A Personal Approach to Investing

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Applied Portfolio Theory
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Abstract

The purpose of the analysis was to apply financial investment strategies to an investment fund owned by the University of Arizona’s Department of Finance. Strict guidelines were set in place by the Investment Policy Statement and followed accordingly. The completed activities helped to reinforce the business curriculum taught in the regular courses in a team setting; this allowed for improved leadership, presentation, and decision-making skills. Research groups were formed and given specific industry sectors to follow. Emphasis was placed on historical asset returns as well as the current economic market structure when applying the investment process and asset allocation concepts. The investment process included four major steps: determining investment objectives, developing asset allocation strategies, portfolio construction and implementation, and ongoing portfolio management. Using the steps highlighted in the Portfolio Management Process resulted in a “top down” method for asset and sector selections and a “bottom up” method for individual security selections. Several relative and absolute valuation methods were learned and applied to both the fixed income and equity markets. Integrity and ethics were also a major focus throughout the year, especially given the weakened state of the financial industry due to these principles being previously compromised.
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Introduction

In a world of unlimited information and tools, investors should look inward to find personal knowledge and strategies when designing an investment portfolio. The
Vast size of the fixed income and securities market can be overwhelming, even for experienced investors. To counterbalance this, each investor should look to her or his own background and current surroundings to find valuable plays in the market. There is no guaranteed way of finding golden arbitrage opportunities in today's market. However, finding a personal niche and never forgetting to ask “why” can allow for a solid investment policy.

William Valentine
During his in-class presentation held on November 5th 2010, William Valentine opened with a bold tip for general investing. He told the class to question the conventional, and to stay outside the crowd. He then advocated for an investment approach that was just that. Contrary to what the class had been discussing throughout the semester, Valentine believed that fundamental analysis and Asset Allocation were dead principles. Although Asset Allocation can still play a key role in increasing a portfolio’s value and should not be completely cast aside, Valentine provided many valid arguments against it.

Battle of the Basics: The Importance of Fundamental Analysis
It is common for an investor to weigh one type of analysis much higher than another, and in today's marketplace it is likely to find the majority of the population relying heavily on fundamental analysis. This is largely due to the plethora of information available by simply looking at a company's financial statements. Similarly, a quick cash flow analysis can prove to highlight market mispricing in a relatively accurate and low risk environment. If you understand the fundamentals of how a healthy company should run its finances, you can often find individual company factors that
have yet to be factored into its stock price creating arbitrage opportunities, that is, if you believe in fundamental analysis.

**ADR Example: Professor Singh's Side**
Immediately before Valentine's lecture, professor Arvind Singh had presented on using fundamental analysis to invest in American Depository Receipts. Professor Singh started by defining ADR's, and argued that their unique composition makes them a powerful way to gain international exposure. He argued that adding them to a portfolio could be a good way to diversify because of their worldwide credibility, ease of currency translation, and potential to increase in value from multiple factors. The class then discussed how an investor's total return is based on four factors. These included the ratio of local domestic currency shares to ADR's, which is fixed and has no direct effect on return. The other factors were unfixed and could change the value of the ADR. These included the performance of the local domestic currency shares in the market, any changes in the exchange rates between the countries involved, and the dividend yield on the local domestic currency shares. Assuming one owned a level 2 or 3 Sponsored ADR, he or she could potentially earn total returns from the before mentioned factors, and also feel safe knowing that the international security in question had reduced risk after being converted to an ADR. This reduced risk resulted from the guarantee that any ADR would be backed by a company that complied with the Security and Exchange Commission’s reporting requirements and that it was most likely being traded on the NASDAQ or the NYSE.
Professor Singh believed that a key philosophical approach to buying ADR’s was to use fundamental analysis. The class has often discussed how fundamental analysis is a key part of stock market valuation. Using relative market concepts, one can spot company growth years before the fact, or on the contrary, the collapse of a company before the cash flows have shown any noticeable decline. Finding the intrinsic value of a company’s stock is a conservative approach for investing because it allows you to invest for longer time horizons based on common economic factors that create shifts in the market sectors as well as the companies within them.

A Newcomer’s Dissenting Opinion
Following professor Singh, guest lecturer William Valentine declared his opposite stance on ADR’s upon arrival of the podium. He claimed he had switched from using a traditional portfolio allocation of about 50% in ADR’s and that his current strategy is to buy individual bonds and Exchange Traded Fund’s on a discretionary basis. The class learned how ETF’s are like open ended mutual funds, however they are on an American listed exchange and trade like individual stocks. This allows the holder of the ETF to have great exposure to overseas markets without also assuming equally high exposure to foreign market risk. Valentine believed that you could find arbitrage opportunities in Exchange Traded Funds by following the overall position of large countries and entire markets through spiders and indexes. He also claimed that similar opportunities were no longer available through fundamental analysis and individual stock picks because any company information would already be factored into its stock price. The argument was in favor of completely efficient
markets, and against highly regarded theories of portfolio management and the capital expenditure pricing model.

Although many of the principles behind Valentine’s basic approach were similar to that of the class, such as the need for global diversification and many other portfolio design matters, his stance on Asset Allocation was fairly opposite that of what the class has been studying. As a class, our investment strategy has been to find undervalued stocks only after defining a general asset allocation between equities and fixed income securities, followed by defining new weights of each industry set against the S&P’s benchmark weights. All decisions for the class’s portfolio have mainly been based on fundamental analysis of relative valuation techniques. Valentine argued that this was a waste of time in the long run. Valentine highlighted the value of the largest five railroads over the past twenty years. Although these particular securities are known for being defensive stocks as opposed to moneymakers, they still managed to outperform the five biggest technology names during this same time period. Expectations in 2000 were that these tech companies would fain at rates of near twenty percent a year when backed by fundamental analysis, and clearly this had not been the actual result. With this example and others, Valentine argued that building a portfolio from individual stock picks was highly volatile and time consuming in comparison to trading with market indices, and subsequently not worth the risk return trade off.
Agreeing to Disagree
The diverse styles of Professor Singh and Mr. Valentine resulted in an almost comical unraveling of events during class. While both investors kept a professional manner and were kept in high regards by the class, the interplay created during the discussion created a slight banter between the two parties. The tension was perhaps created from the fact that dissenting opinions are increasingly rare in a world of black and white business formulas, especially when there is often even less room for any gray areas in an idealized classroom setting. The allowance for diverse investment techniques in a multi-million dollar industry such as financial investment was made crystal clear by the diverging opinions of the class speakers. Both men were clearly intelligent, and both had experienced exponential gains during their time investing; however, they disagreed on even the very fundamentals of financial investing.

While I do see validity in Valentine’s point, there are places where it fails to hold true to his claims. If his argument were true, that would mean that there would be no benefit from holding one-hundred-percent of ones portfolio in the S&P500 as apposed to owning individual shares of stocks listed on that particular index. While it may be easier to invest in exchange traded funds because it takes a majority of the analytical time and work out of investing, it is not necessarily better than picking stocks as we have done in the class using asset allocation and fundamental analysis. The time horizon, experience level, market understanding, risk tolerance, and numerous other factors effect whether an investor should be willing and able to
develop an asset allocation strategy of their own and whether they will benefit from it.

Although it is often efficient to invest in single premade security that already holds diverse exposure to different asset categories, taking the time to develop a strategic asset allocation can also produce returns that far exceed that of any benchmark. As a conclusion, the strategy of Asset Allocation and the use of fundamental analysis can play a key beneficial role in portfolio selection, however they do not have to be considered at all to realize market returns. It is more important for each investor to find his or her own niche in investing and to focus on that strength than it is for everyone to conform to a single investment approach.

**Peter Brim on Raisins**
Another guest speaker, Peter Brim, had a highly different approach to both Professor Singh and Valentine. Brim argued that making profits in today's market takes dedication to extensive research practices, and is not for the weak or temperamental. Along with the general textbook worthy information, it is also important to understand that to call a publicly traded financial asset “cheap” is basically making a bet against millions of other people. Although this may be a frightening observation, it is important to recognize. Confidence is key in the industry, so when presenting to the class or to future clients it is key to know exactly what it is that you are claiming to know that the rest of the market does not.
“Assume you are being arrogant, and respect your competitors,” was Mr. Brimm’s advice. He wanted the class to realize that there is always something out there about a company that you don’t know and someone else does. His point: find it, if you’ve got the heart and the patience. Brimm bluntly acknowledged that there are few “raisins” in the stock market amongst millions of “rat turds,” but that the search was worthwhile with continued dedication to rigorous research.

**Understanding The Waters & Fishing The Ocean**

The first step in investing is understanding the history and current landscape of the world’s economic markets. Gaining a general background helps to then decide what kind of plays to make at the time of investment. The more sources one can use the better. Although external sources are rarely resourceful for stock screening and researching a stock, it is crucial to read up on other people’s opinion for often random but useful information. Peter Brimm recommended a continued study of investing styles, market histories, industry publications, world history, prediction pieces, and economic publishing’s in order to stay sharp on the market. Other sources, like networking, broker tips, and buy sell ratings found online, can be a death trap, Mr. Brimm advised. This was also repeatedly emphasized throughout the portfolio investment class this year. Brimm did advise that, along with “pure dumb luck”, looking for holdings in the 13-F filings of respected investors was the one external source that should be heavily relied on as a novel investor.

Making decisions about whether to be a value or a growth investor must be done before beginning any kind of stock screening. This decision will be based mainly on
personal style, risk tolerance, and market cycle position. As with most things in portfolio performance, the method decided on may evolve with time. Peter Brimm found success on the value side of investing, believing that estimating current value was easier than predicting future results of growth.

**Finding Your Edge**

Once an understanding of the market has been achieved it is time to begin sifting through potential holdings. This can be one of the most difficult and time consuming parts of the investment process. As a beginning analyst there are not usually abundant resources of knowledge available to your skill level. The key to moving beyond this stage is employing your own strengths in creative ways. Do you live near the company? Do you know a lot about the precious metals the company uses as materials? The goal is to be able to quickly understand the resources you must read for information as opposed to having to lookup or forgetting every other word.

During the second semester I followed LIFE Technologies. This was much more difficult than following Wells Fargo first semester. I had spent a great deal of time researching both companies in previous classes: Wells Fargo for the Business Communications Case Competition and LIFE Technologies for Finance 412. Although Wells Fargo had an extremely difficult discounted cash flow model, I was able to determine the appropriate debt and equity structures by comparing it to peers and analyzing other financial statements and ratios. This was a more intuitive process than what I experienced with LIFE Technologies because banks and the general process of lending money are studied throughout college as a finance
student. Rates, the position of the banking industry because of the economic downturn, and many other things had been the main focus of many of the majority of my classes.

On the other hand, even LIFE Technology’s product line is difficult to sort through. On their website, LIFE asserts itself as a provider of tools and services for “personalized medicine, regenerative science, molecular diagnostics, agricultural and environmental research, and 21st century forensics.” It’s unlikely that anyone graduating this year from Eller would have the background needed to decipher through medical terms or closely follow the pharmaceutical environment and its developments. Both surrounding laws and the results of current research and development across the board would be crucial to understand. In this case, Industry played a key role in the ability to find and decipher research about a particular asset. Each investor should start screening for ideas by focusing on his or her strengths and work in a comfort zone.

**Researching a Stock**
Peter Brimm has developed a process that works for him, and in order to help with the difficult and lengthy tasks he must perform he developed a few acronyms to help him remember a few key points. Perhaps after accepting “TANSTAAFL,” or, “there ain’t no such thing as a free lunch,” one can better appreciate all the work that goes into researching a stock. Brimm was quick to admit that although ICSSEM wasn’t the most creative acronym, he insisted that anyone who worked for him swear by it
when conducting research. ICSSEM stands for industry, company (chronologically oldest to newest), sell side, and management.

In Industry, your research provides you with the proper frame of reference. When moving to Company, the first steps are reading the Proxy statements and finding out who owns its stock. Even after helping to manage the UA Foundation’s Portfolio, it is difficult to imagine myself attempting to get a hold of upper level management of companies being publicly traded. Then, read through all financial statements and develop a sense of how the company reacts and moves during historical micro and macro economic events. After determining sales and profit growth, the makeup of the income and balance statements, the existence and capacity of capital investments, and current margins, there should be a lengthy list of questions that result. These questions can help you to determine early on what information you may still need to gather and what information will need to be gathered from other people. Before getting answers to these lists from Sell Side, Externals, and Management, there should be a 2-3 year projection of financial statements completed and analyzed to determine a fair price. Analysts should be able to explain the reason for every growth rate used for the price, and should then go back through research gathered to make correlations to the target price and try to explain why the listed market price is wrong. The many different methods Brimm uses in researching a company or industry employ both fundamental and technical analysis.
The first two steps of ICSSEM were taught in the UA Portfolio class, where as the final three steps seemed to have a lot of different and new information than we had been using. These steps, sell side, external, and management, are used to answer the list of questions gathered during earlier research. This involves contacting brokers and Wall Street analysts for a sales side view, suppliers and customers for an external view, and the company's management for an inside view. These steps were not as readily available to the class as they were to Peter Brimm, given his experience and portfolio size. After all, I can hardly imagine making a phone call to upper management at LIFE Technologies and expecting a genuine response. To counter this inadequacy, Brimm noted the importance of making contacts in the financial industry early on in one's career. Sharing your own tips and making intelligent comments while networking can help ensure you have someone to turn to later when looking for potential handouts.

The Bigger Picture
Keep asking “Why,” repeated Brimm. The lecture was humbling as it taught the class that no person can no everything about anything in today's vast and intricate markets. This belief is contrary to the efficient market hypothesis, which states all anyone can be efficient enough to use public information to achieve returns greater than the average market return. The class also took this approach to investing when using asset allocation and stock selection in combination with extensive research, as apposed to purchasing a general hedge fund or index. The research Peter Brimm does for each of his potential and current holdings digs much deeper for information than our class was able to. Brimm pointed out that, although it was in part because
of his experience, his technique was also a result of his personal style and that it may not work for every investor. Many of the suggestions made would be difficult to follow for anyone holding more than three to four stocks per analyst in their portfolio, however, it was a good insight into the plethora of information available to all market players.

**Comparing Speakers**
The difference came down to a value of time and a preference for type of workload.

Valentine believed that the efforts were not worth the rewards in the process of stock selection because it was nearly impossible to find information on individual equities that hasn't already hit the market. He finds confidence in a longer-term approach where the returns are in line with the market. The benefits to this approach, along with lower trading costs included lower trading frequencies which are often unprofitable but highly tempting and higher risk aversion given that less personal time and care need be invested.

Brim thought that every second you could find to devote to building your portfolio and following your current portfolio would add value. He limits his investments to ten to fifteen securities so that he has the time available to put each under a close watch. It is obvious that his mind is always racing around the market, finding every minute detail he possible can in order to piece together a profit puzzle. This can be seen through his refined research process and his portfolio size.
Other Necessary Techniques

Global Diversification
One of Valentine’s valuable suggestions was to look at the overall position of a country when investing in foreign markets. He also suggested focusing on large indexes while resisting the temptation to overvalue favored emerging markets, because the growth in these markets is often factored into the price already. Valentine warned that developing countries are all a ticking time bomb given that it is nearly impossible to keep a steady and continuous cycle in emerging markets. The high volatility and long term drops cause bubbles, leaving even China at risk of imploding within our lifetime despite its relatively low debt.

Both Professor Singh and Mr. Valentine agreed that there was a valid case for the inclusion of global equities in one portfolio. Valentine even noted that the U.S. market cap is merely thirty percent of the world. Meaning that, in terms of diversification, if one were to only hold American securities they would be doing a poor job of broadening their horizons to create international exposure in order to receive higher overall gains.
There was somewhat of a disclaimer given after the class discussed how important investing overseas is for spreading risk to reduce losses. While diversifying with global equities remains valuable, unfortunately it’s benefits are decreasing with time as the world’s correlation is coming closer and closer to one. As the graph shows below, the correlation of the S&P500 with the individual markets around the world are all converging to one with the expansion of time. As the modern portfolio theory has shown, it is only useful to diversify when correlations between securities are closer to zero, otherwise there is no actual decrease in risk for any additional returns on the overall portfolio.
However, there is an important difference to recognize between correlations actually reaching one, and a correlations *converging* to one. Statistically speaking, as time passes the correlation between global stock indexes and the US can only approach one and will therefore never actually equal one (or negative one, which is equally ineffective for diversification). Even within this infinite convergence towards one there will always be room for slight fluctuations of correlation over time due to various market events. In other words, the limit of the correlation of the US and other markets is one, so it will hover near one as we move forward with time. This is represented mathematically by the following equation, where $a$ is time, $A$ represents the United States and $B$ can represent one of many other global stock indices.

$$
\lim_{a \to \infty} (corr(AB)) = \pm 1
$$
One might ask why such miniscule movements in correlation, that of fractions of a percentage point, would even matter in the grand scheme of investing. However, as long as the S&P500 is moving slightly differently than the markets around the world (meaning that the correlation is not perfectly one), there will always reason to create safety through international diversification and achieve a better risk-return trade off.

**Finding Strength as a Skeptic in an Emotionally Charged Market**

Valentine also spoke about the study of Behavioral Finance and its importance to the way the markets’ participants’ function. The values in Behavioral Finance are in line with what the class has studied, although their importance was never emphasized as dramatically before Valentine’s lecture.

Valentine made an interesting comparison between the stock market and gambling. He argued that investing in the market was similar to betting on dog or horse races and that it was dissimilar to betting at a craps table. In a horse race, the set of outcome possibilities are endless, where as any wager at a craps table is made on a fixed number of outcomes. While everyone may know who the best horse is in the race given their records, betting on the favorite will give you less return if it wins than would betting on a winning underdog. Like dog and horse racing, one can depend on participants to wager on the favorite time and time again, as studied by behavioral finance. The name recognition and former glory is enough for many to bet in the leader’s favor, and this human tendency is similar when it comes to stock
picks. As a result, the more educated investor can find the advantages that lie in going against the crowd pick to find the strongest outlier.

Valentine argued that if you can understand the gambling aspect behind investing, you could become a great analyst using behavioral finance. When people gamble, they bet without rationality because it is outweighed by emotion. A classic example of this parody is when the stock market crashes and investors sell their portfolio in a panic, only to see those who went against the flow of the crowd buy purchasing additional stocks doing very well over time. Any semi-educated investor would not deny that market peaks and troughs are an expected part of investing, and would also agree on the simple slogan that one should buy at low prices and sell at high prices. Why, then, do people sell off all their stock during a market crash? It is because they are investing with emotion; when someone in the building screamed fire, everyone ran in panic before noticing the scream came from a child at play. A wise analyst develops a skeptical sense and looks for opportunities below the radar, rather than following the flight from a commonly perceived “fire.”