AVOID GAMBLER’S RUIN
Bridging Concentrated Stock and Diversification

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AN INCONVENIENT TRUTH: Concentration destroys wealth

Concentration can create wealth, yet remaining concentrated is much more likely to destroy it. Diversification is a great tool for preserving it. There are countless ways of showing the relentless creative destruction of capitalism, but the basic facts below should suffice. If you’re currently sitting on a winner, please reflect on how incredibly lucky you were to hit a home run and how much more likely you are to strike out going forward, if you don’t diversify.

TERRIBLE PROSPECTS FOR HOLDING A SINGLE STOCK

- 12% of stocks end up as 100% loss (the most common outcome!).
- 40% of stocks end up with negative lifetime returns!
- The median stock underperformed the market by >50%.
- A stock is 5x more likely to suffer extreme losses (-30%/year over 10 years) than extreme gains (+30%/year over 10 years).
- The odds of getting an extreme winner are 1 in 15 - 9x less likely than underperforming the market.

Even with the benefit of hindsight, only 1 in 20 investors should have retained all of their stock. That’s 7x less likely than those that should have retained 0%. In the vast majority of cases, retaining 0-30% of the stock would have been optimal.

You may be thinking, “If concentration is so destructive, then how did I manage to accumulate all this wealth?”
HOW YOUR WEALTH GOT SO CONCENTRATED

There are typically two reasons how an investor’s wealth gets too concentrated in the first place:

   **Reason 1**: The company granted you stock as part of your total compensation package.

   **Reason 2**: The company and stock have done tremendously well, so far.

Let’s evaluate these separately in the next two sections, as the first reason may not have been proactive and second is often regretfully fleeting.

**REASON 1. THE COMPANY GRANTED YOU STOCK AS PART OF YOUR TOTAL COMPENSATION PACKAGE**

61% of employees with self-directed retirement plans choose to not have any exposure to their company stock. This is for good reason, since their income, job security, and perhaps even local real estate fortunes are already deeply dependent on the company growing and doing well. That’s what makes your company stock one of the riskiest stocks you can own!

**DIDN’T DIVEST AS YOU VEST!**

Only 15% of self-directed employees maintain dangerous levels of concentration in their company stock (defined as more than 20% of the account balance). Yet, 52% of employees with employer contributions given in company stock
end up retaining a dangerous concentration. What may seem like temporary alignment of interests is also a natural funding mechanism for the company. More importantly, it’s the epitome of having all your eggs in one basket and betting it on your lucky number. It’s critical to be proactive about prudently allocating your nest egg! Divesting as your company stock vests is critical for reducing concentrated stock risk.

If it’s so important, then why aren’t employees doing it? Often inertia, loyalty, guilt, and hope are to blame:

- **Inertia/Loyalty/Guilt.** If you didn’t divest because of feelings of loyalty and guilt, or because of simple inertia, then *did you know that the median stock lifetime is only 7.5 years* (with only 10% surviving past the 28-year mark)? That’s half the lifespan of a well-exercised dog. We all love our canine best friends, but we have to accept the fact that they won’t be around forever and are less likely to learn new tricks over time. Don’t let the inertia, guilt, and loyalty tail wag the dog!

- **Hope.** If you didn’t divest because you believe the company and stock futures are bright and filled with exponential growth, then you may be surprised to find out how futile it is to time the market and how quickly and counterintuitively company and stock fortunes can change. This topic is further examined in the next section.

We can’t emphasize enough that 61% of employees in self-directed retirement plans correctly elect to have 0% exposure to their company stock. Not only is it really risky to own company stock, it’s also very risky to concentrate your wealth in any stock, *regardless of your cost basis and what you owe Uncle Sam.*
REASON 2. THE COMPANY AND STOCK HAVE DONE TREMENDOUSLY WELL, SO FAR

In our highly competitive and regulated “global village,” being king of the hill often quickly turns a winner into a victim of their own success, leaving hopeful investors holding the bag. If you think you have some sort of insider edge to help you time your exit, or that a company and stock awash in great news and constantly rising earnings must have bright prospects, then we cannot underestimate the importance of this section. Specifically, we explain how:

• Most information is long priced into the stock price.
• Past winners and dominant companies often make lousy investments due to naïve extrapolations.
• An informational edge is always indirect and perceived, but high prices trump and neutralize it.

While everyone can buy or sell stocks at the click of a button, hardly anyone has ever successfully outperformed the market over the long run (10+ years). The few who have can all be explained by the luck of the draw among the millions who’ve tried and failed. Why is it so difficult to time the market? Training, ideas, know-how, instincts, and success in non-investment disciplines can often be greatly detrimental when applied in investment analysis, where long periods of robustness tend to increase fragility and not indicate future resiliency whatsoever.
To illustrate how different and difficult the domain of investing is from a variety of intellectual disciplines, let us start with a story about Sir Isaac Newton’s investment experience.

Newton is famous for inventing calculus and formulating the theory of gravity, then applying the principles of gravity to celestial bodies, which proved that the earth revolves around the sun, not the other way around. The Queen knighted him in 1705 and he’s widely recognized as one of the most influential minds of all time, directly contributing to dramatic advancements across a variety of disciplines, including mathematics, physics, astronomy, and optics. A little-known aspect of his career is that he served as the Master of the Royal Mint for over 30 years and, and in 1717, he established a new mint ratio between silver and gold, paving the way for the formal introduction of the gold standard a century later.

Yet, being one of the most brilliant interdisciplinary geniuses of all time and the highest-ranking official of the royal mint didn’t help Newton succeed in the realm of investing. In 1719, during the South Sea Company bubble, Newton succeeded initially and doubled his money, only to see his friends make 2-3x returns after he exited. Subsequently, Newton’s human nature got the best of him, and he reentered the market near the peak a few months later - only to almost lose his entire fortune as the bubble popped. A defeated Newton issued the following infamous proclamation:

\[
\text{I can calculate the motion of heavenly bodies, but not the madness of people.}
\]
There are many domains of expertise out there, and success in one is hardly applicable in another.

- **Theoretical vs. applied.** On a more technical side, it’s one thing to understand a technology and another to apply it by building a gadget or a service.

- **Engineering vs. business.** On the business side, it takes a different set of knowledge and applied skills to develop an enduring business model to monetize a product or service, fend off competition, grow your customer base, and scale your company successfully.

- **Investor vs. market.** In an entirely distant domain lies the lucrative pursuit of stock market profits. Millions of intelligent and successful engineers, lawyers, doctors, scientists, developers, and money managers have tried to figure out how to beat the market. They have vast earnings to invest, due to their intellect and business success, so they have to do something, whether they like it or not! A lot of folks also find the pursuit naturally enticing. Yet hardly anyone has ever beat the market in the long run.
The market by definition exists to weigh and reflect the collective knowledge, wisdom, foresight, skills, and gut instincts of the participants! But it doesn’t stop at the limits of human capabilities. The frontier of computing innovation has always been applied in trading and investing as soon as it becomes economically feasible, as it’s one of the most direct and efficient means of leveraging hardware, software, big data, sensors, and artificial intelligence for the pursuit of profits.

With millions of participants and billions of dollars at stake, any sort of edge or tidbit of new or surprising information is discovered by more than one group of people and quickly gets priced in and arbitrated away. The price of the stock is just as important, if not more, than any sort of fundamental or insider information in determining the ultimate outcome of the investment. No matter how great someone’s understanding is of the underlying technology or business fundamentals, there’s always a price that’s simply too high to generate a good or even a positive return. As Warren Buffett famously puts it:

\[
\text{\textbf{Price is what you pay. Value is what you get.}}
\]

You may have insider knowledge about some of the technology or even business fundamentals, but only a crystal ball can tell you the future price path of any stock. You simply can’t know what sort of exuberant (or pessimistic) expectations are already priced into the stock – no matter who you are!
Finally we can tackle the question: What’s the problem with companies and stocks that have done well? When the company and stock have done well, ecstatic investors and the skyrocketing stock become awfully susceptible to future disappointments. **When everything is great, there’s simply no room left for positive surprises to drive the stock price higher!**

![THE WINNER’S CURSE: TOO BIG TO SUCCEED]

Since the 1970s, sector leaders underperform their sector by 30% over five years, after becoming the largest company in the sector.\(^5\)

When it comes to future investment prospects, being a top dog is an incredibly self-defeating proposition. Here are the five key victim-of-their-own-success factors.

**1. Lower relative upside vs. smaller competitors.**

Big companies can’t grow as fast on a relative basis practically by definition, as the future upside is much less than smaller companies. Being a mega-giant implies that you’re already “king of the hill,” and replicating the same growth on a much larger basis becomes increasingly difficult, if not impossible, as one becomes “too big to succeed.” Of course, in an expanding economy, growth is potentially indefinite, but higher relative growth vs. other companies and competitors is the point here, as it becomes ever more unlikely.
2. **Naïvely extrapolated growth and valuation.**
Quite often these companies get overpriced manyfold due to the performance-chasing nature of investors *extrapolating past market and fundamental returns indefinitely into the future*. Not only are the past fundamental returns *less likely*, those are the fundamentals that investors might be *pricing in*. And if that wasn’t enough, investors and analysts might also be placing a *growth valuation multiple* on said growth expectations, while indiscriminately bidding up the stock.

3. **The glamour status feedback loop.**
Investors, analysts, the media and politicians naturally love success stories. These companies and their leaders are usually pushing the edge of human progress, with almost godlike effort, vision, and success. Unsurprisingly, these heroes (e.g., Steve Jobs, Elon Musk, Jeff Bezos, Bill Gates) become our role models, as we are enamored and inspired by their success stories and reality-shifting foresight.

All this feeds on itself and certainly inspires legions of future entrepreneurs, but it’s all bad news when it comes to future investment prospects. Faithful admirers generously overpay for a share of the company to play a small part in the epic legend of their business hero who can do no wrong in their eyes. Armies of product users become investors and promoters of the stock. This exuberance pushes the stock price and thus the over-valuation spring (#2 above) ever higher to greater extremes, directly lowering expected future returns.

4. **Too much capital to allocate well!**
What do CEOs do when they’re given more capital than is truly warranted by their business? Often, they
misallocate it, because the incentives of the executives are unfortunately skewed toward the short run. When a company’s management has access to easy capital, at best, it just sits there being passively unproductive and generating negligibly low ROI. However, quite often it is literally allocated to unproductive endeavors, like increasing capacity for demand or market share that will never materialize or it’s spent on overpriced mergers, only to contribute to inferior forward returns.

5. **Everybody wants a piece!**

We live in a competitive world, so as much as people love a success story, they also want a piece of the action. Domestic and global competitors and imitators, from the tiniest startups to the largest mega-caps, are all trying to pick apart every single aspect of the current outperformer’s business. *Everything from the crumbs to the bread ‘n butter of the big moneymaker gets attacked all at once as the company becomes larger, more bureaucratic, and less adaptable.*

*Figure 2. Mapping Amazon’s Growing Reach (ValueWalk)*
If that wasn’t enough, governments get in on the action by trying to figure out how to tax and regulate key aspects of the business. If and when things do go south, they won’t think twice about vilifying the same “monopolistic” companies during the bust – the ones they were shielding from competition and exemplifying during the boom years.

**THE PROBLEM WITH NETWORK EFFECTS AND MOAT**

Of course, some argue that network effects can lead to insurmountable moats. **Network effect** is the idea that some services (e.g., telephones), become more valuable as more users buy the product or join the service. A growing network contributes to its own faster growth and creates an ever-increasing competitive advantage, also referred to as an economic moat. Companies can have many different types of competitive advantages, but network effect is one of the rarest and, when created, it can last a long time.

For example, Amazon is often thought of having an **insurmountable moat** that can bring an entire sector to its knees when it makes a move into a different industry. The day Amazon announced its $13.7 billion purchase of Whole Foods, for example, a couple of unusual things happened:

- The top 20 retail and food stocks collectively lost $40 billion of their market cap, an unprecedented breadth of shock since Whole Foods commands only 1.2% of the grocery market.
- Amazon’s value actually jumped by 120% of the target’s value, as opposed to a typical decline in the value of the acquirer.

**However, prices always trump fundamentals, as there is always a price too high for any sort of perceived competitive (or monopolistic) advantage.** When it comes
to giant and dominant companies, you always have to ask: **what relative upside is left in a 900-pound gorilla, when the moat is so great and obvious?**

In addition to being priced into the stock price, being too dominant can eventually hurt the company and stock on the regulatory front.

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**MICROSOFT: A case study**

Some may remember the dominant platform company and poster child stock of the last great tech boom – Microsoft. A virtuous cycle of success turned on a dime into a vicious one in 1999 as Microsoft took the reins from General Electric as the top company in the U.S., just when it looked like Microsoft was set to dominate the window to the internet by leveraging their dominance in operating systems.

Here are some critical news clips from that pivotal year:

**March, 1999 | Microsoft press release**

“Internet Explorer 5 has garnered **unprecedented industry support** from leading sites, ISPs, and PC manufacturers. These [140 leading companies]...enhance their offering and provide their customers with **dramatically faster, easier, and more integrated online experience...”**

**November, 1999 | CNNMoney**

“**MSFT Ruled a monopoly. ‘Caused consumers harm by distorting competition.’**”

Three main court findings:
- 90% large and stable market share,
- high barrier to entry, thus...
- “customers lack a commercially viable alternative.”
It subsequently took Microsoft 16 years to exceed its late-1999 peak! Why?

$ in billions, except EPS

It’s not like the fundamental performance disappointed as revenues and earnings per share (EPS) grew many times over.

It’s quite simple! Microsoft was (over)priced for perfection. The consensus opinion was that it was going to continue to grow exponentially and use its insurmountable moat to dominate and outmaneuver the competition. There was no room left for positive surprises, and thus, no upside for the stock! There was, however, plenty of room for negative surprises for the company and new paradigm-shifting tech (search, smart phones, social media), business models (Software-as-a-Service, selling data), and companies (Google, Apple, Facebook, Netflix, Salesforce) to emerge and challenge the top dog of the last century.
Don’t get us wrong – Microsoft was one of the top wealth-creating machines of all time, #3 in fact. However, it illustrates something important.

Past success can quickly and unexpectedly turn to a future of disappointments precisely when the future looks to be incredibly bright, even for the most dominant company of the time!

If the future looks bright, it’s probably fully priced in, as complacency is setting in. Don’t wait for fortunes to reverse because it won’t be easy to see it happening, except in hindsight. There are thousands of old and emerging profitable ventures and industries all over the world to diversify into!
LONGSHOT BIAS: Inferior Perception and Preferences

On the other end of the spectrum, when it comes to small companies, it’s naturally tempting to root for the underdog and hold out for that rags-to-riches story. Sadly, those long odds are well documented to draw out a gambling impulse, in part because people aren’t good at discerning between small and tiny probabilities. While the house always wins, millions of horse races around the world find the greatest mispricing and thus the most horrible returns for the least likely propositions, as the graph below shows. When something seems like a 1-in-10 chance, quite often it’s 1 in 20, or maybe even 1 in 100!

Figure 5. The favorite–longshot bias (Snowberg, Erik and Wolfers, Justin, Explaining The Favorite–Longshot Bias: Is It Risk-Love or Misperceptions?, National Bureau of Economic Research (2010))
While small stocks as an asset class are expected to outgrow and outperform their larger market counterparts **in aggregate**, that hardly holds true for a single small company/stock. **Being a small fish in a giant ocean means that there’s danger lurking around every corner.** Unfortunately, the odds for a single small stock are quite terrible, even in the short run.

Lottery-like prospects come with lottery-like chances and much greater downside volatility. Investment volatility and risk go hand in hand.

**Volatility is the primary driver of the amount and speed at which you ought to diversify, not your cost basis.** The biggest problem with single stocks is their high and idiosyncratic risk, directly increasing the potential for catastrophic losses. While “market risk” reflects the chances that stocks decline in unison, “idiosyncratic risk” reflects the unique financial, investment, and operational challenges that could be detrimental to performance of a single stock, like executive failures, accounting scandals, better or aggressive competition, and even company culture.
Greater expected volatility directly leads to greater potential for losses and much higher chances of catastrophic losses. With linearly increasing losses, the stock subsequently has to gain exponentially larger amounts to fully recover. Quite quickly, these losses become insurmountable.
Thus the potential for catastrophic and insurmountable losses is much higher with single stocks than with a diversified portfolio.
VOLATILITY TRUMPS UNCLE SAM

Everyone’s heard the saying that nothing is certain except death and taxes. However, investors with concentrated wealth tend to think they can out-will the tax liability. People often say, “I understand the risks, but I just don’t want to pay Uncle Sam right now.”

Typically, if you’re 65 or younger, even if you bought the stock for a penny, it’s optimal to sell and broadly diversify 85-90% of it.8

Taxes always take a distant second to appropriate asset allocation, where diversification is the first and unequivocally most important step. Let’s explore why.

Figure 8. Change in diversification level (Association of Investment Management and Research)
Note: Based on the following assumptions: expected return, 10%; benchmark volatility, 14%; beta, 1; tax rate, 20%; horizon, 20 year; risk-free rate, 6%
VOLATILITY IS THE PROBLEM, AND DIVERSIFICATION IS THE ULTIMATE SOLUTION

Diversification can help reduce the risk of a 25% drawdown by 4-5x (from 40-60% with single stocks).

How? **Diversification spreads both the return opportunities and risk exposure across multiple industries and asset classes.** It works on both company and macro levels.

- **On a company level,** diversification helps the portfolio capture more opportunities offered by all the up-and-comers and new industries. On the defensive front, it also reduces risks, like poor management or obsolescence, since in our highly innovative world, today’s top-dog darlings like Amazon and Apple can suddenly become tomorrow’s laggards, like HP or Kodak.
• **On a macro level**, it helps one diversify across industries, geographies, market cap segments, and other asset classes.

There’s a lot more to robust portfolio construction than throwing a dozen or even hundreds of stocks together. This is because a robust portfolio:

• Must protect against a variety of possible outcomes (growing economy, inflation, deflation, stagflation, etc.).

• Can be tilted toward favorable asset classes like small, value, and quality stocks.

• Can incorporate specialized, uncorrelated, hard-to-access asset classes like reinsurance and marketplace lending.

Robust portfolio construction is a vast topic that could fill many books, and we’re happy to talk to you about this if you’d like to learn more.

Now that you understand the benefits of diversification and how inferior and dangerous concentrated stock exposure is, you’re probably wondering how to best transition into a diversified portfolio. How do we bridge concentrated wealth and diversification?
Typically, the best choice is to diversify most exposure as soon as possible, but everyone’s situation is different. Of course, at Merriman we take taxes and expected volatility into account when customizing solutions to your specific circumstances. However, all of the following factors matter when it comes to figuring out how quickly to divest concentrated stock.

- Stock volatility
- Your investment horizon
- Cost basis
- Excess return expectations
- Even investor stubbornness!

Many more factors should be considered when developing a holistic investment plan that reflects your long-term goals, constraints, preferences, and circumstances. A financial advisor can help determine the best investment plan for your situation.

**It is often possible to hedge the stock by using publicly traded options to limit the downside and leave some upside, and let the stock help pay capital gains taxes.**

What hedging options are available?

- **Prepaid Variable Forwards** (PVF) are one instrument that can be used, but it comes with a lot of flaws, hidden costs, and major conflicts of interest between counterparties.
While not a hedge per se, **contributing your stock to an Exchange Fund** may defer taxes, reduce risks, and provide diversification as concentrated stock exposure is swapped for a broadly diversified basket of securities. However, it comes with **greatly limited liquidity** because the shareholder must typically remain in the fund for at least 7 years, and is only available to “**qualified purchases**” (more than $5 million in investable assets).

**Buying a protective put** in the options market is a better and much more direct way to limit downside as it cuts out the intermediary. **A put is a publicly traded financial instrument that acts as a simple insurance policy by giving the buyer an option (not an obligation) to sell the stock at a strike price of your choosing – typically 5-30% below the market price.** If at any point the stock declines below the strike price, you can exercise your put option to sell at the higher strike price, thereby limiting your downside. There’s a logistical need to actually have or generate some cash to pay for the puts, which takes us to the next and final route.

**The cashless collar** hedging option is typically the best. A cashless collar is a protective put purchase coupled with writing (i.e., selling) a call. The call is also typically sold 5-30% above the market price to:

- **Allow for some upside.**
- **Fund the put purchase with proceeds from the written call.**

The “cashless” part of the name means the premium on
the written call roughly pays for the protective put. The upside allowed by the call can typically be made roughly symmetric to the downside allowed by the put. By selling the call, you give the buyer an option to buy the stock from you at the strike price, which limits your upside to the difference between the call strike and the current market price. The degree to which upside and downside can be dialed in to a specific amount (between 5-30%) is simply a function of what strike prices are traded for your specific company stock – generally at pretty granular increments.

Figure 10. Cashless collar

**WHAT ROLE DOES HEDGING PLAY?**

Hedging is not a way to beat the market or the tax man, but is a means to an end. **It’s a way to limit downside while proactively and intelligently divesting, diversifying, and protecting your wealth.**

- If the stock declines below the strike price, your downside will be contained, because you can sell at
the strike price and diversify into a superior, broadly diversified portfolio.

• If the stock price rises, we can revisit the merits of diversification and risks of concentrated exposure to decide whether rolling the hedge is still feasible.

However, we do not recommend implementing hedging on your own, because there are some potential pitfalls:

• Striking a put too closely to the market price can be viewed as a “Constructive Sale” by the IRS, generating a taxable sale event in their eyes!

• High volatility stocks may have overly expensive options, which can be judged by the implied volatility of the options, as well as the relative pricing of puts and calls.

• If your stock pays a dividend, then matters get even more complicated due to early exercise risk.

Understanding and reflecting all the relevant risks and factors requires relatively sophisticated modeling. That’s why we are here!

HAVE US RUN A CUSTOMIZED ANALYSIS TO FIGURE OUT HOW QUICKLY, OR HOW SLOWLY YOU SHOULD DIVERSIFY!

Reach out now and we’ll get back to you shortly.
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ENDNOTES:


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HAVE US RUN A CUSTOMIZED ANALYSIS TO FIGURE OUT HOW QUICKLY, OR HOW SLOWLY YOU SHOULD DIVERSIFY!

Reach out now and we’ll get back to you shortly.
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