Epsilon Theory

THE FIVE THINGS THAT MATTER #3 | BY RUSTY GUINN

The Myth of Market In-Itself, Part 1

That space and time are only forms of sensible intuition, and hence are only conditions of the existence of things as phenomena; that, moreover, we have no conceptions of the understanding, and, consequently, no elements for the cognition of things, except in so far as a corresponding intuition can be given to these conceptions; that, accordingly, we can have no cognition of an object, as a thing in itself, but only as an object of sensible intuition, that is, as phenomenon — all this is proved in the analytical part of the Critique; and from this the limitation of all possible speculative cognition to the mere objects of experience, follows as a necessary result.

— **Immanuel Kant, *The Critique of Pure Reason* (1781)**

I know, diving right into 18th-century German metaphysics is a real crowd-pleaser. But this is just a bunch of fancy words to say that we can never know the fundamental truth of a thing independently from our perceptions and experience. It's the realization that makes Kant probably the most indispensable of the great thinkers. Doubly so for *Epsilon Theory*. We desperately want to believe that with enough information and analysis, we can know the true value of something. There is an almost mythological belief in the market as the mechanism through which we uncover that truth. The rest of the world will realize that we are right, and *then* we will make money. But the 'true value' of a thing — the market in-itself — isn't something we can know. We observe value only through price, a measure based on our collective subjective experience.

Is there any hiding of the character of an apple-tree or of a geranium, or of an ore, or of a horse, or of a man? A man is known by the books he reads, by the company he keeps, by the praise he gives, by his dress, by his tastes, by his distastes, by the stories he tells, by his gait, by the motion of his eye, by the look of his house, of his chamber; for nothing on earth is solitary, but everything hath affinities infinite.

— *Journals of Ralph Waldo Emerson*, June 7, 1860

Still, just because there isn't a knowable intrinsic value to an investment, no investment in-itself, it doesn't mean we can't know anything about it. The people who form the market and apply their sensible tuition to these things have *affinities infinite*. Some of those affinities can be observed or inferred. This is the soul of the Narrative Machine writ large.

Run a BBW Tumblr blog and forget the password

I may be speaking too soon but this is a disaster

Like old people in modern sneakers

I saw Book of Mormon with a congregation of true believers

— milo, "In Gaol", *a toothpaste suburb* (2014)

As investors, it is very tempting to get so caught up in our own tribe of investing — our style, our philosophy — that we sit in a state of constant bemusement of other investors, sure that everyone is going to come around to our point of view on the value of something eventually. That congregation of true believers we can't believe are watching a parody of their beliefs can stick around for a long, long time, folks. Over a sufficiently long period, being wrong about value but right about price can become indistinguishable from being right about value.

Empathy, evidently, existed only within the human community, whereas intelligence to some degree could be found throughout every phylum and order including the arachnida.

— **Philip K. Dick*, Do Androids Dream of Electric Sheep* (1968)**

I'll admit it. At any given time around our Houston office, there are four TVs tuned to CNBC. Don't ask me why. Or at least don't expect a satisfactory answer.

If pressed, I would tell you that it's important to know what a voice that speaks through thousands of televisions in similar offices around the world is saying, even if it's a meal of empty calories. After all, *Epsilon Theory* is about stories. Stories, those who tell them, and those who, in listening, respond. Some of those stories are powerful myths, timeless and universal, others virtuously or nefariously cultivated for a singular place in space and time. And some of them — including most of what you hear on financial television — are vapid and worthless.

A **story linking** six months of a presidency to the returns of a stock market at the same time. A story linking August returns to calendar years that **end with the number 7**. A story that "**stocks slipped on the news**" of a development in investigations of Russian collusion with no evidence of relationship other than that the two things happened on the same day. Oh look, oil fell on **"profit-taking."** Linking a down day in U.S. markets to one of a million macro factors that moved that day. We say the stock moved "on this news" or "on that news" when, if we're really being honest with ourselves and each other, we know that all of these stories are stupid and wrong. Deep down we know that we have no earthly clue why our investments go up and down every day, much less moment to moment, and we're just grasping for answers. Stories. And boy, are people ready to give us some.

It's a problem. And it's a problem we can't ignore, because our investment decisions communicate views about our expectations even if we don't intend it. We don't get to say that "it's OK" not to understand what moves markets, because every day we are all making bets that say we *do*. Sure, we have all sorts of explanations for why investments *should* rise in value. We *should* be paid for taking risk. We *should* own something valuable if it continues to grow its earnings. We *should* be able to trust the fact that risky investable assets have produced positive returns over almost any long-term horizon for the last several centuries.

But the distinction between understanding why we ought to be paid for owning something and understanding how that manifests itself in changes in securities prices is not just academic. It is fundamental, and it sits squarely in *Epsilon Theory*'s wheelhouse. In the same way that Ben bastardized **Gresham's Law**, I'm going to steal from Friedman:

> **Investment returns are always and everywhere a behavioral phenomenon.**

That's why Investor Behavior is #3 on our list of Things that Matter.

Knowledge and Information

I know we all know this, but from time to time it bears repeating: until it defaults, matures or is called, the price of every security in the world is ultimately driven by two — and only two — things:

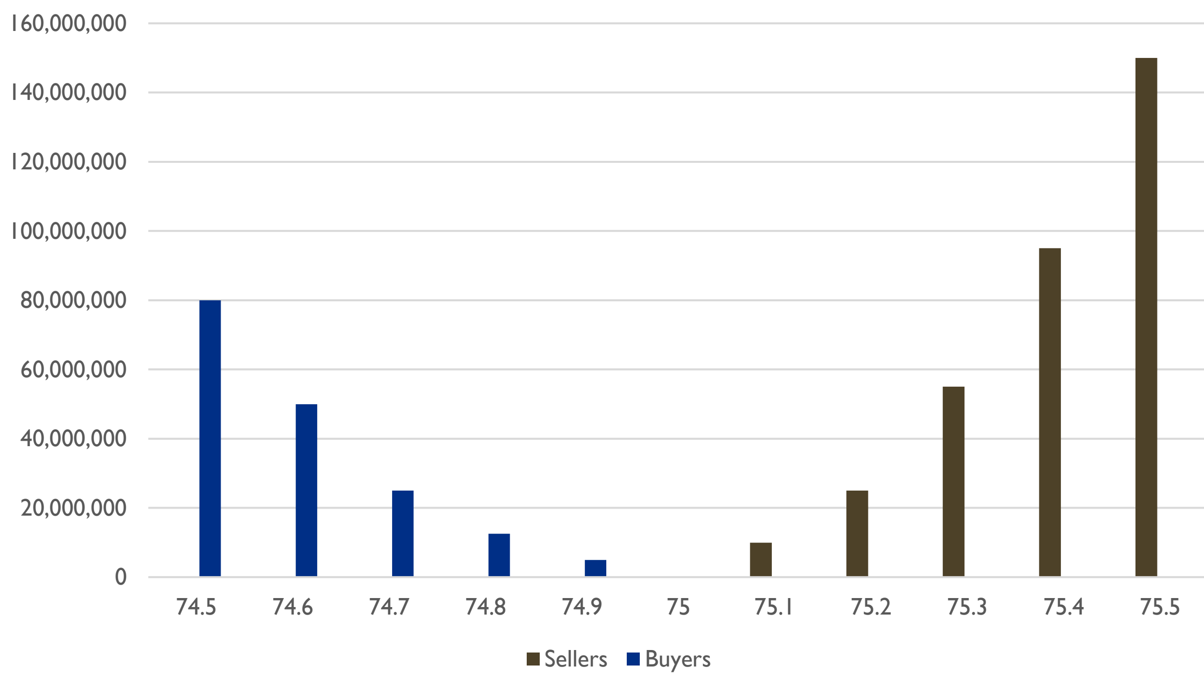
1. Who is willing to pay the most to buy the thing, and
2. Who is willing to accept the least to sell the thing.

That's it. A lot of applied behavioral economics IS flawed and less rigorous than it ought to be, but at the risk of giving Taleb the vapors, any argument for how prices are determined and, thus, how returns are generated that ignores investor behavior isn't just weak. It's objectively wrong.

Now, while there really aren't any strong-form efficient market guys out there with skin in the game (i.e., outside of academia) anymore, there are still a lot who think about markets as being *generally efficient*, by which they mean that the market *generally* does a good job of pricing available information. This is actually a pretty fair point of view. To believe otherwise is to take a dim view of the value of markets as a mechanism for expressing the aggregated will of individuals. That ain't me. I was and will always be a Hayekian at heart. Since we've decided it's now acceptable to terminate employees for expressing wrongthink, I've started firing anyone who doesn't see my copy of *The Road to Serfdom* and slam it down on the conference room table, shouting, "THIS is what we believe!" à la Maggie Thatcher.

The problem with most interpretations of *information*, however, is that fundamental data alone isn't *information* in any real sense that matters. Facts about a company only become *information* when they are passed through the perceptions and preferences of the people who are participating in determining the security's price. There is no objectively 'right price' for a security based on the available information about its business, its assets, its prospects or its profitability, because there is no objective sense in which changes in any of those things ought to result in changes in prices. There is only a price which reflects how that information is viewed through the collective lens of individuals or groups of individuals who participate in that market.

Now while two people functionally determine the current price of any security, the *movement* of prices in that security from that level are also influenced by a much larger group who are willing to buy for a *little bit less* than the guy setting the bid price, and those who are willing to sell for a *little bit more* than the guy setting the ask price. Those who've made those views explicit are part of the so-called order book, an actual group of people willing to buy and sell at certain prices. Greater is the group of individuals who haven't explicitly put a line in the sand at all, but who do have a view that they have an interest in expressing. They are paying attention to the stock. Far, far larger still is the universe of investors and assets who are paying no attention to the security at all and play little to no role in its pricing, even if they own the thing. You can imagine it looking something like the below — a little bit of money is willing to trade close to the current bid-ask spread, and increasing amounts if you're willing to sacrifice.



Source: Salient 2017. For illustrative purposes only.

Again, excluding terminal events for a security — like its default, retirement, maturity or being called away — there are only two ways for a security to change in price:

1. Someone who had an explicit or implicit view in the "order book" — a blue or red bar from the above chart — changes their mind about the price at which they would buy or sell.
2. Someone who didn't have a view before decides to express a view.

Many of the things we do to trade, like a market order or most common trading algorithms, *cross the spread* in order to find a trading partner. In other words, as the day wears on, a lot of the people who thought they'd only sell for $75.10 — but need to sell — end up saying that they'd take less. Those folks are making the price move by changing their mind about the price at which they'd buy or sell. In other situations, maybe we get a call from a client who needs money for a down payment for house. It's a big, liquid stock, so we put in a market order. We take $74.90 for our shares despite having not expressed a view on price before that, and everyone else in the market tries to figure out why.

So why do these people change their mind? Are they, in fact, responding to the stimuli that financial TV suggest? Did a barrel of oil *really* just trade up by 15 cents because investors changed what they were willing to pay as a result of North Korean sabre rattling? Other than major sources of observable volatility — earnings, corporate actions and the like, and often even then — **if anyone tells you they know, they are probably lying to you.** All we know, because it is a tautology, is that it is absolutely a reflection of human behavior (which includes, mind you, the behaviors incorporated on the front-end of a systematic trading strategy or implicit in a trade execution algorithm). That doesn't mean that people can't make money off price movements over this horizon — plenty of stat arb and high-frequency trading firms do exactly that, albeit in different ways. But over the very short run, the drivers of market movement are noisy and overdetermined, meaning that there are more factors driving that noise than there is noise. They are also nearly impossible to generalize, other than to say that they are reflections of the behaviors of the individuals who caused them.

The great investor Benjamin Graham famously characterized his views on the matter in this way. "In the short run," Graham said, "the market is a voting machine, but in the long run, it is a weighing machine." This is a popular view. But with respect due to Mr. Graham, it is also wrong. Since I've bastardized and restated the words of one financial genius already, let's make it two:

> **In the very short run, the market is a voting machine.**
>
> **In the short run, the market is a voting machine.**
>
> **In the long run, the market is a voting machine.**

The Long-Run Voting Machine

There's a contingent of people reading this who are probably saying to themselves, "Wait a minute. What about a bond? Every time I receive my coupon I book some return. Every day I get closer to maturity, and I can predict pretty accurately how a bond trading at a premium or discount is going to converge to par." The implication of that argument is that while fundamental characteristics of an investment may only *technically* manifest themselves in some terminal event, they are *effectively* still very predictive because we can have a high degree of confidence around them for some types of investments. In other words, maybe sentiment is a bigger predictor for risky securities than it is for securities where the return is coming from predictable cash flows.

This is true.

If you intend to hold something to maturity, or if you hold an investment that is reliably paying enough cash flow to repay you over a reasonable length of time, all else being equal, the variability in the price attached to your investment and its returns, and the behaviorally driven component of those returns, ought to be lower. This is one of the reasons why we tend to buy and hold bonds in our client accounts to maturity. Yet, even here, your compound returns are going to be influenced by investor behaviors outside of that bond — you have to reinvest those coupons at rates determined by individual actors influencing prevailing interest rates, after all.

The other, more common argument — this is the Graham argument — is that these behaviorally driven features of markets are, even for investments in riskier parts of the capital structure like credit or equity, temporary noise on the path toward convergence of the investment's price with its value. Investors have historically found comfort in the idea that the voting machine will someday converge to the weighing machine — that one day, *everyone else* will come to the conclusion that I have about this company and value it like I do.

This forms part of the story for a vast range of investment styles. For the investor who speaks the language of growth, it is indispensable. He is saying, explicitly or implicitly, "I believe this company will grow faster than other investors expect. When I'm right, the price will converge to the value implied by the higher earnings." For the intrinsic value or quality investor (I'm talking to you, too, Holt, EVA, CFROI wonks), it is an even stronger impulse. He believes that a company's ability to deploy its current assets and reinvest at higher rates than the market expects (or for a longer time than the market expects) forms a value that is essentially the stock-in-itself. That's kind of what intrinsic means, isn't it? Frankly, it is the multiples-driven value investor who approaches the question with the keenest awareness of behavioral influences on prices. He's comfortable implying that investors tend to do a bad job of knowing which companies ought to be worth a lower multiple of their earnings/assets/cash flow, and that enough time will cause the outperformance of the cheap company to be recognized and rerated. Or maybe just the increase in earnings will cause investors to apply the same multiple to create a higher value. There is, at least, the self-awareness of behavior's fickle influence.

In each of these cases, the investors recognize that the market is a noisy, behaviorally complicated voting machine in the short run. This is why when you meet with a fund manager, they will *always always always* tell you that the rest of the market is looking at the next quarter's earnings, while they stand alone at the top of the mountain, summoning the courage to weather short-term storms in favor of long-term outcomes. They're very brave. Lots of people have been talking about it. But in each of these cases, the reality is that other than significant sources of real cash flow distributions (i.e., *not* stock buy-backs or debt pay-downs, for fans of the "Shareholder Yield" concept), the convergence of the voting machine to the weighing machine can take a very, very, very long time. And it may never happen, for the forces that will cause it to take place are themselves behavioral in nature! Somebody's gotta say they're willing to buy your stock at that price, and that somebody is either a person or a computer programmed by a person.

If the market wants to convince itself that Amazon can and will someday raise its prices to generate actual profits, and that they will then use those profits to bestow untold trillions of dollars (or maybe bitcoins, by the time this actually happens) in dividends on its loyal investor base, it can do it for a very, very, very long time. If you do not think Amazon can manage to preach this narrative to its investor base for another 10, 25 or even 50 years, you are dead wrong.

Do you think I'm arguing against value investing? Against fundamental research? Because I'm not. Not even a little bit. OK, maybe a little bit in the case of most fundamental research. What I *am* arguing is that when these approaches work, they still work because of the lens of preferences and experience that those who participate in the pricing of the investment bring to the table with them. ANY criticism of "behavioral" methods of investing must also be a criticism of fundamental ones, because they both include assumptions about how humans will respond to something.

This has a lot of implications:

For asset owners and allocators: How much time and effort do you spend thinking about who else owns the investment? Who else might *want* to own it if some bigger thing happens in the world? To that investor's situation? To the investment or company itself? Compare that to the amount of time you spend sifting through macro data, research reports and constructing models. If you're like most of us, you're spending <5% of your time and resources on the former and 95% on the latter. That's a mistake.

For fund selectors: Spend more time developing theses about managers who — through intuitive or quantitative techniques — seek to understand what drives the behaviors of other investors (or non-investor influencers of securities prices), rather than simple security-based or macroeconomic analysis.

For all investors: Always keep in mind how prices are determined when you think about how certain trends and events may impact markets and your portfolio. Think about how regulation-driven moves toward passive instruments may change price-to-value convergence. Think about how an increase in private equity dollars may influence or change price-to-value convergence in public markets. Think about what behaviors a low global growth environment could induce on the part of financial advisors, institutions and individuals as they participate in the price-setting process.

OK, so how do we do all this? If the Market In-Itself is a myth, how do we adjust our thinking?

There is no mathematical proof that solves this conundrum for us, because we can't know people's full motivations, preferences and exogenous influences. We do not know what investors or traders are paying attention to, except by observing the results after-the-fact and coming up with stories to attach to those analyses. Even if we could, many of these behaviors are emergent properties of the market in the aggregate, meaning that the way people behave isn't nearly as independent of the path or state of the overall market as we'd like it to be. The market is a complex system.

What we can do is recognize what we recognize about every other aspect of society: that these motivations, preferences and exogenous influences on our behavior are reflected in the tribes we select and the language we speak. We may not be able to observe specific behaviors in action, but we can understand a lot about investors by observing, for example, the sell side. Not because they have anything useful to say (sorry), and not even because we think that they somehow reflect the consensus about a fundamental fact about a company. **Because the sell side is telling us who their customers are.** The feedback mechanisms of industry conventions, of style boxes, of terminology and language that our fellow investors adopt — these, too, all tell us a great deal about investor behaviors. They can also give us insight — incomplete insight, but insight nonetheless — into things like sustained low volatility, limited liquidity, the rationale for the existence of behavioral premia like momentum, value and low volatility, and how they go through sustained periods of weak or strong performance.

And that's exactly where we're going in Part II: the languages and tribes of investing and how they can help us understand the behavioral drivers of the Long-Run Voting Machine.

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