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The Road from Broadway to Wall Street

If you are ready to give up everything else—to study the whole history and background of the market and all the principal companies whose stocks are on the board as carefully as a medical student studies anatomy—if you can do all that, and, in addition, you have the cool nerves of a great gambler, the sixth sense of a clairvoyant, and the courage of a lion, you have a ghost of a chance.
—Bernard Baruch

Whatever method you use to pick stocks, your ultimate success or failure will depend on your ability to ignore the worries of the world long enough to allow your investments to succeed. It isn't the head but the stomach that determines the fate of the stockpicker.
—Peter Lynch

For as long as I can remember, I have had a deep understanding of the engine of the free market. Surely it had something to do with growing up in New York City with my bedroom window overlooking Broadway. I am also sure that my interest in business operations came from having two parents who operated a retail store right below our apartment building. At the dinner table, the discussion often revolved around how the store was doing, as well as how their competitors were fairing. As the youngest of four children, I did not participate much in the conversation, but I listened intently. I saw

stores opening and closing throughout the neighborhood and often thought about what made them successes or failures.

All four of my grandparents lived in New York City as well. We spent a lot of time visiting with my mother's parents, who lived in the same neighborhood as us. Those grandparents were fairly well off, enough so that my grandfather was able to retire at a fairly young age. I can remember often being in his living room as he watched his favorite financial show. He would jot down prices of his stocks throughout the day and would make note of any tidbits of information about those companies that he found interesting.

My father's grandparents, however, were not as well off. The contrast between my two sets of grandparents was very clear. Though I did not love either set of grandparents more or less, the fact that my grandfather who kept track of his stocks was the one who visited us with a trunk full of toys was not lost on me. I identified at an early age that the stock market was a vehicle that could lead to wealth generation. I was determined to understand how it worked.

HAMBURGER HELPER

The discussion of the stock market was commonplace in my childhood home. Though my parents were not very successful in the stock market when I was young, they did eventually have a major investment success that allowed them to live more comfortably in later years. One night while enjoying my family dinner—a hamburger to be exact—I asked whether Heinz was a company that you could invest in. Excited by my early interest in investing, my parents answered yes and encouraged me to dig further. Using my accumulated savings, I became an investor for the first time at age 8—the proud owner of 35 shares of Heinz. I think I enjoyed my hamburgers even more being a Heinz shareholder and followed the stock in the newspaper. A few years later, my shares of Heinz had risen substantially in price, and my opportunist older brother bought my shares from me at a discount to the current market price. I was hooked from that time forward and continued to invest in both stocks and, by high school, in stock options.

In eighth grade, I tested for and was accepted into the Bronx High School of Science. The school was considered one of the best in the country. Despite not being the most conscientious student, I used my natural affinity for math and science to bolster my grades and graduate. The hour-and-half journey each day to Bronx Science, along with working after school, may have had something to do with helping me to develop the work ethic I carry with me today. At Bronx Science, I was exposed to the scientific method as well as other method of critical thinking, which have clearly helped me throughout life.

As my time at the Bronx High School of Science was coming to a close, I knew that my choices for college were limited. First of all, I was going to be paying for college myself and the thought of a private college overwhelmed me. Second, I knew that I could not pass a college-level foreign language course and that eliminated another set of opportunities. As it turns out, the State University of New York (SUNY) system provides an excellent education at a very affordable level for in-state residents. SUNY at Stony Brook offered an accelerated five-year degree that included both a bachelor of arts and a master of science, which I completed. The program focused on using both statistical and quantitative analysis to find solutions to various problems and applications.

THE BELL TOLLS

One concept in particular that I became very in tune with during my time at SUNY was that of the bell curve, or Gaussian distribution. Karl Friedrich Gauss was a German mathematician and astronomer known for his contributions to algebra, differential geometry, probability theory, and number theory. Among other things, he was the creator of the Gaussian distribution, or the bell curve as we will refer to it going forward. By definition, the bell curve (also known as a normal distribution) plots all of its values in a symmetrical fashion where most of the results are situated around the probability's mean, with a small group of outliers at either end of the curve. In layman's terms, this means that the majority of items in any set of data will be at or near average, whereas a select few will be above

average or below average. This idea can be applied to nearly anything: athletes, automobiles, air quality, or, of course, stocks.

The obviousness of the bell curve in its simplicity and its wide applications had a profound effect on me. It was very clear that, in nature, there would be some outliers on both the winning and losing side, and all else would fall basically in the middle. Through the use of the bell curve and a statistical approach adapted to identify superlative, or in other terms highest-quality, companies, I began to develop what we now know as The Magnet® Stock Selection Process (MSSP). Interestingly, years later one of the cofounders of the Urban Policy Science Department at SUNY Stony Brook would become my director of research at the Magnet Investment Group.

After college and graduate school (having earned both degrees simultaneously), I began working for Mayor Edward Koch at New York's Office of Management and Budget. Within two years, I was responsible for forecasting over $500 million in revenues from various city agencies. I was on track to becoming the youngest commissioner in New York City's history. Although I was enjoying my time in city government, I knew my true calling was in the financial markets. The Municipal Building was just a few blocks north of Wall Street, and I felt myself pulled down to The Street. I continued to invest in stocks and was a student of the market, trying to learn as much as I could.

It was not until I was 25 that I entered Wall Street and my financial career began. I started as a municipal bond salesman, but I was using my savings to continue investing in the stock market and to further develop my Magnet theories. I took the opportunity to meet as many portfolio managers, newsletter writers, and authors as I could and invited them all to lunch or dinner. I asked, "What is the number one book that you would recommend?" "What sets you apart from the rest?" What was startling to me then—and even today—is how money managers and mutual funds have pigeonholed themselves into specific boxes: growth, value, or momentum investors. It was after years of listening to these varied approaches to investing that I realized I could develop a quantitative method to incorporate the best aspects of several different top-performing money managers and construct my own process that included the best of various styles. It was over several more years of working with more than 70 college interns from five different universities that The Magnet Stock Selection Process was developed.

Since the beginning of my investment career, I had been interested in developing a model that would try to analyze public companies to give me an advantage investing in the stock market. Several distinctly different models had been created that fell into three broad categories: value, growth, and momentum. In addition, a more passive approach was being pushed on Wall Street, and it was called the efficient market theory. As opposed to the other methodologies, the efficient market theory assumed that all relevant information about a company was already in the public domain and therefore the sum of all buyers and sellers created the correct, or "efficient," price. In analyzing price movement, however, I found it clear that the market was far from efficient. There was simply too much price movement within individual companies for the market to be truly efficient.

This observation of nonefficient price movement is supported by an idea known as chaos theory, whose proponents believe that price is the very last thing to change for a stock, bond, or other security. Though in this context the theory is adapted for analysis of the stock market, the ideas of chaos theory were originally pioneered by a meteorologist at Massachusetts Institute of Technology (MIT) named Edward Lorenz, who attempted to use computers to predict weather patterns. He kept a continuous simulation running on his computer that would output 24 hours' worth of his simulation for every minute it ran, as a line of text on a roll of paper. He intended to draw correlations between seemingly insignificant changes in weather conditions to predict likely occurrences in the future. James Gleick described it well in his book, *Chaos: Making a New Science*:

> Line by line, the winds and temperatures in Lorenz's printouts seemed to behave in a recognizable earthly way. They matched his cherished intuition about the weather, his sense that it repeated itself, displaying familiar patterns over time, pressure rising and falling, the airstream swinging north and south (Gleick, p. 15).

Applying chaos theory to the fundamentals of stock selection made perfect sense to me. I began to gather all the data I could get my hands on about public companies and set out on my quest to develop a model that would identify stocks on the brink of a massive

growth spurt. Through the use of applications borrowed from chaos theory and factor analysis (as opposed to raw data mining), my theories on what makes a good company were transformed into The Magnet Stock Selection Process. At this time, I was asked to be a member of the Quantitative Work Alliance for Applied Finance, Education, and Wisdom in New York City. This is a group composed of some of the top quantitative thinkers from around the country. They hold meetings to debate cutting-edge theories and openly collaborate with one another. Shortly after my initial presentation to the group, more interest gathered in the Magnet system. Two of the largest asset managers in the world offered to do a study to see whether they would hire us to select stocks for them. Both of them offered us contracts. Our approach was closely examined by a few other institutions, and, despite its controversial and unique methodology, we received some lucrative contracts that took us to the next level.

I continued to read every investment book that was recommended to me by the professionals that I sought out and encountered. I was particularly interested in books written by those who had considerable success in the stock market. I began to embrace several aspects of the different schools of investing. Although the various proponents of growth, value, and momentum styles of investing adamantly rejected each other's approach, I saw merit in the different approaches, and it made sense to me to try to combine them somehow. I began to build a model that incorporated the best attributes of the best investors that had come before me. Within a few years, Magnet was offered contracts to select stocks for two of the biggest institutions on Wall Street: John Nuveen & Co. and Van Kampen Funds Inc.

At the time that I was under contract with John Nuveen & Co., I came across a book called *The Predictors*. The book was written by Thomas Bass and was about the use of chaos theory to analyze the stock market. In the book, two men sought patterns within the stock market in an effort to predict the movements of the stock market and traded actively using those predictions. Many at the time assumed the behavior of stocks and the stock market to be completely unpredictable. The most vocal in proclaiming the so-called random walk of stocks were the proponents of the efficient market theory.

Coupled with this assumption, others extended the notion even further. Their approach was simply to broadly diversify among many companies. This approach suggested that you could benefit from the stock market by owning a little bit of everything; with some winners offsetting some losers and therefore creating a decent return. My understanding of the market and individual companies quickly led me to reject this concept and to find a more focused and productive approach. I was not interested in a decent or average return.

The theories regarding investing were not the only areas of the world getting more complex at the time. This was a time of great acceleration in the advancement of various technologies. Personal computers had just been introduced to the world and led to the development of several new industries that did not even exist just a few years earlier. Developments in manufacturing, commerce, and seemingly all walks of life were occurring at breakneck speeds.

Many of the companies involved in these new developments had similar characteristics. They were not only growing their revenues faster than companies that had come before them, but they were also capturing the minds and attentions of the public. What was interesting was that their share prices often got bid up to unsustainable levels only to decline rapidly when competition arose. For this reason, many traditional and experienced investors had no way to analyze this rapidly changing environment.

A few quants, or investors who use quantitative analysis of companies' earnings to seek out those worth investing in, were using chaos theory to trade the market. I did something completely different. Using pattern recognition, I set out to identify the fundamental characteristics that were common among only the best companies. I found that the truly superlative companies often had several certain fundamental characteristics in common. Understanding that there can be only a few "best" companies, I was looking for a model to identify the true superlatives in the market.

COMBINATION HERO

I was convinced that a stock selection model combining the right factors of value and growth could also incorporate the new momentum of financial change occurring throughout the world.

I expanded on this theory and developed a mathematical process that I called The Magnet Stock Selection Process. I took a scientific approach that would help me include the best aspects and factors that worked for other top money managers. This system would be able to identify companies that, through their financial outperformance, would attract and pull in other investors.

It is important to take a moment to distinguish between successful data mining and what we were doing at the Magnet Investment Group. Data miners look for events or circumstances that take place and try to predict the future based on these observations. A common example of this was the observation that the stock market did well in years when the winner of the Super Bowl came from the National Conference, but was weak following years when the winner came from the American Conference. Clearly, anybody with any investment knowledge or experience would not invest based on who won the Super Bowl. What I did instead was to create a model based on my hypothesis of what made a good investment. The characteristics of a company's financials take on very clear patterns when you attempt to separate the winners from the losers. By understanding the subtleties within a balance sheet and income statement, we created a statistical approach to ranking companies within their sectors.

What was so interesting about our system was that it was proven successful in identifying the superlative companies—both in comparison to the entire stock universe and within specific industries. Wall Street is keen on having different analysts following different sectors and becoming experts in very narrow fields. Unfortunately, this specialization has in many cases led analysts to miss the forest while looking at the trees. As we have seen over the years, many analysts' overinvolvement with management has led to many a blind alley.

It is the repeating pattern of accelerating revenues and margins, the emphasis on new products, and the sum of several other important factors that lead to the identification of potential Magnets and ultimately to superior investment results. This holds true regardless of sector or market capitalization. The concept of superiority is not confined to the stock market. It is very clear that when you analyze anything in nature, there can be only a few superior anythings, whether you are looking at architects, painters, musicians—you name it. An unbiased method of finding them is the key to success.

Our work and discoveries here at Magnet have been quite exciting to me. Even more encouraging is the fact that the commonsense approach that we take to investing has been proven statistically significant by others. Through the use of our spreadsheets and ranking system, we have been able to invest in top-ranking Magnet companies that have outperformed the lower-ranked companies time after time.

But beyond finding the right characteristics by which to judge a company's success, the dilemma for me has always been the issue of how to most clearly and successfully organize our information. A professor of mine in graduate school, Dr. Stan Altman, identified this very problem. Back in the 1980s, Dr. Altman wrote an article entitled "The Dilemma of the Data Rich, Information Poor Service Organizations." In his article, he discussed the increasingly difficult task of analyzing data while there was also a steadily increasing amount of information to pore through as a result of the advancements in computer technology. Imagine, this paper was written in the early 1980s!

I began to analyze the outperformance created by investing in the 50 best-scoring Magnet companies within each sector. I found that there was still too much information and too many companies to attempt to truly understand. I then suggested that we narrow our focus to the top 40 companies in each sector in order to get a better handle on the selection system. Interestingly, the performance of the top 40 companies was significantly better than the top 50. This result led to the question, "What happens when we narrow it down to the top 30?" Again we saw stronger returns, whether investing within a single sector or across the entire stock spectrum. Through this thought process, I first recognized the dramatically negative effects of overdiversification. Ironically, at that same time Wall Street was selling the very theories that almost ensured mediocre results at best: diversification, the efficient frontier, and modern portfolio theory.

That our system was able to screen through the entire universe of stocks to select the best-performing and most promising companies was only part of the story. There was still the issue that, if we were constantly rebalancing into the top-ranked Magnet stocks, the model showed a considerable amount of turnover. Some investors have a strong predisposition against turnover in a portfolio. The

other issue was that obviously some of the selected stocks would end up not working out and instead would decline in price. Over the years, I learned to use both stop losses on our declining stocks and trailing stop losses on those stocks increasing in price. Through the use of stop losses, we have been able to reduce risk and have coupled superior stock selection with superior portfolio management.

Currently the investing world is bombarded with the call for diversification. As we shall see, the original diversification studies had several flawed assumptions and cannot lead to anything beyond average results. My entire focus is on creating above-average returns.

I share my Magnet Stock Selection Process later in the book, but for now let us review some of the flawed assumptions that led to today's obsession with diversification. In preparing this book, I spent time with many of this generation's leading investors to get their opinions. In the next chapter we will hear from them as well.