ACCOUNTING FOR STOCK-BASED COMPENSATION

The intrinsic value method of accounting for employee stock option plans results in inconsistency between the accounting for fixed stock option plans and performance-based option plans. A fixed stock option plan is one in which the plan terms (i.e., the option exercise price and the number of options granted) are fixed as of the date the options are granted. In a performance-based stock option plan, the plan terms are dependent on how well the individual or company performs after the date the options are granted. As illustrated earlier in the chapter, the intrinsic value method typically results in no compensation expense being recognized for fixed stock option plans. However, as shown below, compensation expense is usually recognized with performance-based plans when the intrinsic value method is used. As a result of this differential treatment, most U.S. companies have structured their stock compensation programs as fixed stock option plans to avoid recognizing any expense. This result has been particularly disturbing since a fixed stock option plan in some ways is more valuable to employees because the receipt of options under a fixed stock option plan is not contingent on the company or the employee meeting additional financial targets.

The fair value method eliminates the discrepancy between the accounting for fixed and performance-based option plans. This “leveling of the playing field” was a major reason for the FASB’s reexamination of the accounting for stock-based compensation.

This section of the chapter covers the following topics, explaining the accounting for both the intrinsic and fair value methods:

- For performance-based plans
- For awards that call for cash settlement
- For broad-based plans
Accounting for Performance-Based Plans

In the fixed stock option plan of Neff Company that was illustrated earlier in the chapter, Neff’s employees needed only to stay with the company for the entire three-year vesting period in order to receive the full value of the options. With a performance-based plan, the terms of the option depend on how well an employee performs or how well the company performs during the vesting period. To illustrate, assume that the terms of the Neff Company stock-based compensation plan are as follows:

- On January 1, 2000, the board of directors of the Neff Company authorized the grant of stock options to supplement the salaries of certain employees.
- Each stock option permits the purchase of one share of Neff common stock at a price of $50 per share; the market price of the stock on January 1, 2000, is also $50 per share.
- The options vest, or become exercisable, beginning on January 1, 2003, and only if the employees stay with the company for the entire three-year vesting period. The options expire on December 31, 2003.
- The number of options granted, instead of being fixed at 10,000 as in the earlier example, is contingent on Neff’s level of sales for 2002. If Neff’s sales for 2002 are less than $50 million, only the 10,000 options will vest. If Neff’s 2002 sales are between $50 million and $80 million, an additional 2,000 options will vest, making a total of 12,000. Finally, if Neff’s 2002 sales exceed $80 million, a total of 15,000 options will vest.
- Neff’s share price changed as follows over the three-year vesting period:

<table>
<thead>
<tr>
<th>Date</th>
<th>Share Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 1, 2000</td>
<td>$50</td>
</tr>
<tr>
<td>December 31, 2000</td>
<td>56</td>
</tr>
<tr>
<td>December 31, 2001</td>
<td>57</td>
</tr>
<tr>
<td>December 31, 2002</td>
<td>59</td>
</tr>
</tbody>
</table>

**FAIR VALUE METHOD**  For the Neff performance-based stock option plan, the computation of compensation expense is done by combining the value of the options on the grant date with the number of options that are expected to vest. As in the earlier example, application of an option valuation method results in a computed value for each option of $10 as of the grant date. The number of options expected to vest depends, of course, on the probable level of 2002 sales. As of December 31, 2000, when compensation expense for the first year must be recorded, Neff forecasts that 2002 sales will be around $60 million, indicating that 12,000 options will vest. Recognition of compensation expense for 2000 involves recognizing one-third of the $120,000 (12,000 × $10) total estimated expense for the three-year service period. Note that the change in Neff’s stock price during the year (from $50 to $56) does not affect the calculation. Under the fair value method, the options are valued once, at the grant date, and that value is used for the life of the options. The journal entry to recognize compensation expense is as follows:

```
2000
Dec. 31  Compensation Expense ($120,000/3 years) .................. 40,000
  Additional Paid-In Capital—Stock Options  40,000
```

Events in 2001 lead Neff to lower its forecast of 2002 sales. As of December 31, 2001, Neff expects 2002 sales to be only $40 million. Accordingly, it is estimated that only 10,000 options will vest on January 1, 2003. The new estimate for total compensation expense for the three-year service period is $100,000 (10,000 × $10). Because two-thirds of the service period has elapsed, aggregate compensation expense recognized should be $66,667 ($100,000 × 2/3). Because compensation expense of $40,000 was recognized in 2000, the necessary journal entry in 2001 is as follows:

```
2001
Dec. 31  Compensation Expense ($66,667/2 years) .................. 44,444
  Additional Paid-In Capital—Stock Options  44,444
```

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33 FASB Statement No. 123, par. 29.
Upon close examination, it can be seen that this computation of compensation expense differs from that typically encountered in situations with changing accounting estimates. Usually, the effects of changes in estimates are spread over current and future periods. In this case, such a procedure would result in 2001 compensation expense of $30,000, an allocation of the remaining compensation expense of $60,000 ($100,000 – $40,000) evenly over the remaining two years of the service period, 2001 and 2002. However, FASB Statement No. 123 requires a so-called catch-up adjustment when recognizing compensation expense related to performance-based option plans. The catch-up adjustment makes the cumulative expense recognized equal to the amount it would have been had the updated estimate for 2002 sales been used all along.

Actual sales for 2002 are $85 million (Neff had a pretty good year). As a result, according to the terms of the performance-based plan, 15,000 options will vest as of January 1, 2003. Because the entire service period has elapsed, aggregate compensation expense recognized should be $150,000 (15,000 × $10). Because compensation expense of $66,667 ($40,000 + $26,667) has already been recognized in 2000 and 2001, the necessary journal entry in 2002 is as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002 Dec. 31</td>
<td>Compensation Expense ($150,000 – $66,667)</td>
<td></td>
<td>83,333</td>
</tr>
<tr>
<td></td>
<td>Additional Paid-In Capital—Stock Options</td>
<td></td>
<td>83,333</td>
</tr>
</tbody>
</table>

The journal entry to record the exercise of all 15,000 of the options on December 31, 2003, to purchase shares of Neff’s no-par common stock would be as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003 Dec. 31</td>
<td>Cash (15,000 × $50)</td>
<td></td>
<td>750,000</td>
</tr>
<tr>
<td></td>
<td>Additional Paid-In Capital—Stock Options</td>
<td></td>
<td>150,000</td>
</tr>
<tr>
<td></td>
<td>Common Stock (no par)</td>
<td></td>
<td>900,000</td>
</tr>
</tbody>
</table>

**INTRINSIC VALUE METHOD**  With the intrinsic value method, the total compensation expense for the service period for a performance-based plan is remeasured at the end of each year in response to changes in the variables used to compute the initial value. In the Neff example, the grant date estimate of total compensation expense for the three-year service period is $0 because the options have no “intrinsic value” on that date ($50 stock price – $50 exercise price). But, at December 31, 2000, an updated forecast of 2002 sales and the December 31, 2000, stock price are used to estimate total three-year compensation expense as $72,000 (12,000 options × ($56 stock price – $50 exercise price)).

This process differs substantially from the intrinsic value method of accounting for fixed stock option plans that was illustrated earlier in the chapter. With fixed stock options, changes in stock price occurring after the grant date are ignored. This significant difference in accounting between fixed plans and performance-based plans under the intrinsic value method is what caused the FASB to advocate the fair value method. However, as stated previously, most firms will continue to use the intrinsic value method because it usually results in no compensation expense for fixed plans.

The journal entry to recognize 2000 compensation expense using the intrinsic value method is as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001 Dec. 31</td>
<td>Compensation Expense ($66,667 – $40,000)</td>
<td></td>
<td>26,667</td>
</tr>
<tr>
<td></td>
<td>Additional Paid-In Capital—Stock Options</td>
<td></td>
<td>26,667</td>
</tr>
</tbody>
</table>

34 Total compensation expense is also affected by the number of options that employees forfeit, i.e., by leaving the firm before the vesting period is over. Under the fair value method, a forecast of forfeitures can be incorporated in the estimate of options to be exercised. Alternatively, the compensation expense each year can be computed based on the actual number of unforfeited options. Under the intrinsic value method, compensation expense each year is always computed based on the actual number of unforfeited options.
As of December 31, 2001, Neff expects that only 10,000 options will vest on January 1, 2003. In addition, the stock price on December 31, 2001, is $57 per share. The new estimate for total compensation expense for the three-year service period is $70,000 \[10,000 \times (57 - 50)\]. Because two-thirds of the service period has elapsed, aggregate compensation expense recognized should be $46,667 \( \frac{70,000 \times \frac{2}{3}}{2} \). Because compensation expense of $24,000 was recognized in 2000, the necessary journal entry in 2001 is as follows:

2001
Dec. 31  Compensation Expense ($46,667 – $24,000) .......................................... 22,667
Additional Paid-In Capital—Stock Options ........................................... 22,667

This catch-up adjustment is exactly like that required with the fair value method.35

Actual sales for 2002 are $85 million, so 15,000 options will vest as of January 1, 2003. In addition, Neff’s stock price is $59 per share on December 31, 2002. Because the entire service period has elapsed, aggregate compensation expense recognized should be $135,000 \[15,000 \times (59 - 50)\]. Because compensation expense of $46,667 \( \frac{24,000 + 22,667}{2} \) has already been recognized in 2000 and 2001, the necessary journal entry in 2002 is as follows:

2002
Dec. 31  Compensation Expense ($135,000 – $46,667) ......................................... 88,333
Additional Paid-In Capital—Stock Options ........................................... 88,333

The Neff example illustrates why very few stock-based compensation plans in the United States are structured as performance-based plans. In the example, compensation expense in each year of the three-year vesting period was as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Compensation Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>$24,000</td>
</tr>
<tr>
<td>2001</td>
<td>22,667</td>
</tr>
<tr>
<td>2002</td>
<td>88,333</td>
</tr>
</tbody>
</table>

With a fixed stock option plan, total compensation expense for the vesting period is known as of the grant date (except for possible reductions stemming from option forfeitures). With Neff’s performance-based plan, total compensation expense for the vesting period was not known until the end of the vesting period. Also, with the performance-based plan, Neff’s compensation expense varied significantly among periods because of changes in the stock price and the forecasted level of the performance target. The intrinsic value method causes performance-based plans to yield more volatile amounts for compensation expense than do fixed option plans. Managers and investors have long shown a preference for smooth earnings. Consequently, the intrinsic value method has seriously hindered the adoption of performance-based stock option plans in the United States.

**Accounting for Awards That Call for Cash Settlement**

Neff Company’s stock-based compensation plans discussed above stipulated that the compensation would be paid in the form of stock options. Because settlement of these stock options requires Neff to issue its own stock and does not require any transfer of assets, the stock options are considered to be equity instruments. When a stock-based compensation plan calls for a cash settlement or gives the employee the option of
choosing a cash settlement instead of receiving stock options, work by employees during the service period creates a liability for the firm because the firm is obligated to transfer assets (cash) in the future.

The accounting treatment for plans that call for settlement in cash is the same for both the intrinsic value and fair value methods. And the good news is that we don’t need to learn anything new because the accounting is almost identical to that used for performance-based plans under the intrinsic value method. The reason is that a liability is created; therefore, the important accounting issue changes from measuring the value of options granted to estimating the amount of cash that will ultimately be paid out.

To illustrate the accounting for awards that call for settlement in cash, assume that Neff Company has decided that instead of granting its employees 10,000 stock options, it will grant an equal number of cash stock appreciation rights (SARs). A cash SAR awards an employee a cash amount equal to the market value of the issuing firm’s shares above a specified threshold price. Neff Company promises that after January 1, 2003, it will pay the exerciser of each cash SAR an amount equal to the excess of the share price on the exercise date over the $50 threshold price. The cash SARs vest beginning on January 1, 2003, only for the employees who stay with the company for the entire three-year vesting period. The cash SARs expire on December 31, 2003. From an employee’s standpoint, this cash SAR plan is economically equivalent to the fixed option plan illustrated earlier in the chapter. However, from the standpoint of Neff’s accounting treatment, the cash SAR plan is different because it creates a liability to transfer cash.

All journal entries to record compensation expense for 2000, 2001, and 2002 and for the redemption of the cash SARs on December 31, 2003, are given below. Remember that the accounting for plans requiring a cash settlement is the same for both the intrinsic value and fair value methods.

Assume the following information:

Neff share price:
- January 1, 2000: $55
- December 31, 2000: 56
- December 31, 2001: 57
- December 31, 2002: 59
- December 31, 2003: 61

Just as with performance-based plans under the intrinsic value method, the forecast of the cash settlement amount is updated at the end of each period using current stock price information. This is true under both the intrinsic value and fair value methods.

As of December 31, 2000, because the stock price is $56, the best estimate of the amount of cash that will be transferred when the cash SARs are exercised is $60,000 \[10,000 \times ($56 - $50)\]. The journal entry to recognize 2000 compensation expense using both the intrinsic value and fair value methods is as follows:

\[
\begin{align*}
\text{Dec. 31} & \quad \text{Compensation Expense} \ (\$60,000/3 \text{ years}) & \quad 20,000 \\
& \quad \text{Cash SAR Payable} & \quad 20,000
\end{align*}
\]

As of December 31, 2001, the stock price is $57 per share. The new estimate for total compensation expense for the three-year service period is $70,000 \[10,000 \times ($57 - $50)\]. Because two-thirds of the service period has elapsed, aggregate compensation expense recognized should be $46,667 \($70,000 \times \frac{2}{3}\). Because compensation expense of $20,000 was recognized in 2000, the necessary journal entry in 2001 is as follows:

\[
\begin{align*}
\text{Dec. 31} & \quad \text{Compensation Expense} \ (\$46,667 - \$20,000) & \quad 26,667 \\
& \quad \text{Cash SAR Payable} & \quad 26,667
\end{align*}
\]

Except for the account titles, this catch-up adjustment is exactly like those illustrated previously.
Neff’s stock price is $59 per share on December 31, 2002. Aggregate compensation expense for the three-year service period is $90,000 \[10,000 \times (59 - 50)\]. Because compensation expense of $46,667 (\$20,000 + \$26,667) has already been recognized in 2000 and 2001, the necessary journal entry in 2002 is as follows:

2002 Dec. 31 Compensation Expense \(\$90,000 - \$46,667\) .......................................... 43,333
Cash SAR Payable ................................................................................. 43,333

Between the time the cash SARs vest and the time they are exercised, the company’s stock price can still move, affecting the ultimate amount of cash paid out for the cash SARs. The impact of these postvesting price movements on the cash SAR payable account are recognized as compensation expense in the year the price movements occur. The required entry in 2003, to reflect the increase in Neff’s stock price to $61, is:

2003 Dec. 31 Compensation Expense \[10,000 \times (61 - 59)\]....................................... 20,000
Cash SAR Payable ................................................................................. 20,000

The entry to record the cash payments made to holders of the 10,000 cash SARs that vested on January 1, 2003, and were exercised on December 31, 2003, is as follows:

2003 Dec. 31 Cash SAR Payable ...................................................................................... 110,000
Cash \[10,000 \times (61 - 50)\] ............................................................... 110,000

If the exercise period extended beyond 2003 and if cash SARs remained outstanding, an entry would be made at the end of each year to revise the estimated amount of the cash SAR liability. These revisions are recognized as part of compensation expense for the period.

**Broad-Based Plans**

Some employers grant employee stock options and employee stock purchase rights to substantially all employees. Common practice has been for companies to allow employees to purchase stock for as much as a 15% discount from the market price. Under APB Opinion No. 25, no compensation expense was recognized for these broad-based plans. Under FASB Statement No. 123, compensation expense is recognized if employees are allowed to purchase shares for more than a 5% discount from the market price. The rationale is that allowing employees to purchase stock for an excessive discount is just an alternative way to grant compensation.