

Know Your Options

How to Evaluate Stock Options and Their Impact on Total Compensation

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About This Document

CollegeHire presents "Know Your Options," an original publication provided free of charge to students interested in finding out more about total compensation and the role that stock options play. This document is produced in conjunction with CollegeHire's "Know Your Options" and "How to Find Your Dream Job" seminars, held at campuses across the country. Students surveyed after the presentations indicated that a take-home version of the information would be fresh in their minds during the job search process. This document is the first of several seminar topics to be made available online.

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Introduction

Throughout the recruiting process, college graduates are faced with a multitude of decisions. These decisions can have a tremendous impact on their entire careers. Because of this, it is vitally important that each candidate takes the time to evaluate all his/her opportunities.

When evaluating a job opportunity, one of the largest decision factors is compensation. It is important that the college graduate getting his/her first “permanent” job understands that compensation is much more than just the payroll check. Especially in today’s job market, there are many components of total compensation that the candidate should consider.

One of the most complicated segments of total compensation relates to stock options. This component has been around for a long time and has been reserved primarily for top executives in a corporation. But in today’s competitive high-tech market, many companies offer equity (stock options) to employees – even those right out of college.

This document is designed to help give those entering the job market introductory information about stock options along with how to evaluate their impact on total compensation. It is intended to give you a basic understanding of stock options. For a more detailed understanding, we recommend the following two books:

Consider Your Options: Get the Most from Your Equity Compensation. Kaye A. Thomas, Fairmark Press Inc., 2000. ISBN: 0967498163.

Stock Options: An Authoritative Guide to Incentive and Nonqualified Stock Options (2nd edition). Robert R. Pastore, PCM Capital Publishing, 2000. ISBN: 0966889924.

This document is not intended to walk you through all the steps necessary to evaluate an offer, and it will not figure out which job offer is best. There are so many variables to consider when comparing job offers and compensation packages that it is impossible to have a document do that for you. In the end, it becomes a very personal decision that requires a lot of thought, and we hope this document will be helpful to you along the path to a decision.

History of the Recent Job Market

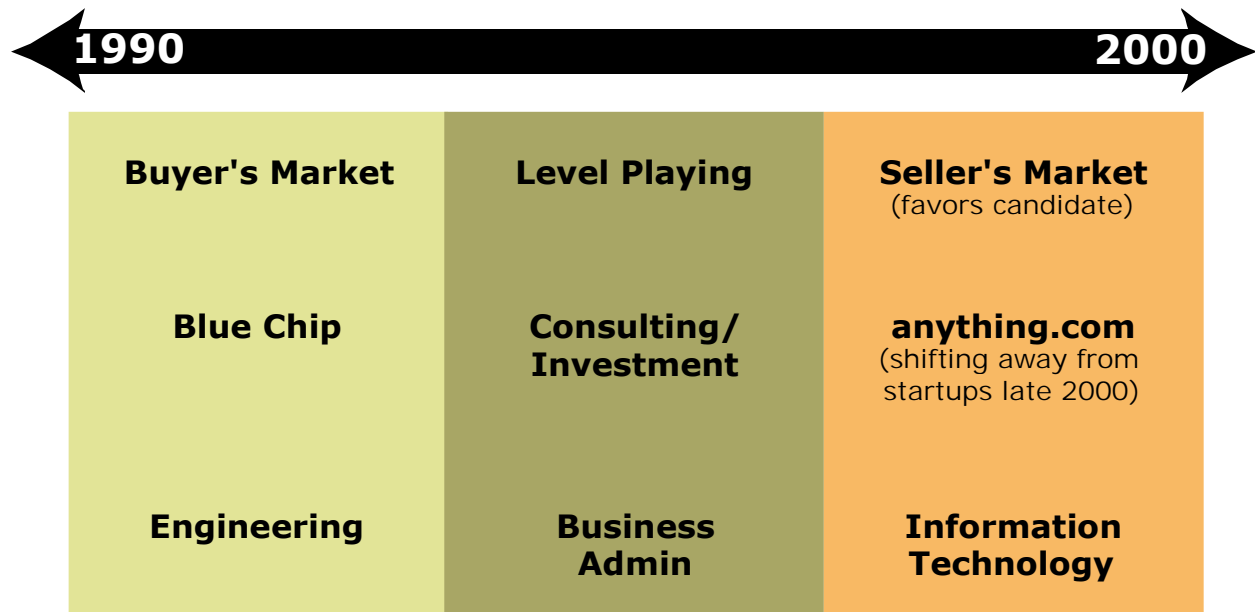


Figure 1

During the past decade (Figure 1), the job market has made some significant shifts. In the early 90s, the economy was adapting to and recovering from an economic slowdown. Because of this, the job market in the high-tech industry favored the companies. The main job openings were at the top, large corporations looking to hire the best technical people they could find. Those companies had a great deal of bargaining power since their hiring goals were relatively low and the supply of talent was more than enough to fill the openings.

As the decade progressed, the "Internet Revolution" gained momentum and we now have a job market that clearly gives the candidate the bargaining power. With the number of high-tech openings greatly expanding and the number of high-tech graduates decreasing slightly each year, it is now a powerful seller's market. There is a huge demand from the start-up (dot com) companies looking for top, cutting edge talent. Moreover, as the start-ups begin pulling talent from the "old economy" companies, demand explodes at those large corporations.

As this document is being published, there has been a noticeable slowdown in the demand and appeal of the start-up opportunities, but it is still a very strong seller's market across the high-tech industry.

Now, the candidates are usually in a very good negotiating position with prospective companies; therefore, they will probably weigh the compensation aspect of an opportunity very highly. It is critical, however, that candidates understand how to evaluate the total compensation package a company may offer.

Evaluating Your Offer

Many people think only of their paycheck when considering what comprises their compensation. There are, however, several pieces of the total compensation pie (Figure 2), that each person should think about before he/she starts looking for a job.

Everyone is looking to optimize his/her pie, but the way each piece is sliced is a personal decision based on how each segment is valued. Some people are willing to sacrifice a lower base salary by offsetting that with a higher potential for a large performance bonus. On the other hand, a candidate might be looking to maximize his/her guaranteed salary because of his/her own particular financial situation – for example, paying off student loans. The point here is that there is no correct way to cut your pie. ***Each person should take the time to consider what his/her optimal total compensation pie should look like.***

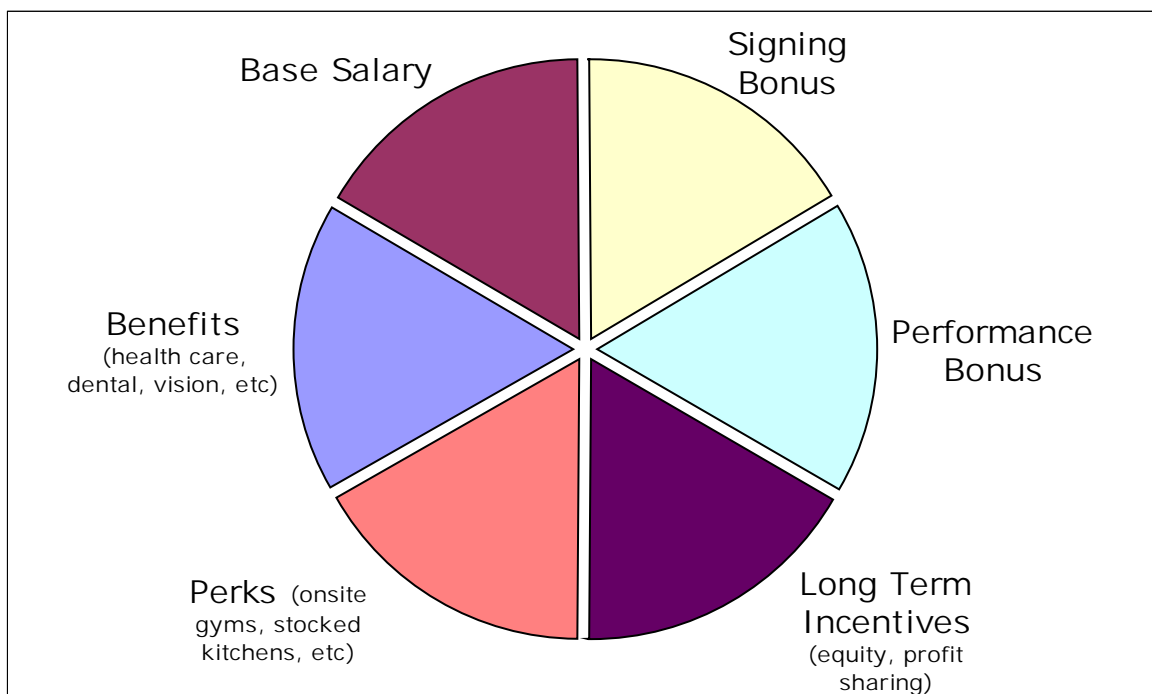


Figure 2

Of course, when considering the total compensation structure a candidate is looking for, he/she must also understand what kind of working environment will be experienced in return for the compensation. It is very difficult to find the opportunity that optimizes the total compensation package and the “perfect” working environment.

The following illustration (Figure 3) shows one way to see how compensation fits in with the Big Picture.

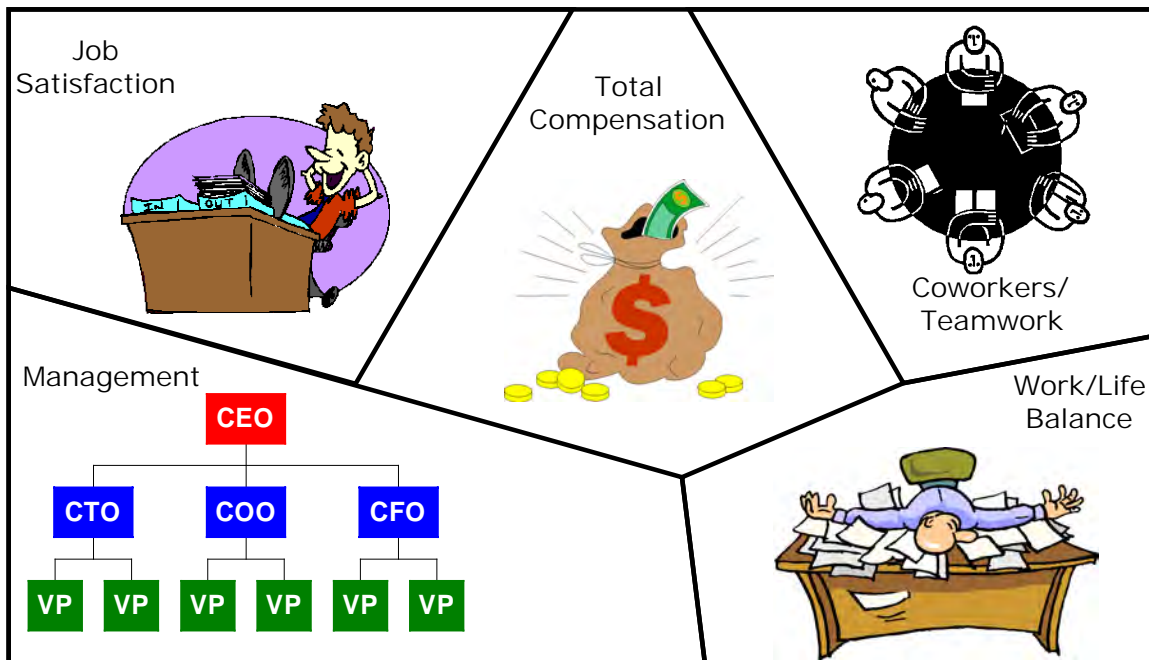


Figure 3

Just as salary is one component of total compensation, total compensation is just one part of your employment experience. Consider all the pieces and decide where you may be willing to make tradeoffs.

Here are a few things to take into consideration:

- What are the future prospects of the company (market space, competition, product, etc.)?
- What kind of funding, if any, is behind the company (venture capital)? Who are the investors?
- Are there any programs at the company that address quality of life issues (flex time, community service, etc.)?
- Has the company been recognized as being a good place to work (Fortune, Forbes, etc.)?
- What is the overall company culture like?

Also, be sure to get several other opinions from family, alumni, friends, publications, public disclosures, and online bulletin boards.

THE BOTTOM LINE

Be your own venture capitalist. Would you write this company a \$10 million check? We recommend you spend time getting the detailed data needed to make this decision. Visit online sites like Hoovers.com and Yahoo! Finance to help with your research.

Stock Options

One of the most complicated components of total compensation is stock options. The rest of this document is intended to give you a basic understanding of how to evaluate stock options as a segment of a total compensation package.

Common Definitions

Option

The right, without the obligation, to purchase a share of stock for a period of time at a predetermined price regardless of the fair market value of that share.

Exercise

The act of turning in your option and purchasing a share of stock.

Exercise Price (Strike Price)

The pre-set price you may purchase the stock – no matter what the fair market value is at that time.

Vesting Period

The period of time you are required to hold the option before you can exercise it. This is used by the company as an incentive to keep the employee for a longer period of time. The most common vesting schedule allows for 25% of the options to vest each year for four years.

Types of Stock Options

There are two main types of stock options that companies grant to employees.

1. Incentive Stock Options (ISO) – *most common*
2. Non-Statutory Stock Options (NSO) – *also known as “Non-Quals” since they do not qualify as Incentive Stock Options*

Generally, incentive stock options are not taxable to the employee until he/she sells the shares subsequent to exercising the options; however, non-statutory stock options are taxable to the employee upon exercise (at ordinary income rates).

This document is not intended to deal with the tax implications of stock options, so we recommend you contact a tax advisor and/or conduct further research on your own.

Until recently, stock options have been reserved for the top levels of management as an incentive to lead the company to peak performance and value to shareholders. In today's high-tech market, companies give out equity because it is necessary to remain competitive. The most sought-after talent is going to have opportunities that give him/her ownership in the company, so other companies offer options to stay in the hunt for talent.

Of course, companies grant options for more altruistic reasons as well. Equity encourages employees to think and act like an owner. Companies hope this mentality leads to better decision-making and smarter-working employees.

Another reason for granting stock options is that it can be considered “free money” to the company. Stock plans may be structured to allow employers to grant large amounts of compensation without taking the hit to earnings that base salaries and cash bonuses require. Also, the company may be able to benefit from a tax deduction when an employee exercises the options.

Why Should I Want Them?

Very few investment opportunities offer this combination of upside opportunity and downside security.

The strike price is usually low enough, as compared to the fair market value, to require a relatively small amount of initial cash outlay when compared to the potential value at market rates.

This opportunity is depicted in the following chart as the Value Zone (Figure 4). As the market price of the stock increases, it can easily surpass the strike price and produce a tremendous gain in value.

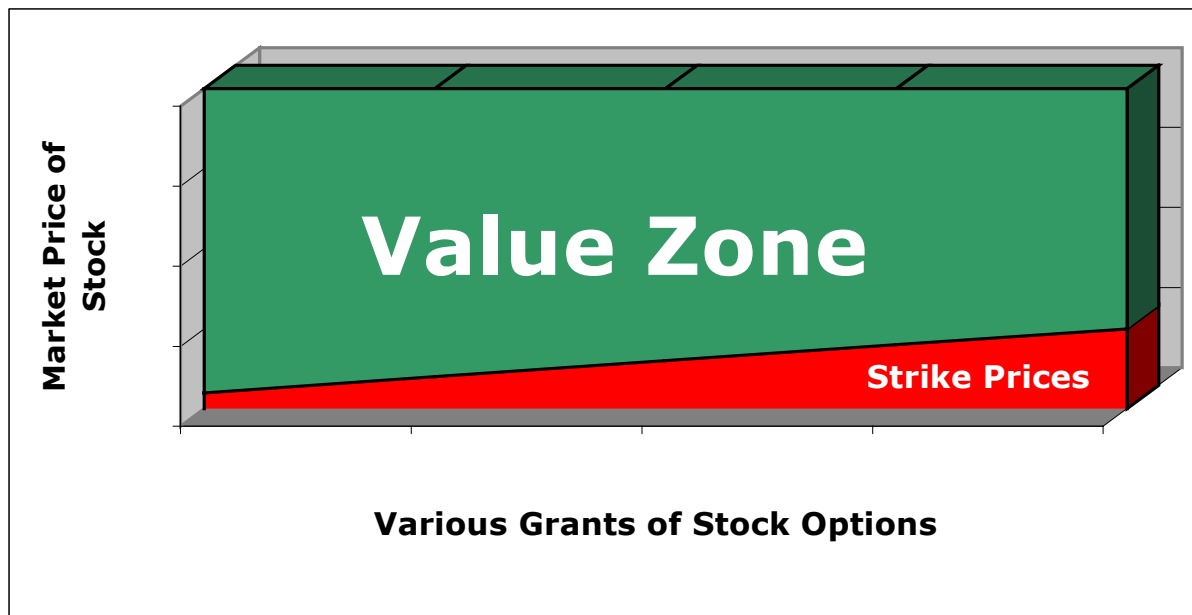


Figure 4

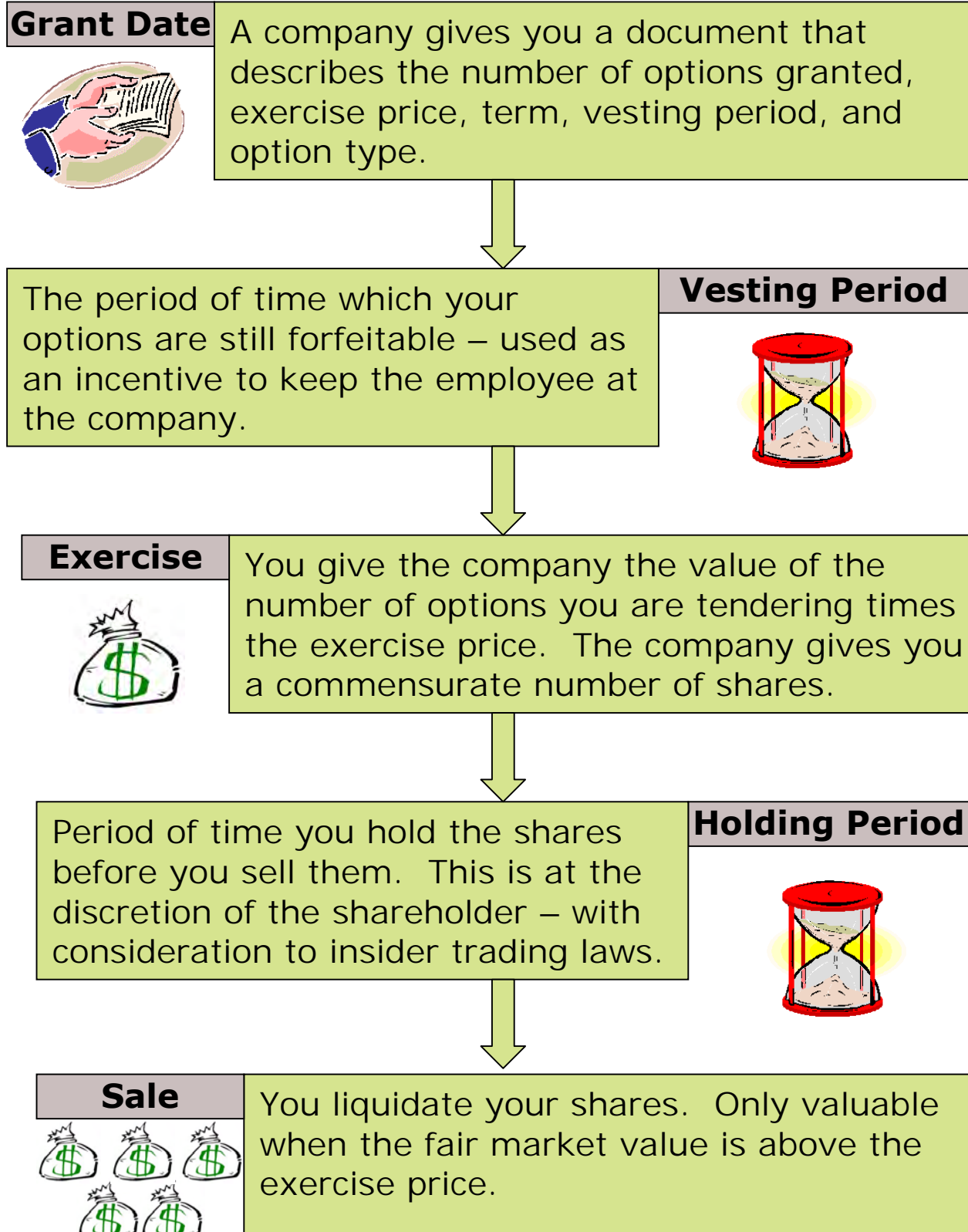
WHAT'S THE CATCH?

- A stock option is just a piece of paper on the grant date.
- It only has value to the extent the price of the stock rises above the strike price.
- Vesting periods can “handcuff” you into staying at your job longer than you prefer.
- They are not free to you
 - when you exercise the option, you have to come up with the cash for the exercise investment (# shares exercised * strike price)
 - Uncle Sam takes his share upon exercise and/or sale of the stock – depending on the type of option you were granted.

THE BOTTOM LINE

Stock options have the *potential* to deliver a lot of value, but it really comes down to your personal risk tolerance with respect to how much of a *sacrifice* you are willing to make in terms of short-term cash compensation for the possibility of long-term equity compensation.

How do they Work?



What are the Options Worth?

As with any investment, predicting the future is part of the game.

You can try to estimate the present value of the options by utilizing a few different financial formulas.

Intrinsic Value – is the simplest, and most obvious, technique. By multiplying the number of options with the exercise price, you get the current value. However, the exercise price is usually set as low as possible to give the recipient the largest chance for a gain in the future. This does not take expected future values into account.

Black Scholes Model – is a very complicated model, as you can see in Figure 5. There are several online applets that can help you use this calculation; they can be found by searching for “Black Scholes” with your favorite search engine.

$$C = SN(d_1) - Ke^{(-rt)}N(d_2)$$

C=Theoretical Call Premium	e=Exponential function (2.7183)
S=Current stock price	$d_1 = (\ln(S/K) + (r + \sigma^2/2)t) / \sigma\sqrt{t}$
t=Time until option expires	$d_2 = d_1 - \sigma\sqrt{t}$
K=Option strike price	σ =Standard deviation of stock returns
r=Risk-free interest rate	ln=Natural logarithm
N=Cumulative standard normal distribution	

Figure 5

Present Value of Expected Gain (PVEG) – is another complicated financial model that can help you value your options. (You don't want us to show you more formulas.)

However, there are some ways to estimate a future value of a company without complicated financial formulas. This is another way for you to “be your own venture capitalist”.

- Try to find at least two publicly traded competitors in the market space and try to determine the total number of competitors
 - Ask the company
 - Use Hoovers.com (or similar) to find competitor listings
 - Search articles and press releases – they often mention their competitors
- Get the following data about the publicly traded competitors (from Yahoo! Finance, Quicken.com, etc)
 - Stock price
 - Market capitalization (Stock Price * Number of Outstanding Shares)
 - Most recent revenue and profit/(loss) numbers
 - Date the company was established
 - Revenue Multiplier (Market Capitalization ÷ Revenue)
- Determine the size of the market (and future growth estimates)
 - Ask the company what their market estimates are
 - Ask the company what market analysts cover their market segment and find any published reports from those analysts

With all the data you collect, you can make a reasonable estimate of the company's future value – which translates into the future value of your shares of stock.



Example of How to Value the Options

Here is an example using fictitious information:

You are offered 5,000 options in **Company A** that vest over 4 years with an exercise price of \$1/share. Company A is a start-up company that was founded one year ago. There are 10M shares outstanding. You are trying to estimate how much the shares will be worth in 4 years.

Publicly traded competitors	Company Y	Company Z
Current Stock Price	\$12	\$8
Shares Outstanding	33M	25M
Market Capitalization (stock price * shares outstanding)	\$400M	\$200M
Estimated Annual Revenue	\$40M	\$30M
Revenue Multiplier (market cap ÷ annual revenue)	10	6.7
Years in existence	5	4

These two companies, Y and Z, are considered to be some of the top companies in the same market space as Company A.

There are about 50 competitors, and some analysts estimate the market to be about \$10B in four years.

Company A revenue for the 1st year was \$3M.

Here are some things to think about and conclusions you can make with this data:

- It took Company Y 5 years to get to \$400M in value and Company Z took 4 years to get to \$200M. Since these are some of the top companies, you can assume Company A will not be worth more than \$400M in 4 years.
- If Company A's revenue growth is 75% each year, then the revenue in 4 years will be around \$28M. Does that sound reasonable? Do the products they sell support this assumption? Do you have faith that the management team can grow revenue 75% a year? Does the company have a competitive advantage that can sustain this growth for 4 years?
- Do you expect the competitive landscape to be constant over the next 4 years? Will there be market consolidation? Or will there be more competitors?
- Where do you think Company A will fall in this group of competitors?
- Assuming the market stays consistent over the next 4 years and that Company A will be a top company, you can expect Company A to have a revenue multiplier of around 8 (somewhere between Company Y's 10 and Company Z's 6.7).
- If Company A has revenue of \$28M in 4 years, then the company value will be around \$224M (revenue of \$28 * revenue multiplier of 8).
- If the value of the company is \$224M, then the stock is valued at about \$22/share (\$224M ÷ 10M shares). If this is the case, then you have shares worth \$22 after you exercised them for \$1/share.
- Does it make sense that a \$10B market in 4 years can have several companies with at least \$200M in market cap – and some with more than \$400M?

Obviously, there are many more questions requiring answers, and there are more conclusions you can make with the data you found. This is just an example of how to begin looking at the information you find about the company and the market.

There is not a formula that will guarantee the future value of your options. But this is one way to help you start thinking about how you can make an educated prediction about the prospects of the company.



The points to take away from this section are as follows:

- The value of a stock option is dependent on what happens in the future.
- Since there is no way to predict the future, some financial academics came up with some predictive models to help.
- There is a lot of “gut feeling” involved in putting a value on the options you are granted – think about the company and its future prospects (additional information about what to think about is in future sections of this report).
- Consult a financial advisor to get expert advice.

This section is not intended to give you enough financial information to make decisions about option valuation. Please consult a financial advisor for expert advice.

The following chart shows a sampling of options from public companies and their values over time.

	# Options	Value of the Grant				Actual Value Two Years Later		
		Market Value 1/2/1998	Intrinsic Value	Black Scholes	PVEG	Market Value 1/3/2000	Value per Option	Total Grant Value
Microsoft	1,000	\$ 32.78	\$ 32,781	\$ 11,830	\$ 36,458	\$ 116.56	\$ 83.78	\$ 83,781
Coca Cola	1,000	\$ 66.84	\$ 66,938	\$ 17,660	\$ 30,537	\$ 56.25	\$ -	\$ -
Amazon	1,000	\$ 4.95	\$ 4,953	\$ 2,820	\$ 7,594	\$ 89.38	\$ 84.42	\$ 84,422
Yahoo	1,000	\$ 8.28	\$ 8,281	\$ 4,720	\$ 12,697	\$ 237.50	\$ 229.22	\$ 229,219

THE BOTTOM LINE

In the end, the value of the option is driven by the amount of spread between your exercise price and the fair market value of the stock on the date of exercise. Since you cannot possibly know on the grant date what the spread will be, the best you can do is make an informed guess about the growth in value of the underlying stock. Remember, though, that the number of options being offered is not necessarily a reliable indicator of how much potential value you are being given.

More Options Isn't Necessarily More Dollars

The number of options granted is not the number you should focus on. The entire value calculation depends on the estimated future value of the stock.

Growth projections are probably the most influential parts of the calculation. For example, take a look at the following chart of fictitious data:

	# Options	Exercise Price	Cash Value at Exercise	Most Important Numbers		
				Future Price	Gain per Share	Future Gain
Blue.com	10,000	\$ 1.00	\$ 10,000	\$ 5.00	\$ 4.00	\$ 40,000
Red Technology	2,500	\$ 1.00	\$ 2,500	\$ 10.00	\$ 9.00	\$ 22,500
Green Software	5,000	\$ 1.00	\$ 5,000	\$ 15.00	\$ 14.00	\$ 70,000

Options in a Private Company

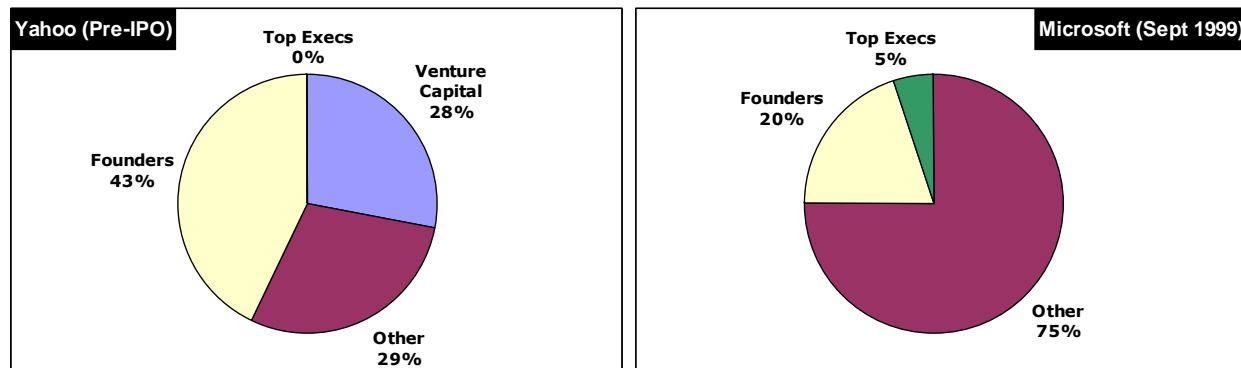
Predicting the future value of the shares gets even more complicated if you receive options from a private company. Public companies have easily accessible histories of their stock price movement. There is also a great deal of research available to help predict the future value of the stock.

On the other hand, private companies are not traded on the market, so there are no historical numbers to research and only very limited information on growth prospects. Because of this, the candidate must get this information directly from the private company during the recruiting process. It is best to get this information from the CFO or VP of Finance.

Here are a few things to keep in mind when evaluating stock options at a private company:

- These options can provide considerable upside opportunity for the option holder if the timing is right.
- The options are essentially illiquid even if vested (there is basically no market for the shares).
- It is critical to know the company's exit strategy (are they planning to IPO, stay private, get acquired).
- Be sure to know exactly what will happen to your options in the event of a transaction – if the company is acquired.
- Once again, take advantage of information available about public companies that are comparable (competitors, similar business models, similar product maturation, etc).

The following pie charts show two different ownership profiles. They can be considered fairly typical examples of pre-IPO and public company profiles.



What to do with the Options

Once your options vest, you have three alternatives:

1. Defer exercise – you do not have to exercise when the options vest.
2. Exercise and Hold – you can exercise the vested shares and hold on to the shares in anticipation of future appreciation.
3. Exercise and Sell – you can exercise the shares and sell (usually available in one transaction) immediately if the fair market value of the stock at the exercise date provides you the gain you are looking for.

What you choose depends on many different factors:

- Current value of the stock
- Future growth of the stock price
- Cash position
- Ability to borrow at loan interest rates
- Stock option type
- Portfolio diversification
- Current tax rates
- Future tax rates
- Your risk tolerance
- Your personal financial goals



Questions to Pose

When evaluating the total compensation package offered by a prospective company, we recommend you get comfortable with the answers to the following questions: (you may either ask yourself these questions or directly ask the company)

- Is the base salary competitive?
- Can I live comfortably in the lifestyle that I desire?
- How often will the salary be adjusted?
- What are the criteria for performance bonuses?
- What is the target bonus pay-out level? What is the historical data on bonuses?
- How often are bonus pay-outs made?
- What is the average bonus pay-out (% of salary) for someone in my position?
- What has the stock price done historically?
- What is the anticipated stock price appreciation?
- Does the company expect you to exercise and hold the shares?
- What percentage of ownership does the broad employee group hold?
- Does the company anticipate an IPO? If so, when?
- Is the company currently well funded or is it looking for additional funding?
- If looking for additional funding, how will the transaction dilute your shares?
- Who are their venture capitalists? How much of the company do they own?
- What is the company's competitive advantage?
- Where is the company in its product development lifecycle?
- What is the size of the projected market for its products?
- How many shares are currently outstanding?
- How many options have been granted?
- How many options are available for future granting?

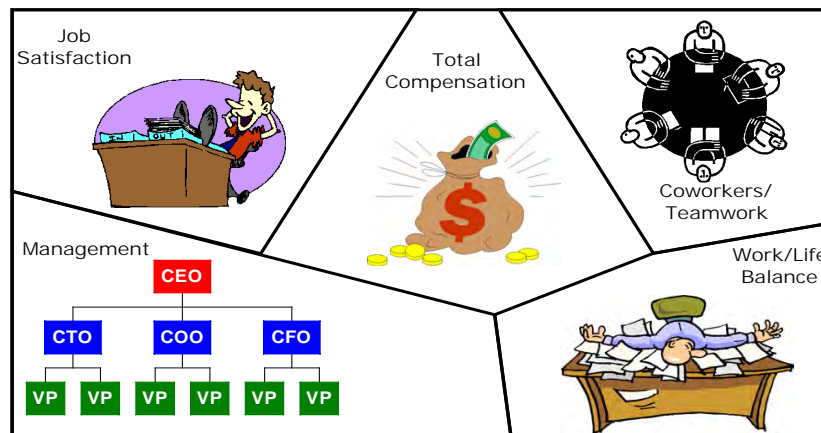
This, of course, is only a list of cash and stock related questions. You should always be getting answers to all the questions about compensation, management, team environment, job duties and satisfaction, work/life balance, and other issues.

Conclusion

Evaluating an offer from a prospective company should be a very thorough effort. Your first “permanent” job out of college will have an impact on your entire career.

There are many different aspects of the opportunity that you must strongly consider. We recommend that you take whatever time is needed to get comfortable with the decision.

Don't forget this picture.



Total compensation is only one piece of the entire picture.

If you are evaluating an opportunity that includes stock options, or the potential of options in the future, you now know how difficult it can be to get comfortable with answers to all the open questions.

We hope this document has given you a good understanding of how options work and what to think about when evaluating them. We do not intend this document to answer all your questions, and the information provided should not be considered legal, tax, or financial advice. We recommend that you conduct additional research on your own along with consulting legal, tax, and financial advisors.

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