Exogenous Risk vs. Endogenous Risk

[Factors of Market Volatility]

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Fancy Words, Simple Idea

One reason the investment business generates so much jargon is because some folks in it are forced to compete with rhetoric rather than results. But even truly talented players have difficulty avoiding jargon altogether, and some of the best minds in the business enjoy an edge precisely because they're skilled at approaching old problems from new perspectives. When doing so, they often cannot avoid coupling their novel ideas in unfamiliar terms. A good example is Dr. Horace W. ("Woody") Brock, founder of an Arizona-based consultancy named Strategic Economic Decisions. Polysyllabic to a fault, Dr. Brock has authored a number of superb analyses of important investment problems, the most recent of which focuses on asset allocation. More specifically, it focuses on the crucial question of whether US stocks purchased at today's prices offer expected returns commensurate with their risks. Not wanting to give away Brock's store, we will not publish here his highly provocative answer to this question. But we will restate approvingly the useful distinction that he draws between two very different forms of risk. And we will encourage readers with hefty subscription budgets to join the SED fold. [1]

What's New?

"Exogenous risk" is a fancy way of describing what most investors focus on when they ponder why securities move up or down in price. Public information gets reflected pretty rapidly in securities prices. Stock or bond prices may be unjustifiably high or low in relation to such information, but if the information is disseminated widely, then the safe assumption is that securities prices already reflect it. By definition, then, future price changes will be driven by "news" — unanticipated changes in economic fundamentals that cause investors to revise their estimates of securities' intrinsic worth. The more susceptible a security is to negative "news" — slumping sales, eroding earnings, and other fundamental problems — the more exogenous risk it embodies. And the more risk a security embodies, the higher its expected return, i.e., the lower its current price.

Out of the Closet

Having mastered the concept of exogenous or fundamental risk, we're ready to meet its overbearing sibling: "endogenous risk." Why is the latter overbearing? Because exogenous risk explains at most one-third of stock market volatility. Interestingly, prior to the 1990s, endogenous or non-fundamental risk wasn't discussed in polite company on Wall Street. The subject was taboo because the phenomenon that it engenders — "unexplained" volatility — was associated with the Wall Street equivalent of social disease: investor irrationality. But thanks to seminal work by Stanford's Mordecai Kurz and other financial economists, the manic-depressive behavior that behavior that
securities markets occasionally exhibit is now regarded (to quote Brock) "as a straightforward manifestation of Invisible Hand economics without any extraneous assumptions of investor irrationality." In other words, endogenous or non-fundamental risk has come out of the closet.

**Sources of Endogenous Risk**

"Genius," a wise man once said, "is the ability to invent one's own occupation." By this standard, Brock is a genius, because he makes a princely wage translating academic research into lucid prose that his institutional clients can readily comprehend. Among his many expository triumphs is a discussion of various ways in which endogenous risk gets created and nurtured. These include "correlated belief structures" (i.e., rational but ultimately unfounded premises on which large numbers of investors base their bets); leveraged investments (i.e., positions financed with borrowed money); and, most importantly, trend following. The latter phenomenon takes at least three distinct forms. The first is the investment equivalent of American football's "piling on": short sales by speculators acting on the belief that Newton's First Law applies to financial markets (bodies in motion tend to stay in motion). The second is the investment equivalent of insecure adolescence: uncertain in the extreme how to interpret certain information (e.g., a decision by the Fed to cut short-term interest rates), many investors become preoccupied with what their fellow investors are doing, discarding fundamental approaches to securities analysis in favor of purely technical ones. ("The trend is your friend.") The third form of trend-following is the investment equivalent of bad parenting, or what Brock refers to as "perverse incentive structures." By this he means business arrangements that cause investors to ignore fundamental developments in favor of more ephemeral considerations. The classic example is a money manager who abandons his discipline after a patch of poor performance for fear that clients will flee if his relative performance doesn't improve immediately. In this example, the bad parents are the clients, who've created an environment in which the manager is incentivized to act in ways inimical to their long-term interests.

**Relevance for TIFF Members**

Brock's work on risk is important for foundation fiduciaries because it highlights the importance of knowing the company that they keep. More specifically, it forces fiduciaries to ponder the absolute levels of exogenous and endogenous risk that their portfolios embody as well as these risks' relative weights. Why are the relative weights important? Because endogenous risk is more damaging to an investor's karma than exogenous risk. It's more damaging because the volatility it engenders can seem painfully capricious. It's one thing to have a stock plummet in price due to an unexpected change in a company's fundamentals (e.g., a new competitor comes on the scene) — when exogenous risk of this kind rears its ugly head, an investor penalized by it has the small but important comfort of knowing exactly what's gone wrong. But when endogenous or non-fundamental risk rears its ugly head, investors often have no idea what's hit them. Brock's favorite example of such blindsiding is the sudden collapse of government bond prices throughout the developed world during the first half of 1994. Ex-post analysis
suggests that bond prices collapsed primarily for endogenous reasons: a modest change in economic fundamentals (i.e., exogenous "news") caused a modest correction, which caused reflexive selling by leveraged speculators, which in turn engendered multiple waves of trend following as defined above. In other words, bond prices fell by a magnitude unexplainable by changes in "the fundamentals" — accelerating GDP growth, widening government deficits trends, and the like. The important point is this: because endogenous risk tends to be "unfathomable and inexplicable" (Brock's words), investors rightly demand a higher return per unit of endogenous risk than they do per unit of its less capricious sibling.

**$9 Trillion Question**

We come now to the $9 trillion question ($9 trillion being the aggregate capitalization of US stocks). To what extent do today's unprecedentedly high stock valuations reflect a decrease in one or both of the risks discussed above? Assuming, for purposes of discussion only, that at least part of the big run-up in the S&P 500 is attributable to investor perceptions that both forms of risk have declined, are these perceptions justified? No one can say for sure. What we can say with great confidence is that the S&P 500 is priced today at a level consistent with an abnormally low level of both forms of risk. Bonds, on the other hand, are priced at levels consistent with a goodly amount of endogenous risk, i.e., the spread between nominal yields and inflation is abnormally high. It is high, Brock suggests, not because investors believe the underlying fundamentals are deteriorating but rather because they're abnormally uncertain about which fundamentals truly matter. Unemployment rates, CPI trends, gold prices, the dollar's foreign exchange value, Alan Greenspan's marital status: investors today are highly perplexed as to which fundamental factors truly matter in determining the true worth of fixed income instruments. Fearful as they are that their "model" of how the world works will prove flawed, bond investors today demand abnormally high real yields to compensate for abnormally high endogenous risk. Long-term investors thus confront a paradox: today's bond market rewards them for bearing risk that they really shouldn't mind bearing (i.e., short-term endogenous volatility), while the US stock market pays them little or nothing for bearing risk that they really should mind bearing (exogenous volatility). Differently put, the asset class that has become dominant in most "long-term" portfolios carries a price tag which presupposes almost no "bad news" moving forward, while the asset class that has lagged historically carries a price tag which presupposes continued unpleasantness.

**To Thine Own Self Be True**

Now more than ever, foundation fiduciaries must ask themselves just how long their investment time horizons truly are. Ironically, the more confident they are that they can withstand short-term embarrassment, the more they should consider shifting funds on the margin from stocks to high grade bonds — especially if they have not rebalanced their asset mixes for a while. As Brock's cogent analysis reveals, Treasury notes priced at current levels arguably reward investors for bearing endogenous risks that are not
relevant over decade-plus time horizons, whereas the S&P 500 provides no comparable "free lunch."

Endnotes

1. The firm's phone number is 480-883-3200.