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Fun with Forfeiture Rates!

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Agenda

- Forfeiture Rate Intro
- Types of Forfeiture Rates
- Estimating Forfeiture Rates
- Applying Forfeiture Rates
  - Static
  - Dynamic
- Changing Application Methods

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Survey Data

- NASPP Data
  - NASPP Quick Survey Conducted in June 2010
  - 200 responses
  - http://www.naspp.com/members/QSurveyResults/2010_June.pdf
- SOS Data
  - Survey conducted August 2011
  - 78 responses

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Pop Quiz

It's okay not to apply a forfeiture rate to the accrual of share-based comp expense if:

a) You don't know the right rate to use
b) You've never had any forfeitures
c) You only grant to the top 3 execs and all have acceleration on termination clauses
d) Your audit partner doesn't understand forfeiture rates

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Forfeiture Rate Introduction

- FAS 123(R) / Topic 718 requires that expense for equity compensation be reduced by an expected forfeiture rate
  - Rationale: to produce even accruals over service period
  - 718 – 10 – 35 – 3 Forfeiture Rates

35-3 The total amount of compensation cost recognized at the end of the requisite service period for an award of share-based compensation shall be based on the number of instruments for which the requisite service has been rendered (that is, for which the requisite service period has been completed). An entity shall base initial accruals of compensation cost on the estimated number of instruments for which the requisite service is expected to be rendered. That estimate shall be revised if subsequent information indicates that the actual number of instruments is likely to differ from previous estimates. The cumulative effect on current and prior periods of a change in the estimated number of instruments for which the requisite service is expected to be or has been rendered shall be recognized in compensation cost in the period of the change. Previously recognized compensation cost shall not be reversed if an employee share option (or share unit) for which the requisite service has been rendered expires unexercised (or unconverted).

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Forfeiture Rate Types

- Annualized Forfeiture Rates
  - Most Frequently Used
  - What % of grants forfeited annually?
  - 5% chance each year of forfeiting
  - Formula to apply:
    - Service Period = Vest Date minus Grant Date
    - (1 – Rate)^Service Period
- Flat/Aggregate Forfeiture Rates
  - Haircut by set amount
  - 5% off the top
  - Problems:
    - Not very complex or flexible
    - Does not take varied vesting schedules into account
    - Tends to overstate forfeiture rate when applied

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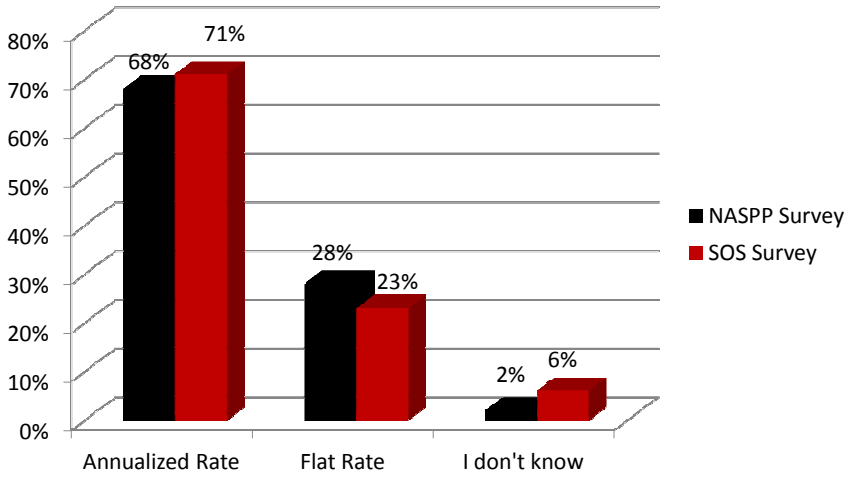
Annualized Rate vs. Flat Rate



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ESTIMATING FORFEITURE RATES

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Rolling X months/average

Take the forfeiture rate (aggregate) for each of the last 12 months and use a weighted average

Jan – 10%	July – 20%
Feb – 12%	Aug – 10%
March – 15%	Sept – 15%
April – 8%	Oct – 8%
May – 20%	Nov – 5%
June – 20%	Dec – 5%

Average of 12 months = 12.33%

Note: Since this is monthly and a rolling average comparison, this may be a comparison of unvested or outstanding shares to forfeited shares

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Three-year Rolling

- Aggregate forfeitures from the last three years
  - Shares forfeited/shares granted
  - Each quarter one quarter "dropped off"
- Annualize using average vest period and / or opportunity
- Issue:
  - If any "unusual events" have occurred (e.g. RIFs) in quarter in which they "drop off" – large change in forfeiture rate

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Other Methods

- Aggregate Forfeiture Rate Annualized by Average Vest Period / Opportunity
  - For grants granted within a given year (e.g. 2010, 2011) up through current
  - 1 – ((1-Aggregate Forfeiture Rate %) ^ (1 / Average Vest Period in each year))

Year	Agg Forf Rate % for All grants granted this year	Avg Vest Period	Annualized Forfeiture Rate
2011	7%	2.5	3%
2010	10%	2.5	4%
2011	12%	2.5	5%

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Forfeiture Opportunity vs. Vest Period

- Recent grants not outstanding long… less "opportunity" to forfeit
- Grants from 5 years ago - 5 years for terminations to occur
  - Full vest cycle complete
  - Average vest period can be used (often 2 or 2.5 years)
  - 10% aggregate = 5.132% annualized (2 years)
- Grants from 3 months ago not outstanding for 2 years
  - Annualizing by 2 years inaccurate
  - Not likely to have 10% forfeiture after 3 months
  - 2% aggregate = 1.005% annualized (2 years)
  - 2% aggregate = 7.763% annualized (.25 years)
- Formula for Opportunity
  - =(Min(today's date, vest date)-grant date)/365.25

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Annualization Formula

- =1-((1-Aggregate Forfeiture Rate)^(1/Time Period))

Aggregate Forfeiture Rate	Average Vest Period / Forfeit Opportunity	Annualized Forfeiture Rate
10.00%	2	5.132%
2.00%	2	1.005%
2.00%	0.25	7.763%

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Other Methods

- Annualized Turnover Rate from HR
  - Some HR departments will have this at their finger tips
  - Should be updated each year
  - If term data only - can use a similar method – annualize by avg length of employment
- Even with limited data – case can be made to use Forfeiture Rate from system/software
  - Will be trued up when share vest / are forfeited

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Granting New Instrument Types

- What forfeiture rate to use?
- Is the population being granted to the same or different?
  - If same population, use same rate
  - If different, filter historic data for new instrument population
- Population-driven not instrument-type driven
- Do RSUs vs. options have significant impact on retention?
  - Possible, but difficult to quantify…

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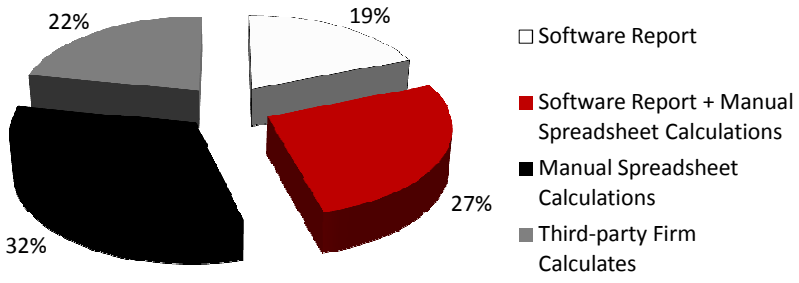
Calculation of Forfeiture Rates

How do you calculate forfeiture rates?



*SOS Survey Data

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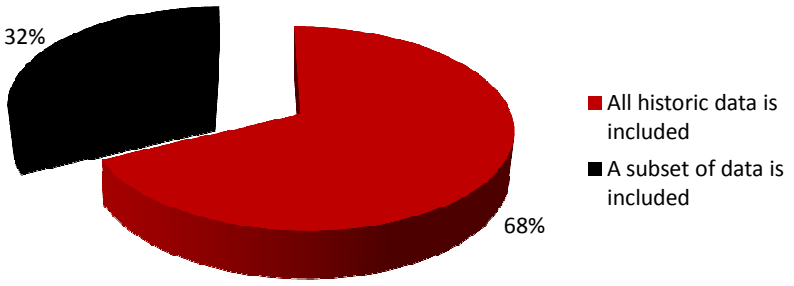
Data Included

Which data do you include on the report or in your calculations?



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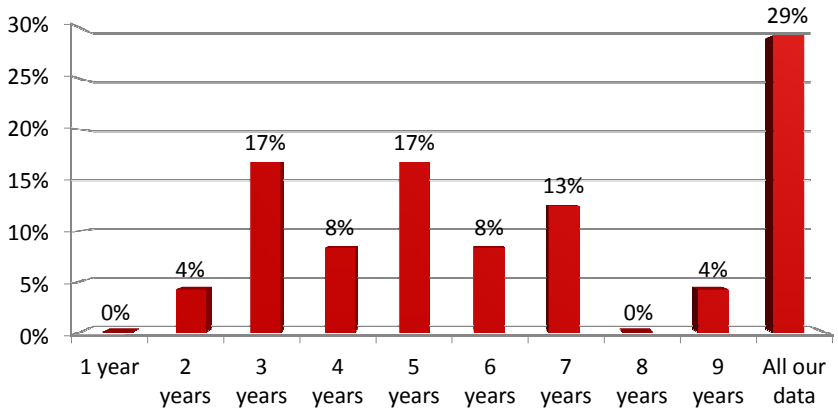
Subset of Data

How many years of grant data do you include in the report and/or your forfeiture rate analysis?



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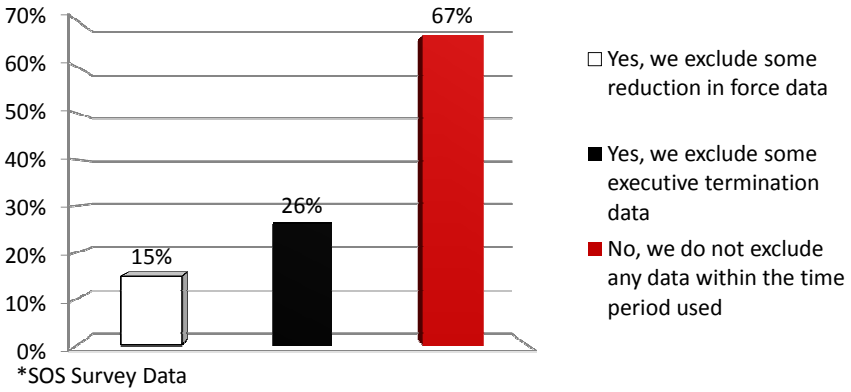
Survey Data

Do you exclude any data from reductions in force (layoffs) or executive terminations? (Select all that apply.)



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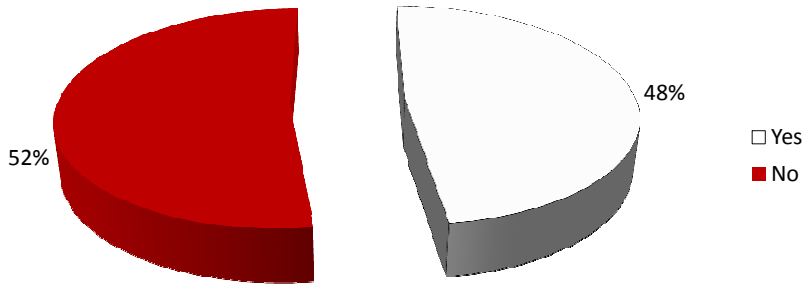
Survey Data

Do you stratify optionee groups for purposes of estimating expected forfeiture rates?



*NASPP Survey Data

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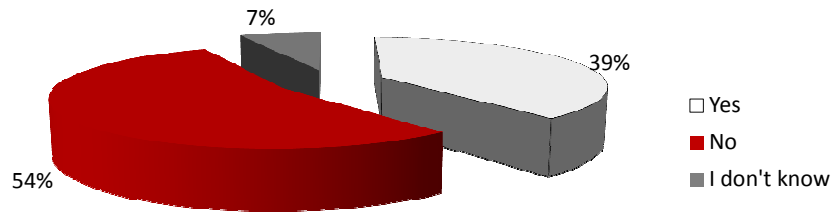
Do you calculate and apply different forfeiture rates for different groups of employees?



*SOS Survey Data

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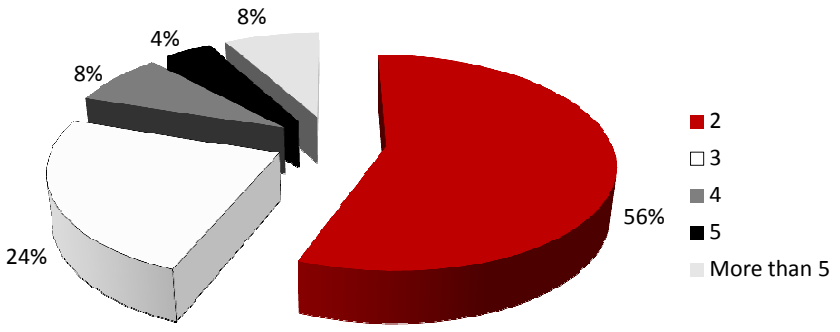
How many different forfeiture rates do you calculate and apply?



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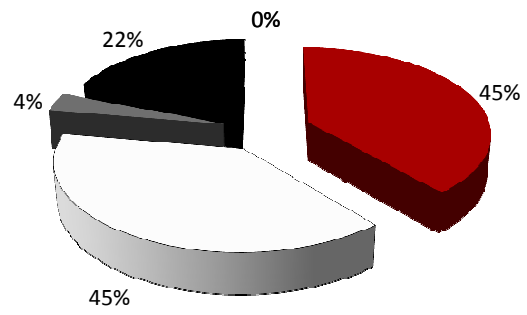
How frequently do you review your forfeiture rate assumption(s)?



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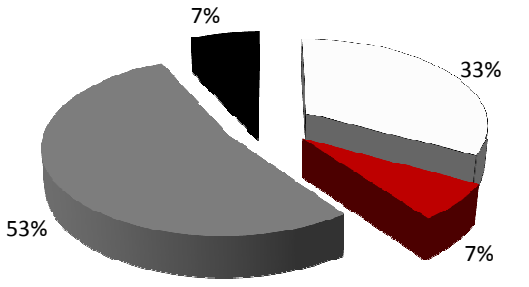
Survey Data

Which time period do you use to annualize your forfeiture rate?



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Forfeiture Rate Calculation

- Make sure your calculation
  - is defensible
  - is easily repeated
  - Use your software/systems if you can…
- **Make sure your calculation matches the attribution method**
  - **Aggregate / Flat vs. Annualized**
- Common Mistakes
  - Excel miscalculations
  - Calculating an "aggregate rate" but application requires annual

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APPLYING FORFEITURE RATES

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Pop Quiz

The crux of the difference between the "static" application method and the "dynamic" application method is:

A) Dynamic is the correct way to accrue under 123R / T718

B) The applied forfeiture rate stays the same throughout the service period vs. changing

C) You don't have to perform true ups if you use the Dynamic method

D) That warm fuzzy feeling of clothes fresh from the dryer

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Terminology

- Static Method
  - AKA "True Up at Vest"
- Dynamic Method
  - AKA
    - "True Up at Forfeiture"
    - "True Up at Termination"
    - Hyperbolic

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Applying Forfeiture Rates: Static Method

- True Up at Vest (Static)
  - Forfeiture Rate stays same over service period
  - Wait until vest date to true up
  - Examples given in ASC 718
  - Use full service period to apply annualized forfeiture rate
  - Forfeited grants remain on accrual reports until after FINAL vest date
  - If forfeiture rate accurate = even accrual over time
  - If forfeiture rate inaccurate, large true ups common
- Example
  - 4-year, cliff vesting
  - (1-Forfeiture Rate)^Full Service Period
  - (1-5%)^4
  - = .95*.95*.95*.95
  - = 81% Expected to Vest Rate

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Applying Forfeiture Rates: Static

- True Up at Vest (Static)
- Example
  - 4-year, graded vesting

Tranche	Service Period	Applied	Result	Note
1	1	(1-5%)^1	95%	Used while first tranche accrues – trued up to 100% at vest.
2	2	(1-5%)^2	90%	Used while 2nd tranche accrues – trued up to 100% at vest.
3	3	(1-5%)^3	86%	Used while 3rd tranche accrues – trued up to 100% at vest.
4	4	(1-5%)^4	81%	Used while 4th tranche accrues – trued up to 100% at vest.

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Applying Forfeiture Rates: Dynamic Method

- True Up at Termination (Dynamic)
  - Application of the Forfeiture Rate changes during the service period
    - Theory: as time passes, more likely that grant will vest, therefore more expense accrued
  - Reverse all accrued expense at termination, stop accruing for forfeited grants
  - Developed after the release of ASC 718
  - Use remaining service period to apply forfeiture rate
  - Less even accrual over time, however…
  - If forfeiture rate inaccurate, true ups are smaller, more frequent
- Example on next slide

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Applying Forfeiture Rates: Dynamic Method

- Example
  - 4-year, cliff vesting

End of Quarter	Remaining Service Period	Applied	Result
1	3.75	(1-5%)^3.75	83%
2	3.5	(1-5%)^3.5	84%
3…	3.25	(1-5%)^3.25	86%
8…	2	(1-5%)^2	90%
12…	1	(1-5%)^1	95%
15	.25	(1-5%)^.25	99%
16	0	(1-5%)^0	100%

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Static Method: Accurate Rate

- Example:
  - 5 grants, $100 fair value, one-year vesting, 20% forfeiture rate

Grant #	1st Qtr	2nd Qtr	3rd Qtr	4th 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 2nd Qtr. True up to $0 in vest quarter.
	$100	$100	$100	$100	$400

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Pop Quiz

With the True up "on vest date" method, forfeited grants are kept in the grant pool past forfeiture date because:

A. Someone forgot to take them out

B. Because I said so, that's why

C. It helps audit the numbers

D. Keeping grant pool intact needed when paired with "static" forfeiture rate application

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True up on Vest Date

- One of the grants was forfeited in Q2:
  - Why do all the grants still appear on the report?
  - Why don't you reverse the expense accrued for the forfeited grant?
- Because
  - A) no expense has been accrued for the grant (because of the "haircut") and
  - B) if the grant were removed from the report, the total expense would be reduced AND the forfeiture rate applied = double counts the forfeiture

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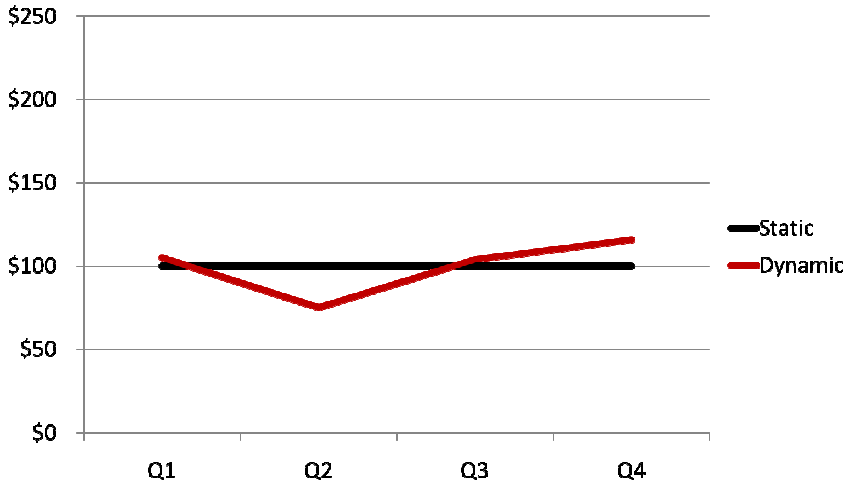
Static vs. Dynamic: Accurate Rates



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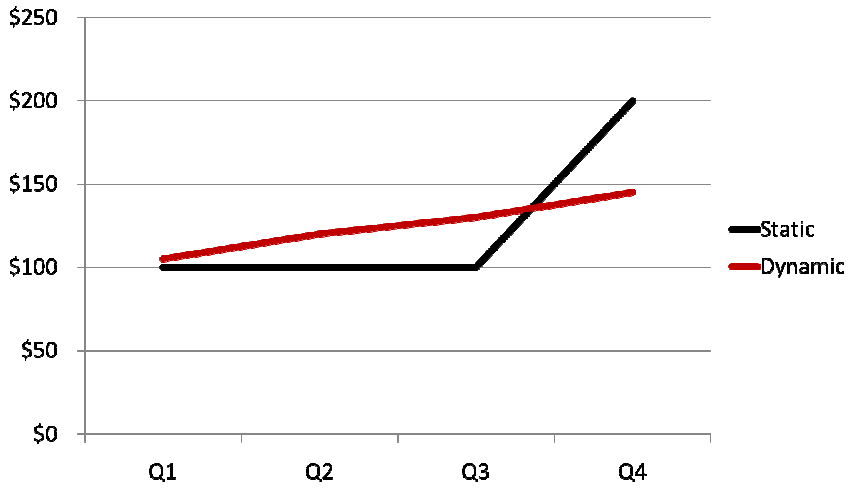
Static vs. Dynamic: Rate Too High



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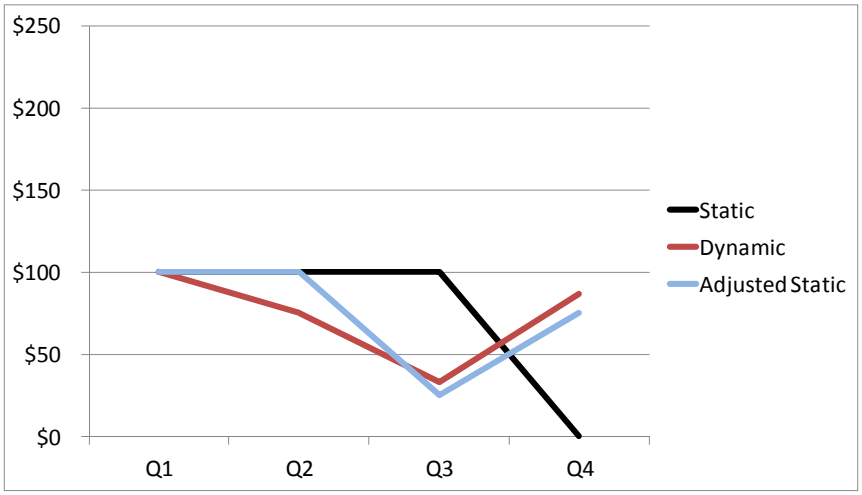
Static vs. Dynamic: Rate Too Low



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Pros & Cons

	Pros	Cons
Static	• Perfectly even accrual ***if forfeiture perfectly accurate*** • Examples in the standard use this method	• 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	• Less dramatic swings in expense ***if estimate not accurate*** • Takes time into account • More intuitive? • Some Big 4 firms call "best practice"	• No documentation – not in standard, etc. • Contradicts examples in standard • Difficult to perform calculations in a spreadsheet

*Combining methods of application can result in large true ups in expense.

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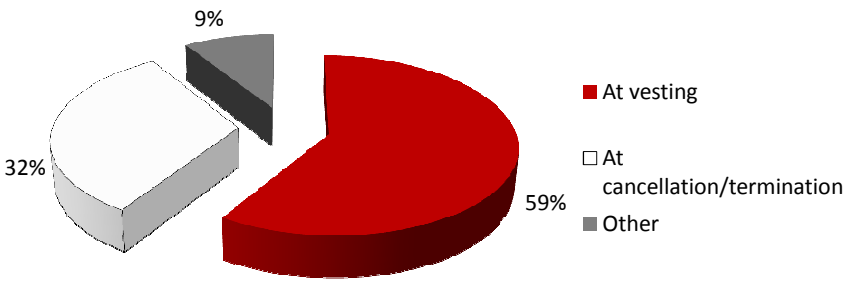
Survey Data

At what point in the life cycle of an award do you true up estimated forfeitures to actual outcome?



*SOS Survey Data

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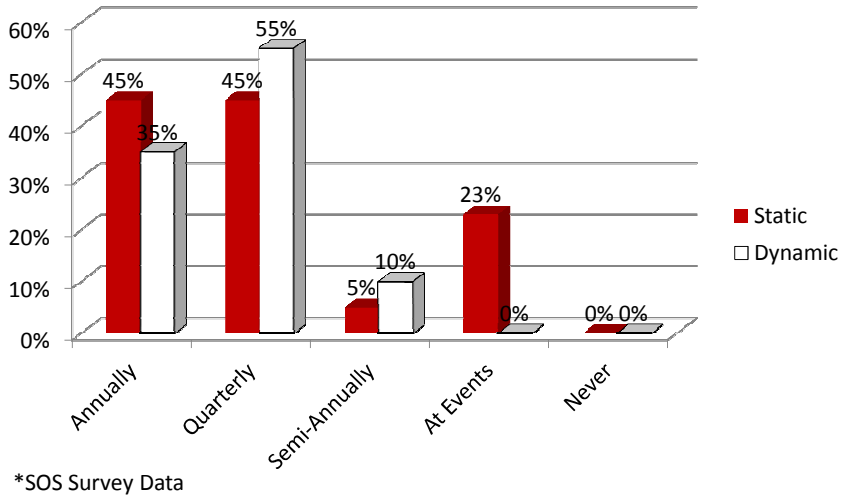
Review Forfeiture Rate Estimate



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Pop Quiz

Which method is better: "static" (w/at vest date true up) or "dynamic" (paired with at forfeiture date true up)

A. Yes.

B. Dynamic – it sounds cooler

C. Don't ask me, I'm still waiting for the "fun" part of this presentation to kick in

D. Review both and decide which works best for your company

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Static vs. Dynamic

- Neither method is *incorrect* under 123R/Topic 718
- Both methodologies work, as long as they:
  - Adhere to the rules of 718, and
  - Don't combine parts of each method (double-counting)
    - Don't drop forfeited grants off the report (dynamic) AND
    - Apply forfeiture rates using full service period (static)
- Which is better for YOUR company?
  - How even is your expense accrual over time?
  - Do you have large swings in expense quarter-to-quarter?
  - Are you auditors comfortable with the method you're using now? Or do they continue to question it?

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When To Consider Switching

- Example of a company for whom True UP at Vest is NOT working
  - Review a set of grants that vest in Q4
  - Don't include new grants (keep "the pool" the same)
  - Vesting event occurs in Q4 – True Up will occur in Q4
  - Materiality is specific to a company
  - Moving EPS at all… $.01?

Q1	Q2	Q3	Q4
$5M	$5M	$5M	$9M
$9M	$9M	$9M	$5M

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Changing Methods

- Why change?
  - Your audit firm continue to question the method you use
  - Dynamic thought to be "best practice" by some
  - Inaccurate forfeiture rates – less *dramatic* true ups in a single quarter each year
  - Ongoing manual adjustments / spreadsheet calcs necessary
  - Different systems use different methods
- How to change
  - Calculate expense "To Date" – through end of current reporting period both ways
    - From the time you adopted 123R/Topic 718 to date
    - Match expense grant by grant
  - Change in ESTIMATE, not change in accounting policy
    - Generally a one-time true up in the quarter in which the change is made

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Contact Information

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APPENDIX

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Static Method: Accurate Rate

- Example:
  - 5 grants, $100 fair value, one-year vesting, 20% forfeiture rate

Grant #	1st Qtr	2nd Qtr	3rd Qtr	4th 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 2nd Qtr. True up to $0 in vest quarter.
	$100	$100	$100	$100	$400

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Static Method: Inaccurate Rate

- Example:
  - 5 grants, $100 fair value, one-year vesting, 20% forfeiture rate
  - No grants forfeited

Grant #	1st Qtr	2nd Qtr	3rd Qtr	4th 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

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Static Method: Inaccurate Rate

- Example:
  - 5 grants, $100 fair value, one-year vesting, 20% forfeiture rate
  - 40% of grants forfeited

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

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Dynamic Method: Accurate Rate

- Example:
  - 5 grants, $100 fair value, one-year vesting, 20% forfeiture rate

Grant #	1st Qtr	2nd Qtr	3rd Qtr	4th 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 2nd Qtr. True up to $0 in vest quarter.
	$105	$75	$104	$116	$400

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Dynamic Method: Inaccurate Rate

- Example:
  - 5 grants, $100 fair value, one-year vesting, 20% forfeiture rate
  - No grants forfeited

Grant #	1st Qtr	2nd Qtr	3rd Qtr	4th 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

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Dynamic Method: Inaccurate Rate

- Example:
  - 5 grants, $100 fair value, one-year vesting, 20% forfeiture rate
  - 40% of grants forfeited

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

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