RADFORD REVIEW:

Using Capped Options to Collar Volatility

In 2006, motivated by the dual requirements to adopt FAS123(R) (now ASC Topic 718) and to take accounting charges for at-the-money stock option grants, companies began to frenetically search for techniques to optimize their accounting dollars. In the years that ensued, a number of widely accepted approaches emerged to help firms minimize their equity costs, once again bringing a degree of stability to option design practices. However, with extreme volatility now much more frequent in the markets, yielding higher than expected option valuations, companies are once again under renewed pressure to redesign equity vehicles to help minimize option expense.

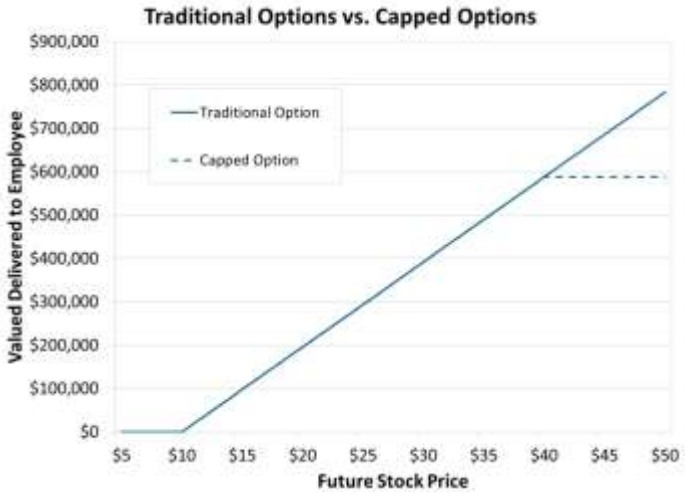
Capped options minimize option expense without infringing upon the award's perceived value.

In this environment, one instrument gaining broader traction as a method to minimize option expense is a "capped option," which is particularly attractive because it helps companies manage costs without infringing upon the award's perceived value. (For examples already in the marketplace, see Urban Outfitters and Qlik Technologies.) Capped options, also referred to "barrier options," involve applying a maximum limit on the value an employee can receive upon exercise.

How Capped Options Work

In short, a capped option limits the value delivered to an employee once a certain stock price is exceeded. For example, an option granted with a $10 strike price and a 400% cap would not allow an employee to receive any additional value once the stock price exceeds $40. Or in other words, the maximum amount an employee could earn from this particular grant is $30 per option ($40 minus $10), even if the stock price climbed over $40. Figure 1 below illustrates how the cap affects the value delivered to employees in relation to a traditional option.

Figure 1



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How Capped Options Minimize Expense

Traditional options are typically valued using a Black-Scholes model, while Monte Carlo simulation is used to determine the fair value of a capped option.

Beginning in 2006, the Financial Accounting Standards Board (FASB) determined the fair value of option awards should be estimated at a grant date using an option pricing model, the most common of which is the Black-Scholes formula. While capped options offer companies the ability to make several adjustments to a Black-Scholes model (or even a binomial model) to determine fair values, the preferable methodology (to pass through audit review) is Monte Carlo simulation.

Without diving into the mathematics behind Monte Carlo simulations, we wanted to provide some quick estimates for how fair values can differ between a traditional option using a Black-Scholes model and a capped option using a Monte Carlo simulation in Figure 2 below.

Figure 2 – Fair Value Comparison

	Traditional Option	Capped Option
Cap	n/a	400.00%
Stock Price	$10.00	$10.00
Strike Price	$10.00	$10.00
Expected Life	5.00	5.00
Volatility	60.00%	60.00%
Risk-Free Rate	1.00%	1.00%
Dividend Yield	0.00%	0.00%
Fair Value	**$5.10**	**$4.42**
% of Grant	**51.02%**	**44.24%**

As you can see, the capped option using Monte Carlo simulation generates a more favorable result when all other factors are equal. This is significant because many companies determine the number of options to grant, in part based on a total accounting fair value. The discount associated with the capped option's fair value allows for significantly more options to be granted to employees. In the above example, a company aiming to grant $100,000 in options could award 19,600 traditional time-based options or 22,601 capped options.

The main driver for the magnitude of the fair value discount between traditional options and capped options is the expected volatility.

Additional Valuation Examples

The ultimate size of the discount in fair value and resulting increase in the number of options granted depends upon the valuation assumptions used, such as expected volatility, expected life and dividend yield. For example, a shorter expected life allows less time in the simulation model for the stock price to reach its cap. As a result, the fair value of the capped option will be closer to the fair value of the traditional option.

It should be noted, however, that the main driver for the magnitude of any discount is expected volatility. A higher volatility increases the probability of the simulated stock price reaching the cap in the Monte Carlo simulation, while a lower volatility decreases the probability of the simulated stock price reaching the cap. Accordingly, the fair value of a capped option will approach the fair value of the traditional option as the expected volatility decreases. To the other extreme, the discount in fair value from a capped option increases as the expected volatility increases.

Figure 3 on the following pages illustrates a range of potential fair value discounts based on various volatility inputs and cap levels.

With a 400% payout cap, a Company with a volatility of 80% can save 26% on the fair value of a traditional option, while a Company with 30% volatility may only save 1% on the fair value of a traditional option.

Figure 3 – Impact on Fair Value at Different Expected Volatilities and Cap Levels

Expected Volatility	Traditional Options	Discount Achieved at Various Capped Levels			
		500%	400%	300%	200%
30%	$2.81	-0.42%	-0.45%	-2.88%	-11.32%
40%	$3.62	-2.01%	-3.93%	-7.44%	-21.01%
50%	$4.38	-6.71%	-7.36%	-13.85%	-30.36%
60%	$5.10	-10.41%	-13.20%	-21.36%	-39.41%
70%	$5.77	-13.61%	-19.05%	-27.99%	-47.01%
80%	$6.38	-20.34%	-25.71%	-35.51%	-53.66%

As you can see in Figure 3, significant reductions in estimated fair value can occur without changing any of the other terms or assumptions related to an option award. However, it must be noted that the above analysis is only illustrative in nature and assumes all other option valuation assumptions remain constant. As other assumptions change, the specific discounts listed above would change as well, although the overall trends observed above would remain similar.

Perceived Value of Capped Options

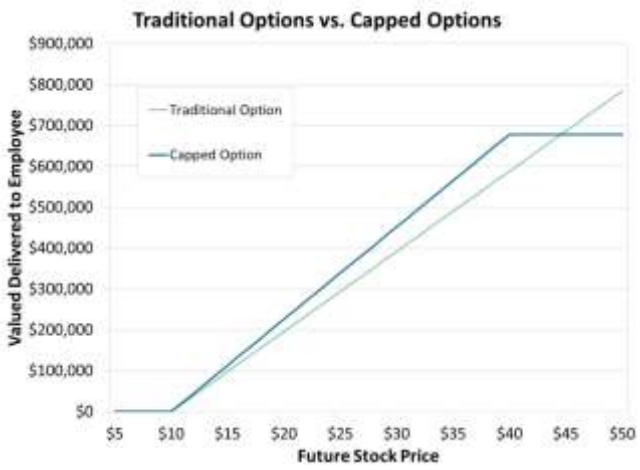
When developing equity awards, accounting cost should not necessarily dictate optimal compensation design. Instead, accounting cost is an element that should be integrated into the design process so that companies will understand how design choices increase or decrease perceived value along with accounting costs.

One of the reasons capped options are increasingly popular in the marketplace is their ability to minimize the cost to the company without always affecting perceived value. For example, most employees do not anticipate their company's stock price increasing by 400%, and if it did, would be very pleased with a 400% return even if they had to leave an extra 10% on the table due to a cap. Thus, so long as companies set caps at levels that seem unlikely to be achieved, the hit to perceived value is generally minimal. That said, lower caps could impact perceived value at a certain point, so there are clearly limits on how restrictive a company can be without damaging the original intent of option awards to drive growth.

The effect that capped options have on the perceived value depend on the level of the cap. A lower cap will infringe more upon the employee's perceived value as the cap is more likely to be hit.

To take the example described in Figure 2 further, would an employee prefer to receive 22,601 capped options or 19,600 traditional options? The employee would fare better with the capped options so long as the stock price ranged from $10 - $44, which represents a set of far more likely outcomes. Only when the stock price exceeds $44, do the traditional time-based options generate better outcomes for the employee. Meanwhile, the company has maintained expense levels while granting more options. Figure 4 illustrates this relationship.

Figure 4



Corporate Governance Considerations

In addition to reducing potential accounting charges, capped options can also provide corporate governance benefits to companies. Caps function as built-in limits for oft-criticized windfall payouts by reducing outsized compensation opportunities Boards of Directors might have previously considered highly unlikely. Furthermore, caps act as risk mitigation devices by limiting incentives for executives to take unnecessary risk after already achieving high levels of performance.

Capped options provide Compensation Committees with extra built-in controls for stock options without the subjectivity and complications of performance-based equity. Further, in special situations where new options are issued as a replacement for underwater options, a cap on the new awards does a great job of ensuring new grants cannot exceed the value and dilution of the original awards.

Conclusion

A major priority for companies in today's marketplace is to maximize the value of awards granted to employees while minimizing the incurred expense associated with those awards. For companies already issuing stock options on a regular basis, Radford recommends considering capped options going forward. While these awards may not be right for all organizations, as the return on the issuance of a capped option does not always differ significantly from traditional options, for companies with high stock price volatilities, capped options can generate real value. In situations where capped options produce discounts in the fair value of equity awards, they provide companies with the flexibility to reduce costs, issue more options and improve equity award governance. To find out if capped options make sense for you, please contact your local Radford consultant.

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