



Epsilon Theory

It was you, Charley

July 17, 2018



Charley: Look, kid, I— how much you weigh, son? When you weighed one hundred and sixty-eight pounds, you were beautiful. You coulda been another Billy Conn, and that skunk we got you for a manager, he brought you along too fast.

Terry: It wasn't him, Charley, it was you. Remember that night in the Garden you came down to my dressing room and you said, "Kid, this ain't your night. We're going for the price on Wilson." You remember that? "This ain't your night!" My night! I coulda taken Wilson apart! So what happens? He gets the title shot outdoors on the ballpark and what do I get? A one-way ticket to Palookaville. You was my brother, Charley. You shoulda looked out for me a little bit. You shoulda taken care of me just a little bit so I wouldn't have to take them dives for the short-end money.

Charley: Oh, I had some bets down for you. You saw some money.

Terry: You don't understand! I coulda had class. I coulda been a contender. I coulda been somebody, instead of a bum, which is what I am. Let's face it. It was you, Charley.

- *On the Waterfront* (1954)

This is Part 3 of the multi-part Three-Body Alpha series, introduced in the [Investing with Icarus](#) note. The Series seeks to explore how the increasing transformation of fundamental and economic data into abstractions may influence strategies for investing – and how it should influence investors accessing them.

	Economic Models	Behavioral Models	Idiosyncratic Models
Systematic	Security Screening Econometric GTAA	Trend-Following Momentum Value Factor Investing Mean-Reversion Statistical Arbitrage	High Frequency
Discretionary	DCF / DDM / Price Target Quality-Based Credit Work Growth Equity Relative Value Asset Value	Sentiment Value + Catalyst Discretionary Macro Other Trading Strategies	Activism Distress

Every professional financial adviser knows what it's like to be Charley Malloy.

I see that hangdog look on a lot of faces out there. It's not the face of someone who has endured a crash, mind you. No, I've seen *that* face, too. This is different. This is the face of someone who felt like he did what he was supposed to do. *I had some bets down for you, Terry. You saw some money.* But it still wasn't enough.

I've read a lot of articles and papers lately analyzing investor behavior and emotional states during and following periods of extreme stress. We know that people act differently [during](#) and after market crashes. There are [books](#) and [papers](#) written about the average biological and neurological impact of daily P&L on the human body. We observe how fear of big losses creates persistent structural returns for those willing to be short volatility (well, usually, anyway). If you want to understand the investor's brain after a crash, the existing literature has got you covered. But there's a lot less analysis and research out there about the petty ennui that comes from doing The Right Things to what seems like no good end.

But that is exactly the reality of every financial adviser in the United States since the Global Financial Crisis. Our decision-making may have been flawless. Our diversification may have been optimal for the instruments and mandate we had. Our education program peerless. Our rigor, our discipline, our adherence to process may have been consistent – obnoxious, even. Our returns were good. Really good.

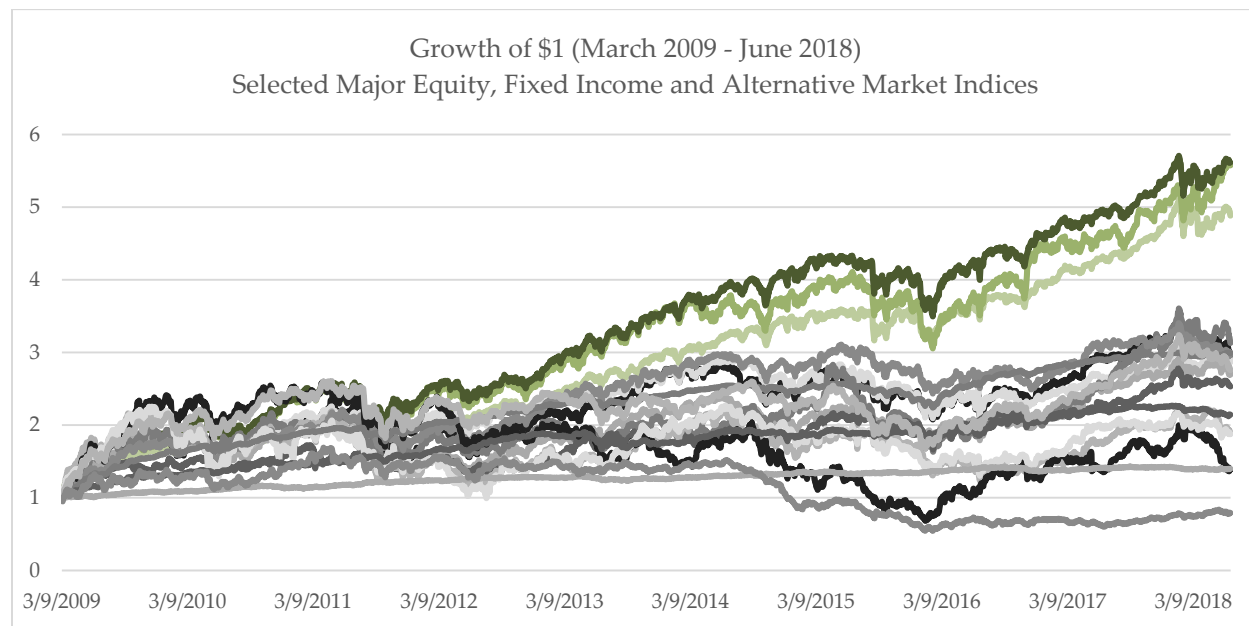
And yet every single thing we professionals did – you and I – probably made our clients less wealthy than they would have been had they done the dumb thing they would have done without our help.

Let's face it. It was us, Charley.

What do I mean? First, I mean that perhaps the strongest and most common bias of the modern American investor – the domestic equity bias – has outperformed everything for a long time. With perfect hindsight,

everything we did to diversify away from that bias hurt returns. Almost everything we did hurt risk-adjusted returns too. This is the kind of thing that usually gets explained away with some observation that you *could always* just look back in time and complain that you didn't just buy the asset that performed best. You know, those menu charts with the best performing asset class year-by-year for a decade. OK. But this is different, even if we want to say it's not different. **In this case, we can be pretty confident that most of our clients *really would* have bought a bunch of US stocks if it weren't for us.**

The chart below plots the difference in the growth of their portfolio if they had invested a dollar at the 2009 lows in a major US index (shades of green) vs. any other major equity, fixed income or credit asset class in the world (shades of gray).



Source: July 2018 Epsilon Theory, Bloomberg. You cannot invest directly in an index. Past performance is not indicative of future results.

It's a big gap. It's a big gap after being sliced and diced a dozen different ways. It doesn't change if we assume that the investor didn't invest until things recovered in 2010. It doesn't change if we assume that the investor sells everything after the drawdown in 2015. So massive, so broad-based has the rise in US stocks been over the last decade, that we could have just picked a stock in the S&P 500 at random in March 2009 and had a better than 70% chance of outperforming just about every major index in the world.

Before you say anything, you're right. There are a lot of reasons why this is a very stupid analysis. It's stupid because changing how we make decisions based only on the outcome of those decisions the last time we made them is a recipe for disaster. It's stupid because yes, sometimes the S&P 500 will be the top performing market among hundreds for an extended period for reasons that shouldn't inform our expectations about any sustainable premium. It's stupid because we will win for our clients in the long run by making informed, process-driven risk and diversification decisions, not by predicting the best thing we could have owned.

But you know why it's not stupid? Because the world is non-ergodic. What does that mean? It means that the path of wealth creation matters. It means that if the path we put our clients on takes them to a place they don't like along the way, they will fire us, stop following our advice, and do Really Bad Things with the money we don't manage anymore. There are good and bad responses to that. The typical response (and a bad one) is passive aggressive humblebragging. *Well, we tried to educate them, but they just didn't get it. Yet*

another client, lost to behavioral biases! Another risk-averse, political Board! Who wants clients with short-term mindsets anyway?

No. No to all of this. **It was us, Charley.**

I'm not saying professional investors and advisers should acquiesce and just buy whatever makes their clients comfortable. First, that's insane. Second, we are fiduciaries (or **will be soon**...or y'know, **maybe not**). But part of being a fiduciary (or part of being an ethical non-fiduciary), is treating those clients as principals. By shutting off the part of our brain that wants to educate them constantly. By listening. As I wrote in **Gandalf, GZA and Granovetter**:

It should also be a reminder to those of us with clients that it is important to listen to what they are telling us. About their desires, their intents, their motivations. The robo-adviser, style-box generation is happy to slot us into a category and tell us who we are. Even outside of this, the investment industry has constructed entire business models out of gaming characteristics to suit investor archetypes and the superficial things that are likely to attract them to buy. As an industry, we don't treat our clients like principals, and it's a problem.

In other words, if we're going to look after Terry's interests, we've got to have a good idea how he'll respond when things go wrong. But we also have to know what "things going wrong" means to him. Maybe it means "not getting the return of the best performing asset in the world", in which case you're on your own. **Godspeed**. More likely is that it incorporates a sensitivity to outcomes for both the portfolio and its sub-components. That it takes into account the client's perception of convention. That the more an adviser deviates from that perceived convention, the greater the scrutiny on outcomes. This goes beyond off-the-shelf risk matrices that many advisers rely on. It means knowing not just **how deep**, but **how different** and **how long** portfolio drawdowns can be before Terry throws in the towel.

I think about most of the above as a general rule – something that we can assume, by and large, is always true. But this series is focused on the concept of the **Three-Body Market**. Our thesis is that increased information flow and media have created a fertile environment for Narrative – both natural and artificial constructs of language and sentiment – to play a more significant role in the pricing of financial assets. It's not a thesis that **everyone agrees with**. But we believe that the increased role of narrative abstractions means that the outcomes we should expect from some investment strategies and portfolio philosophies may differ from what we have seen in the past. Perhaps substantially so.

To that end, other than, perhaps, Systematic Macro strategies, I believe the strategies that are and will be most heavily impacted by Narrative-influenced markets are Multiple-Based Value strategies. I'm using this term to refer to strategies which rely on multiple-based measures of cheapness of an issuer's security relative to some fundamental metric in ways that are heavily or completely systematic. That means quantitative value strategies, value style premium strategies and fundamental indexing strategies. More importantly, it also means portfolios built around static biases toward value indexes like the Russell 1000 Value Index. It does not mean value-with-a-catalyst, cash flow-based strategies or other discretionary value strategies, which will be covered in a later chapter in this series, although some conclusions will overlap.

Why is this important for the Terrys and Charleys of the world? *Because more than any decision professional investors make for their clients, I think, the decision about how (or how not!) to incorporate value investing into portfolios creates the risk of mid-course corrections and bad behaviors that ruin long-term wealth creation.* Even in ordinary environments, bets both **for** and **against** value can create deep, long-lasting drawdowns that cause portfolios to differ dramatically from client expectations.

In a Three-Body Market, we think that's truer than ever. Here's why.

Multiple-Based Value in a Three-Body Market

To understand the why – and to guide real portfolio decisions on the topic - let's first talk about how we think multiple-based value investing changes in a Three-Body Market. All of these are generalized, by which I mean that they don't take into account current price levels, growth expectations, demographic expectations, credit or business cycles or the like:

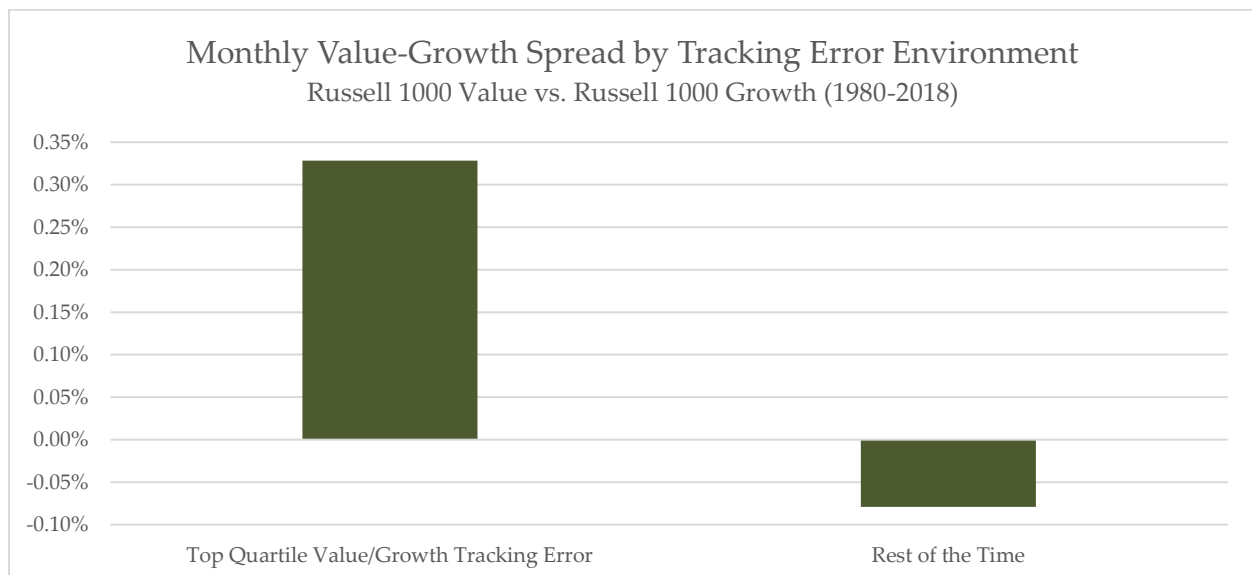
- **Greater Persistence in Regimes:** Because Narrative is an abstraction from the fundamental characteristics of an investment (often abstractions of abstractions), we think that its influence on asset prices can take far longer to change than most investors expect. In other words, Narrative is *not* a thesis that breaks and is discarded when a contrary fact comes to light.
- **More Episodic Risk and Return Profiles:** Because of the aims of those promoting them, investment narratives tend to be – *but are not always* – oriented toward stability, growth and positive expectancy. When they break, they break **gradually and then suddenly**.
- **Asymmetric Returns Among Descriptors:** Different forms of multiple-based value investment (e.g. book-to-price, earnings yield) are varyingly susceptible to the influences of Narrative, meaning that dispersion among and between these methods may be higher than historical levels.

In a very real sense, we are arguing that value will behave basically like it always has, but y'know...*more*. But for reasons that will be familiar to every professional investor, this is not an insignificant claim.

Narrative Persistence and the Episodic Nature of Returns on Value

First, bear in mind that value investing already tends to be episodic in nature.

What I mean is that a substantial portion of the returns to value over growth come in periods where the difference between value and growth has been elevated in the recent past. The below chart shows the average monthly spread between the Russell 1000 Value and Russell 1000 Growth indexes since 1980, based on the trailing 12-month tracking error between the two indexes.



Source: July 2018 Epsilon Theory, Bloomberg. You cannot invest directly in an index. Past performance is not indicative of future results.

Most investors usually think of value investing as *conservative*, or as an expression of humility about the ability to correctly predict the future. Of course, in certain environments it also gets recast as “bottom-fishing” or “junk”. And to be fair, there are huge gulfs in the various approaches to the style that would validate all of these characterizations at different points. But from the more important relative perspective (at least for our exercise), its most significant outperformance against growth tends to come in chunks when the direction of returns to value and growth are changing most dramatically, rather than in more ordinary periods.

In normal environments, I think this is frequently due to natural behavioral forces that take hold as benign economic and investment environments foster improved sentiment, robust risk appetites and willingness to bet on extrapolating growth (which bets are also, it should be noted, sometimes correct). Likewise, these behaviors can be the result of more artificial influence, such as central bank actors pushing investors out the risk curve by taking action with their own balance sheets. In either case, those behaviors tend to improve the superficial stability of a system while increasing its real instability. GMO’s Ben Inker described this well in his [Q1 letter](#):

Even if the natural volatility of the economy has fallen over time and even if policy response is better than it was 80 years ago, neither markets nor economies are all that well-behaved. Stability breeds instability, as Hyman Minsky pointed out 40 years ago. Statistically, we should expect to get periods of relative calm in any natural (or randomly generated) system, and those periods end. But beyond that, the calm itself encourages behaviors that eventually lead to highly volatile outcomes.

Much of what we think of as the return profile of value is often the result of the slate being wiped clean of those superficial sources of stability. These aren’t really so-called **Minsky Moments** – most are just garden variety cycles of fear and greed - even though some of the same forces are at play. It is also noteworthy, given the relationship between value/growth and sectors over the last several decades, that this is not uniformly true. The market props up junky \$10 stocks that should have been junky \$0 stocks sometimes, too, usually because there is some underlying instability within a ‘value’ industry being obscured by an external stabilizing factor (e.g. the US government’s desire for Oprah-style everybody-gets-a-house outcomes manifested through, I don’t know, about a dozen different policies). But by and large, when we bet on multiple-based value, we are betting on exuberance breaking down and calmer heads prevailing. The *margin of safety!* meme historically has a lot of truth.

So how does the increased sensitivity of market participants to Narrative change this? In a way, you could say it is yet another superficially stabilizing force that results in reduced real stability and occasional major growth/value repricing events. You wouldn’t be very far off, at least in terms of the outcomes we would expect. But the actual working of the effect is different. The effect of a particularly strong Narrative is to create resilience to changes in any number of states, fundamental facts or external factors. A strong Narrative doesn’t stabilize the price of a security or group of securities. **A strong Narrative insulates price from the influence of realities that conflict with that Narrative.** It is a **voodoo wasp**, replacing the independently functioning brain of a caterpillar/investor with a larvae/meme controlled clump of neurons, governed by simple intuition of whether events and facts fit the Narrative or not.



Narrative is metastability. And its purpose is the superficial appearance of robustness in the system.

Here's one example of what metastability looks like. On July 6, 2018, the Washington Post published a [piece](#) that revealed an increase in the pace of Twitter's elimination of fake/bot accounts. When the market opened on Monday, July 9, the stock fell sharply from Friday's 46.65 close before settling in just above 42. That is, until Twitter's CEO hopped on his company's flagship product to make sure everyone knew that the removed accounts were never part of the company's published metrics. Within about 10 minutes of trading, the stock had recovered half of its lost value from the original article.



Source: July 2018 Bloomberg. This is not a recommendation to buy or sell any security.

The whole affair – indeed, the whole adjusted user metric being discussed – is and was a complete cartoon. Within the cartoon, all of this makes perfect sense. Early morning discovery of just how much everyone thought everyone else cared about the WaPo piece, followed by a clarifying CFO/CEO tandem communication that cleared up a bit, and, well, we should probably discount this by a little bit just to show we're paying attention and not at all happy that we had to learn about this in the newspaper. How about we trim it back to, oh, exactly half the initial drop? Within this farcical cartoon, hundreds of millions of dollars in value were exchanged.

Outside the cartoon, an investor might reasonably ask, "Wait, is anyone else concerned that none of the other people who own this stock seemed to know what was included in that metric AND that 10% of this stock's value evaporated when that metric that nobody really seemed to understand *might* have changed?" But whatever. Buzz, buzz, fellow caterpillar.

And so it is that abstractions of valuation into metrics whose nature and relationship to real economic value we do not – cannot – understand can lead to persistence in a stock, sector or asset class's performance.

Metastability manifests in other ways, as well. The same day that WaPo broke their Twitter story, a competing media organization put out a note arguing that [Amazon is a value stock](#). Yes, that Amazon. You know, the one that trades in a range of 70-120x earnings? Let's take a live look at the author's reasoning:

Yet even at this valuation, all but one of 52 analysts surveyed by Bloomberg recommend owning the stock, and 48 of them say that investors should buy it and keep it, according to data compiled by Bloomberg.

Which makes Amazon something few analysts ever believed it could become: a value stock, fetching a modest price considering the company's opportunities for growth.

The rest of the piece is more of the same. “This stock has everything!” You could call it garden-variety exuberance about a stock that has dominated even the most aggressive investor expectations over the last decade (and in full disclosure, while I rarely have any stock-specific views, I have been super wrong about this stock for a super long time, so take that as you will). But I don’t think that’s what it is. **This is just straight-up gaslighting.** Take a gander at the closing number, which literally walks through an Intro to Security Analysis definition of traditional growth investing before calling Amazon “pretty much the definition of a value stock.”

“Two facts make Amazon unique,” said Jitendra Waral, a senior analyst at Bloomberg Intelligence. “The DNA of the company is to try to cut the number of steps to zero for a consumer to buy goods from Amazon. Amazon wins by constantly changing behavior through innovation. The company spends eight to 10 years to research new products so it always is thinking much ahead. Amazon’s end market is 16 percent of global gross domestic product, excluding China. To put this in context, if Amazon’s end market was the Empire State Building, it still is on the third floor. This gap creates plenty of return-on-investment opportunities for their long-term investments.”

That’s pretty much the definition of a value stock.

Now, look. I get that there are all sorts of Graham & Dodd intrinsic value schools that often have nothing to do with Multiple-Based value other than the name. But come on. This is a Missionary telling investors that this stock has more room to go – that it doesn’t need to be taken out to slaughter when tech/growth/expensive stocks get their comeuppance. That it can be thought of as something else. Anything to keep the run going.

And it can. The metastability that comes from strong Narratives around investments **can** sustain lower volatility and positive returns through all sorts of changes in fundamental realities. And yet, in the end, it comes to the same thing: one day, the story breaks, and you’re left with fractional ownership in a company with actual revenues, expenses and cash flows. The only difference, I think, is that it will typically take longer to do so, and with some risk that the gap between cartoon and reality is wider when it does.

The Uneven Influence of Narrative

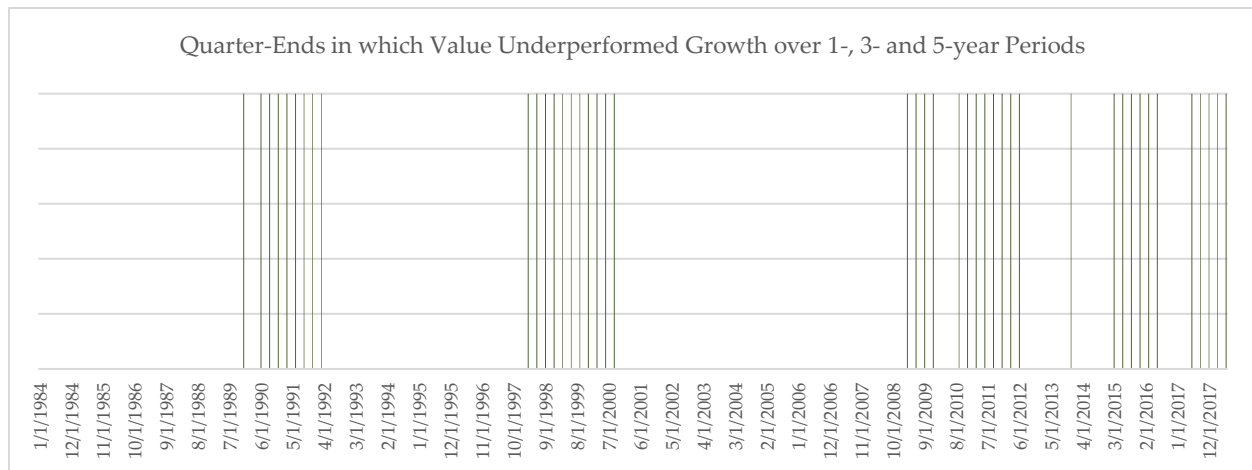
We’re covering a lot of ground in this note and in this series, and I’m taking liberties to generalize where I think it’s suitable to do so. Even within multiple-based value approaches, there is a lot of diversity. The difference in period-to-period performance among value descriptors (e.g. price-to-book, earnings yield, dividend yield, cash flow yield, plus all sorts of forward and trailing variants) can be shocking. The reality is that I have no insight into how the current market for information changes expected returns among them. Sorry.

So while I don’t think it makes sense in a survey piece to spend a great deal of time guessing whether P/E or P/B is going to work better or worse, I *do* think that some factors are going to be more susceptible to abstraction and Narrative effects than others. Companies that promote valuation on self-determined non-accounting metrics are the obvious outlier. Outside of that, I would expect dividend yield, price-to-earnings metrics, price-to-book and the like to all be impacted differently. In all cases, however, I expect the length of periods over which each works and does not work to be longer than usual, and for the dispersion among factors to be elevated, creating additional sensitivity to narrower systematic approaches.

Multiple-Based Value in Live Portfolios

In addition to the fact that I just don't have any idea, part of the reason that I'm a bit indifferent to trying to predict which approach to value investing is going to work best in a Three-Body Market is that it isn't really what matters. **What matters is that the value investor's outcome has as much to do with what he can endure as what he does. What matters is that going forward, I think endurance will matter even more.**

While it's perilous to start telling stories about things that already happened, I think that we are already seeing the greater persistence of value / growth regimes, at least in the ways that matter to investor decision-making. We've all seen the charts with the drawdowns of value against growth. They're bad, but they're not as bad as the 90s. We've all seen the trailing relative performance. Same deal. But that's not the only time when investors make bad sell decisions. They often make sell decisions after being persistently hounded by bad news, when what they are doing takes on the very comfortable appearance of rejecting *something that doesn't work*. Consider the below illustration, which shows every quarter (since 1984) in which each of the 1-, 3- and 5-year returns of value underperformed.



Source: July 2018 Epsilon Theory, Bloomberg. You cannot invest directly in an index. Past performance is not indicative of future results.

Put yourself in the shoes of financial adviser. A pension manager. Every quarter when you show up with a big weight in something that has gotten creamed over every historical period that matters to the client, you're going to have a Bad Meeting. **This chart is a schedule of your Bad Meetings.** Sure, in the late 1990s you had a hell of a job. Sticking with value then into the recovery in the early 2000s was tough, and truth be told, few FAs and asset managers were really able to do it (and those that did may still regret it!). But even though the drawdowns haven't been as deep, the persistence of the underperformance of value since 2009 – almost 10 years now! - seems like it was perfectly designed to empower the skeptical pension fund board or would-be do-it-yourself wealth management client to think of his professional advisers as idiots for hire.

You shoulda looked out for me a little bit, Charley.

Want to know what it's like to be a committed value investor in this kind of environment? Talk to David Einhorn. Now, full disclosure: I've never invested with Greenlight. I don't like hedge fund terms on liquid beta product. C'est la vie. But I know enough to know that the [piece published in the WSJ](#) on July 5th was grotesque. Read it if you haven't. It's a well-written and well-researched piece. But it's also a painful

example of exactly the kind of flawed thinking that creeps into each of our minds unbidden when we've borne witness to such sustained, repeated losses. In that frame of mind, we will always – always - find stories that allow us to externalize the decisions we made in hopes that they will permit us to walk away from them without shame or effort. *I'm not making a mistake by redeeming just because of performance. Einhorn's clearly lost his marbles.*

Oh, the article doesn't come out and say that Einhorn's 'aloofness', 'midday naps', 'unpopular stock picks' and '[unwillingness to give] mid-month updates' were associated with his stretch of bad performance, but it drips with the implication. Feeling the need to bolster the argument, the story...<checks notes>...goes back 17 years to find a stock that a sell-side guy pitched that Einhorn didn't like. It accuses him of being "uncomfortable delegating authority" as if this were a tell-tale sign of a breakdown, somehow unaware that a single PM structure is the strong preference of almost every institutional pool of capital in the world. He and his team members – wait for it – 'gained reputations for enjoying themselves after hours'. You may wish to stop reading now, because I am going to tell you something truly terrible. Very, well, you have been warned. They hosted an annual poker tournament where people drank and hundreds – nay, thousands – of dollars were bet on games of chance. For shame! Oh, and he got a divorce.

I hate to be the one to break all this news to you, but it increasingly sounds like David Einhorn is ...well...pretty normal? I mean, for a Master of the Universe and all.

But hold on, Rusty, does the piece end with a "despite bad returns, he's back in Vegas" bon mot? And how, my friends. Why? Because all this has anything whatsoever to do with whether he's good portfolio manager? With whether his strategy should be expected to work in the long term? No. Because we're 10 years into a bunch of Bad Meetings with clients in which a strategy with tremendous philosophical, behavioral and empirical underpinnings hasn't worked in a big way. For most of us – even disciplined institutional investors and gifted financial writers (relax, I'm talking about the guy at the Journal) – it's just too much. And so must this underperformance be subsumed into the stories about why value isn't working.

The Right-Thinking Investor in me wants to say, "Yes! Buy when others are fearful! Lean into this madness!" But for the grace of God, though, folks. It is very hard to do. It is easy to convince ourselves that we can, and perhaps easier still to convince ourselves that we can cause our clients or others who rely on us as fiduciaries to do it. But the only advice that is worse than advice ignored is advice accepted and betrayed halfway through to completion. For investors, that isn't a throwaway aphorism. Changing strategies midstream can impose tax and behavioral costs that dwarf most premia, even vaunted value.

Ultimately, betting on value in your portfolio relies on the same calculus as it always has: it's absolutely worth doing if you and your investors can bear the drawdowns. But in a Three-Body Market, I think you should be prepared for the periods of its underperformance *and* outperformance to be longer than they have been historically, and potentially meaningfully so. I think you should prepare for the returns to be more episodic, and potentially meaningfully so. I think there are ways to shorten these drawdowns to be more manageable – incorporating momentum, potentially using catalyst strategies – all of which should be part of the arsenal if you are contemplating it.

So how do we approach positioning on value going forward?

- **For Many, Don't:** This is going to be unpopular. Because value returns in a Three-Body Market are likely to be even more episodic than usual, trying to time them is exceedingly risky. Because trying to time it doesn't work, value is a strategy best implemented as a static tilt. Because it is best implemented as a static tilt, investors who are committed to it must be able to endure not only the

usual potential drawdowns, but potentially deeper and more persistent ones that will try their and their clients' endurance. Despite the fact that value *absolutely works*, many of us and many of our institutional and individual clients should probably be at market weight on value vs. growth. If we know we're not up for the game, it's better not to play.

- **For the Rest, Be Brutally Honest:** If we have decided to keep our positions, then yes, we should show clients the data supporting these strategies. But we should also show them how deep, and how long they can lose. Don't tell them that the historical events were anomalies. Make sure they know that we could be having a conversation in 10 years with nothing but red in the rear-view mirror, and that we would be guiding them to stay the course.
- **Pair with Catalysts/Momentum:** While factor timing is difficult, I continue to think that pairing momentum with value can do a lot to provide the benefits of value investing with less susceptibility to extended periods of value underperformance, regardless of their drivers. It's not a panacea, as recent months have shown us, but I still believe.
- **Premia > Fundamental Indexing > Indexing:** Many indexes, including the most popular Russell 1000 Value, and ETFs based on them, are heavily oriented around single measures for value. Diversifying among value factors will be important if, in fact, dispersion among outcomes from those factors is higher, and if periods of sustained outperformance or underperformance for those factors are longer than they have been historically. I'd be more inclined to allocate to traditional quantitative strategies or premia-based strategies than narrower single-factor or pure index approaches.

If you get nothing else from this note, the story is in the first two bullets. For those of us in positions of trust with clients, we should listen to them. There is a temptation among us in the industry to feel like we aren't doing our jobs if we don't squeeze out every ounce of in-sample return from the risk our clients are taking, and I empathize. I have used the 'hiding the medicine in the hot dog' analogy more than once, to my shame. But out-of-sample, live money in real portfolios is what matters. Not recognizing the real tolerance our clients have to return streams that can deviate from their long-term averages for very long periods of time isn't being a good fiduciary, and it isn't being a good steward.

Terry deserves better.

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