Value, Growth and the Limits of Our Investment Knowledge Taming the Uncertainty Monster
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Meet the monster

“Doubt is not a pleasant condition, but certainty is absurd.”

- Voltaire

There are people in the investment community who claim to know things with a level of certainty that is unjustified. They develop rules-based investment strategies grounded in their views about “how things work.” Yet their strategies fail to recognize the complex and dynamic nature of the financial markets, undermine the credibility of our industry and, ultimately, could harm clients.

Investing is not a hard science. Water freezes at 32 degrees. Hot air rises. Throw a ball in the air and it falls back to Earth. In the hard sciences, there are rules that always apply.

Investing involves putting your money at risk in one of many markets – stocks, bonds, real estate, commodities, art or rare coins. All of them are complex systems driven by the collective behavior of millions of human beings. They reflect our rational nature, our emotional nature and our ability to learn from the past and adapt to what we learn.

It is extraordinarily difficult to develop hard and fast rules about how markets will behave. We don’t know what events will unfold or how investors will react to them. We don’t know how fear and greed will manifest themselves. We don’t know what lessons people will draw from the past or how they will change their behavior to take those lessons into account.

We can develop guidelines based on our observations about the past, but in the investment world there are few equivalents to “water freezes at 32 degrees.” All investment decisions involve an element of uncertainty.
No matter how hard we try, we can't make it go away.

Environmental scientists have a similar problem. Their task is to study and understand the behavior of another enormously complex system and make recommendations to policymakers whose job it is to save the world. They study the environment with all the tools available to modern scientists. They use their immense computing power to develop models that attempt to simulate reality. They run scenarios. They calculate probabilities. They propose theories. Still, they do not fully understand the environment and cannot reliably predict its behavior.

Professor Jeroen van der Sluijs of Utrecht University in the Netherlands coined the term "uncertainty monster" to describe how the scientific community responds to the uncertainties that arise from the study of the environment. He borrowed the monster metaphor from Dutch philosopher of technology, Martijntje Smits. Georgia Tech professor and climate scientist Judith Curry popularized the uncertainty monster concept in this country.

The uncertainty monster inhabits our world just as it does the world of environmental science.

Uncertainty, itself, is not the monster. The monster is within us. It raises its head whenever we try to deny uncertainty, disguise it, contain it or hide it from view.

The monster is dangerous. It leads us to believe we have figured things out, know the rules and can relax. It causes us to be confident when we should be cautious. It creates blind spots. It causes us to act mindlessly when we believe we are acting prudently.

Ultimately, the monster harms our clients because it causes us to communicate untruthfully and set expectations inappropriately. It raises false hopes. It undermines trust – the foundation of all relationships. The advice we give becomes mechanical rather than thoughtful.

**Wrestling with the monster**

“Essentially, all models are wrong, but some are useful.”

-George E. P. Box

The uncertainty monster exists because humans do not like uncertainty. In studies, people will choose to receive a definite electric shock now rather than the possibility of a shock later. However, people do differ in the degree to which uncertainty bothers them. Some tolerate it well while others are “allergic to uncertainty,” according to professor Michael Dugas.

Dugas, a psychology professor at the University of Quebec, is one of the architects of the intolerance of uncertainty scale (IUS), which was developed to measure the differences in individual tolerances for uncertainty. He described those who demonstrate a higher level of intolerance for uncertainty based on their IUS score as having a “cognitive vulnerability.” This vulnerability can cause them to engage in “certainty-seeking behavior.” They may try to impose a level of order and predictability on a situation or
a set of facts that is simply not justified.

Many people in our industry have a high intolerance for uncertainty. They mine data, develop models, discern patterns, calculate parameters and establish rules all with the goal of taming the monster. By quantifying uncertainties, they make them seem more certain. They use the cloak of rationality to smother the beast. Van der Sluijs calls them “monster exorcists.”

Our clients don’t like uncertainty either. They have worked hard to build financial security and don’t like the idea of having it swept away by the financial markets. They look to us for help. They appreciate our guidance, but what they really yearn for are answers. It is tempting to ease their anxieties by saying we have answers even when we do not.

It’s not that we should abandon our efforts to apply scientific methods to better understand the financial markets. But we should be cognizant of and acknowledge their limitations. Markets are not made up of molecules. They are not subject to gravity or other physical forces. There are no simple solutions. We should avoid the urge to suggest that there are.

**The monster at work**

“It’s not what you don’t know that kills you, it’s what you know for sure that ain’t true.”

-Mark Twain[1]

Much has been written about the “factor zoo.” The term refers to the hundreds of data-mined regression-driven patterns and anomalies that might provide an edge to an investor who capitalizes on them. Most have been dismissed as useless by those who study the ripples on the pond of history.

One factor stands out, however. Virtually everyone nods their head in agreement with the statement “value stocks outperform growth stocks.” We speak uncritically about the “value premium,” and many asset managers and financial advisors build portfolios with permanent value tilts because they believe that “value beats growth.”

In fact, they are certain it does.

The idea that value beats growth is anchored in the now-famous research conducted by Fama and French covering a relatively brief period from 1963 through 1990. They segregated the universe of stocks into categories based on the ratios of their book values to their market prices and found that what we now call “value stocks” performed better than growth stocks over the study period.

But there is no such thing as a “value stock.”

Stocks can and do move in and out of the “value” category over time. Fama and French reconstituted their “value” portfolio periodically based on the criteria they established for the category. The value indexes we use today are also reconstituted periodically. Value is a moving target.
When we talk about “value” today, what are we talking about? Different value indexes contain vastly different stocks. The S&P Small Cap 600 Value Index is comprised of 455 stocks while the Russell 2000 Value Index is comprised of 1,354 stocks. The definition of value is not fixed.

Value is an abstraction, not a real thing. It is a collection of stocks issued by companies that have little in common other than their price-to-book ratios. The Russell 1000 Value Index, for example, contains oil companies (Exxon), tech companies (Intel), banks (Wells Fargo), railroads (Union Pacific) and companies that sell jelly (JM Smucker), toothpaste (Colgate-Palmolive) and soda pop (Coca Cola). Last year the best performing value stock gained over 93% while the worst performing lost over 80%. On a five-year basis, the best performing value stock gained over 44% on an annualized basis while the worst performing lost over 30%. Talk about diversity!

Take a look at the stocks that comprise the Russell 1000 Value and Growth Indexes and you will find that the value/growth distinction is fuzzier than you imagined. The Russell 1000 Value Index contains 695 stocks, and the Russell 1000 Growth Index contains 608 stocks. Examine their constituent stocks closely and you will find that 293 stocks appear in both the Value and Growth indexes, albeit in different weightings. Apple is both a value and a growth stock!

“OK,” you say, “maybe this value/growth distinction is a bit fuzzy, but value, no matter how you define it, still beats growth, right?”

Well, it depends.

In the 26 years since the original Fama and French research (1990-2015), growth has outperformed value in 12 of those years (46%) while value outperformed in 14 years (54%). On a rolling five-year basis growth outperformed 48% of the time while value outperformed 52% of the time. When value outperformed growth it did so by a larger margin, so it still won on an annualized return basis. To a client this might look like two mediocre football teams duking it out. One scores more points when it wins, but neither is dominant.

If you look at the most recent 13 years (2003-2015), the period since the tech-wreck, a different picture emerges. Growth “won” in six of those years and value “won” in seven. However, if you measure based on a five-year rolling return basis, growth outperformed 82% of the time while value outperformed only 18% of the time. Over that period growth produced an annualized return of 9.6% compared to value’s 8.7%. When does the exception become the rule?

All this history is interesting, but what does the future hold? No one knows. There is no generally accepted explanation for the underlying source of the so-called “value premium.” Even value’s strongest advocates offer multiple possible supporting theories for its existence. We know why water freezes at 32 degrees, but we don’t know if the value/growth patterns we have observed in the past will repeat themselves in the future. We just aren’t certain.

**Learning to live with the monster**

“There are very few monsters who warrant the fear we have of them.”
When we are in the grip of the monster, we confuse the abstractions we create with the reality they were intended to represent. The monster transforms insight into rote rules of thumb and, in the process, strips it of its richness and subtlety. It leaves us looking like clever school children, so proud that we can recite the thirteen colonies from memory.

No one likes uncertainty. Some of us dislike it more than others. Smits says, “We should…prefer to be led by objective data that have been checked empirically, realistic explanations and workable solutions.” But she warns that our desire for certainty “will probably be thwarted” and suggests that we adopt “an attitude that acknowledges the fundamental limits on what we can know, leaving room for the unknown.”

We are not scientists. We are more like navigators. Technical knowledge and the scientific method are important, but alone are not sufficient for a successful voyage. We need to acknowledge this reality and share it with our clients. To do otherwise undermines our credibility and leads our clients to believe that we have answers they will soon discover we simply cannot have.

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Scott would like to thank Smits, van der Sluijs and Curry for letting him borrow their monster and apologizes for taking so many liberties with it.

[1] There is uncertainty as to whether Twain actually said this. Michael Lewis, however, attributed it to Twain in The Big Short.