Avantis Investors®
By American Century Investments®

Representativeness in Investing

ACADEMIC PERSPECTIVE

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"First to Market Play From EMS Find Inc. (EMSF) Is Set to Shake Up $15-Billion Market with Next-Gen Breakthrough" proclaims the headline in a glossy sales brochure featuring an image of a racing ambulance superimposed with an electrocardiogram. "Like Uber for Ambulances!"

The description of EMSF's app-based services is indeed similar to or representative of Uber's services:

1. A nurse orders an ambulance pickup to a patient's home using EMS Find's online tools.
2. The ambulance safely delivers the patient for treatment.
3. After treatment, a health care facility worker loads the patient into an ambulance.
4. The ambulance transports the patient back home.
5. The patient is back home safely.

But is Uber really representative of EMSF? Are we using good representativeness shortcuts or succumbing to representativeness errors when we conclude that investing in EMSF now, on its ground floor, will yield returns similar to those that Uber ground-floor investors enjoyed? Representativeness errors abound among investors, and they are costly. Financial advisers can help clients avoid these costs by steering them away from representativeness errors.

REPRESENTATIVENESS SHORTCUTS AND ERRORS

We use representativeness shortcuts when we assess the likelihood of events by their similarity or representativeness to other events. We use representativeness shortcuts well when we consider both "representativeness-information" and "base-rate information." We commit representativeness errors when we assign too much weight to representativeness information and too little weight to base-rate information.

Representativeness-information in the EMSF case lies in its imitation of the immensely successful Uber. Base-rate information is the information that causes most startups to die, and very few of those that survive succeed as much as Uber. It turned out that the representativeness shortcuts in this case were errors. Those who bought EMSF shares lost, unless they quickly flipped the shares to other buyers committing even bigger representativeness errors.

The price of EMSF shares almost doubled from May 1, 2015, to June 12, 2015. In 2017, EMSF changed its name to Integrated Ventures, Inc. (INTV) and launched a bitcoin mining operation. By November 2, 2018, its shares were trading at 0.3% of its June 12, 2015, price.

REPRESENTATIVENESS ERRORS AND RECENCY ERRORS

What we know as "recency errors" are, in fact, part of "representativeness errors," and the term recency errors is misleading. Recency errors occur when people consider recent events, such as a stock market crash, as generally "representative" of the stock market and conclude in error that stock market crashes are frequent. Recency errors are representativeness errors because they are rooted in people's focus on the "representativeness information" of the recent crash and neglect of "base-rate information" that stock market crashes are rare.

Moreover, people don't always perceive recent information as representative. They are more likely to perceive vivid events as representative than recent events. One example is the lingering pessimistic perception of the stock market, years after the stock market recovered from the 2008-2009 financial crisis and moved much higher. The financial crisis is no longer recent, but it remains vivid.

REPRESENTATIVENESS ERRORS IN INVESTING

One example of representativeness errors is the conclusion that beating the market five years out of six is representative of the skill of a mutual fund manager rather than the manager's luck. Therefore, we are forever chasing top funds in our quest for top returns, never pausing to ask whether the size of the sample is indeed large enough to warrant the top fund designation.

Fund managers, like the rest of us, don't hesitate to say "No, thank you" and put down the phone when salespeople call. We don't feel obliged to listen to an entire sales pitch. As we decide whether to listen or quit, we properly consider both representativeness information and base-rate information. We put down the phone because base-rate information tells us most sales pitches aren't worth listening to, even though this salesperson has a pleasant voice.

The same rule properly applies to mutual fund managers. If we make an error, it is in giving too much consideration to the performance of a particular mutual fund and too little consideration to the process used to achieve that performance or to the average performance of all such funds relative to index funds.

Amateur day traders in the foreign exchange market commit representativeness errors when concluding they possess trading skill based on trading success during short periods, despite evidence that past trading success doesn't predict future success. Traders react to short-term success by increasing trading and risk taking. The effects are stronger for novice traders, consistent with more intense "learning" in early trading periods.[1]

Each of us begins a career and witnesses stock market (and other) returns during that formative period. Yet, returns during that period aren't necessarily representative of returns during any longer period. Still, witnessing stock market returns at the beginning of a financial career leaves behind a vivid story, even though the returns provide almost no relevant information. Investment professionals extrapolate from returns witnessed early in their careers when forming beliefs about future returns, and early-career returns affect their expectations of future returns more than recent returns do.[2]

Awareness of and susceptibility to representativeness errors should prompt financial advisers to avoid these errors and their costs and guide their clients to do the same.

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Endnotes

[1] Itzhak Ben-David, Justin Birru and Viktor Prokopenya, "Uninformative Feedback and Risk Taking: Evidence from Retail Forex Trading," NBER Working Paper No. w22146, (April 2016). http://ssrn.com/abstract=2762097.

[2] Arvid O.I. Hoffmann, Zwetelina Iliewa, and Lena Jaroszek, "Wall Street Crosses Memory Lane: How Witnessed Returns Affect Professionals' Expected Returns," (January 22, 2017). Paris December 2017 Finance Meeting EUROFIDAI-AFFI. http://dx.doi.org/10.2139/ssrn.2877366.