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Managing Unforecastable Risk

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Noted economist Frank Knight formalized a distinction among various types of risk associated with uncertainty. He defined three levels of uncertainty. The first is the type associated with a roulette wheel- where it is not possible to know the final outcome, yet one can reliably define the probability of an event's occurrence. The second type of uncertainty is associated with statistical estimation. In this type of ***known*** risk, quantification of risk using statistical methods is possible. The example of trying to estimate liability obligations for an insurance company may be useful in this case. An insurance company knows that calamities and claims are inevitable, and can build a statistical model based on various parameters such as the number of people it insures, their age, previous driving history, and so on, to create relatively robust confidence intervals of the likelihood and magnitude of its obligations.

A third level of uncertainty has to do with essentially ***unknowable risk***, an unforecastable risk where there is no formula, equation, or model to address it- such as in the case of the coronavirus pandemic and its consequences felt all around the world. No one predicted the emergence of the coronavirus in China or its impact on the global economy and capital markets. The virus is an exogenous risk that is not part of any quant model for investing, an economic model for managing an economy, or a valuation framework for financial securities.

Who had a model of a global pandemic? Nobody did. Unknown risk is outside of any quantitative model, any Pareto model; it is outside of all the things that finance professors love to talk about. But this type of risk is also an everyday part of our lives. Each moment in time is different from all others and not repeatable. Every time I drive to work there is no guarantee I will arrive. We use routine to manage uncertainty. But routines are disrupted each day of our lives even though we often just ignore it.

So how does one deal with unforecastable risk?

The single most important risk management strategy for addressing unknown risk for investment management is an ***effectively*** **diversified portfolio**.

By its nature, not much can be done to address unforecastable risk other than being well diversified. Essentially, as long as the global economy eventually recovers, a globally effectively diversified portfolio will ultimately benefit

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investors. This means portfolios should be diversified in every sense- including avoiding concentrations in individual stocks and in geographic regions. Our current volatile, pandemic focused world is an example of a time where there might be a risk in one geographical region that we cannot possibly forecast given how things realistically evolve. For example, initially China was the epicenter of the pandemic but thereafter Chinese equity markets became more stable quicker than other developed markets.

New Frontier's signature innovation addresses accounting for uncertainty in the investment process, in order to build more robust, well-diversified portfolios. Our multi-patented optimization process computes thousands of possible scenarios, and selects the portfolio most likely to perform well given the many possible ways in which the future may unfold, resulting in better-diversified portfolios. The optimized portfolio, while not perfect, is much better than relying on a single imperfect scenario to address uncertainty. In addition, our optimization process enables us to incorporate the most up-to-date information and adapt to the markets as they evolve, resulting in rigorously diversified portfolios - across geographies, sectors, factors - that are designed to endure in many market environments.

Our goal at New Frontier is truly effective diversification for all different levels of systematic risk. The process of delivering a portfolio that is currently risk-return optimal requires data management, sophisticated optimization, and portfolio management technology. In both volatile and calmer times, a thoughtful, tested investment process designed to deal with uncertainty offers investors a sound, disciplined approach to the ubiquitous risk management issues in these unprecedented times.

This note was posted as an entry on New Frontier's investment blog on May 6, 2020. Read this entry and other posts at: newfrontieradvisors.com/blog.

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