Analyzing Current Behavioral Trends: Predicting Markets Through a Pandemic

By John M. Burkhardt

The disruption to the global economy and financial markets consequent to the COVID-19 pandemic is unprecedented in recent history. While some level of contraction was to be expected, volatility and unexpected swings have stymied many professionals. In the face of this, how can organizations chart a strong and stable course?

THE ISSUE OF VARIABLE BASELINES

Modeling markets has proven quite difficult over the last several months. This largely arises from the fact that it is difficult and likely impossible to establish any sort of meaningful baseline to model against. Government policy has been adjusted weekly, travel restrictions have shifted continuously, classes of business permitted to open have constantly changed. This would be challenging enough, but there is additionally the concurrent issue of a continually-evolving pandemic as well. Our understanding of COVID-19 pathology and morbidity updates daily. The comparatively stable baseline against which markets operate and people live their lives has become highly variable.

The challenge here is that a shifting baseline strips conventional models of their predictive efficacy. Perniciously, however, this fact is not immediately clear. Conventional outcomes and key performance indicators can still be measured by the same approaches normally used. Meaningful conclusions cannot be drawn from these measures, however. There is no reasonable way to determine whether an observed outcome is a consequence of market movement, baseline movement, or some combination of both, and so interpretation of any observed changes becomes more of an exercise in reading tea leaves than genuine quantitative inference.

Because conventional models break down under variable baseline conditions, one must rely on understanding the biases and behaviors of individuals to arrive at useful predictions of future market activity. Instead of attempting to model the market as a whole, it is more fruitful to examine the activities of the individuals whose decisions and resources collectively make up the market. This is a considerably more granular and therefore intensive process, but one that allows for substantially more analytical flexibility and robust predictions.

DETERMINANTS OF BEHAVIOR

Human behavior under risk is driven by a consistent set of rules and heuristics, a consequence of evolution that served to keep our ancestors alive during a considerably less forgiving epoch. That modern humans seldom face survival pressures anymore is immaterial; these rules are hardwired into our brains. Central to this discussion are three interconnected phenomena: minimization of uncertainty, behavioral inertia, and loss aversion.

Much of human behavior is driven by a generalized dislike for uncertainty. In an unstable environment, people will tend towards behaviors that are rooted in certain, easily understood information, and simplify their mental processing as much as possible. This functions as both a driver itself, leading to the exaggeration of existing behaviors, as well as an informational cue to engage downstream heuristics. Unfortunately, it is nearly impossible to predict which behaviors will become entrenched and exaggerated during a crisis, only that some will. This is due to the founder effect phenomenon. Classically described as a loss

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of genetic variance when a small number of individuals establish a subsequent population, here the founder effect describes the loss of behavioral variance when an initial behavior, such as hoarding toilet paper, propagates within a group.

The continuation of established behaviors is also governed by behavioral inertia. This is defined as the general tendency for people to persist in what they're already doing, minimizing mental effort. Inertia becomes particularly relevant in understanding the likelihood of adoption of new behaviors. Finally, loss aversion governs most comparison-based decisions. In the face of multiple options, individuals tend to pursue wins that are most certain regardless of magnitude, and losses that are least painful regardless of probability.

Contrary to popular belief, people's attitudes and intentions are comparatively unimportant in driving their behavior. While comparatively easy to measure, attitude is a remarkably poor predictor and driver of behavior. As such, predictions based on the consumer confidence index and related measures are less useful than one might hope.

WHY TOILET PAPER?

A common question over the last several months has been: Why toilet paper? What made people fixate on toilet paper and frantically hoard it, to the point of creating an artificial shortage? The hand sanitizer shortage is something that people can generally understand, but ... toilet paper? As it turns out, this is an excellent question for examining and understanding what's driving a large array of behaviors that have been occurring during the pandemic, and helps identify the types of predictions that can be made about human behavior in the coming months.

At the root of this is people's intrinsic dislike for uncertainty. While human brains are good at making decisions around very likely and certain outcomes, they're considerably less adept at handling uncertainty. Consequently, individuals tend to seize onto any fragment of certainty encountered and anchor actions there.

In the initial phases of the Coronavirus outbreak, very little was known about its relative risk and how best to respond, a recurring theme throughout the pandemic. Appropriate individual actions were unknown. It was widely reported that gastrointestinal symptoms were an indicator of infection, and early news reports advised having toilet paper on hand in the event of infection. This amounted to a founder effect of sorts. As the first wave of buyers descended on stores, social proof compounded by loss aversion engaged. All these other people are buying toilet paper; there's so little left on the shelves; I need to buy some now. As supply at the time was largely inelastic, there was no way for the market to attenuate this feed-forward response.

There are strong parallels between this and the gasoline shortages in the early 1970s. Both cases witnessed a utilitarian commodity of limited availability being hoarded during a period of global uncertainty. Commoditized, utilitarian behaviors have a much greater propensity to spiral out of control.

The import of all of these contributing factors becomes even more clear when examining a more recent question: Why can people be persuaded to buy toilet paper but not wear masks? Beyond the fact that buying toilet paper is an established behavior while wearing masks is not, minimization of uncertainty again has outsized impact in influencing behavior. In the United States, initial guidance suggested that masks were ineffective—recommendations to wear masks came weeks later. There have since been conflicting reports on mask efficacy from various health agencies. All of this reduces the perceived certainty around masks, which in turn diminishes the trend to wear them. Social proof again comes into play, but here it works against the behavior. The lack of uniform social behavior reduces the propensity of individuals to wear masks. Toilet paper, on the other hand, has never been subject to any of these pressures—no one in modern history has ever suggested that toilet paper shouldn't be used.

WHAT'S ON THE HORIZON?

Knowing all of this, what trends can be extrapolated? While it's unclear at the time of this writing whether there will ever be a full return to pre-pandemic normal market and social behaviors, the activity level emerging from the lockdown and stabilization of behavior will occur in a gradated fashion. In the initial draft of this article, it was postulated that the initial re-emergence of normal market activity would occur over the next four to six months. However, this estimate quickly became obsolete as domestic infection rates spiked, offering a clear illustration of the variable baseline issue described above.

It appears more and more likely with each passing day that much of the market disruption that has occurred will persist even after COVID-19 is not a top-level concern. Current practices have persisted long enough to acquire inertia—that is to say, they are new baseline behaviors. This is readily observable in sectors such as commercial real estate, business travel, and green behavior initiatives such as reduction in premises and institutionalized work-from-home policies. It will be most relevant, however, and most impactful, in personal financial behaviors. A "new normal" for personal behaviors has not yet coalesced, but the relevant determinants of behavior are clear, and extrapolations can be made.

The future movement of the financial markets is remarkably difficult to predict with any specificity, due to continuously emerging factors such as the opening and closing of borders, spikes in infection rates and government responses to them, and the amount and nature of federal relief packages. It is clear that the U.S. stock market in general will suffer at least one additional major dip, which at the time of this writing in July of 2020 may already be occurring. Volatility will remain high

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but gross trajectory will be downward. From this and the last six months, strong predictions can be made around the population response.

A BRIEF SNAPSHOT: 20 MINUTES INTO THE FUTURE

By way of example, one can expect to observe a change in individuals' financial behaviors in a complex and binary fashion. While superficially it will appear to be a divergence of haves and have-nots, in fact the determining factor will be debt. Avoidance of risk and loss will be a major determinant; individuals with the means to do so will contract their personal debt as much as possible so as to minimize risk exposure. They will also tend to pivot to more stable investments, resulting in the sale of high beta securities and aggressive growth funds. While the traditional market haven in uncertain times is U.S. Treasuries, it is not clear that this will hold true for individual investors. The concurrent anti-police and anti-government protests in the wake of George Floyd's death serve as something of a wildcard here. Source credibility with the U.S. government is low, so government-backed bonds are not as attractive an option as they historically have been. Cash may become a commonplace holding.

In marked contrast, those with significant debt and without the means to reduce it will accumulate even greater debt. This will be facilitated by reduced and lost employment, as well as poor understanding of the specific requirements of the relief provided by the CARES Act. Moreover, in loss-certain and aversive scenarios, it is known that individuals become much more speculative and willing to take on further debt, gambling on spending their way out of insolvency against a high probability of default. Among active investors in this population, speculative investing and short positions will increase. Barring an extension of CARES, one can expect to see a surge in individual and small business bankruptcies during the second half of 2020 as overextended accounts come due.

This is expected to facilitate a tightening of credit spreads beyond what is already being observed, as well as a general contraction of interest rates. If unemployment remains elevated through the end of 2020 (a likely outcome at this juncture), one can expect the changes in personal financial behavior to move from being reactionary to becoming entrenched, and credit spreads and interest rates will remain depressed for the indefinite near-term. Depending on how long businesses remain closed or at reduced capacity, there may also be sufficient reduction in spending over a sufficiently long time such that negative interest rate policy becomes a realistic discussion. This will be heavily affected by the outcome of the November presidential and congressional elections, a topic too broad and complex to discuss here.

Institutional behaviors are generally prone to greater inertia than individual behaviors, and generally show lower magnitude of change, even in crises. However, at a certain scale of crisis, the seismic shift in environment can create rapid adjustments in even the largest organizations. On the institutional level, three general classes of actors are expected to emerge to shape the coming months: those without means, those with means, and those with means and appetite. Organizations without means—i.e., those with limited cash reserves, significant debt, and products and services that are in low demand through the pandemic—largely will serve as fodder. The current wave of corporate bankruptcies (600 in June alone) is unprecedented in recent history. This will both feed the distressed asset market and facilitate a divergence in surviving organizations. Most organizations will be expected to display normal risk-averse behavior, minimizing loss exposure and expenses.

However, organizations with risk-positive tendencies will become even more so. Key predictive factors include an existing expansion mindset and aggressive leadership. Risk-positive behaviors will be amplified, effectively creating an acquisition-minded subset of organizations displaying gambling behavior. Small and mid-sized organizations will face a substantially-increased risk of predation, and there will be a substantial amount of consolidation within sectors over the next 12 to 18 months.

SUMMARY

Traditional predictive tools are not built to deal with the variability the world currently faces. The COVID-19 pandemic amounts to a prolonged black swan event, for which one must look past conventional assessments to arrive at any level of confident predictions. Behavioral analysis factors for biases and heuristics designed specifically for uncertain evolutionary contexts, and these heuristics are the primary drivers of market participants' decisions at present. Through understanding the most likely behaviors of individuals, it becomes possible to arrive at an aggregate understanding of market outcomes. ■

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