



# BEHAVIORAL FINANCE

---

## Decision-Making Under the Gambler's Fallacy

March 11, 2015

*Fama-Miller Working Paper*

After reviewing the decisionmaking processes of individuals in three high-stakes contexts — refugee asylum courts, loan application review and baseball umpire calls — the authors write that they found strong negative autocorrelation that was unrelated to the quality of cases. That is, the judges, loan officers and umpires made decisions based as much on their own previous decisions as on the facts they ostensibly were weighing.

This negative autocorrelation is stronger among more moderate and less experienced decision-makers, following longer streaks of decisions in one direction, when the current and previous cases share similar characteristics or occur close in time, and when decision-makers face weaker incentives for accuracy.

The authors show that the negative autocorrelation in decision-making is most consistent with the gambler's fallacy inducing decision-makers to erroneously alternate decisions because they mistakenly believe that streaks of affirmative or negative decisions are unlikely to occur by chance. They contend that their results are unlikely to be driven by potential alternative explanations such as sequential contrast effects, quotas, learning, or preferences to treat two teams fairly.

Beyond the three settings studied, the authors add that the gambler's fallacy could affect decision-making more broadly. For example, financial auditors, HR interviewers, medical doctors, and policy makers all make sequences of decisions under substantial uncertainty. Our results suggest that inaccurate perceptions of what constitutes a fair process can perversely lead to unfair or incorrect decisions in many situations.

This document is not intended to, and does not relate specifically to any investment strategy or product that AQR offers. It is being provided merely to provide a framework to assist in the implementation of an investor's own analysis and an investor's own view on the topic discussed herein.

This document has been provided to you solely for information purposes and does not constitute an offer or solicitation of an offer or any advice or recommendation to purchase any securities or other financial instruments and may not be construed as such. The factual information set forth herein has been obtained or derived from sources believed by the author and AQR Capital Management, LLC ("AQR") to be reliable but it is not necessarily all-inclusive and is not guaranteed as to its accuracy and is not to be regarded as a representation or warranty, express or implied, as to the information's accuracy or completeness, nor should the attached information serve as the basis of any investment decision. This document is not to be reproduced or redistributed to any other person. The information set forth herein has been provided to you as secondary information and should not be the primary source for any investment or allocation decision. Past performance is not a guarantee of future performance. Diversification does not eliminate the risk of experiencing investment losses.

This material is not research and should not be treated as research. This paper does not represent valuation judgments with respect to any financial instrument, issuer, security or sector that may be described or referenced herein and does not represent a formal or official view of AQR. The views expressed reflect the current views as of the date hereof and neither the author nor AQR undertakes to advise you of any changes in the views expressed herein.

The information contained herein is only as current as of the date indicated, and may be superseded by subsequent market events or for other reasons. Charts and graphs provided

herein are for illustrative purposes only. The information in this presentation has been developed internally and/or obtained from sources believed to be reliable; however, neither AQR nor the author guarantees the accuracy, adequacy or completeness of such information. Nothing contained herein constitutes investment, legal, tax or other advice nor is it to be relied on in making an investment or other decision. There can be no assurance that an investment strategy will be successful. Historic market trends are not reliable indicators of actual future market behavior or future performance of any particular investment which may differ materially, and should not be relied upon as such. Diversification does not eliminate the risk of experiencing investment losses.

The information in this paper may contain projections or other forward-looking statements regarding future events, targets, forecasts or expectations regarding the strategies described herein, and is only current as of the date indicated. There is no assurance that such events or targets will be achieved, and may be significantly different from that shown here. The information in this document, including statements concerning financial market trends, is based on current market conditions, which will fluctuate and may be superseded by subsequent market events or for other reasons.