

“If you are uneasy, welcome to the club.”

— Charlie Munger on 2/12/2020, before everything hit the fan

Life comes at you fast. Volatility came roaring back to the markets in an historic fashion. We sent out a [Special Update on March 16th](#) explaining the investment game plan. I won't fully rehash it here, but the short answer is opportunistic gradualism. We'll slowly accumulate businesses we've coveted for years as prices come to us. I'm hesitant to make any bold proclamations, as it feels like we're still in Act 1 of this particular saga. One-in-a-hundred year pandemics are bleak, yet this too shall pass. Howard Marks has a great line in one of his recent memos: “The investor's goal should be to make a large number of good buys, not just a few perfect ones.”

After a few years of being closed to new investors, Farnam Street is taking on new clients in anticipation of opportunities. Introduce us to your friends and family who could use a steady financial hand. Despite a recent bounce back in stocks, it's likely the storm is still brewing. Markets punish complacency. As the sage philosopher Mike Tyson once said, “Everyone has a plan until they get punched in the mouth.”

The rest of the letter will feel incongruent with the rapid inundation of developing storylines. Each day brings us new scary headlines of hospitalizations, contagion, unemployment, debt crises, and bailouts. Our species is choosing the best of bad options, as the faultlines of our fragility are laid bare.

Errors originate from blindspots. And emotional thinking is the shortest path to throwing on blinders. It helps to keep calm and focused by engaging what psychologist Daniel Kahneman calls System 2 thinking. Slow down. Be methodical. Prepare. Follow your game plan. Don't under- or over-react. Zoom out. Accept reality without bargaining.

Big Data

“It's what you learn after you know it all that counts.”

— John Wooden

How do we *know* things? Like “Capital-T Truth” know, for certain. It's scary to stop and think how many of your beliefs and lenses to interpret the world derive from what you were told as a younger self.

The scientific method was developed in the early 17th-century by an English philosopher named Francis Bacon. Before that, the “truth” was generally formed from guesses, mythology, and whatever authorities had to say on the subject. The Enlightenment wasn’t far behind as we gained tremendous insight into the workings of our physical world. And on its heels came the Industrial Revolution as we harnessed science for material improvement.

Theory, experimentation, implementation, commercialization. Rinse and repeat.

One of the key tenants of the scientific method is data collection. Generally, the more data, the better. We need a large and representative sample size (n) if we want to make predictions about a population or phenomena.

When it comes to the world of investing, a tremendous amount of data are generated, but the relevant n is often laughably small. Take market prices. We can look at millions of minute-by-minute squiggles of the ticker. But how big is our n for the major moves which truly matter? There have been sixteen bear markets since 1926 according to Fidelity. Any statistician worth their salt will tell you sixteen data points won’t generally provide much explanatory power. Our millions of daily prices show that all datasets aren’t created equal. So when I tell you these sixteen bear markets have lasted an average of 22 months and claw back an average of -39%, you should maintain a healthy skepticism. We simply can’t say much about any bear market, or bull for that matter. We’re muzzled by small sample sizes.

Keep in mind that facts are like radioactive material--they have a half-life³. Facts decay in a probabilistic fashion based on the domain where they reside. This makes reading widely and continually updating your “facts” of paramount importance. As Goethe said, “He who moves not forward, goes backward.”

How tall is Mount Everest? The exact height of the mountain changes by the second based on a balance of plate tectonics pushing up and wind erosion scrubbing off. That “fact” changed since you started reading this letter.

On the other end of the half-life spectrum resides physics. Aristotle had a description of facts about our physical world which persisted for centuries. We had improvements from Copernicus, Kepler, Galileo, and Descartes. Then along came Newton and calculus to change the game. Of course, Einstein’s relativity was next to kick over the apple cart. Who knows what follows and when, but there’s likely something after relativity in this millennium.

¹ Samuel Arbesman has a lovely book on the subject called [The Half Life of Facts](#).

If you're an ardent truth-seeker, where can you look to find a large enough n to give you confidence you're on robust footing? Where is the real big data?

Here are three possible answers, in order of explanatory power. I'll frame the familiar concept of reciprocity as viewed through these three prisms, and then provide the takeaways for an investment context.

1. The Inorganic Universe

"Time obliterates the fictions of opinion and confirms the decisions of nature."

— Marcus Tullius Cicero

The best guess is our universe is 13.7 billion years old. That's what an epistemologist would call an "empirically big-ass dataset." We can have reasonable confidence that shrewd analogies drawn from physics are likely to provide insights.

Newton's Third Law states that for every action, there is an equal and opposite reaction. In math, we call it reversion to the mean. Quite literally in astrophysics, what goes around (a planet) comes around. The universe seems to like to keep the score even.

2. Biology

"Nature uses only the longest threads to weave her patterns, so that each small piece of her fabric reveals the organization of the entire tapestry."

— Richard Feynman

Life has been on earth for roughly 3.7 billion years. The branching and evolving of life has generated an incredible number of interactions to catalog and decipher. It's our next best data set.

Evidence suggests that the eukaryotic cells that we're all made of originated when two simple bacteria teamed up together. One may have contributed protection and food with its lipid membrane while the other supplied energy as a mitochondria inside its new friend. It's notable that the recipe for your mitochondria comes solely from your mother's lineage.

This biological reciprocity conveyed survival advantages. Both sides were better off by the arrangement. We have a similarly symbiotic relationship with our gut bacteria. Tit-for-tat has been around for billions of years and has proven an evolutionarily stable strategy.

3. Human History

“If you want to go fast, go alone. If you want to go far, go together.”

— African Proverb

Recorded history goes back roughly 5,000 years to Sumerian cuneiform, however our species is likely ~2 million years old. Most of that time we roamed the savannah as small bands of hunter-gatherers.

A hunter-gatherer lifestyle served up a full helping of random chance. Some days you caught your prey. Some days you were skunked. And some days your prey caught you. Meat from your kill spoiled quickly³. One survival mechanism we evolved was to “store” meat in our fellow human’s stomach. When our hunt came up empty, a friend shared their kill, and vice versa. It was an early instance of insurance and we got good at keeping score. By coordinating our efforts and sharing the results, our cooperation improved our odds of survival. Nature wired reciprocity as genetic instinct.

Hence we hear the timeless wisdom of karma, the golden rule, or “an eye for an eye.” We have a highly evolved sense of when we’re being cheated, and a visceral fear of being ostracized from the tribe (the brain-chemistry cocktail known as “shame”). It was a literal death sentence during our formative years.

Drawing inference from three staggeringly large data sets, we can safely say that reciprocity is a solid building block of knowledge.

The investment consequences are profound.

Going All-In

Due to reciprocity, any economic organism, what we’d colloquially call “a business,” is only sustainable if all of its relationships are win-win. A business can take advantage of counterparties for periods of time, but eventually the other side will seek retribution. There are no examples of a business that can permanently cheat stakeholders. Zero.

² Interesting side note: humans are the only animals to cook their food. Cooking predigests food, increasing the bioavailable energy by up to 40%. The campfire was like an external stomach, perhaps allowing us to dedicate more resources to a bigger brain. Other apes spend 10% more energy on just maintaining longer alimentary canals to digest raw foods.

Management's job is to recognize how their business interacts with its environment, and then structure win-win relationships with six key counterparties, peeking at their cards to figure out what they seek³:

1. **Suppliers** - stability--if you keep them busy, they'll keep you price competitive
2. **Customers** - perceived value has to be greater than the price paid
3. **Employees** - financial and non-financial recognition, stability, the opportunity to own a house in a safe neighborhood, provide their kids' an education, and a reasonable retirement
4. **Owners** - investment has to provide superior returns, low risk, and long duration
5. **Regulators** - want to look good and not show up in the newspaper for allowing bad behavior
6. **Communities** - provide jobs, don't pollute their backyards

Win-win keeps other parties from searching for a Plan B. They feel safe to go "all-in" on the relationship. The normal distribution of outcomes of the dog-eat-dog world loses relevance.

Every miracle is an *all-in* phenomenon. Two simple bacteria Voltron to form complex life. A soldier lays down his life for his platoon. The crackling energy of an early start-up. The 1980 US Hockey team. True love. *All-in* is the magic ingredient.

It's a sad reflection of short-term thinking, but most publicly-traded companies routinely violate one of these win-win relationships. Too many managerial actions betray being all-in for their company. In these cases, they're instead all-in for themselves. Much of the commercial universe is uninvestable for those optimizing for the truly long game. They aren't sustainable businesses when viewed through our big data prisms. It's important to remember there are shades of gray whenever humans are involved. We can't abandon critical thinking; there are no pure angels or demons.

In summary, the big data of physics, biology, and history can provide us intellectual-terra-firm to interpret the diminutive dataset domains of the investment world.

³ Hat tip to a remarkably successful CEO friend who helped me appreciate the significance of this insight. He prefers his anonymity, but I'm forever indebted.

Quick Housekeeping Items

- Part of being a registered investment advisor with the State of California means providing compliance updates and disclosures annually. Here's where we keep the most up-to-date documents for our clients:
<https://www.dropbox.com/sh/sp5mqetpcwrjc1b/AABxGZXC6vKI-AFosZam6xita?dl=0>
- In March, we added a new team member to Farnam Street. **Brian Miller** was one of our favorite students from our teaching days at UC Davis's MBA program. Due to his aptitude and high moral fiber, we kept an eye on him and enjoyed watching his career blossom. Brian was an obvious fit after he expressed interest in joining our little firm. He'll be coming aboard as an investment advisor and will provide a much needed Bay Area presence. Welcome, Brian!

As always, we're thankful to have such great partners in this wealth creation journey.

Jake & Lonnie