



## **A Very Brief History of Investing Methodology**

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June 2018

Imagine investing in 1878 in the United States. Living in mid-town Manhattan, it was a twenty or thirty-minute ride in the carriage downtown to the J.P. Morgan bank where you met with your private banker. Upon discussing the potential stock purchase in question at length, he took your order. Because you were at the center of U.S. finance, the banker simply started a chain of physical paper notes, culminating in a messenger taking your order across the street to the New York Stock Exchange. There it was routed to the bank's floor broker, who in turn had to walk over to the post where the stock was traded, and the trade would be negotiated. Nowhere in the country could anyone buy a stock as fast as this, a mere hour or two to actually make the purchase. Eventually, in the modern age, a new technology would change this slow process into a lightning speed trade, uprooting the way investors had functioned for over two hundred years. I am of course referring to the telephone.

By the early 1900's, the phone was widespread enough amongst the wealthy, enabling brokerage offices to disperse around the country. Changes like these not only affected how people traded stocks, but it also affected the investment process. Getting information, any information, was a major challenge. There were no required public statements. The first public statements, published by U.S. Steel in 1903, were certified by Price Waterhouse. Audited statements were rare. Misinformation and rumors were commonplace so that alliances and politics among NYSE members dominated the landscape. Professionals traded key information among friends. It makes sense that the New York Stock Exchange was considered a club. All the deals, information, and plans of stock manipulation occurred upstairs at the New York Stock Exchange Luncheon Club. Yes, they called it that. Lunch was extremely important. There was whispering and bluffs, lies and promises. You had to be an insider, but among the Stock Exchange members there was fierce competition to dominate the business and remain on the cutting edge of the back room deals. Maintaining a reputation for reliable information and upholding your word on every deal made you Wall Street's most valuable person. This could only be done by having unquestioned honesty and a reputation for fair dealing. That person was J.P. Morgan. Even Teddy Roosevelt as President, who clashed and fought Morgan several times, claimed he had never met a more honest man. Morgan's word was gold. After the San Francisco Earthquake of 1906, which contributed to the financial Panic of 1907, it was J.P. Morgan that the world turned to for help and guidance. He cobbled together many deals that saved the system more than once.

Quality information was key, but what was the best method 100 years ago to determine what companies to invest in? Taking a ride in your new car in 1922, you can imagine a lengthy car ride up to Hartford, to meet with some industrialists. You probably would spend the night since the key meeting would be either lunch at the club or a

fancy dinner after work. You better be paying for dinner, as well as arriving with a nice expensive, personal gift. This was legal bribery. There were no rules regarding inside information, so endearing yourself to management to ensure that you will have the best understanding of the company was the path to remain a step ahead of the crowd. In the United States in the 1920's, this was the only way to manage stock portfolios, if not relying on your trusted friend to do this exercise for you. Once a bond had been established, the phone was now critical as the investment company could get updates with a simple, albeit expensive phone call. The leverage in obtaining information was revolutionary. Now the car ride to Hartford was more about maintaining the cordial relationship, and it became less frequent.

All this changed in 1933 with the formation of the SEC. Audited statements became required and far more common, "designed to restore investor confidence in our capital markets by providing investors and the markets with more reliable information and clear rules of honest dealing." Now there was a menu of financial statements to analyze and in 1934, the Columbia Business School professors, Benjamin Graham and David Dodd, wrote the ground-breaking book, **Security Analysis**, the first real investment book of its kind. The authors showed how to define value in a stock through these statements and with the growth in public statements, investing analysis grew. Professor Graham had a student that had such a capability to memorize data that after the student poured over statements he remembered them all and became perhaps the most famous U.S. investor of all time. That student, of course, was Warren Buffet. The 1940's through the 1960's were Buffet's heyday as he had the only computer available to see it all together; his brain. Value investing became mainstream.

During the 1950's, a change occurred in how investors started evaluating companies. Benjamin Graham, at the height of the Depression, emphasized value focusing on the balance sheet items such as book value or net cash, but Thomas Rowe Price had a different idea. Besides looking at what the company was doing currently in profits, he realized that different growth rates in companies meant that their level of profitability would diverge over time. Growers earned more down the road than their peers. Growth stock investing was born. It was the idea that you looked at where the company would be in the future and patiently wait for much higher valuation levels to play out. T. Rowe Price sought companies that had "excellent growth potential in earnings and dividends above the growth rate of the general economy." Price was willing to pay more for the same current earnings based on the divergence of their future profitability. This thought process dominated new Wall Street thinking right up to the 1970's, culminating with the high-flying "Nifty Fifty", a group of fifty well-known, blue chip growth stocks.

The post war period saw a marked rise in published research reports out of the brokerage community. Early in my career, I was talking to an old portfolio manager from Connecticut, Ted Morse, who told me that in the late 1960's, Merrill Lynch announced they would issue a basic stock research report every single week. This steady flow of research reports was unprecedented. Ted told me that at that time he could read all of Wall Street's research for the week while riding the New Haven Railroad home on Friday night. Information access was getting easier although one had to do business with many brokerage firms to obtain all the stock analyst's reports. There were no

photocopying machines and everything arrived by snail mail in hard copy. Extra copies were valuable and branch offices quibbled over who got the published reports and how many.

I was taking a college course in the early 1970s that required us to program an IBM computer. The computer room at school was spotless, but the air was sterile and stale. This is what it must have been like in a submarine during WWII. I had written a simple equation which was recreated in my neat pile of punch cards, manila cards the size of a plane ticket with holes in them that were fed into the computer reader. The computer was the size of a refrigerator but had far less computing power than your I-phone. The cards flipped through and my simple equation was solved. They told us computers would be very important someday, so we needed to know how to use those punch cards. We believed them, but we just had no feel for where it would appear first and how soon. On Wall Street, it was quite soon.

By the late 1970's, brokerage and large investment firms were using mainframe computers to run the back office, trading and accounting systems. PC's were beginning to appear on desktops, but applications were very limited. In my department, many computers sat dark. Management knew we needed them, but for what? For years, data had been collected by several companies, but in the early 80's Zacks Investment Research put it all together. By then the desktop computer, with its powerful 486 chip and comprehensive databases, created a completely new style of investing. There were many firms that were creating trading strategies in option pricing, short term momentum, etc. with the new computers, but Ben Zacks had the databases and a software package to work on a cheap dedicated PC to create quantitative models. Behold the Quants. Zack's software had statistical packages as well as data in prices, financial statements and Wall Street analysts' earnings estimates, among many other things. For the first time you could statistically measure what worked in investing, by how much and how long, all with razor sharp probabilities. The comprehensive data on thousands of stocks enabled high statistical certainty. I attended a Quantitative seminar in 1987 and discovered Zacks. I convinced my boss at Smith Barney to subscribe based on the reports on the stocks P/E's, dividend yield, and other simple common stock statistics. I worked with a Smith Barney programmer, messed around with creating models to flag winner stocks. We were Smith Barney's first investment quant analysts.

Quantitative Research created a sea change in the investment process. No longer was the task to obtain information, but to *manage* information. In the 1960's, investment styles took on a narrow focus; large cap growth, small cap value, etc. These narrow styles were a result of the limited ability to follow large numbers of companies. This all went out the window with Quant. Every Monday morning, I could screen thousands of companies for winning characteristics based on their Friday night's closing prices and data and focus my research efforts on those specific stocks. When someone asked if I was growth or value, I would reply "yes." You could be both or what has come to be known as GARP (Growth At a Reasonable Price). We were highly focused on what Wall Street reports to read. Amazing. Warren Buffet now had to contend with those investors who didn't or couldn't memorize all the data. It was all in their computer.

Probably the most powerful investment quant tool of the late 1980's and early 1990's was tracking the change in Wall Street Analyst's earnings expectations for companies. Companies whose projected earnings and outlook that continued to rise through time were the big winners. My crowning model was in 2000 and it enabled me to invest successfully for what I suspected would last ten more years. The world was quickly catching on and not only were sources in changes in earnings expectations becoming ubiquitous, but today they are being displayed on all types of terminals such as Bloomberg and FactSet. This change shifted the investment focus on forward earnings, this year and next, not trailing earnings.

In the 1980's, old portfolio managers would snap at you saying that you should base stock values on reported earnings, not fantasy numbers of the future. At Smith Barney, I had trouble convincing co-workers to buy stocks based on next year's earnings. The pricing inefficiency should be on next year's number because everyone else is focused on this year, making their decisions based on this year's valuation. Since then I have watched the world go from cautiously embracing the future outlook of a company to an obsession with the current quarterly estimates and an analytical time horizon of one to two years forward.

What is the next phase of investing? Today companies are highly restricted by what they can tell you and when. Weeks before an earnings report they enter quiet periods where they will say virtually nothing. Information comes out quickly and simultaneously everywhere and is quickly impounded into stock prices. Today, the life cycles of companies have become much shorter, especially in technology. Stock portfolio turnover is many times that of the 1970's as a result, but this has led sophisticated investors to take a long-term approach, where possible. They examine the long term prospects of a company, like the growth stock investors of the 1950's, but with a bolder twist. They buy companies that are successful, well-positioned in their business long term, but not necessarily very profitable today. The focus is on years three through ten, and not the next two. If you can paint a picture of a company's sales and earnings many years down the road and the projected resultant stock price is many times the current price, this is the stock to own. This implies that company forecasting has improved immensely over the past several decades, and I think it has. Note this is a departure from the statistical mining of the 1990's and relies more heavily on an old school approach to investing by relying on analyst's ability to determine information not known or understood by the databases and internet. The edge is abstract and long term. Quant is dependent on the mispricing of stocks, based on current and changing analyst's expectations over the shorter term, making this a true investment horizon.

Like so many other areas today, investing has gone through many changes and has dramatically increased its level of sophistication. Twenty years from now, Artificial Intelligence may become very prominent as long-term forecasting may increase in accuracy, all with the help of the big brain on autopilot. There is no telling where all this leads to.