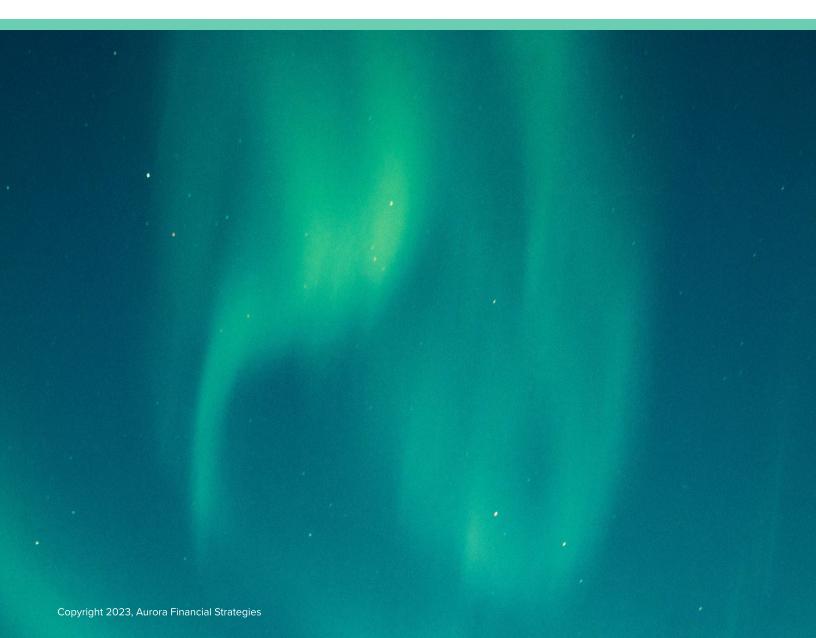


Investing in Stocks the Aurora Way

An overview of our methodology by Austin Crites, CFA



In 1984, Warren Buffet wrote <u>The Superinvestors of Graham-and-Doddsville</u> in which he describes how investors following a common framework had extraordinary success over a long period of time, despite a lack of superhuman intelligence or an insider network. Buffet, one of the most successful investors of all time, was a student and protégé to Benjamin Graham and uses this letter to tell the stories of investors with approaches deriving from Graham's teachings. Buffet points out that each "Superinvestor" applies the framework in unique ways resulting in very different portfolios and styles of investing.*

We believe the only true way to invest is to adhere to Graham's definition: "An investment operation is one which, upon thorough analysis promises safety of principal and an adequate return. Operations not meeting these requirements are speculative." Benjamin Graham - The Intelligent Investor.

This guide is designed to share how to invest in stocks utilizing our interpretation and application of Graham's definition. You will learn the following basics of investing in stocks: **margin of safety**, **sustainable moats**, and **corporate governance**.

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Benjamin Graham - The Intelligent Investor

Margin of Safety

Is the price significantly less than its intrinsic value?

Margin of safety is a central tenet of employing the "investment operation". As Buffet explains in his article, "You also have to have the knowledge to enable you to make a very general estimate about the value of the underlying businesses. But you do not cut it close. That is what Ben Graham meant by having a margin of safety. You don't try and buy businesses worth \$83 million for \$80 million. You leave yourself an enormous margin. When you build a bridge, you insist it can carry 30,000 pounds, but you only drive 10,000 pound trucks across it. And that same principle works in investing."

At the heart of this theory is that an investor should purchase investments at a significant discount to their intrinsic value. Investors calculate this value using different methods. They might compare capitalization multiples of sales, cash flow or earnings to peer groups or the overall market. Some use shorthand like the PEG ratio (Price to earnings ratio divided by an estimate of long-term earnings growth). The most theoretically accurate methods are the discounted cash flow (DCF) models and its closely-related cousins residual income model and dividend discount model). I prefer the DCF family of valuation frameworks, but whatever method you choose you'll need a margin of safety.

You can find a detailed explanation of DCF <u>here</u>. In short, the valuation technique relies on an investor's estimates of periodic free cash flows well into the future and then applies time value of money concepts to "discount" those future cash flows into a "present value". A bird in the hand is worth two in the bush. This is our preferred method for the estimation of intrinsic value.

Investors trying to value a company quickly realize that small changes in the inputs of their models can make large differences in the value. Some get discouraged by this and determine that the effort is fruitless. I believe they are missing the point. Graham preached a margin of safety because of the difficulty in determining precise valuations. If a stock is selling at \$100 and I believe I have a standard error of \$20 in my valuation model, I shouldn't be buying it for more than \$80 or I run the risk of overpaying. In fact, I should probably insist on \$60 to reduce my risk of losing principal and increase my chances of earning an adequate return over the long term. As Buffet states, "The (super)investors simply focus on two variables: price and value."

^{*}This guide is not intended to self-anoint as a "superinvestor". These folks earned their title through decades of results. What I am trying to establish is how our investment philosophy relates to and draws inspiration from this incredible cohort of investors by creating a how-to-guide for investing in stocks.

"Long ago, Ben Graham taught me that 'Price is what you pay; Value is what you get.' Whether we're talking about socks or stocks, I like buying quality merchandise when it is marked down."

Warren Buffet

Buffet's article borrows another counterintuitive idea from Graham; that the more a stock declines in price, the less risky it becomes. Buffet explains, "The exact opposite is true with value investing. If you buy a dollar bill for 60 cents, it's riskier than if you buy a dollar bill for 40 cents, but the expectation of reward is greater in the latter case. The greater the potential for reward in the value portfolio, the less risk there is." Traditional wisdom in finance posits that recent volatility in stock prices (higher beta and standard deviation) translates to higher risk. Further, modern portfolio theory is built on the idea that higher returns can only predictably come from higher levels of systematic risk. Buffet and Graham's provocative ideas fly in the face of commonly accepted financial theory yet are so concise and easy to understand. Buying an asset with a margin of safety (price significantly less than value) can only mean a higher expected return with less risk.

But if valuing a stock is hard, how can we make the process more reliable? I believe there are two things every investor must insist upon to increase the accuracy of their valuations and thus, the effectiveness of their decision-making: Sustainable Moats and Corporate Governance.

Sustainable Moat

Can the company be reasonably expected to protect the profits that your valuation relies upon?

Economic Moats are qualities that shield a business from the competitive forces that would otherwise erode profitability. By definition moats allow a business to earn returns on their invested capital in excess of the costs of said capital. Economic moats are not created equal. Many companies have more than one moat source of varying characteristics of strength and sustainability. Many investors focus on the strength (power to create economic profits) but I believe sustainability is as much or more important as it makes forecasting cash flows into the future a less risky endeavor, and more accurate as a result.

An economic moat can take many forms. Morningstar is an excellent authority on economic moats. They segment moat sources in the categories below next to an explanation in my terms.

- Switching Costs Anything that serves as a barrier to a customer switching to a competing service. This could be as strict as contractual or as loose as an inconvenience.
- **Network Effect** The idea that each new customer that is added makes the product/service more valuable to all other customers. Once a certain lead is established, it is difficult for competitors to attract customers resulting in "winner take all" markets.
- **Efficient Scale** Business conditions such that a new competitor in a given market would render both companies unprofitable creating a disincentive for new competition to enter.
- Intangible Assets (Brands, Patents, Regulatory Licenses) Brands create conditions conducive to monopolistic competition (competition based on differentiation rather than price). Patents create a barrier to the replication of a product or service. Regulatory licenses can vary in strength but generally create a buffer to competition.
- Cost Advantage Companies that can generate products or services at a lower price than anyone else. This is usually related to some preferential access to factors of production or superior scale.

As you evaluate a particular moat source, it's important to consider how sustainable the source is. Companies that are the most difficult to value have the most uncertain moat sustainability. The more sustainable the economic moat (and the higher the growth rate), the larger the multiple of value on current cash flow will be justified by your model. If a company has a moat that is not very sustainable, the range of outcomes will be extremely wide, meaning that you cannot pay for very many years of cash flow while achieving a sufficient margin of safety. By insisting on a moat sustainable enough to justify the current cash flow multiple, you can significantly reduce left tail events and improve your chances of realizing Graham's goal of promising safety of principal. It's all about trying to reduce the error term in your cash flow projections.

Harvard Business School professor Michael Porter devised a framework called "Porter's 5 Forces" that is very helpful in evaluating the sustainability of moats. These "Forces" consider the competitive landscape, how it is changing, and how a company's moat may be impacted. This is a relatively straightforward exercise. By learning about the aspects of the industry and business that Porter identifies, you will be more attune to the risks and opportunities of the business to create more accurate financial forecasts and business valuations.

Porter's Five Forces

- 1. Threat of New Entrants
- 2. Threat of Substitutes
- 3. Bargaining Power of Buyers
- 4. Bargaining Power of Suppliers
- 5. Rivalry among Existing Competitors

One problem many investors encounter on this journey is that many of the issues related to economic moats and their sustainability are qualitative in nature, introducing a lot of gray to an investment world that seeks black and white. Each investor is not well suited to understand every business and their moat. It's important to wait to find something you can understand well. As Buffet says, "The trick in investing is just to sit there and watch pitch after pitch go by and wait for the one right in your sweet spot." Investing is a unique endeavor in that we get to pick the problems we tackle; we shouldn't let them pick us. Buffet explains, "I don't look to jump over 7-foot bars: I look for 1-foot bars that I can step over."

The lesson here is that we choose to invest in companies where we can understand the moat and its sustainability characteristics and where we can buy it at a sufficient margin of safety. But there's one more component to consider; corporate governance.

Corporate Governance

Will management direct profits in a way that enhances or destroys value?

"Since you don't have your hands on the \$400 million, you want to be sure you are in with honest and reasonably competent people, but that's not a difficult job."

Warren Buffet (on the importance of corporate governance)

Once an investor has conducted a thorough analysis of a business including its moat characteristics to determine that a stock offers a strong margin of safety (to improve the odds of the safety of principal and an adequate return), there is one last consideration. By studying the moat of a business an investor can better understand the reliability of future cash flows, but it does nothing to ensure those cash flows will be used appropriately.

Case Study - Let's consider an extreme example on the negative end of the spectrum. Company A is a mature business with a fabulous moat. It generates significant free cash flow that we can reasonably expect to grow at 3-4% per year for a very long time with a low risk of deterioration. This company should be easy to value and could make a fine investment providing that the price is right. But as you look further, some issues emerge:

- Founder has 100% of the voting power, common shares carry no vote
- **Proxy statement** reveals that management team issues large equity incentive compensation packages to themselves through low hurdle (and easily manipulated) performance targets
- Buy back only enough stock to offset dilution created by employee stock compensation
- · No dividend
- Lots of related party transactions Management team hires selves and/or relatives for company contracts with alarming regularity
- Growth projects unrelated to the core competencies of the business exhaust remaining cash flow
- Checks with suppliers/customers/employees reveal strained relationships

What is the business worth now? I would argue that this "business" exists only to enrich the founder and entrenched management team who have no incentive to reform. Owners of the common shares have no participation in the company profits with no mechanism for which to change that. The existing moat may not be as sustainable as it originally appeared as stakeholders appear to be incentivized to find a way around. Further, capital allocation decisions alter the fundamental nature of the business over time and those growth investments seem unlikely to produce meaningful cash flow in the future. The only real value here to a common shareholder is that eventually, the founder's votes will go to an heir that may run things differently. The business itself is very valuable, but because of poor corporate governance, the stock is worth very little.

You should be highly selective on corporate governance as a method for minimizing agency risk. Agency risk occurs when a shareholder relies on a third party (management in this case) to make decisions on their behalf. This risk comes from the conflict where the management team's self-interest may not align with that of the shareholder. Many investors rely on rules of thumb here, such as insisting on a separation of the CEO and Chairman of the Board. In my view, this is over simplistic as these rules of thumb can be easily gamed by nefarious actors and in isolation are only signals. **Common sense** is a better judge in this case.

- Read the proxy statement Review the pay structure. What is the surest way for management to achieve their performance targets? Get creative (within the law) because they will. Would you like to see them achieve their targets in this way? Do their targets change from year to year? Have they ever repriced stock options? Are you comfortable that management's interests are aligned to yours as an investor?
- Read the 10k Do they explain the business in terms that are easy to understand? Or do they make things overly complicated (great way to hide the facts)? Are there related party transactions and what is their nature?
- **Listen to the earnings calls** Do they act like a grand promoter or a steady hand? Do they take responsibility for mistakes or do they blame external forces? Is the messaging consistent from quarter to quarter?
- Review past capital allocation decisions How have they allocated capital in the past amongst dividends, stock buybacks, R&D/Growth capital expenditures, acquisitions, disposals, debt? Do those decisions make sense, and do they align with your understanding of the business and its opportunity set?

As minority investors, we must rely on the management team running the companies we invest in to make decisions on our behalf. A proper evaluation of those management teams, their incentive structure, and past behavior are perhaps both the most important and most misunderstood aspects of the investment process. Remember, by investing in a stock you are, by extension, also hiring the associated management team to look after your company.

"We look for three things when we hire people. We look for intelligence, we look for initiative or energy, and we look for integrity. And if they don't have the latter, the first two will kill you, because if you're going to get someone without integrity, you want them lazy and dumb."

Warren Buffet

When to Sell

How most investors think about sell discipline

Most of the conversation and study on investing focus on what and when to buy. It seems most investors sell based on a handful of criteria:

- Reaches Target Price Identified at Purchase
- Price Decline of a Predetermined Amount
- Better Opportunity Arises

The problem with the first two is that they don't incorporate new information as time goes along. It is important to adjust our estimate of value over time as we learn more about the business. Selling a stock just because the price declines are in direct contrast with our concept of margin of safety. Assuming no change in VALUE, a lower PRICE should instead beg the question, "Should I buy more?". The issue with selling at a predetermined price is that great businesses oftentimes improve and create value over time. It may still be a tremendous bargain if the value of the company has increased.

"The first rule of compounding: Never interrupt it unnecessarily."

Charlie Munger

Instead, just invert your buying process. I believe you should think about selling in the same way you think about buying. I have conditions I require to buy a stock in 3 thought categories: Margin of Safety, Sustainable Moat, and Corporate Governance.

If any of those conditions are broken, the stock gets sold.

This can happen quickly if I consider the offense to be egregious. Maybe I consider it grossly overpriced, the moat is disintegrating quickly, or the company engages in behavior I am not comfortable with.

For any minor violation of the 3, the stock just gets put on my list of stocks with which I am willing to part. Perhaps, the stock is slightly overpriced. Maybe the competitive advantages are showing signs of age. Maybe, the company's capital allocation decisions are not as clever as I'd like. This brings up that 3rd idea most investors use as a sell discipline, better opportunities.

In your constant pursuit for the ideal portfolio, you must always consider opportunity costs. Would I rather own this or that and what are the consequences from making a change? You should be willing to sell a stock for a better opportunity. However, you must consider that you are likely much more familiar with the stock you own than the one you don't. I suggest you require a higher margin of safety for the stock you are buying than the one you sell to account for this risk. Leave some wiggle room to be sure the grass is greener on the other side.

Behavioral Considerations

Put yourself in a position to make good decisions

I've always had a passing interest in poker. I never really committed myself to the game, but I love thinking and reading about it. One of the things I learned about betting strategy is that the best players are consistently able to put their opponents to the task of making difficult decisions which come with a higher propensity to make mistakes. Investing isn't like poker. The opponent is yourself and you only look them in the eye when you're in front of the mirror. Early on in my investing career, I found myself continuously put to difficult decisions. An investment I had made had either shot up or down in value. I didn't have a framework to put myself to easy decisions. If a stock had gone up significantly, was it overpriced or was the business just worth more now? If the stock declined significantly, would the business recover or would it go belly up?

I decided to develop the approach previously described to circumvent those difficult decisions. The ideas behind a sustainable moat and corporate governance are designed to make the valuation decision easier while trying to limit the type of left-tail events that lead to difficult decisions. That means saying no to a lot of things. That's easy in theory but difficult in practice.

"The trick in investing is just to sit there and watch pitch after pitch go by and wait for the one right in your sweet spot. And if people are yelling, 'Swing, you bum!,' ignore them."

Warren Buffet

In Summary

Investing in stocks is at the same time incredibly simple and enormously difficult. The rules of the road can be understood by almost anyone. After performing extensive research, only purchase shares at a significant discount to their intrinsic value. Find frameworks such as sustainable moat and corporate governance to simplify that calculation and only sell when your buy criteria are no longer true or you are presented with an irresistible alternative. Executing this is much more difficult. It requires hours of research and quiet introspection. It requires discipline and willingness to forgo action, biding your time for the right opportunity. It requires the willingness to appear wrong in the pursuit of being right. It can be a lonely pursuit. But for those that are willing to march the path untrodden, the search for Graham and Doddsville awaits!

I'll end this guide with Buffet's own conclusion to the Graham and Doddsville letter. Written in 1984, the words sing more true every day!

"In conclusion, some of the more commercially minded among you may wonder why I am writing this article. Adding many converts to the value approach will perforce narrow the spreads between price and value. I can only tell you that the secret has been out for 50 years, ever since Ben Graham and Dave Dodd wrote Security Analysis, yet I have seen no trend toward value investing in the 35 years that I've practiced it. There seems to be some perverse human characteristic that likes to make easy things difficult. The academic world, if anything, has actually backed away from the teaching of value investing over the last 30 years. It's likely to continue that way. Ships will sail around the world but the Flat Earth Society will flourish. There will continue to be wide discrepancies between price and value in the marketplace, and those who read their Graham & Dodd will continue to prosper."

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