tr>
</tbody>
</table>

Table 1. Reasons actual shares differ and associated expense treatment

**Modification Accounting: Contribution Rate Changes**

As outlined above, an individual increasing their contribution rate triggers modification accounting for that individual’s grant. Think of this program feature as simply allowing for an incremental number of shares to be earned, which is something occasionally seen with performance awards or reload options. In contrast to other equity vehicles, however, the presence of this design feature allows continuous changes to the withholding rate. Even though we would expect ESPP participants to pick a withholding level and stick with it, our experience suggests at least some take full advantage of the flexibility and may alter their rates multiple times within a single offering.
Because the flexibility to alter the contribution rate results in the ability to buy more shares, incremental shares are added to the remaining purchases in the offering. The value ascribed to these shares is the fair value of the ESPP on the modification date, taking into account the stock price and remaining term as of that time. To properly account for this type of modification, the incremental shares must be captured in a “child award” that will expense from the modification date through the respective purchase date, and will have a different fair value from the parent award.

We’ll refer to parent and child grants throughout the remainder of this paper. It’s a useful metaphor because it captures how modifications create standalone share quantities. These share quantities have their own vesting periods and their own values, and yet their existence is derived from the underlying grant that is modified. We use the parent-child framework not only to make a conceptual point, but also to underscore that, from a systems perspective, it’s necessary to link the two together. When the underlying parent grant is forfeited, the child follows and receives the same treatment.

**Modification Accounting: Resets and Rollovers**

Reset and rollover provisions are perhaps the trickiest ESPP features. They’re incredibly valuable to program participants, will usually have material expense implications, and add layers of complexity to the overall accounting model and process.

Resets and rollovers are plan features that can be triggered when the stock price on a purchase date is lower than the stock price on the enrollment date. Resets and rollovers are effectively ratchet provisions for multi-purchase offerings, where the employee can be guaranteed the most favorable purchase price available in the plan. These are triggered when the stock price on the purchase date is lower than the grant-date stock price. When this occurs, the then-active purchase is made, but the strike price for future purchases resets to the lower price.

Once a reset or rollover is triggered, this decrease in the strike price represents a modification for the remaining purchases. This requires a two-part approach to accounting for the modification. First, more shares are purchased due to the lower price, and these incremental shares need to be captured in a child award as is done with contribution increases. Second, the lower strike price increases the value of all shares to be purchased, resulting in incremental cost.¹ Accounting for this incremental cost results in creating a second child award for the affected grants, which has a fair value equal to the increase in the value of the original purchase.

¹ For an in-depth discussion of modification accounting, see our Modifications White Paper.
Consistent with modification accounting for other awards in ASC 718, both sources of additional expense are recognized from the modification date through the remaining life of the tranche. Finally, in a rollover—so called because the employee is “rolling over” into the new offering that starts on that day—the participant is enrolled in further purchases on top of having their strike price lowered. This differs from a reset, in which the price for the already-existing purchases is simply “reset” to the lower price and the offering is otherwise unaffected.

For example, consider a two year offering with four purchases and a rollover feature. If the rollover modification were to occur at the end of the first purchase, then that purchase would occur at the lower price. The three remaining purchases would be modified to have a lower strike, with each tranche getting a child award for the incremental shares and a second child award for the incremental fair value. Additionally, one more purchase would be added, at the new strike price, to fill the enrollment back to four purchases. This is illustrated in Figure 1.

![Figure 1](image)

*Figure 1. The rollover that occurs at the end of the first purchase, triggering child awards for the remaining three purchases and adding one new purchase.*

If another rollover were to occur, the same thing would happen, but the complexity is increased. That is, it modifies everything outstanding, creating child awards for the future purchases, the additional rollover purchases, and even the first set of child awards. This is illustrated in Figure 2.
Figure 2. The child awards pertaining to each rollover as denoted by the numbered circles (1 represents the first rollover, 2 represents the second rollover)

Finally, a third rollover in a row illustrates how extreme the complexity can be when tracking modifications upon modifications. All the extant purchases, even child awards, receive new child awards. This is illustrated in Figure 3.
Figure 3. Dizzying level of complexity with child awards reached after three rollovers (numbered circles)—not even including changes in contributions. Automated processes must be in place to handle scenarios like this with less risk.
There are a couple of ways to handle the reporting when dealing with these provisions. A simple approach is to track incremental ESPP expense at the aggregated purchase level. Since most ESPP complexity is triggered by purchase-level modifications such as resets, it’s possible to make a single, on-top adjustment that represents the entire purchase’s modification.

In most cases, however, we prefer a more granular approach that involves creating individual child awards and modeling them in tandem with all the parent awards. For example, if a parent award ID is ESPP0001, we might create child awards such as ESPP0001_a, ESPP0001_b, and so on. Each one occupies a row in the data with its own vesting schedule and fair value. A separate process handles forfeitures and makes sure that forfeiture records cascade to affect both child and parent grants.

**Lack of Comprehensive Data Availability**

Last, but absolutely not least, is data. Everything discussed so far, from withholding rate changes to resets, works only if the underlying data can be assembled and processed. As we mentioned earlier, unlike every other area of stock compensation reporting, for ESPPs no administration system tracks all of the necessary data.

Some of the information is stored in the stock administration system, some in the payroll system, and some exists only in spreadsheets. This adds a level of complexity unique to ESPP reporting.

At a minimum, ESPP accounting requires the data shown in Table 2.
<table>
<thead>
<tr>
<th>#</th>
<th>Field</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Salary</td>
<td>Compute estimated shares</td>
</tr>
<tr>
<td>2</td>
<td>Contribution percentages (and effective dates)</td>
<td>Compute estimated and incremental shares</td>
</tr>
<tr>
<td>3</td>
<td>Grant price</td>
<td>Estimate incremental cost; trigger resets; compute diluted EPS</td>
</tr>
<tr>
<td>4</td>
<td>Estimated shares</td>
<td>Basis for expense</td>
</tr>
<tr>
<td>5</td>
<td>Grant-date fair value</td>
<td>Basis for expense</td>
</tr>
<tr>
<td>6</td>
<td>Offering and purchase dates</td>
<td>Expense amortization period</td>
</tr>
<tr>
<td>7</td>
<td>Withdrawals, terminations, purchases, and other transactions (separately flagged)</td>
<td>Correctly reflect in expense via reversal, true-up, etc.</td>
</tr>
<tr>
<td>8</td>
<td>Modification flag</td>
<td>Denote when a modification occurred and of what type (e.g., rollover, contribution change)</td>
</tr>
<tr>
<td>9</td>
<td>Modification details</td>
<td>Details of modification, including date, share, and pricing information</td>
</tr>
<tr>
<td>10</td>
<td>Child awards (with appropriate fair values and requisite service periods)</td>
<td>Correctly recognize expense related to modifications</td>
</tr>
<tr>
<td>11</td>
<td>Disqualifying dispositions (for US participants)</td>
<td>Company only receives a tax deduction if the employee disqualifies</td>
</tr>
<tr>
<td>12</td>
<td>Participant location and other indicative data needed for reporting</td>
<td>Tax, push-down accounting, or other internal need for granular reporting</td>
</tr>
</tbody>
</table>

Table 2. Minimum data required for ESPP accounting

As you can see, this data comes from disparate sources. Grant prices are typically found in the stock administration system. Salaries are typically in a separate HR system, and individual contribution percentages sometimes in a separate Excel maintained by stock administration. Other data, like finer modification details or child grants, may not exist within the current process at all. And of course, some fields are absolutely necessary while others are discretionary depending on the scope of reporting needed (e.g., disqualifying dispositions and indicative data).

You’ll also need to decide how, and how frequently, to pull and merge data feeds. Exception handling and data validation are especially important given that large and constantly changing datasets are being merged. An important part of our work is helping clients make these process decisions. Just like we have done here, we encourage you to map the features of your program to the data fields you need to properly account for those features, then build a process around the disparate data elements.
Conclusion

As ESPPs expand and companies add more employee-friendly features, pool-level accounting becomes less tenable. Employee-level tracking of ESPPs is already happening. Occasionally the external audit team drives this, but frequently we find that management is looking to remove imprecision and ambiguity from an increasingly material expense.

The diversity of plan features, materiality thresholds, and accounting information systems require every solution to be different and customized to the fact pattern at hand. But there’s one common thread: The process needs to provide for precision and control. We encourage companies to critically analyze their ESPP reporting, and make sure they architect a process that handles the substantive program features at a level of precision that fits the overall materiality of their program.

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