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THE FINANCIAL LAWS OF GRAVITY

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As legend has it, in 1666 a brilliant young scientist was relaxing on the grounds of his family home when he observed an apple fall from a nearby tree. He began to wonder why apples always fall straight down, rather than sideways or upward. This led him to consider that the Earth might be exerting an attractive force on the apple and, by extension, all physical objects. This young man was, of course, Sir Isaac Newton. And as the apocryphal tale goes, this unremarkable event sparked Newton's remarkable insights into the forces of gravity and motion.

Newton later postulated that gravitational force acts universally, whether between planets or everyday objects. His work, published in Philosophiæ Naturalis Principia Mathematica (1687), introduced both the laws of motion and the theory of universal gravitation, marking one of history's most significant scientific achievements. His theories remained unchallenged for over two centuries until Einstein's theory of relativity, though Newton's insights still suffice for many engineering and astronomical applications today.

We believe there is an Analogous set of irreducible and enduring truths for investing in stocks. These investment truths may not be immutable properties in the same sense as gravity or the natural laws that define the mechanics of motion, but they offer a fundamental blueprint for achieving long-term investment success. We like to think of these investment principles as the "financial laws of gravity".

The fundamental difference between price and value lies at the heart of our first investment principle. And despite the fact that this understanding is a precursor to long-term investment success, many investors fail to appreciate the distinction. Instead, they often blithely assume equivalency between current market pricing and business value. To fully appreciate the danger of this error in judgment, we first must unpack the difference between "price" and "value" in an investment context.

Principle 1:

PRICE IS WHAT YOU PAY, VALUE IS WHAT YOU GET.

Price, in essence, is simply a market quote. It represents the amount of money that buyers and sellers agree to exchange for a specific asset at a given moment. Prices are easily observable and can fluctuate significantly based on various factors, including market sentiment, news, and temporary imbalances surrounding supply and demand for shares. These short-term market price fluctuations generally offer little, if any, insight into the value of the business. Additionally, predicting short-term stock prices is a pursuit that has repeatedly proven to be as unpredictable as a random walk.

Value refers to the intrinsic worth of a business or asset. In short, this "intrinsic value" is the present value of all the future net cash flows of the business. It is a more complex concept than the current market price, taking into account factors such as a company's financial health, growth prospects, and competitive advantages. Intrinsic value tends to fluctuate much less than quoted market prices, because business fundamentals rarely change as dramatically or frequently as stock price movements suggest. And in contrast to the price of a security, with enough analytical rigor it is possible to make a reasonable assessment of the intrinsic value of a business. Intrinsic value is not a random walk.

Recognizing the difference between price and value is liberating knowledge for an investor. Savvy investors understand that market prices can deviate significantly from intrinsic value, creating opportunities for future profit. When the market price of an asset falls below its intrinsic value, it may signal a buying opportunity. Conversely, when the price exceeds intrinsic value, it might be time to consider selling. An assessment of value provides this crucial insight that is conspicuously absent in "price-only" strategies.

Yet, the random nature of short-term market price movements is often too alluring for many investors to ignore. Armed with theories geared at predicting the inner workings of the market or the short-term tendencies of stocks prices, many would-be investors adopt the mindset of a speculator. They often end up disappointed as these speculative, price-only strategies share one critical flaw: they neglect the fundamental concept of value. And, from an investor's perspective, price is meaningless without the context of value.

Principle 2:

VALUE CREATION IS FUNDAMENTALLY A COMPANY-LEVEL PHENOMENON

Empirical evidence and experience support our belief that the key determinants of value creation are almost always self-determined, company-specific activities. Upon close examination, we can see that the value creation process is rooted in the coordinated actions of individuals working to provide a product or service that is desired in the marketplace.

Importantly, these activities are largely independent of macroeconomic events. This is not to say that macroeconomic forces are irrelevant. At times, these more wide-ranging events can exert a lasting influence on individual company financial performance and asset values. However, in most cases any enduring impact tends to be limited. The effect generally takes the form of short-term headwinds or tailwinds to the value creation process.

The challenge in assessing value creation stems from the intangible nature of the most consequential value creating activities. These inherently long-tailed activities include building and defending a competitive moat, establishing a capacity for serial innovation, and nurturing a corporate culture that encourages profitable growth and operational excellence. Since these complex undertakings are both difficult to measure and accrue over longer time periods, investors are often tempted to turn to other more readily quantifiable factors that do not adequately capture the drivers of value creation. Wall Street's obsession with quarterly earnings reports is a classic manifestation of this phenomenon in practice.

The good news is that if we adopt a long-term view, we can see the impact of the real value-creating activities play out in a company's financial performance, primarily in the interplay between growth and return on capital (ROC). The potential for growth speaks to the exploitable market opportunity, but growth alone cannot create economic value. It must be profitable enough to justify the ongoing investment in the business. This is where ROC comes in. A high ROC provides incremental capital to fund future growth, effectively creating a virtuous cycle of value creation.

Take the example of a high-profile company like Apple Inc. During the course of Apple's ascendency to the most valuable company in the world (at the time), it was subjected to a deluge of teeth rattling macroeconomic events and historical market sell-offs. These included the 9/11 terrorist attacks, NASDAQ meltdown, Global Financial crisis, and Covid shutdowns (just to name a few.) Despite these macroeconomic shocks, from 2002 to 2022 Apple's fiscal year revenues grew from $5.7 billion to $394.3 billion and its operating cash flow from $90 million to $122 billion — increases of 24% and 43% per year, respectively. Its ROC exceeded 20% in all but the first two years of that period of incredible growth. In fact, for many years the company's ROC exceeded 50% — a level far above the average for U.S. corporations. Apple's stock responded accordingly, generating a compound annual return of over 37% per year.

The Apple story also Illustrates how growth and ROC combine to leverage one of the most powerful forces in the financial world, the power of compounding. Companies that consistently generate high ROC and have opportunities to reinvest their earnings at attractive rates of return can create breathtaking value over time, even in the face of challenging macroeconomic conditions. Einstein, who gave us the mind-bending theory of relativity, reportedly referred to compounding as the "eighth wonder of the world." We wholeheartedly agree with this assessment.

All of this points to one conclusion, an ability to recognize and capitalize on the true nature of the value creation process is central to any successful long-term investment strategy. Investors should focus their efforts on finding companies that are capable of achieving increasing levels of financial success regardless of the presence of macroeconomic turbulence.

Principle 3:

THE STOCK MARKET IS OFTEN INEFFICIENT IN THE SHORT TERM, BUT IT IS RUTHLESSLY EFFICIENT OVER THE LONG TERM

Much of the artifice of the investment management industry is built on the back of the academic model known as Modern Portfolio Theory (MPT). MPT assumes financial markets are efficient, which means stock prices always incorporate all known information about future prospects. And if stock prices discount all available information, those same prices can be assumed to be a reasonable reflection of the intrinsic value of the underlying assets — making it unlikely that investors will be able to consistently outperform the market. This is the philosophical grounding for passive investment vehicles such as index funds.

However, for this infallible pricing mechanism to exist, investors must be rational economic agents. That is, investors will always choose the financially optimal decision based on the preponderance of the evidence. This "rational economic agent" assumption makes for nice theory, but it is not consistent with reality.

When dealing with human nature and complex, high-stakes systems like the stock market, decisions are rarely the result of economic reason alone. Greed, fear, and a variety of other suboptimal psychological tendencies play a central role in many (perhaps most) financial decisions. And if enough securities traders and investors either consciously or subconsciously reject economic optimization as their guiding principle, pricing inefficiencies occur.

The good news is these stock price inefficiencies are almost exclusively a short-term phenomenon. Over longer time periods, the market has proven to be as ruthlessly efficient as MPT predicts. In other words, the dynamics of value creation eventually overwhelm human tendencies that serve to undermine rational economic decision making, allowing stock prices to predictably converge with the underlying intrinsic value of the business. And you need not take our word for it. Examine 10 or more years of stock price history for virtually any publicly traded company, and you will likely find that the long-term arc of the stock price has closely tracked the fundamental performance of the business, but the short-term stock price has bounced around like an errant ping-pong ball.

Pulling it all together, our third investment principle tells us that stock prices can and often do temporarily detach from the intrinsic value of the underlying assets, but that those prices tend to converge with intrinsic value over the long-term. Value recognition is ultimately inevitable. This dynamic is an incredible gift to investors. Investors need only exercise reasonable levels of analytical diligence and patience to profit from the recurrent short-term price dislocations.

Principle 4:

ABSENT A MARGIN OF SAFETY, INVESTING IS SIMPLY SPECULATION

The inimitable Benjamin Graham asserted that a true investment effort promises both "safety of principal" and an "adequate return." In his assessment, any activity failing to meet these prerequisites was purely speculative in nature. Graham was also quite explicit regarding the dangers of blurring the line between investing and speculating. And this was not just academic bluster. Graham had directly experienced the financial pain of speculative choices as a practitioner managing his own investment partnership.

Graham also recognized that investors need more than just an appealing conceptual framework to maximize the odds of long-term investment success and avoid risky speculations. Investors require practical, battle-tested methods to protect and grow their capital. To this end, Graham gave the investing public a powerful risk-mitigating tool that sits at the heart of our fourth investment principle – margin of safety.

Margin of safety can be thought of as an investor's first line of defense against a damaging permanent loss of capital in situations where things do not progress as expected. A margin of safety cannot eliminate the potential of a loss, but it can significantly reduce the likelihood that an adverse outcome will cause unrecoverable damage to one's portfolio.

From a practical perspective, a margin of safety is the discount a security is trading at relative to the underlying intrinsic value of the company. Therefore, determining the margin of safety begins with assessing the intrinsic value. If an investor has no sense of the underlying value of a security, it is impossible to determine a margin of safety; because the investor cannot know if they are buying at a discount or a premium. This is where the first two principles we discussed come back into play by focusing our attention on both understanding and assessing value.

Intrinsic value may set the reference point, but a margin of safety is always a function of the price paid. This is what the investor controls. The investor has little influence over the intrinsic value of the security; they can only assess it. But an investor always determines the price they choose to pay. So being a shrewd and patient buyer lies at the heart of the concept of margin of safety.

A proper margin of safety goes a long way toward fulfilling Graham's promise of safety of principle and an adequate return, but it does not guarantee such an outcome. Investing involves uncertainty, anduncertainty carries the potential for adverse outcomes against which one cannot be fully protected. However, a suitable margin of safety tilts the probability of long-term investment success into the investor's favor. (Please see our "Free Solo" white paper for a more comprehensive discussion into how we identify and mitigate investment risk.)

CONCLUSION

As we wrap up this note, we find ourselves in another period of jarring market turbulence. Yet, just as Newton's intellectual heirs trust that an apple will always fall downward, we take comfort in the enduring pull of financial gravity. Its principles have guided our investment decisions through countless market cycles, proving their worth time and time again. To ignore these fundamentals would be akin to dismissing gravity while standing at the cliff's edge—you can, but we would advise against it.

ABOUT DISCIPLINED GROWTH INVESTORS

Disciplined Growth Investors is a Minneapolis - based management firm specializing in prudently exploiting investment opportunities in publicly held small cap and mid cap growth companies. Founded in 1997, the firm remains employee owned and completely independent.

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