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Intelligent Money

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Special Notes of Interest:

- Microsoft's annual net profit through June 30 would have been reduced from $7.83 billion to $5.36 billion if its issued options were expensed.
- The S&P 500 index is down nearly 49% since its peak in March of 2000.

Current thinking from Haven Financial Advisors

Hedging Strategies for Employer Stock Options

Employer stock options have been featured in the news recently. And the coverage has been controversial. The media is focusing on whether companies should expense the stock options that they grant to employees. This article will instead focus on employer stock options from the standpoint of the employee.

Despite the implosion in the capital markets, there are a number of folks that still have considerable wealth tied up in their employer's stock through unexercised options. That creates some unique planning risks and opportunities that are best addressed with an experienced professional.

First, let's talk terminology. There are two kinds of employer stock options: qualified or incentive stock options (ISOs) and nonqualified stock options (NSOs). The latter are far more common as they impose fewer burdens on the employer and allow the employer to take tax deductions sooner. ISOs are defined under IRC 422 and offer significant tax advantages on the employee. Both kinds of options are call options conferring the right to buy the company stock at a specific price known as the *strike price*. Other key terms are intrinsic value and time value. The former is the difference between the market price of the underlying stock and the strike price. The time value of an option reflects the potential for gain in the intrinsic value based on future stock price movements prior to the option expiration.

Options on stocks may also be bought and sold in the open market. These securities are known as exchange-traded options. They are not granted to individuals as is the case with employer stock options. This is an important distinction.

The exercise of an NSO is a taxable event to the employee under IRC 83. Ordinary income is recognized to the extent of the difference between the market price of the stock and the strike price. The exercise of an ISO does not trigger an ordinary taxable event so long as the employee retains the newly purchased stock for a full year. However, the difference between the market price of the stock and the ISO strike price is treated as a preference item for the purposes of computing the alternative minimum tax (AMT).

Most employees receive a basket of options upon joining a company and, perhaps, each year thereafter. Each option basket has a unique strike price. Most employees cannot exercise their options immediately as they are subject to a vesting schedule. Intel, for example, may offer its new professionals a basket of options that vest at the rate of 25% for each of the first four years with the company. Unless an option is vested, the employee cannot exercise it to realize any value. The vesting schedule incents the employee to stay with the company for an extended period of time.

Generally, there is little intrinsic value to options at the time they are granted During the internet boom of the late 1990s, many employees received options on private stock that was expected to increase exponentially in value with each successive round of financing - culminating in an

Employer Stock Options (continued)

IPO. That phenomenon has evaporated right along with the IPO market. Most option holders today work for established public companies and their options do not expire for many years to come. In this kind of market climate, many employees mistakenly disregard their options portfolio.

Most salaried people underestimate the degree to which their fortune is concentrated in their company or industry. The average worker invests not only his human capital with his company but his financial capital as well. Even those not invested in the company stock believe they are knowledgeable about their industry and invest in competitors, customers, or suppliers. Such investments are ill-advised from a diversification standpoint. Stock options are merely a more subtle form of asset concentration. How do we quantify this exposure?

"Just as you would buy homeowners insurance to protect yourself against casualty loss, it may be necessary to insure against a decline in company stock that comprises large fraction of your net worth."

As a first step, I recommend finding out what options the employee has and what he has coming. Periodically, the employer should provide each eligible employee with a schedule of vested and unvested options that looks something like Table 1 below.

Once this information is obtained, it is important to assign a value to the options portfolio. In my view, unvested options should be assigned weight as well as vested options. The amount of weight assigned would be a function of the company and the position of the employee within that company. A longstanding performer like Microsoft would command greater weight for its unvested options than a company in its third round of layoffs over the past year. Similarly, a key employee with ten or more years seniority is more likely to stay with the current employer than a younger individual actively looking for other work.

A key financial planning objective will be to determine the materiality of financial exposure in employer stock options. Compare the company stock market price to the strike prices of the vested options and compute the value that might be

Table 1- *Hypothetical Market Price of Company Stock is $25.00*

Year of Grant	Type	Granted	Strike Price	Exercised	Vested	Unvested
1998	NSO	10000	10	0	10000	0
1999	NSO	10000	12	0	7500	2500
2000	NSO	10000	14	0	5000	5000
2001	NSO	10000	20	0	2500	7500
2002	NSO	10000	30	0	0	10000

Calculation of the intrinsic value of the vested and unvested options

Vested		Unvested	
1998: 10000 Vested Shares x ($25 - $10) =	$150,000	0 Unvested Shares x ($25 - $10) =	$ 0
1999: 7500 Vested Shares x ($25 - $12) =	$ 97,500	2500 Unvested Shares x ($25 -$12) =	$32,500
2000: 5000 Vested Shares x ($25 - $14) =	$ 55,000	5000 Unvested Shares x ($25 - $14) =	$55,000
2001: 2500 Vested Shares x ($25 - $20) =	$ 12,500	7500 Unvested Shares x ($25 - $20) =	$37,500
2002: 0 Vested Shares x ($25 - $12) =	$ 0	10000 Unvested Shares x 0 =	$ 0
Total Intrinsic Value of Vested Options =	$315,000	Total Intrinsic Value of Unvested Options =	$125,000

Employer Stock Options [continued]

realized today were they exercised immediately. In Table 1, we assume the market price of the underlying stock to be $25. Note that an option can never have an intrinsic value less than zero. The aggregated intrinsic value of the sample portfolio is somewhere between $315,000 and $440,000, depending on how much weight is assigned to the unvested options. A relatively small decline in stock price would greatly reduce the computed result. Just as people buy homeowners insurance to protect against casualty loss, it may be necessary to insure against a decline in company stock that constitutes a large fraction of one's net worth. The question then becomes how to best protect against loss.

There are a few ways to minimize the risk. The first requires the exercise of some or all of the vested options and the prompt sale of the stock into diversified investments. Another would be to employ exchange-trade options to protect against downside market action.

The decision to exercise is a function of several factors: the time to expiration of the options in question, the ratio of an option's intrinsic value to time value, the volatility of the stock, and the income tax consequences of the exercise. Clearly options that have intrinsic value should be exercised prior to expiration. However, for those options whose time value greatly outweighs intrinsic value, it is better to postpone exercise. There is no reason to purchase a volatile stock near its strike price. Such action will negate the substantial time value of the option.

Our income tax code is progressive. There are bona fide tax considerations that argue for a gradual exercise of options to exploit the lower income tax brackets over multiple years. In the case of ISOs, the employee is incented to retain stock obtained through exercised ISOs for a full year so as to retain long term capital gains treatment for the eventual sale of the stock. Thus, there are compelling tax considerations that argue against a straightforward strategy of prompt option exercise and stock sale. Once a stock is obtained through the exercise of an NSO, however, it is best sold and converted to a more general investment vehicle. There is no tax incentive to hold company stock obtained via NSOs longer than a day and portfolio considerations call for diversification.

Exchange-traded option strategies are most appropriate for hedging against losses from stock obtained through the exercise of ISOs and any type of unexercised option. The central theme to an exchange-traded options strategy is downside protection.

Larger publicly traded companies have well developed exchange-traded options markets including longer term options known as Long-term Equity AnticiPation Securities or LEAPs. This greatly simplifies the crafting of a hedge strategy. Smaller companies may not enjoy liquid options markets. In these cases, it may be safer to sell the stock outright. Sometimes the best hedging solution is to buy put options in stocks or indexes that correlate well with the underlying stock. It's an imperfect strategy but one that offers some downside protection.

As an example, one might hedge downside risk in a small high tech company by purchasing put options on the NASDAQ-100 Trust Securities (QQQs). The QQQs represent exposure to newer technology companies and will track most tech stocks reasonably well. Of course, a single company might suffer precipitous declines independent of any industry trend. The

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Employer Stock Options (continued)

"proxy hedge" that I outlined will not protect against those events.

Put options can be purchased to provide a minimum level at which company shares may be sold. All or part of the purchase price of the put options may be funded by selling call options on company stock in the open market. A combination of puts and calls structured in this fashion is known as a collar. Generally, collars involve the sale of calls just above the market price of the stock and the purchase of puts at some level lower than the stock. The illustration below describes the profit and loss of such a collar position. Note that the market risk of ABC stock has been neutralized below $40. The treasury has taken notice of this phenomenon and has promulgated "constructive sale" regulations that might trigger a taxable event.

A collar that provides for some loss and some gain should not be considered a constructive sale unless it comes too close to freezing the value of the stock. "Collars are not likely to be considered abusive if the term of the transaction is three years or less and the difference between the floor and ceiling price of the collar is at least 20 percent."[1]

Many employees of public companies are heavily exposed to their employer stock through a variety of means. The Enron scandal illustrated the dangers of company stock concentration in a 401(k) plan. Employer stock options can add subtler risks. When dealing with these options, tax considerations are often at odds with diversification considerations. The efficient resolution of these competing interests lies with a coordinated option exercise plan augmented by a hedge program of exchange-traded options. No useful hedge plan can be crafted without comprehensive knowledge of the client's financial position. That's the job of the financial planner.

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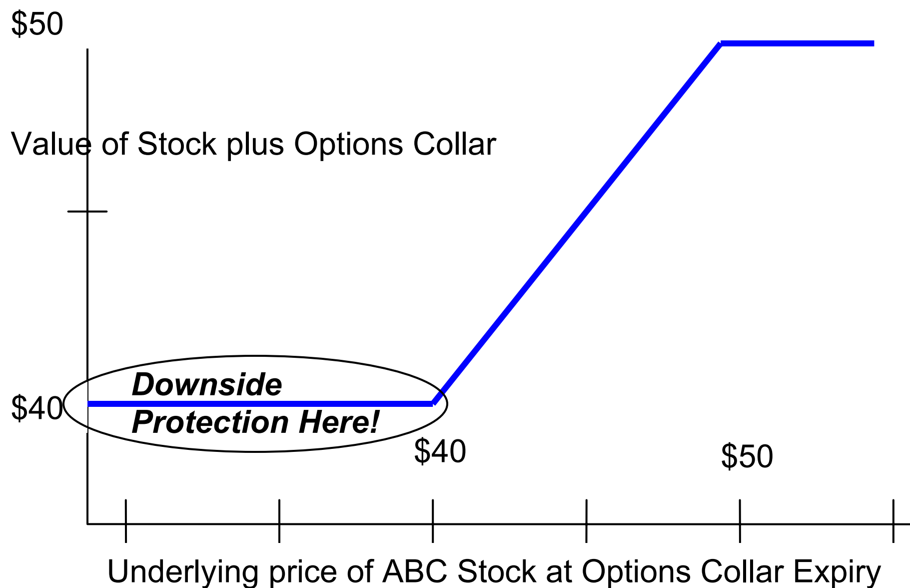

[1] "Hedging Strategies for Protecting Appreciation in Securities and Portfolios" Mark A. Miller, Journal of Financial Planning. August 2002 pp. 64-76.