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UNCERTAINTY AND THE OODA LOOP

In everyday conversation, 'risk' and 'uncertainty' are virtual synonyms, but in reality they are not the same. In 1921, an economist at the University of Chicago, Frank Knight, drew a bright line between the two. Risk arose when more things *could* happen than *would* happen and the things that could happen were quantifiable. A 'risk' could be bounded based on its observed incidence. For example, the number of Category-5 storms in the Atlantic in a given hurricane season is a fairly well-behaved series. Uncertainty, on the other hand, pertained to events with an unknown distribution. Asteroids, earthquakes and volcanic eruptions all stem from undetermined processes. What Knight observed was something insurers have always known. You can insure property for hurricane damage, but not meteor strikes. Knight's dichotomy was so trenchant that economists now refer to unknown unknowns as 'Knightian uncertainty.' Investors are normally very comfortable with risk. Immense human (and non-human) intelligence is deployed to model and assign probabilities to outcomes. As a result, price discovery in financial markets is normally a smooth process. Investors do not cope well with uncertainty.

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The puritanical risk engineers will point out that a global pandemic is hardly outside of our experience, so it is not a black swan. On the roulette wheel of potential events, there is definitely a slot labeled "Human Pathogen." Granted. Nevertheless, the new coronavirus has taken us closer to the edge of Knightian uncertainty than at any other point in our lifetimes. Like a driver who runs into a fog bank, many of the guideposts that we have used to establish our location, direction and speed have become hazy at best. To regain our bearings we have spent more time than ever reaching out to our network of managers, portfolio companies, public health experts, Wall Street traders and policy experts. From those conversations, several themes emerge. First, the Federal Reserve and Treasury's rapid actions have supported market functioning. Their steps to increase the supply of safe assets in the form of bank reserves have allowed markets to clear and prevented the initial panic from causing more long-lasting damage. Second, the fiscal support sponsored by Congress is helping tide over households and businesses temporarily dislocated by the quarantine measures. Third, our managers moved quickly to re-configure their portfolios to preserve flexibility to weather the storm. They have biased portfolios towards businesses with ample liquid resources and resilience to the disruptions. Fourth, almost all of our investing partners are concerned about the second- and third-order impacts of the quarantine. They are planning - as all businesses are - for only a gradual and halting resumption of normal activity levels. The extended recovery will likely lead to more solvency issues and, hence, opportunities to recapitalize companies that may need capital infusions. As a result, they are biding their time rather than plunging headlong into their prior positions.

Our sense, too, is that a measure of caution is warranted. The global economy will suffer a downturn in the second quarter that may possibly exceed the worst experience of the Great Depression. Despite the herculean efforts of our government to soften the blow, the wounds to businesses and households will be deep and take time to heal. Businesses are likely to emerge more cautious with respect to hiring, capital expenditure, capital structure and supply chain management. All of these measures will dampen earnings. Likewise, consumers are likely to curtail discretionary spending out of precaution if not necessity. One of the lessons of the Great Financial Crisis is how slow the recovery was, even after the worst of the credit crisis was over.

On the other hand, we're also mindful that crises can catalyze wide-ranging change for the better. Many innovations that have been gestating slowly for the past decade have been accelerated by Covid-19. We have all experienced how effective on-line collaboration tools have been in the workplace, education and medicine. Those habits may well lead to on-going productivity enhancements. We expect many more positive and transformative adaptations, that will only become evident in the fullness of time. John Barry's account of the 1918 flu pandemic, *The Great Influenza*, offers a case in point. It recounts how a small group of infectious disease specialists from Johns Hopkins relentlessly pursued the disease in laboratories across the country. Ultimately, the virus outran their best efforts. But their concerted efforts ultimately led to fundamental medical advances, such as the discovery of the genetic role of DNA. Human ingenuity and progress seem to find their origins in the kind of adversity we currently face.

As nature abhors a vacuum, so do markets abhor uncertainty. What rushes into the void are inchoate fear and unhinged euphoria. Tactical operatives in the military have a framework - the OODA Loop - for dealing with uncertainty amid the fog of war. OODA stands for Observe. Orient. Decide. Act. As your investment office, we are spending every minute processing new signals from the markets and the real world. We are recalibrating our investments to mitigate undue risk and prepare for any opportunities that may emerge.

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