

AN ACCOUNTING VIEW OF SHARE-BASED COMPENSATION

WHITEPAPER

BY KEVIN BRADY, ARMTECH, SEPTEMBER 2012

WHITEPAPER

AN ACCOUNTING VIEW OF SHARE-BASED COMPENSATION

I. EXECUTIVE SUMMARY

Corporations who issue stock to their employees face a number of financial reporting challenges, specifically around the amortization of compensation expense and tax accounting. These needs are commonly met with spreadsheets that crunch large volumes of data, which are then manually sliced into roll-ups, allocations, roll forwards and journal entries. This paper sets forth the optimal way to structure and process this data so that all financial reporting needs can be met in a timely and efficient manner.

II. THE PROBLEM

First, a brief statement of the problem. The amortization of compensation expense contains many moving parts, some of which are estimates that require frequent updates. For example, corporations need to estimate future forfeitures as well as the likelihood that management will achieve its performance targets. These estimates are revised periodically. Some plans call for accelerated vesting upon retirement eligibility and the modification of awards. Multiple tranches further complicate the amortization because adjustments must be maintained at several levels within each award. All of these items impact the amount and the rate of amortization expense that is recognized in the general ledger, and ultimately, in the financial statements. When the award is finally transferred to the employee, the equity accounts must be trued-up to reflect the actual charge to the equity of the the company. For budgeting purposes, compensation expense must be allocated to department or locations, ideally on a net basis (after forfeitures).

Tax accounting has its own set of issues, which concern the maintenance of deferred tax assets by legal entity, the tracking of permanent differences where deductions are not allowed, the timing of tax deductions and the impact of tax benefits on the income statement and balance sheet. Upon realization, the tax accounts must be trued-up to reflect the actual benefit of the tax deduction.

To meet these financial reporting challenges, each department typically loads and maintains its own spreadsheets with raw data from the stock administrator. The data is then crunched, allocated and consolidated before it is passed on to the next user in the financial reporting supply chain. This has several disadvantages including the creation of many reconciling items within and between departments. It is also an intensely manual process that is difficult to integrate with legacy systems such as the general ledger and tax provision. Audit trails are opaque and often require a re-creation of the entire process into order to validate a single result.

III. THE SOLUTION

Secondly, a brief description of the solution. The ideal system will have the following characteristics:

1. All awards are included in the system. Leaving just one type of award outside the system creates offline workarounds that compromise the entire process and make automation difficult.
2. System data structure that tracks elements of the calculation at the appropriate level; i.e. tranche, award, grantee, plan.
3. All calculations are done at the lowest level of detail, specifically the tranche level. This supports detailed reporting on any component of the calculation.
4. Combine 2 and 3 to automate change management. This ensures that current and future amortization expense will be dynamically adjusted for changes in estimate.
5. Support employee mobility. Account codes, legal entities, and departments all need to be stored at the grantee level to support any number of rollups that are driven by employee mobility. See white paper “Equity Compensation and Employee Mobility” on ARMtech website for more detailed discussion.
6. Roll forward reports at any level of detail.
7. Leave out the tax rates. Changes in corporate tax rates are best managed in the tax provision system, which is built for that purpose. Duplicating this function in share-based compensation creates unnecessary reconciliations.
8. Transparent audit trails.
9. Flexible views of time periods to support planning needs.

This is a bottom up approach that creates and maintains all critical elements of the amortization and tax accounting calculations at the tranche level. By starting at the bottom, it is possible to rollup any component of the calculation, thereby providing a clear audit trail. This compares favorably to a top down approach where the components of the calculation must be unraveled from a topside point of view.

IV. IN-DEPTH

Each system characteristic is discussed in greater detail below.

1. All awards are included in the system

In processing share-based compensation, the job can only go as fast as the slowest award, and any award left outside the system as a manual workaround represents a failure. These are usually the more complex awards that contain many moving parts.

Accordingly, it is important to use a system that can support all awards, regardless of their complexity. Examples of complex features include performance shares, modifications from equity awards (amortized at historic values) to liability awards (marked to market), and accelerated vesting schedules.

From a tax viewpoint, awards which do not give rise to a tax deduction are added back as permanent differences to arrive at taxable income. Often, these balances are not tracked and effectively remain outside of any system. When the award is settled, the tax department must be careful to identify these awards so that no deduction is claimed. This creates a problem because settlement can take place many years after the original expense was recognized in the financial statements. The better solution is to track the disallowed expense as a permanent difference within the system so that it can be flagged upon

settlement. This approach also supports an automatic reconciliation between the total amounts owed to employees and the deferred tax asset. As a result, the deferred tax asset can be substantiated at any point in time with reference to the amounts that have been recorded in the general ledger.

2. System data structures

If all data is to be stored in the system, how should the data be structured?

For any given award, there are only three elements that drive the amortization of compensation: the number of shares, the value of the award and the requisite service period. There are 4 levels at which the elements can be tracked: tranche, award, grantee and plan. The system must be able to store and update all three elements from the optimal level. Any data entered at the optimal level will get pushed out to all other levels. This is illustrated below for a number of different functions:

Function	Element	Optimal level
Performance shares	Number of shares	Plan
Forfeiture	Number of shares	Grantee
Accelerated vesting	Requisite service period	Grantee or plan
Modify equity to liability	Value of award	Grantee or plan

The efficiencies gained from this approach are clear. If performance targets are met by a group of grantees, a multiplier is applied once at the plan level and all tranches and awards are updated automatically. If a grantee forfeits an award, all his/her unvested tranches are zeroed out. If the vesting date for a group of employees is accelerated (due to the achievement of performance targets or a restructuring), the dates of all impacted awards can be moved forward at once. If an equity award is modified to be a liability award, the market price can be loaded once at the plan level so that all awards are automatically marked to market.

In addition to this hierarchy, certain attributes are required for grantees (such as links to legal entities, forfeitures and retirement eligibility) and roll-up criteria (such as account, department, legal entity), all of which are sensitive to time. This will facilitate reporting around the compensation expense for time spent by an employee within a department or legal entity.

3. All calculations are done at the lowest level of detail

Awards are often broken down into tranches which vest at different rates and may even have different values. Changing the value of the award and the vesting schedule will impact the amount and the rate of amortization. If the amortization calculation is done at the award level or higher, the system cannot support different amounts and rates of amortization at the tranche level. The result is another workaround, where award-based amortization must be reversed and replaced by manual tranche-based amortization.

As an illustration of the necessity of capturing detailed award data, consider the following example:

- An issuer makes a front-loaded award of which 50% vests on the first anniversary, 25% on the second, and the remaining 25% on the third and terminal vesting date.
- The company has elected to use a straight-line expense attribution method.
- Without knowledge of each separately vesting portion of the award, the company would have been under-accrued at the end of the first year. It would have recognized expense equal to only 33% of the value of the award rather than the 50% that was actually vested.
- However, with tranche-level data, a system can automatically apply an under-accrued test and adjust expense accordingly. In this case, the system would automatically use the tranche-at-a-time method.

The build of the deferred tax asset is driven by the value of the award (net of forfeitures) and the rate of amortization, both of which are best maintained at the tranche level for the reasons noted above. The tax advantages of this approach can be seen with forfeitures. If an employee leaves the corporation when tranche 1 is fully vested and tranche 3 is not vested at all, tranche 1 will carry a zero forfeiture rate and tranche 3 will be subject to 100 percent forfeiture. The deferred tax asset will be equal to 100 percent of the value of tranche 1; the deferred tax asset for tranche 3 will be written off. This ensures complete parity between the amounts owed to employees (recorded above the line on a pretax basis) and the deferred tax benefit (recorded below the line on an after-tax basis).

4. Change management

Using the approach set forth in 2., the initial setup and amortization of the award is relatively straightforward. However, difficulties can arise when one or more changes occur during the amortization period. Specifically, the prior periods must remain unchanged, while the current and future periods are adjusted to reflect the new facts.

What is the best way to manage these types of changes and achieve a high level of automation?

The answer is to follow a process similar to that of the original set-up (discussed above in 2) and rely on the calculation engine working at the lowest level of detail (discussed above in 3) to recompute the amortization table.

For example, assume that a group of executives in a single plan hit their performance targets and are granted additional shares which vest immediately. The shares are multiplied at the plan level and allocated to awards and then tranches. The requisite service period (set at the plan level and pushed down) is brought forward to the current period. Estimated forfeitures are reduced to zero for all tranches. All of these changes are processed simultaneously, increasing the amount of the expense recognized in the current period.

Assume further that several of these executives accept transfers to countries that do not permit a tax deduction for time spent in-country. These executives are switched to entities flagged as non-deductible and no deferred tax asset is established for their time spent in these countries from the date of the transfer. The deferred tax asset recorded for time spent in deductible countries is maintained.

5. Support employee mobility

Net compensation expense, deductions, excess tax benefits/detriments and equity true-ups are all components of the calculation that need to follow the movements of employees. The roll-up of these components can be achieved by linking the employee to account, legal entity and department for the following purposes:

Component	Roll-up	Purpose
Net compensation	Account	Journal entry
	Legal entity	Deferred tax asset
	Department	Budget
Deduction	Legal entity	Tax payable
		Intercompany charges
Excess Ben/detr	Legal entity	True-up tax accounts
Equity true-ups	Account	True-up equity accounts

Additional roll-ups for physical location, pay grade, etc may also be useful.

**See white paper "Equity Compensation and Employee Mobility" on ARMtech website for more detailed discussion.*

6. Roll forward reports at any level of detail

A detailed roll forward report ensures that all balances are correct and the proper activity is reported on the income statement and balance sheet:

Beginning balance + Compensation expense - Settlements +/- True-ups = Ending balance

The roll forward report needs to be available at any level of detail; i.e. tranche, award, plan and can be rolled up by account, legal entity, department and employee.

The most critical roll forward supports the entire amount that is owed to all employees and accounts for 100 percent of the population. This effectively operates as a sub-ledger to the amounts recorded in the general ledger. There is a second roll forward that supports the deferred tax asset, which includes only those awards that gave rise to a temporary difference in the tax provision; i.e. the permanent

differences represent a reconciling item between the two. In this way complete parity is maintained above and below the line at a very low level of detail.

7. Leave out the tax rates

Many stock administration systems attempt to tax-effect their calculations. This is a very complex undertaking that is best left to the tax provision and tax return systems of the corporation, which are specifically designed for this purpose. Furthermore, if after-tax figures are loaded into a tax system, many times they must be grossed-up to allow these systems to do their job. This is an extra off-line step that creates needless data touches and reconciliations.

The maintenance of tax rates in the stock administration and tax provision systems also creates additional work because the tax rates for each entity must be maintained in two places.

The benefits of this approach can be seen where there is a change in tax rates. The tax provision system will re-value the deferred tax asset at the new rate and will automatically charge the appropriate tax expense or equity account. The stock administration cannot handle this, so the calculation must be unwound; i.e. grossed-up, before it can be loaded into the tax provision system.

Unlike the maintenance of tax rates, there is every reason to track non-deductible awards which result in permanent differences within the share-based compensation system. This is because many deductions are disallowed at the grantee level and cannot be managed within the tax provision or tax return systems; e.g. IRC Section 162(m) disallows deductions for highly compensated individuals and foreign tax laws may prohibit a deduction for share-based compensation related to time spent in-country.

8. Transparent audit trails and user controls

In a post-Sarbanes-Oxley world, everything that touches the financial statements needs an audit trail. This means that the financial reporting systems must be able to deliver the details behind every calculation at every level. This ensures that the auditors can test any number of inputs, calculations and outputs to satisfy themselves that the system is working properly.

The system must also have controls that limit access to authorized users. User activity reports track logins, data entry, and sign-offs are needed to enforce security policies.

9. Flexible views of time periods to support planning needs

Corporations have many planning needs that require input from share-based compensation systems. Assuming that all relevant grants have been loaded, simple projections of compensation expense for the year can be accomplished by setting date ranges. Multi-year projections may require the load of future grants, which can be difficult to estimate but are necessary to complete this exercise.

If a corporation is undergoing an acquisition, spin-off or other type of re-structuring, it is important to support different scenarios. One way to handle this job is to create a snap-shot of the system at a point in time, possibly after a monthly or quarterly closing, and then use that audited data to simulate various rationalization plans. This will give corporate planners a clear sense of the changes that are required to achieve their profitability and earnings per share targets.

About the Author

Kevin Brady is the CEO and Founder of ARMtech. He is the lead director of Annaly (NLY), currently traded on the New York Stock Exchange with a market capitalization of \$ 10 billion, and has served as the chair of the audit committee for 12 years. Previously, Kevin was the CEO and founder of TaxStream, which was sold to Thomson Reuters in 2008. He can be reached at (201) 238-2900 x 0237 or kbrady@armtechnology.com.

Global Headquarters

24 Commerce Street
Suite 500
+1 201.238.2900

Send us a sales enquiry at:
[**sales@armtechnology.com**](mailto:sales@armtechnology.com)

Read more about our products at:
[**www.armtechnology.com**](http://www.armtechnology.com)

