MANAGING A DIVERSIFIED PORTFOLIO

By

Katarina Kolesikova

A Thesis Submitted to the Honors College

In Partial Fulfillment of the Bachelors Degree
With Honors in

Finance

THE UNIVERSITY OF ARIZONA

MAY 2012

Approved By:

Professor Arvind Singh
Department of Finance

The University of Arizona Electronic Theses and Dissertations Reproduction and Distribution Rights Form

Name (Last, First, Middle) Kolesikova Katarina	
Degree title (eg BA, BS, BSE, BSB, BFA):	
Honors area (eg Molecular and Cellular Biology, English, Studio Art): Finance	
Date thesis submitted to Honors College: May 1, 2012	
Title of Honors thesis: Managing a Diversified Portfolio	
:The University of Arizona Library Release	I hereby grant to the University of Arizona Library the nonexclusive worldwide right to reproduce and distribute my dissertation or thesis and abstract (herein, the "licensed materials"), in whole or in part, in any and all media of distribution and in any format in existence now or developed in the future. I represent and warrant to the University of Arizona that the licensed materials are my original work, that I am the sole owner of all rights in and to the licensed materials, and that none of the licensed materials infringe or violate the rights of others. I further represent that I have obtained all necessary rights to permit the University of Arizona Library to reproduce and distribute any nonpublic third party software necessary to access, display, run or print my dissertation or thesis. I acknowledge that University of Arizona Library may elect not to distribute my dissertation or thesis in digital format if, in its reasonable judgment, it believes all such rights have not been secured. Signed: Date: May 1, 2012

Abstract

Stock picking rests on distinguishing the undervalued “good deals” in the market from the overvalued securities. This can be challenging because when you come up with a valuation that is significantly different from the current market rate, you are making the assumption that thousands of investors, most with more experience and resources that you, are wrong and that you found something fundamental about the company that they missed. Every investor has his or her own system for picking stocks. In my opinion, the most effective one is to focus on in depth research of the company, because this allows you to come create an accurate discounted cash flow valuation model. The paper talks about this investment process in detail. It is a series of short papers about a variety of investment topic, ranging from a discussion of the merits of active vs. passive management, asset allocation, and behavioral finance, all the way to accounting issues that investors should be aware of.

The Investment Process According to Peter Brimm

The investment process is a complicated one; every investor believes that they have the "special secret" or gift that enables them to continuously create abnormal returns for their investors. Most of the time this is not true. However, some investment managers have been extremely successful. Peter Brimm is one such investor. His personal approach is very research focused. He prefers to invest for longer time horizons and to only have about 13 stocks in his portfolio at once. This limits diversification, which could lead to excessive volatility and risk; therefore it is extremely important that the research that he does is through and valid.

Stock picking rests on distinguishing the undervalued "good deals" in the market from the overvalued securities. This can be challenging because when you come up with a valuation that is significantly different from the current market rate, you are making the assumption that thousands of investors, most with more experience and resources that you, are wrong and that you found something fundamental about the company that they missed. Therefore, the most important question to ask in your research is "why".

It is impossible to do quality research on all (or even on a small fraction) of the stocks that are currently trading in the marketplace. This is why it is important to have a strategy to distinguish the undervalued securities from the overvalued ones. Quantitative screens on financial rations and price movements can be invaluable tools. Investors can narrow their search by looking at growth, value, momentum, and a number of other factors. It is easier for the analyst if the search criteria are very specific and narrow; however, it is more difficult to find investors for a hedge fund or investment firm with this strategy because there is more risk with a concentrated strategy. Another useful tool to narrow down potential stocks to do further research on is to look at the 13-F fillings to see what influential investors such as Warren Buffet are currently investing in. One must be careful because these fillings only contain the investors' positions in the stocks and not any options or derivative instruments that they have on the stock. This could be misleading because it looks like the investor is betting on a stock price increase, while if they own a large position in puts, in reality they are actually betting on a stock price decline.

Once the analyst has narrowed down a list of stock, he or she must learn everything that they can about the industry.

This will give the analyst a frame of reference that will deepen the analyst's understanding about the competitive position of the company that he is interested in. The analyst must have a clear understanding of the macro economic factors that affect the value chain in the industry. This entails knowing which part of the chain has the highest margins and profits as well as knowing hoe goods flow from the beginning of the process up until the finished product. In his presentation, Peter Brimm mentioned that he finds it helpful to draw a diagram of every player in the industry. Along with the quantitative analysis of margins, sale growth, and ROIC, and EBTDA, the analyst should conduct a Porters five forces analysis. Porter's analysis is a framework for industry analysis and business strategy development. It is a way to establish whether the industry that the firm is in is an "attractive" one.

The next step of the stock-picking process is researching the company itself. This means reading the 10Ks and 10Q filling going back at least a yea and a half. The analyst should pay special attention to the proxy or the DEF 14 filling because that outlines how top management gets paid because if they make money based on revenue growth, they will act differently than if they are paid based on increasing their margins. According to Peter Brimm, a sock picker should make an effort tog et his hands on and read every single piece of information that was published about the company in the last three years. This included transcripts from earnings calls, earnings releases, news articles, and press releases because this enable you to get a feel for how effective management is and how they react in certain situations.

In order to beat the market, a stock picker has to find a mispricing. This means that he finds something that analysts with bigger resources missed. This is why the company research part of the stock picking equation is so important. It is what gives the investor a competitive advantage.

According to Peter brim, in order to value a company accurately a investor has to project the full financial statement of the company for the nest 2-3 years by building a discounted cash flow model. It is not wise to project more than 3 years because these models inherently have a lot of assumptions. Cash flows that are further in the future are much more uncertain because a lot can happen both in the company and the economy during that time. There should be a reason behind every assumption that is used in the discounted cash flow valuation because small changes in something such as a growth rate can have a significant impact on the price of the security.

At this point in the research process the analyst or investor SHOULD have a very long list of questions about the company that cannot be answered by reading earnings call transcripts or SEC fillings. As Peter Brimm said, if the stock picker has not complied a long list of questions, he is not doing his job. To get answers, to these questions, an analyst should turn to sell side analysts who follow that specific firm. Peter Brimm shared that the best way to approach this is to rank the analysts that follow the stock from best to worst and contact the least informed ones first. This way, you can get the "easier" questions out of the way and so that you are more and more informed as you move up the list. One question that should be asked of all of the analysts if, " What are other people calling you to ask about this particular stock." Although these conversations with sell side analysts often do not lead to a lot of new information if you have done your research correctly and thoroughly, they are important in the sense that they provide the analyst with a "feel" for how the market for the stock behaves. In addition this analysis will provide a tightened up financial valuation of the company as well as a list of potential catalysts that might move market sentiment on the stock.

Major suppliers and customers can also be a resource. Again, this will most likely not provide any new information because there are laws such as Regulation FD that address the selective disclosure of market information to people that can potentially trade on that information. When an issuer discloses such information, even accidentally, they must make sure to issue a press release as soon as possible so that the same information is available to all market participants. However, these conversations are a way to fact-check the information that the company claims on its 10K fillings and during its conference calls. In addition, you can get more information about the industry as a whole and how the company and its competitors are perceived in the marketplace.

Finally, an analyst should talk to the management of the firm. It is difficult to gain access to top-level management unless you are an investor with a significant amount of money to invest. Therefore, former management might be the best resource because they have more freedom to be forthright. This is the last step of the research process.

Stock picking can be a complicated procedure. You have to do enough research so that you can confidently claim that you know something about the company that the market has missed. This takes either a huge ego or diligent research. It is so important to read everything that you can about the company going back at least a few years. Many people view this process as extremely time consuming. And it is. This is why every investor has a different stock picking process; if you have a very diversified portfolio, doing such in depth research might not be the best way to approach stock picking. Peter Brimms method works best when you have a smaller portfolio and a longer-term time horizon. Of course, that means that you are making a bet that you know the companies well enough and they are undervalued enough that you will not be hurt by your lack of diversification. This method has more risk; however the potential payoff is also significant.

The Active v. Passive Management Debate

The desire to beat and to outperform the markets stems from peoples' innate desire to win. We admire people who exhibit superior or special skills; we revere pro athletes and respect financial managers such as Warren Buffet who have become legends because of their market timing skill. But there cannot be winners without there being just as many, if not more, losers. So the question remains: which investment strategy is the best: passive or active? The Genspring speakers, Will Froelich, Evan Judge & Damon Miller, come down clearly on the passive side of the debate, while our class leans toward the active side. I believe that there are both pros and cons to both investment styles; the debate essentially boils down to an investors' belief about market conditions and overall market efficiency.

Active management can be defined as an attempt to find "good deals" and mispricing in financial markets. They try to pick undervalued stocks, bonds, and mutual funds by analyzing both individual companies and markets as a whole. In essence active managers are seeking to maximize the value of alpha in the capital asset pricing model equation.

An important argument that people have against active management is that the transaction fees are much higher than with passive management, which makes it harder to achieve the returns that clients expect. Passive management is an opposing financial strategy where the manager invests in a portfolio with previously determine asset weights. A main reason for this is to avoid the investment fees that active managers must deal with. Active managers tend to incur more expenses (high-priced analysts, trading costs, marketing budgets, etc.) than their passive counterparts, which means that the post-expense return on a actively managed dollar is often lower than the return on a passively managed dollar. Of course, there are managers who regularly outperform the market, but it is unlikely that they will consistently do so for an extended period of time.

Research has shown that the highest performing mutual fund often have returns in the lowest third the following year. According to our speakers, investors get attracted to the next "hot" investment, which drives up demand and in turn prices, which eventually makes the stock overvalued. Proponents of passive financial management theories often point to the fact that researchers have not been able to show a clear link between past and future performance as a clear sign that active investing is not worth it. On the other hand, I read an article that argued that there are mangers who do regularly outperform in subsets of their portfolio. The problem is that oftentimes, the firm has restrictions on portfolio weights that prevent the portfolio from being concentrated in these "best ideas", so the performance of the portfolio overall does not reflect the performance of these subsets. Also, it is easy to say that you outperform if you look at only specific stocks/parts of the portfolio, because then it could give you more leeway to look only at positive returns which would distort the real performance of the investment.

Passive managers have no opinion about the relative attractiveness of one specific security within an asset class as compared to another. Always being fully invested, they just make choices about asset allocation weights. They invest in broad asset classes. One poplar way to achieve this is to mirror the performance of an stock index or fund. Therefore, their returns are driven primarily by the market. There are a few obvious advantages to this approach. First, it is cheaper than active investing because there are fewer transaction costs. There is no risk of miss-allocation and it is also more tax efficient.

The negatives to passive investing, as mentioned by Will Froelich, Evan Judge & Damon Miller, is that you're returns are destined to be average. By giving up the benefit of over-performing, the financial manager also gives up the risk of underperforming. One of the things that draw people to investing is that by taking large risks, they have the potential to receive large rewards. But passive investors try to avoid this type of mindset because they believe that being invested in the market as a whole will bring about the most profitable returns.

One of the biggest challenges that Genspring faces, is rationalizing their passive investment strategy to their clients. People do not want to pay a manager to invest their money and to let it sit there. Many people do not see any value in that. In essence, they have to rationalize and explain the basic ideology or the reason behind their company to each client. Therefore, Genspring has to create added value for their clients. In order to do this, they also provide financial planning and tax services. They also deal with trusts and estates, and look for structural inefficiencies. Although this could be potentially cheaper as an unbundled product, they provide the added convenience and ease that all of their clients' financial needs can be taken care of in the same place, by an advisor that they trust and have a relationship with.

Another valuable value added service is that they serve as emotional advisers to their clients. Because their core strategy is to buy and hold, they have to convince their clients not to go along with the majority and to sell when the market is down and to buy when it is up. This could be one of the hardest and most difficult parts of the job, in my opinion. It is very difficult to explain to someone without any financial know-how that even though they are bleeding money and everyone is panicking and leaving the market, that they, in fact, should invest some more. The Genspring financial advisors have to overcome their client's (and people's in genral) tendency to be emotional investors.

The active versus passive financial management debate is basically a result of an individuals belief about how efficient markets are. If an investor believes that all available information is already incorporated into the current stock price then he or he is more likely to have a passive investment strategy. But if an investor thinks that markets are not completely efficient, then an active strategy would allow him or her to find these mispricing and to capitalize on these returns. If you believe that the market is informationally efficient, then there is really no way to outperform the market unless you have a magical crystal ball that sees into the future.

Although the "popular opinion" these days seems to be that active investing wins out over passive management every time, I believe that there are strategies that one can use that make active investing a profitable strategy. One way an active financial manager can be successful is if he or she consciously avoids emotional investing and attempts to invest in a contrarian way. A contrarian investor is of the opinion that following what the crowd, or the majority of people, are doing is the wrong way to go. If there is some "hot" stock that everyone is currently buying, it is usually too late. A contrarian investor buys low and sells high, relying on the belief that the market will always turn around. Will Froelich, Evan Judge, & Damon Miller, agreed with this statements. They mentioned that during the 2008 crisis, they tried to encourage their clients to not only keep their money in the market when everyone was trying to get out, but to actually invest more. It is human nature to react emotionally; the problem is that this causes us to overweight recent, both positive and negative trends, when there really is no empirical evidence that they will continue. People are naturally "bad" investors because they we are driven by our emotions. I believe that just by being aware of this and trying to minimize this will make one a better investor.

The structure of our class is in direct contradiction to the investment strategy that the mangers at Genspring have. This is due, in part, to the fact that the class is designed to actually teach us something and to allow us to get real hands on financial experience. If at the beginning of the semester we bought a few stock and held them till May, there really would be no point to having an applied portfolio class. Interestingly our class has performed quite well since the founding of the portfolio. This just goes to say that it is not impossible to beat the market-50% of people do it each year.

In conclusion, there is no end in sight to the passive versus active financial management debate. There are pros/cons to both approach and people who believe strongly in each. People will continue to invest and to come up with brand new strategies that will make them rich because we are all looking to be that special someone who beats the market and always makes above average returns.

Diary of Class Sessions

Investment Process

The guest speaker was very interesting because it was nice to see how all of the theories that we learn in finance classes are applied in the "real world". The part of his talk that I found most fascinating was the part about managing relationships with clients and making sure that their expectations are reasonable. Every client, especially individuals with little experience in finance, would love to see double digit return on their portfolio with little to no risk. The investment manager must be able to evaluate their risk tolerance, investment horizon, liquidity needs, and their spending policy to create a portfolio that fits all of these needs. At the same time, he or she has to justify all of these decisions to the client in a way that will keep the client happy. Therefore, client reporting and communication is an extremely important part of the investment manager's job. I think that assessing the client's risk tolerance can often be underestimated during the investment process because it is kind on an unclear and subjective process. The investment manager has to be adept at both finance (obviously) and also at reading human behavior. Age and gender obviously play a role in an investor's attitude toward risk: older people are more risk averse and males have been shown to have a more positive attitude toward risk. Personal questionnaires, as the guest speaker pointed out, and forming a personal relationship with the client are crucial because one has to look beyond such general characteristics such as classifying people be age or gender. The problem is that many investors do not know their true appetite for risk. They can say one thing but it is completely different when they see the value of their portfolio drastically decline because they took a risk that did not pay off. One of the reason why being a investment manger is an interesting career option to me is because I have always been interested in psychology. When managing people's money the manager has to take all of these behavioral finance factors into mind along with their opinions/judgments about where the market will go.

Foundation Guest Speaker

The goal of the UofA Endowment is to manage the fund in such a way that the return exceeds the 5.25% hurdle rate so that the principle can continue to grow and increase so that it can continue to pay out scholarships. The asset allocation ranges are set so that they express the classes' belief about overall economic conditions but also so that they can withstand an entire bull and bear market cycle. This has obviously been an effective strategy because the fund has consistently been in the top quartile of performers.

Sector Selection

We continued our sector overviews in class today. One of the sectors that my group is in charge of this semester is telecom. I find this sector interesting because I did an internship at a telecom company in Europe this past summer. I worked for Slovak Telekom, which is the largest telecommunications company in Slovakia and owns T-Mobile Slovakia. Deutsche Telekom is the majority shareholder of Slovak Telekom.

The telecom sector is a interesting one that is difficult to succeed in. The market is very saturated and highly competitive. The fixed line business has decreased drastically over the past few years as people have switched over to mostly mobile communication. The companies generate most of their revenues from mobile internet which is the product line that currently has the highest growth. It is also a sector that is very highly regulated which can have a significant effect on the firm's bottom line. Potential investors have to keep this in mind. For example, over the summer an important regulatory issue that Slovak Telecom had to consider was that the European Union decided that for every rateplan with a 2-year contract, the company will have to offer a similar plan with the same pricing that only forces the client to sign up for a year. This would have a huge effect for the company because it would essentially eliminate 2-year contracts because clients would have no incentive to purchase them since there would be no discount associated with it. The business model of many telecom firms is based on the fact that they focus on getting people to commit to contracts so that they stabilize and even out their revenue streams. It is important to look at each sector in great detail because this can help make sector allocation decision. One also has to be able to make assumptions about the future growth of each sector.

Asset Allocation

Asset Allocation is an investment strategy that attempts to balance risk and reward by changing the percentage of your portfolio invested in each type of asset (Eg. Stocks v. Bonds). The question of asset allocation is one of the most important questions when considering an investment because it takes into account your most general feelings about the state of the market and your expectations of where the market will go. If your analysis shows that the market is under-valued, then you should overweight stocks and if you believe that it is over-valued, you should underweight stocks. When making an asset allocation decision, the investor has to balance the amount of risk that they are willing to take on with the return that they would like to see.

I agree with the asset allocation decision that the Portfolio made, especially after they were able to clear things up a little bit with the addendum presentation.

Genspring

One of the big debates in finance is one whether it is better to invest actively or to invest passively. It has been going on for quite some time and is not likely to end anytime soon. Passive mangers have no opinion about the attractiveness of one security within an asset class as compared to another. They have a long-term asset allocation strategy that they stick to. They are able to avoid the risk of miss-allocating their assets, but at the same time, they also give up the reward of over performing. One advantage of passive investing is that it is tax efficient; a disadvantage is that the investor is doomed to be average.

The speakers from Genspring have a passive investment strategy. As they said, they try very hard to be unemotional and to avoid the behavioral gap. They have a long term asset allocation strategy/goal that they try to stick to. In order to add value to clients, they also do financial planning, taxes, and estates. Another large role that they play, which all investment managers must do, is to be emotional advisers for their clients. I remember hearing a quote (I am not sure by who) who said that people are naturally bad investors because we have emotions. People naturally want to buy when the market is high and sell when it is low. This herd mentality can be very dangerous to their bank account. In reality they should be doing the opposite. Buy when prices are low, and have faith that the market will eventually turn around to make you a profit. I think that it pays to be a contrarian investor because if you just go with the flow, you will never win because there is no way that you can beat the people that invest full time and have many more resources.

The passive vs. active investment debate is interesting because studies have show that most of the time, people do not beat the market. After calculating in the costs, the return of the average actively managed fund does not outperform the market. Also, many of the highest performing mutual finds do not stay at the top for long; they usually end up in the bottom third the next year. So the question remains why do people constantly try to outperform the market? I think that a large part of it is because everyone thinks that they are that one special person who has magical investing skills and that they will be in the minority who do have better returns than everyone else. Also, active management allows the investor to manage volatility by investing in less risky high quality companies instead of the market as a whole. They might be willing to accept lower returns in order to decrease the risk of the investment. Also, many active managers could believe that the market is not fully efficient and therefore, that they can capitalize on the mispricing if their research is good enough and they act quickly. Either way, it is important to try to avoid investing emotionally. All investment decisions, in my opinion, should be based on research and numbers instead of gut reactions.

Edward Jones/Fixed income

The job of a bond trader is to provide the best execution for clients. They must supply bonds to diversify portfolios and must manage risk for the firm by going long or short on bonds. the Edward Jones bond traders trade corporate bonds, government bonds, mortgage backed securities and other municipal securities. The market for bonds can be very complicated because while a company has only one stock issue, they can have hundreds of different bond issues.

As the speaker said, they have many clients who are retired which significantly changes the investment strategy because the time horizon is much shorter and the level of risk tolerance also decreases usually. Retirees invest in bonds, not for the capital appreciations but because they might need the steady income every month from the coupon payments. Also, I think that a slowing economy can be bullish for

bonds because people tend to have a herd mentality. If the stock market goes down, people have a tendency to flee to safety, which makes them turn to bonds.
This high demand and limited supply drive up the price and drive interest rates down. Of course, just as stock, bonds are also subject to risk. For example, there is risk that the cash flows that are promised will not turn out the way they should because of default risk, and can be subject to payment contingencies. Also the yields fluctuate and are subject to changes in the interest rates.

Speaker Don Seely

Doing the DCF assignment for a financial firm was difficult because all companies have financial statements that are slightly different. That is why this lecture was very helpful. It was helpful to be told what to look for and where to find it when evaluating a company. There are a lot of ways for a company to, not necessarily change earnings, but to make the results look different than they actually are. So, as Don Seely said, it is very important to go to the actual source of the information and to look at things such as inorganic v. organic growth, the impact of foreign exchange, and sustainable tax rates. Knowing what to look for can help you see if a company is trying to smooth their earnings or if they are reporting increases in revenue that, in reality, are just a result of selling off a subsidiary and not actually because their core business is doing well and increasing its sales volume.

He was right that our generation is used to getting information instantly so we have developed a "grab and go culture". One of the reasons for it is, again, that digging deep into the 10K and 10Qs is very time consuming, because sometimes it seems like the most relevant information is hidden in the most unassuming places. But sometimes, we turn to the yahoo finances, and wsj.com because the actual 10K is impossible to decipher. For example, JPM does not classify accounts receivable and accounts payable as separate line items on the balance sheet. Instead, they created a category that is called, "Accounts payable, accrued expense and other liabilities" which makes it difficult to separate out these items to calculate net working capital. Also, valuing a financial firm is difficult because they don't have a cost of goods sold, and you have to figure out where to put interest income and payments since loans and checkable deposits are a significant portion of their business. But Don Seely's lecture was very helpful to get a general look of what to search for in financial statements and I guess the best way to get to the point where your valuations are precise and accurate is just to spend lots and lots of time looking at different firms to get a feel for what they do and how and what everything means. Practice makes perfect.

Speaker: Peter Brimm
Stockpicking as a Career

The are many different types of investment and money management firms. The trick to being successful is to find one that fits your investment style and skills. For example, you can be a stock picker at a private equity firm that has long time horizons and very diversified asset classes. You can also work for a Pension plan or a endowment if you do not mind the bureaucracy. The other side of the spectrum is hedge funds that really don't have restrictions at all.

According to Peter Brimm, the most important part of a stock pickers job is research. He spends weeks researching each company that he is considering investing in. He uses the ICSSEM acronym, which stands for Industry, Company, Sell Side, External, and Management.

You have to have a deep understanding of the different parts of the industry that the company operates in. This entails knowing the fundamental drivers of the value chain, the industry's macro perspective, growth of sales, and what kinds of margins do firms have.

You also have to know everything there is to know about the actual company that you are thinking of investing in. You should read the last 2 10Ks and last 6 10Q fillings along with all conference call transcripts and press releases. In addition it is important to analyze changes in balance sheet and income statement accounts as well as sales and profit growth going back 3-5 years. Once you have a better understanding of the inner workings of the company, you can create a discounted cash flow model. You should have a reason for each assumption that you make in the model. The discounted cash flow model should not go out more than 4 years because the future is too uncertain to put that much weight on it in your model.

When researching a stock, it is also important to talk to sell side analysts. This most likely will not yield much new information, but it will clue you into potential catalysts for the stock. Another valuable source of information can be old customers or suppliers of the firm. These people are restricted from telling you too much however, because of regulation FD. The same goes for the management of the company.

One of the most important parts of researching a stock is to acknowledge that you don't know everything. You have to question every input that you put into your dcf model and be willing to change your mind.

"The Big Short"

"The Big Short" By Michael Lewis is a very interesting book that explains the Financial Crisis of 2008 in a understandable and concise way. The bond was invented in the 1980's and every since, investment banks like Goldman Sachs, Merrill Lynch, and JP Morgan have been innovating and creating financial instruments that have bond-like qualities. Mortgage backed securities are one type of these financial derivatives.

In the early 2000s, lax lending standards and misplaced incentives led to the fact that anyone could get a home loan without having to prove that they had the resources to pay it back. Banks made money from the underwriting fees associated with the loans; they then sold off most of the loans to investment banks. Therefore they had little incentive to make sure that they were making safe loans because they carried none of the default risk. The investment banks then created mortgage bond by pooling thousands of home mortgages and packaging the income streams into something that could be bought and sold like bonds. Wall street structured these mortgages into stacked layers called tranches- the lowest tranches represented the riskiest loans and had a higher payoff while the highest tranches were rated triple A and thought to have no risk of default

However, there is an inherent conflict between rating agencies like Standard and Poor's or Fitch because Wall Street pays these firms to rate their financial products. In an effort to squeeze even more profit from the mortgage market, Wall Street firms created the Collateralized Debt Obligation (CDO). A CDO is a package of the lowest tranches of hundreds of different mortgage bonds. They argues that because the CDO had pieces of mortgages from all over the country they were virtually risk free because there was little to no chance of all of the homeowners defaulting on their loans at once.

A few investors, such as Mike Burry, saw that this real estate bubble was not sustainable and convinced banks to sell him insurance against CDO. This was the beginning of the Credit Default Swap. These CDSs were issued by AIG. Wall Street firms saw a way to make even more money and started selling credit default swaps as well. Therefore, they were exposed from two sides- the banks had CDOs to sell and were also liable for credit default swaps.

As housing prices started dropping and people started defaulting on loans (many loans had a low teaser rate for a few years and then a higher fixed rate kicked in that people could not pay), the investment banks started to suffer losses. Since the system was so interconnected, panic was triggered in the markets. Lehman Brothers was allowed to fail and commercial lending dried up. The government helped bail out AIG and started looking at possible regulation of investment firms and the market to prevent another financial crisis in the future.

Bob's Lecture on Performance Attribution

An important part of a portfolio manager's job is performance attribution. In other words, a manger must be able to quantify how much value he or she added during a given time period. There are two main ways to do this: sector selection and factor attribution. Sector selection is empirically simpler because it breaks returns into two categories: sector weights and security selection. It is important to note that security selection is portfolio weighted because the security returns are multiplied by the weight that the security has in the portfolio. In a way, this penalizes stock pickers for poor portfolio weights because even if a security has an amazing return, it will not contribute much to the overall return of the portfolio if the sector that it is in is underweighted.

Factor attribution approaches performance attribution differently. It decomposes return into "market factors". This gives you more flexibility because can look at how things such as beta, size, and other factors. This requires that you have the relevant data for all of the securities, which can be difficult to obtain. Also, market factor returns are not directly observable. Finally, as with other types of financial modeling, the answer is only as good as the model. If you build a model that does not correctly capture these factors, the performance attribution analysis will be skewed.

Sector selection is much more intuitive than factor attribution. The only data that you need to input are the weights and returns for the securities, which is easy to obtain. Because of these factors, sector selection is the method that is most commonly used.

In summary, performance attribution determines which investment decisions worked and which ones did not. It allows the manager to learn from his or her mistakes in order to avoid using the same effective strategy in the future.

Greek Debt Restructuring

The Greek debt restructuring was the largest restructuring in history. The intention was that it is better to take a loss now than to chance and even bigger losses sometime in the future. The restructuring buys time for Greece to start fixing its economy while clearing the way for a new flow of bailout funds. 85.8% of private-sector investors committed to swapping their bonds for new ones with less than half of the original value. If more than half of the bondholders had not agreed to the deal, the collective action clauses would have triggered a bond default.

The Greek debt crisis started in 2009 when the government revealed that the budget deficit would be higher than previously estimated and would hit 12% of GDP. This triggered a downgrade in the countries credit rating. A few months later the Greek government announced an austerity plan that would comprise of higher taxes, a cap on civil servant's pay, and a freeze on pensions. The Greek citizens were not in favor of these strict measures and protested the government's actions heavily. European leaders agreed to give Greece a bailout package because letting it default would severely cripple the economies of other countries. At the beginning of 2012, the Eurozone leaders agreed on more measures designed to help the European economies.

Bob's Fixed Security Valuation and Fixed Income Portfolio Strategy

Fixed Income is an important part of a portfolio. It mitigates risk and provides diversification. A fixed income instrument provides regular payments in the form of coupons. Some common examples of fixed income instruments are treasury bonds, treasury bills, corporate bonds, mortgage backed securities, commercial paper, and private placements. Fixed income securities are less risky than equities, and at times, can have higher returns than stocks. Of course, bonds are not completely risk free. They are subject to default risk , payment contingencies (if they are callable), yields are subject to changes in interest rates and spreads, and changes in volatility.

Duration is the negative of the change in price for a unit change in yield, as a fraction of price. It is the weighted average of the times until the fixed cash flows are received. Duration measures the bond's price sensitivity to yield. In periods, of rising interest rates, it is better to shorten the duration of the portfolio. This is the strategy that we currently employ.

Duration of a bond changes as coupon payments are paid to the bondholder. This is because after the coupon, that amount is no longer on the timeline. Other than time and payment of coupons, there are other factors that affect a bonds duration. The coupon rate and its yield. Bonds with high coupon rates and, in turn, high yields will tend to have lower durations than bonds that pay low coupon rates or offer low yields. This makes sense, because when a bond pays a higher coupon rate or has a high yield, the holder of the security receives repayment for the security at a faster rate.

Speaker: Don Seely
Accounting Topics for Investors

Companies are often under strong pressure to "adjust" their earnings. This is why accounting fraud play such an important role in business. Especially as markets become calmer and asset classes become less correlated, investors have more opportunity to profit from doing fundamental research.

An investor should not just accept the top line, GAAP reported, results as always the best representation of a company's earnings. On the other hand adjustments to GAAP reported earnings leave a lot of room for earnings manipulation. Amazon, for example, had a 60 million dollar difference between GAAP and non-GAAP earnings. Companies often take out expenses that they classify as one time or non-recurring. This could be thing such as restructuring expense or amortization of intangibles. However, under SOX, external auditors have to sign off on press releases and file them with the SEC. In addition, investors are devaluing companies that they feel abuse adjusted information.

Another issue that investors must be aware of is that accounting abuses are quite common in the business world. Pressure/incentives, opportunity, and attitude/rationalization are often called the fraud triangle because when combined, they can lead to accounting abuses. Even famous companies have, whether intentionally or not, had trouble with their accounting standards. For example, Waste Management understated liabilities, Parmalat had issues with phantom assets, and Sino Forrest lost track of some trees.

In order to prevent such accounting abuses, top management must create a culture of integrity. They must set an exemplary tone at the top and have good oversight.

Mathew Harrison's Lecture on Ethics

After every big economic event or downturn, a plethora of regulation is created to try to prevent such an event from happening again. For example, after the Great Depression, the Securities Act of 1933 mandated that companies must disclose all relevant information when issuing new securities. The Investment Advisers Act of 1940 created a fiduciary standard that registered investment advisers and put them at higher standard. They had to put their investment objectives for the clients in writing and were required to put the interests of their clients first.

The Sarbanes Oxley Act was a response to accounting abuses in the early 2000's such as Enron and WorldCom. It enhanced the accounting standards that publically traded companies had to comply with. For example, the top executives have to sign off on financial statements and state that they are correct to the best of their knowledge. Regulation FD mandates that Whenever a company disclose material (would more the stock price) non public info to individuals who may trade on the info, they have to make sure that they announce it publically through news channels. Essentially, if something is accidentally disclosed to select people, they also have to make that information public as soon as possible.

The financial industry is also self-regulated by the CFA institute. The CFA Principles for General Conduct include things such as that managers must act in a professional and ethical manner, must act for the benefit of their clients, must act with independence and objectivity, and must communicate information to their clients in a timely and accurate manner.

Ten Lessons from Steve Leuthold

Steve Leuthold is an extremely successful and influential investor. He has established a reputation as an industry expert by making predictions about the directions of the markets based in intensive analysis of historical market data. He has compiled a list of ten lessons that he has learned in his long career. For example, he always considers a market crisis as a potential market opportunity. Of course, this approach requires significant cash reserves because although the market will eventually turn around, that might not happen before you are not liquid anymore. In addition, there are times when it is more profitable to invest in bonds as opposed to equities.

A way to avoid behavioral biases and to become a more rational investor, Steve Leuthold suggests that you should establish a set of personal investment objectives or guidelines, making sure to consider your investment weaknesses and to counteract them if possible. Each time you want to change to makeup of the portfolio, you should check that the action is in line with these objectives. Of course, objectives and goals can change over time, so you should revise them about once a year.

Another important lesson from Steve Leuthold is that "even Microsoft is not forever". This means that buying a portfolio of the hottest and most popular companies in American and then just leaving the portfolio alone for years will not give you superior returns. You cannot assume that just because a company is super profitable right now, it will continue to be innovative and successful in the future. There are many examples of this: Kodak was too slow to respond to the digital camera and now it is almost irrelevant. Avon was huge in the 1990's however, that is not the case anymore.

Bob's Lecture on Value at Risk

Value at risk is an important concept in financial risk management. It is especially relevant to financial institutions and dealer firms because they are very highly levered. VaR is defined as the amount that you can loose, given a time horizon and probability. The most common confidence intervals that are used are 99% and 95% and the amount can be expressed as either a percentage of a dollar amount.

The Value at Risk does not tell you anything about the absolute worst-case scenario that can happen but it forces mangers to think critically about the risk that they are taking. There are three different ways to calculate VaR: the variance-covariance approach, historical simulation, and the Monte Carlo Method. The covariance-variance method computes the variance of the returns of a particular stock and uses standard deviation to estimate VaR. A benefit of this approach is that you do not have to assume that returns are normally distributed. The historical simulation method calculates the historical returns of a stock over a specified time horizon and ranks them from smallest to largest. If there are 100 observations, for example and you are calculating the 95% VaR, you have to look at the 5^{th} worst observation to get the 95% VaR. The Monte Carlo Method, on the other hand simulates various hypothetical scenarios. Although this does not require historical returns or a normal distribution, it is computationally intensive.

Value at Risk has some negative features. It ignores the magnitude of bad events because it does not take into account the absolute worst returns that can happen. In addition, it does not satisfy the sub-additive property, which means that the risk of a portfolio should be less than the sum of the risk of its components. Var does not have this property. Anther criticism is that it can create a false sense of security because it uses the past to predict the future. Extreme events such as the 2008 financial crisis are so rare that there are very few data points that the VaR analysis can use. However, Value at Risk is nevertheless a useful tool in risk management.

Mathew's Lecture on Behavioral Finance

Investors do not always behave rationally. Behavioral finance is a field that attempts to explain stock market anomalies and deviations from the Efficient Market Hypothesis by looking at how psychological factors affect a persons investment decisions and market outcomes. The field of behavioral finance considers how people feel about certain investment situations, because, even if they are not fully aware of it, it can influence their decisions.

Some common emotional biases are mental accounting, overconfidence, endowment effect, los aversion, and fear of regret. People naturally frame and define assets as if they belong to different classes, based on the risk that you are willing to take with each "pool" of money. An investment manager can use mental accounting as a tool to present an investment plan to a client but it is important that he or she does not do this because it can distort the asset allocation of a portfolio.

People are naturally overconfident in their own abilities and believe that they are always right. This introduces a bias because they feel as if they have superior knowledge and information, which can lead them to take excessive risk. One source of this bias is that people naturally remembers the times when they successes and forget the times that they failed. But the stock market is a zero sum game, so at all times, there have to be just as many investors who are wrong as there are ones that are right.

The endowment effect is another interesting bias. In the process of investing money in a stock, a person must create a convincing investment thesis. Once that investor owns that stock, he or she often delays making investment changes because that would entail that he or she was originally wrong in the assumptions that they made. In addition, people often hold on to losing stocks too long because of this same reason. This is another confirmation bias called fear of regret. Finally, people are willing to take bigger risks if the option is presented in terms of a loss as opposed to in terms of a gain. Psychologists have dubbed this bias as Loss aversion. In investment terms, this causes people to sell a stock after it has had a certain percentage gain but they hold on to a losing stock because you believe that it must come back.

An important step toward avoiding these biases and becoming a more rational investor is being aware of all of these emotional biases. An investor should periodically evaluate all oh his or her holdings to check if they would make the same investment today as they had before. An investor should diversify and play devils advocate and actively seek out research that disagrees with their investment thesis. There is no point to reading something that just restates all of your current opinions. Finally every investor should have an exit strategy to decrease the impact of fear of regret and endowment effect.

Dr. Lamararoux's Lecture on Market Micro Structure

Trading and market have changed significantly over the last few decades. Markets were much more rigid and trading options were limited. Trading on the NYSE happened through a specialist that stood ready to buy or sell shares when liquidity was low. The theory behind this was that the specialist ahs a responsibility to maintain a stable market by buying when the market was going down in order to mitigate the decrease. However, because all the trading happened at one location buyers and sellers could also find each other and work out a deal. The Nasdaq was a little different. It was (and is) a dealer market. All trades are brokered by a dealer who makes money off of the bid-ask spread.

The market structure of the Nasdaq used to be structured in a way that hurt small retail investors. The spread was fixed at 12.5 cent, but large traders continued to trade on the exchange. This shows that they were treated differently and could trade within the spread so it did not affect them as much. If it had, there would have been pressure for big companies to switch to being listed on the NYSE.

Regulation and innovation have changed the markets. Now, options are listed on all of the options trading sites; the gentleman's agreement that if an options was, for example, listed on the Chicago Board of Trade, it would not be listed anywhere else has been regulated away. In addition, as technology continues to improve, high frequency trading continues to increase significantly. It currently comprised of about 70% of the volume. Algorithmic traders try to make money by finding liquidity in the market microstructure. They do not buy stock because they believe that it is fundamentally undervalued; they often hold it for less than a second.

The market has also become much more fragmented. One new innovation is 'dark pools". These pools are for traders who want to put in large buy or sell orders without tipping their hand.

Technical Analysis

Technical analysis is an investment technique that involves the examination of past market data (especially focusing on price and volume data) to forecast and estimate future price trends in order to make investment decision. Technical analysis does not attempt to measure a securities' intrinsic value. Technical analysis is based on three underlying principles: all relevant information is already reflected in the securities share price, that trends appear in price movements and, once started, these trends tend to persist, and finally, that activity in the market repeats.

Chartists have a very visual approach to technical analysis; they look at patterns in stock graphs. They look at thing such as Gann triangles, trend lines, triangles, and speed resistance lines. Technicians use a more quantitative approach in that they often use quite involved and sophisticated statistical methods to arrive at investment decisions.

Technical Analysis assumes that the only thing that matters in the market is the interaction of supply and demand. Prices tend to move in trends that tend to persist. However, there are some criticisms of technical analysis. The first is that this field of investment ignored empirical evidence from the efficient market hypothesis. There is no one group of trading rules that works at all time. It is also a very subjective field and if a huge number of chartists trade on an apparent trend, there could be a price move just as a result of that. In essence, some price movements are self-fulfilling because of the market activity of technical analysts