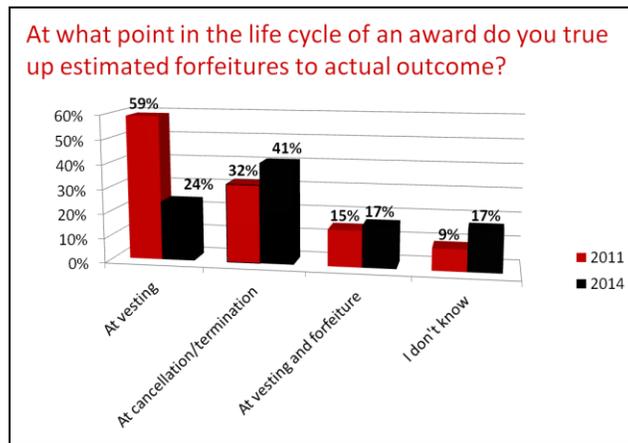


Forfeiture Rate Update¹

In 2011, SOS conducted a survey on forfeiture rate practices. At that time, 59% of all survey respondents indicated that they performed the true up at the time of vesting (also known as the “static” method) and 32% of respondents indicated that they performed the true up at the time of forfeiture (also known as the “dynamic” method).

In 2014, we conducted the *same* survey and found that truing up for actual forfeitures at the time of forfeiture had now eclipsed the once more popular method of truing up at vest. In 2014, the number truing up at the time of vesting had dropped to 24% and the number truing up at forfeiture had risen to 41%.



A new wrinkle was introduced to this issue when, on March 30, 2016, the FASB issued Accounting Standards Update (ASU) 2016-09, [Improvements to Employee Share-Based Payment Accounting](#), which amended ASC Topic 718, *Compensation – Stock Compensation*. The ASU included provisions intended to simplify various aspects related to how share-based payments were accounted for and presented in the financial statements.

“For public business entities, the amendments in this Update are effective for annual periods beginning after December 15, 2016, and interim periods within those annual periods. For all other entities, the amendments are effective for annual periods beginning after December 15, 2017, and interim periods within annual periods beginning after December 15, 2018. Early adoption is permitted for any entity in any interim or annual period. If an entity early adopts the amendments in an interim period, any adjustments should be reflected as of the beginning of the fiscal year that includes that interim period.”

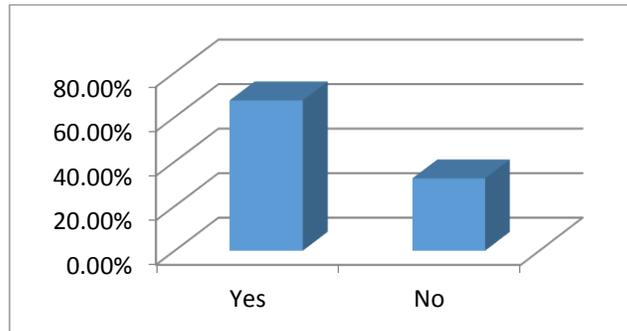
As it related to the estimation of forfeitures:

Current GAAP	Summary of Simplifications
Accruals of compensation cost are based on the number of awards that are expected to vest.	An entity can make an entity-wide accounting policy election to either estimate the number of awards that are expected to vest (current GAAP) or account for forfeitures when they occur.

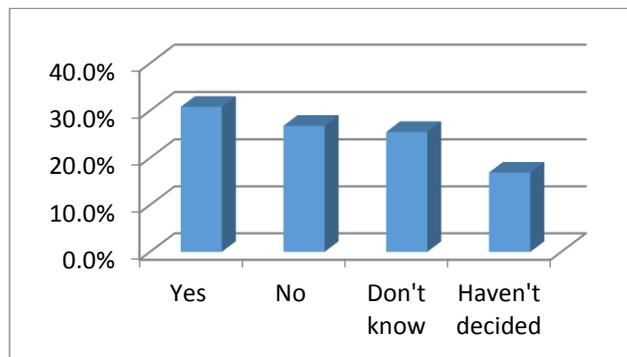
¹ For more information on this topic, see [FASB ASU 2016-09: Amendments to ASC 718](#) and [July 2017 Xtra Accounting Update with the March 2017 Survey Results on ASU 2016-09](#).

Thus, companies were now given the option of doing away with the need to estimate forfeitures. In May 2017, the NASPP conducted a survey related to the adoption of ASU 2016-09. There were two questions pertinent to this topic:

1. Has your company adopted ASU 2016-09 yet? [Total Responses: 292 (197 Yes; 95 No)]



2. Did you (or are you planning to) change your practices to account for forfeitures as they occur? [Total Responses: 302 (93 Yes; 81 No; 77 Don't know; 51 Haven't decided)]



It became clear that many companies were quickly choosing to do away with the need to estimate forfeitures and, thus, understand how the different forfeiture rate methods were applied.

However, if this topic is still relevant for your company or of interest to you and you need to understand the pros and cons and differences between each of the forfeiture rate estimation approaches, read on...

Application of Forfeiture Rates

The examples of how to apply the forfeiture rate in ASC 718 discuss a group of grants and the total expense for the grants. They apply the forfeiture rate (to the power of the three-year service period) to the total expense throughout the life of the grant and if the forfeiture rate proves inaccurate during the year, the rate is adjusted.

In the examples, the forfeiture rate is applied using the three-year service period throughout the three-year life of the grant (a 3% annual forfeiture rate is applied using $.97 \times .97 \times .97$). Adjustments are made to the forfeiture rate throughout the vest period if the total number of

grants that will be forfeited is estimated to be more or less than 14% ($1 - (.97 * .97 * .97)$); but any necessary true up for actual forfeitures is not performed until the final vest date for the grants is reached, at which point the final count of grants forfeited and vested is known.

Consider a simple example: If you had five grants, each valued at \$100, vesting over a year, and you had an estimated forfeiture rate of 20% (one of the five grants), you would recognize only \$400 instead of the full \$500 of expense. However, you must true up for actual forfeitures. So, you would true up to \$500 if all the grants vested. If two of the grants were forfeited instead of one, you would ultimately recognize only \$300 of expense. The goal of applying estimated forfeiture rates is to "smooth out" expense and attempt to minimize the "peaks and valleys" of the expense recognition that we encountered under FAS 123 - when most companies recognized forfeitures only as they occurred (as they were permitted to under that standard).

The Static Method

This method, in which the entire service period is used to apply the forfeiture rate during the entire service period is sometime called "the static method" because neither the service period used to apply the estimated rate nor the total expense is adjusted during the recognition of expense - it is static and unchanging. This method is also called "True Up at Vest". Forfeited grants remain on the expense report and within "the pool of expense" even after they are forfeited. If the forfeited grants were to be removed from the total expense being recognized and the entire service period were used to apply the forfeiture rate, the forfeitures would be "double-counted" and the appropriate amount of expense would not be recognized until true up. (See the discussion on "the hybrid method" below.)

Let's consider our simple example from above: five grants, valued at \$100 each, with a one-year service period. The total pool of expense is \$500, reduced by an annualized forfeiture rate of 20%. Therefore, only \$20 is accrued each quarter for each grant instead of the full \$25 for each grant. If one of the grants is forfeited in the second quarter of the year, the full \$500 is still used as the base amount of expense before the forfeiture rate is applied.

Since the forfeited grant remains on the report and in "the pool of expense", the forfeiture rate continues to be applied with the full service period, the expense for the grants that ultimately vest would be: \$20, \$20, \$20, and \$40. The expense for the grant that is forfeited would be: \$20, \$20, \$20, and -\$60. The negative \$60 for the true up for the forfeited grant *exactly* offsets the "catch up" for the grants that vested and the expense would be \$100 each quarter - the exact even amortization over the service period for which the standard is aiming.

Grant #	1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr	Comment/Total
1	\$20	\$20	\$20	\$40	True up to \$100 in vest quarter.
2	\$20	\$20	\$20	\$40	True up to \$100 in vest quarter.
3	\$20	\$20	\$20	\$40	True up to \$100 in vest quarter.
4	\$20	\$20	\$20	\$40	True up to \$100 in vest quarter.
5	\$20	\$20	\$20	-\$60	Forfeited in 2 nd Qtr. True up to \$0 in vest quarter.
	\$100	\$100	\$100	\$100	\$400

Because the forfeiture rate is perfectly accurate, the recognition of expense is perfectly even over the service period.

The most significant issue with this approach is that it is nearly impossible to predict forfeiture rates accurately. With the static method, all of the true up is left until the end. So, if your forfeiture rate is inaccurate and you haven't been making adjustments to the rate as the grants

are expensed based on actual forfeitures, the true up impacts your expense all at once (that is, in the quarter in which the grants vest) potentially producing large fluctuations in expense.

If, in the example above, no grants are forfeited (forfeiture estimate is too high), the total expense per quarter would be \$100, \$100, \$100, \$200. Since all grants vested, each grant is trueed up to 100% of expense in the fourth quarter on the vest date.

Grant #	1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr	Comment/Total
1	\$20	\$20	\$20	\$40	True up to \$100 in vest quarter.
2	\$20	\$20	\$20	\$40	True up to \$100 in vest quarter.
3	\$20	\$20	\$20	\$40	True up to \$100 in vest quarter.
4	\$20	\$20	\$20	\$40	True up to \$100 in vest quarter.
5	\$20	\$20	\$20	\$40	True up to \$100 in vest quarter.
	\$100	\$100	\$100	\$200	\$500

If, in the example above, two grants are forfeited instead of one (forfeiture estimate is too low), the total expense per quarter would be \$100, \$100, \$100, \$0. Since two grants forfeited all expense booked for them (\$60 each, \$120 total) is reversed in the fourth quarter and the three grants that vested are trueed up to 100% of expense, but that does not offset the unexpectedly high reversal.

Grant #	1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr	Comment/Total
1	\$20	\$20	\$20	\$40	True up to \$100 in vest quarter.
2	\$20	\$20	\$20	\$40	True up to \$100 in vest quarter.
3	\$20	\$20	\$20	\$40	True up to \$100 in vest quarter.
4	\$20	\$20	\$20	\$-60	Forfeited in 2 nd Qtr. True up to \$0 in vest quarter.
5	\$20	\$20	\$20	\$-60	Forfeited in 3 rd Qtr. True up to \$0 in vest quarter.
	\$100	\$100	\$100	\$0	\$300

If the forfeiture rate is adjusted from 20% to 40% in the third quarter, when the second grant is forfeited, to catch up to the 40% rate, each grant would now amortize at only \$10 per grant in the third quarter and then true up for vesting and forfeiture in the fourth quarter, which would result in total expense each quarter of \$100, \$100, \$50 and \$50. This is still a significant fluctuation in expense, but less dramatic than waiting until the final quarter and taking the full adjustment then.

The Dynamic Method

The alternative approach to the static method is sometimes called "the dynamic method" - so called because the grants comprising the "pool of expense" change (forfeited grants are removed) and the forfeiture rate is adjusted throughout the service period: only the remaining service period is used to apply the expense. In our example above, if the grant were granted at the beginning of the first quarter, in the first quarter the forfeiture rate would be applied "to the power of" .75, because only 3/4 of a year remains in the life of the grant. In the second quarter, .50 would be used, etc. So, for each of the grants that ultimately vest, the expense each quarter would be: \$21.15, \$23.57, \$26.21, and \$29.07. For the grant that is forfeited, the expense

would be \$21.15, -\$21.15, \$0 and \$0, resulting in total expense of \$105.75, \$68.29, \$94.56, and \$131.40. This expense is certainly not perfectly even over time, but it is more even than if the forfeiture rate were inaccurate and all of the adjustments were made in the final quarter of the year.

Grant #	1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr	Comment/Total
1	\$21	\$24	\$26	\$29	True up to \$100 in vest quarter.
2	\$21	\$24	\$26	\$29	True up to \$100 in vest quarter.
3	\$21	\$24	\$26	\$29	True up to \$100 in vest quarter.
4	\$21	\$24	\$26	\$29	True up to \$100 in vest quarter.
5	\$21	-\$21	\$0	\$0	Forfeited in 2 nd Qtr. True up to \$0 in vest quarter.
	\$105	\$75	\$104	\$116	\$400

Though the expense is less even over time using the Dynamic method than the Static method, if the forfeiture rate is accurate, the adjustments to the forfeiture rate are "automatic" - as the grant gets closer to vesting it is more likely to vest, so more expense is recognized. Final true ups are still required for the grants that vest, but they are likely to be slightly less dramatic than under the static approach, depending on the magnitude of inaccuracy of the forfeiture rate.

And when forfeiture rates are too high, the Dynamic method results in a gradual increase to expense over time.

Grant #	1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr	Comment/Total
1	\$21	\$24	\$26	\$29	True up to \$100 in vest quarter.
2	\$21	\$24	\$26	\$29	True up to \$100 in vest quarter.
3	\$21	\$24	\$26	\$29	True up to \$100 in vest quarter.
4	\$21	\$24	\$26	\$29	True up to \$100 in vest quarter.
5	\$21	\$24	\$26	\$29	True up to \$100 in vest quarter.
	\$105	\$120	\$130	\$145	\$500

And when they are too low, there is an immediate impact to expense in the quarter in which more grants are forfeited, but then a gradual upward trend in expense.

Grant #	1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr	Comment/Total
1	\$21	\$24	\$26	\$29	True up to \$100 in vest quarter.
2	\$21	\$24	\$26	\$29	True up to \$100 in vest quarter.
3	\$21	\$24	\$26	\$29	True up to \$100 in vest quarter.
4	\$21	-\$21	\$0	\$0	Forfeited in 2 nd Qtr. True up to \$0 in vest quarter.
5	\$21	\$24	-\$45	\$0	Forfeited in 3 rd Qtr. True up to \$0 in vest quarter.
	\$100	\$75	\$33	\$87	\$300

The “Hybrid” Method (True Up at Forfeiture AND Vest)

If the expense for the forfeited grant were removed from the total expense before the forfeiture rate were applied, leaving a total expense of \$400. Since the full service period is used to apply the forfeiture rate, the recognition each quarter would be only \$80 $((\$400 * .25) * (1-.20)^1)$. This would result in under-recognition of expense over the one-year service period, which must be trued up at the vest date.

If the 20% estimated forfeiture rate proves accurate, the expense must be trued up to \$400 at the end of the year since 4 of the 5 grants vested. So the expense per quarter for the grants that ultimately vest would be \$20 for each quarter until the final vest period in which each grant would “catch up” from the \$60 booked through the end of the third quarter to the full \$100 of fair value for the grant by booking \$40. The expense for the 5th grant that is forfeited would be \$20, -\$20, \$0 and \$0, so total expense by quarter would be \$100, \$60, \$80, and \$160, which is certainly not the even amortization over the service period that the application of estimated forfeiture rates is intended to produce.

Even though removing forfeited grants from the report in the period in which they are forfeited *seems* to make more sense... it results in a very uneven amortization of expense. Even so, several stock plan systems do use the hybrid method.

Static vs. Dynamic Pros & Cons

	Pros	Cons
Static	<ul style="list-style-type: none"> Perfectly even accrual <i>if forfeiture perfectly accurate</i> Examples in the standard use this method 	<ul style="list-style-type: none"> Not intuitive – forfeited grants remain “in pool” / on reports Large company events must be included in estimated rate (execs leaving, RIFs, etc.) – Ongoing adjustments to rate required
Dynamic	<ul style="list-style-type: none"> Less dramatic swings in expense <i>if estimate not accurate</i> Takes time into account More intuitive? Some Big 4 firms call “best practice” 	<ul style="list-style-type: none"> No documentation – not in standard, etc. Not similar to <i>examples</i> in standard Expense less even over time, even if estimate is accurate

And, based on our survey results, it seems to be that more clients are now in favor of the “set it and forget it” method of forfeiture rate application (aka Dynamic).

Does your system offer a choice between Static and Dynamic? Are you considering changing from Static to Dynamic? SOS has helped a number of clients perform this analysis and change over the past few years. The process can be quick and easy and usually is fairly painless. However, the difference between the two approaches can be small (the smallest we’ve seen was \$8K) or quite large (millions) and you need to be prepared to book a true up for the difference to enable you to switch. Generally a grant-by-grant comparison should be performed and the reasons for the difference quantified and a memo should document the analysis. Or, if your

company is thinking of doing away with the estimation of forfeiture rates altogether, we can also help with that analysis.

Questions? Contact us at info@sos-team.com for more information and an estimate on helping your company switch.

About Stock & Option Solutions

Stock & Option Solutions (SOS) has built a team of extremely qualified and dedicated professionals for the outsourced management or staffing of your stock plans and special projects. SOS's Stock Plan Outsourcing Solution is the most comprehensive outsourcing service in the marketplace, making the choice easy. Beyond our total outsourcing solutions, we are focused on helping companies like yours through challenging steps with temporary staffing, permanent placement, expert project resources, and high level project management. Call us today at 408.979.8700 to learn more or visit us online at www.sos-team.com.

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