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Thoughts for Investors

Darwin, Punctuated Equilibrium and the Stock Market

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During a speech at Carnegie Mellon¹, Tom Siebel, founder of Siebel Systems and now C3.ai, an artificial intelligence software platform company, referenced Stephen Jay Gould, deceased Harvard paleontologist and author of the theory of "Punctuated Equilibrium." I read about Gould more than 30 years ago and immediately sensed a connection between his theory and the actions of stocks and the stock market, as I will explain in this newsletter.

"When everyone is thinking alike, then somebody isn't thinking."

-Gen. George S. Patton

Charles Darwin is famous for his theory of "natural selection," a process whereby organisms better adapted to their environment survive while others go extinct. The flow of natural selection creates a balance or "equilibrium" in nature that seems efficient and rational. Equilibrium for the stock market is also the norm. Unfortunately, it can lull investors into complacency, making them mistakenly believe the stock market is also efficient and rational. Hence the widely accepted and no longer questioned use of index funds for "passive" investing. Many believe that with a "calculated" risk tolerance and financial plan, they can "automate" investing and allow the index funds to do the job of natural selection for them. Unfortunately, index funds are strongly tethered to what worked in the past and it takes time for them to recognize natural selection and change the stocks.

"What drives me every morning and what keeps me up every night is one thing: this business is not about longevity, it's about relevance."

-Satya Nadella, CEO, Microsoft

Gould, on the other hand, claimed natural selection didn't explain all of how we got to where we are. Gould's theory is that long periods of "equilibrium" are interrupted or "punctuated" by episodes of major change for which nature appears stuck in the past and inefficiently prepared for the future. Might COVID-19 be proof of "punctuated equilibrium" for the stock market? Did your financial plan account for a pandemic? Or 9/11? Did the indexes? Like dinosaurs, some industries, stocks and investments once thought invincible, were devastated by COVID. So were the portfolios of investors who automatically assumed what worked in the past would continue to work in the future. While longevity provides no guarantees, all is not hopeless. Pandemics don't come around very often, but innovation does.

"This time is different are, perhaps, the four costliest words in investment history."

-Sir John Templeton

Is Templeton implying that nothing ever changes? Ask Kodak shareowners. Kodak was too busy protecting their lucrative film business to recognize their "equilibrium" was "punctuated" by the innovation of the digital camera, a technology they invented then ignored! There is "change" and there is "different." Templeton wasn't saying things don't change. In fact, he created much wealth for investors capitalizing on the opportunities change brings. Rather, I believe he was warning against emotional reaction to change. The "fight or flight" response is no different today than in the days of the cavemen. Was it an "efficient" and "rational" stock market or an "emotional" stock market that rapidly declined and equally rapidly recovered?

"God gave us a brain so we could craft rational arguments for our emotional decisions."

-Hans Stroeh

Today, mankind demands a curated explanation for everything and science, technology, government and Wall Street oblige, accurate or not. Might emotion be the human trait we were given to cope with "punctuated equilibrium"?

"Go to where the puck is going, not where it has been."

-Walter Gretzky

So what should investors learn from the most recent episode of "punctuated equilibrium"? If you understand there will be more, you will be less surprised by the next one. Also, recognize that "punctuated equilibrium" often speeds up "natural selection." Are you an "active" investor, taking advantage of "punctuated equilibrium's" changes? Or are you a "passive" investor, still owning what worked in the past because you inherited it and fear the ghosts of your ancestors, don't want to pay taxes, or assume index funds will eventually remove the dinosaur bones? Kodak is no longer in the S&P 500. Tesla was only recently added to the S&P 500, after it had already risen some 14,000% from its IPO.

"The computer is a bicycle for the mind."

-Steve Jobs

With the help of the computer, the process of "natural selection" has enabled "cloud," "edge" and "mobile" computing. These have already changed many industries. The "punctuated equilibrium" of COVID sped up the maturation of their progeny: e-commerce, enhanced digital payment methodologies, faster distribution and logistics, "streaming" and even vaccine research. Do you own these beneficiaries of change? Or are you hoping the dinosaurs come back? "Telemedicine" was already addressing longstanding issues of transportation, taking time off from work, child care, waiting in an office full of sick people, access to specialists, and a shortage of medical professionals, especially in rural areas. COVID sped up telemedicine's acceptance and adoption.

Fear finally seems to be ebbing. While some "species" may never recover, others like work-from-home (WFH) and telemedicine are not going away. Though investors remain on edge, as evidenced by increased volatility, the absence of complacency is a good thing for the stock market. It's the animal not paying attention that gets eaten.

"It is a mistake to try to look too far ahead. The chain of destiny can only be grasped one link at a time."

-Sir Winston Churchill

In summary, I believe "equilibrium" in the stock market will return, albeit among the bones of companies that couldn't (or wouldn't) adapt to the hints from "natural selection." "Punctuated equilibrium" is always capable of extensive damage, especially to investors who expect "passive" index funds to "automate" their investing. Index funds take a while to adapt to "natural selection" and even longer to adapt to "punctuated equilibrium." How many telemedicine companies are in the S&P 500?

Also beware of believing in "market efficiency." During "punctuated equilibrium," even more human decisions are, unfortunately, based on emotion. Mostly efficient is still inefficient, and inefficiency can compound, leaving many investors, in the long run, unprepared for the future. According to Nerdwallet², the average 401(k) balance among 50-59 year olds is \$174,100. Is that enough for 20-30 years of retirement?

Take heart though! As long as there is innovation and not too much interference, there will be opportunity for humans to adapt to "natural selection" and "punctuated equilibrium." As we often say, we will worry about the stock market when mankind exhausts the capacity of the human brain. We humans have a lot of capacity to put to good use, as long as we "actively" use it and understand the power of emotion.

"Nevertheless so profound is our ignorance, and so high our presumption, that we marvel when we hear of the extinction of an organic being: and as we do not see the cause, we invoke cataclysms to desolate the world, or invent laws on the duration of the forms of life."

-Charles Darwin

¹https://www.youtube.com/watch?v=4le4gat6idQ

²https://www.nerdwallet.com/article/investing/the-average-401k-balance-by-age

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