

January 5, 2024

TO:

Vanessa Countryman, Secretary
U.S. Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549-1090

FROM:

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FROM:

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RE: Proposed regulation “Conflicts of Interest Associated with the Use of Predictive Analytics by Broker-Dealers and Investment Advisors” (File No. S7-12-23).

Dear Ms. Countryman,

We appreciate the opportunity to comment on the proposed Conflicts of Interest Associated with the Use of Predictive Analytics by Broker-Dealers and Investment Advisors rule.

Our comment represents our opinion and not necessarily that of Massachusetts Institute of Technology or The University of Texas at Austin, our respective employers. We have, in the past, had a financial relationship with Robinhood Markets Inc. No third party, including Robinhood, is compensating us for writing this letter.

1. Executive Summary

We limit our attention in this comment to the Proposal’s use of research by Barber and Odean (2000) as evidence that “excess trading has a negative impact on investment returns” (see page 148 of the Rule Proposal). As we detail in this comment, the results in Barber and Odean (2000) show no underperformance for the average account, find no relation between account-level trading

frequency and performance before trading costs (“gross returns”), and pertain to a 30-year-old environment with 100 times higher trading costs than today. More-recent evidence on gross returns for retail investor trades is consistent with near-zero abnormal returns for retail investors, as predicted by standard economic theories. Moreover, since trading costs are negligible in recent years, net returns are also relatively unaffected by trading.

2. Summary of Results in Barber and Odean (2000)

The results in Barber and Odean (2000) either do not support the main message of the paper, “trading is hazardous to your wealth,” or only support this message due to transaction costs (commissions and bid ask spreads).¹

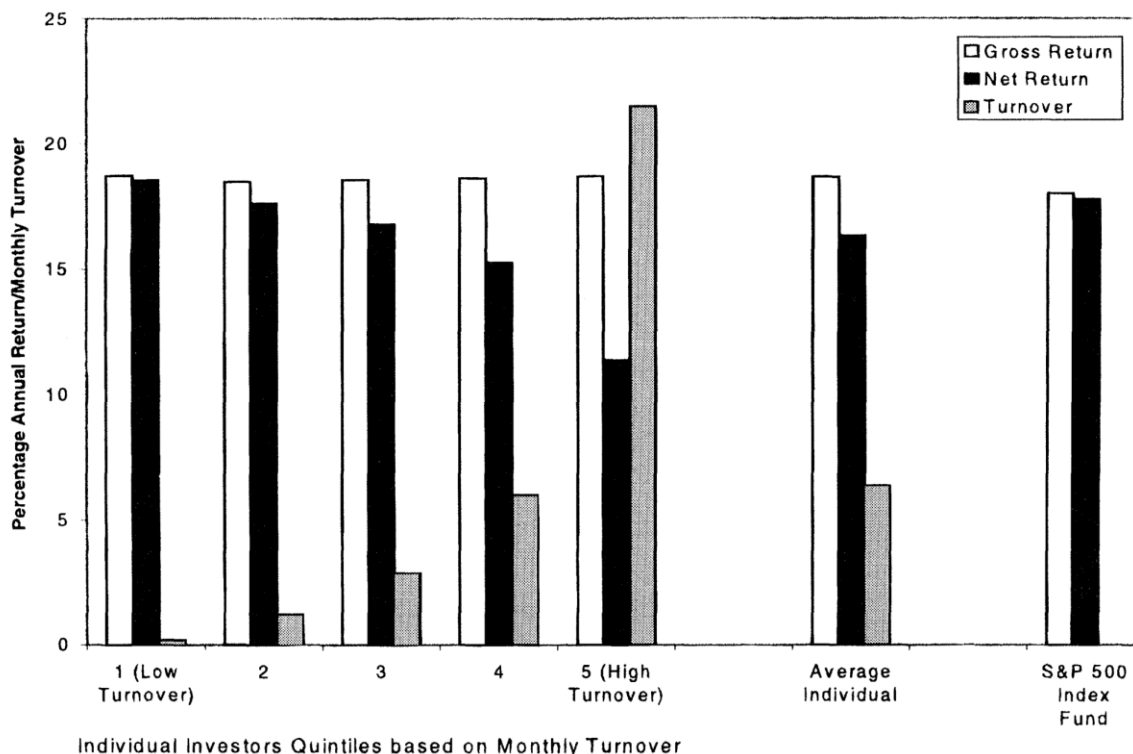


Figure 1. Monthly turnover and annual performance of individual investors. The white bar (black bar) represents the gross (net) annualized geometric mean return for February 1991 through January 1997 for individual investor quintiles based on monthly turnover, the average individual investor, and the S&P 500. The net return on the S&P 500 Index Fund is that earned by the Vanguard Index 500. The gray bar represents the monthly turnover.

¹ A more-precise statement of the message in Barber and Odean (2000) is “individual investors who hold common stock directly pay a tremendous performance penalty for active trading.”

The main results of the paper are all presented in Figure 1, copied above for convenience. The black bars show that average returns net of transaction costs are substantially lower for accounts with high trading frequency (measured by turnover) than accounts with low trade frequency. The white bars, by contrast, show there is no relation between trading frequency and returns before transaction costs (“gross returns”). Table 5 confirms there are no differences in risk-adjusted gross returns across turnover quintiles, and that the difference in net returns is statistically significant. The turnover-performance results therefore indicate that trading more than the average account was hazardous to your wealth in the 1990s, but only due to transaction costs.

Another, perhaps more important, question Barber and Odean (2000) addresses is whether the average individual investor suffers worse performance by directly trading stocks. The “Average Individual” and “S&P 500 Index Fund” bars in Figure 1 show that for the typical account, gross returns are slightly *higher* than the gross returns of the S&P 500 index fund, while net returns are slightly lower. Table 2 uses a variety of specifications to show that, for the most part neither gross nor net returns are significantly different from zero on a risk-adjusted basis.² The average performance results therefore do not support the conclusion that trading is hazardous to the average individual investor’s wealth.

3. Trading Costs in Barber and Odean (2000) vs Today

Barber and Odean use data from 1991-1996. Round-trip trading costs including commissions and bid-ask spreads are 303bp in their main sample and 516bp if you include all trades (not just those above \$1,000). Today round-trip trading costs are below 4bp for retail trades executed off-exchange (see Table 5 in SEC Proposed Order Competition Rule, copied below). Trading costs are therefore 100x smaller today than they were in the Barber and Odean (2000) sample. This implies that the one clear result suggesting trading frequency erodes performance in Barber and Odean (2000), the negative turnover-return relation at the account level, is unlikely to hold in modern markets because it arose entirely due to high transaction costs previously.

² The only specifications to show slight underperformance (5-20bp/month) uses a hypothetical approach where the retail investors retained the same portfolio the entire year. This alternative must outperform the S&P 500, an unreasonable benchmark, for this result to square with the others.

Table 5: Comparison of Rule 605 Execution Quality Statistics Between Common Stocks and ETFs in Q1 2022

	Combined Marketable Orders		
	WH	EX	
Average Price	\$47.89	\$58.14	
Share Volume (billion shares)	106.97	179.49	
Dollar Volume (billion \$)	\$5,122.91	\$10,436.02	\$
Fill Rate (%)	69.32%	25.77%	
Effective Spread (bps)	1.81	2.06	
Realized Spread (bps)	0.61	-0.38	
Price Impact (bps)	1.20	2.44	
E/Q ratio	0.48	1.01	
Pct of Shares Price Improved	83.17%	8.78%	
Conditional Amount of Price Improvement (bps)	2.17	1.50	

4. Near-zero gross returns predicted by economic theory and consistent with recent empirical work

Standard economic theories of portfolio choice, efficient markets, and market microstructure predict that the prevailing market price of a stock fairly reflects all public information. Investors without private information will therefore earn no positive or negative excess returns above standard benchmarks through any mechanism other than trading costs.

The same prediction holds for models featuring overconfident or otherwise “behavioral” investors. As Barber and Odean (2000) state when describing their preferred Odean (1998) model featuring overconfident investors: “The overconfidence model predicts that the net return performance of households with high turnover will be lower than that of households with low turnover, while making no prediction about the differences in gross returns.” (emphasis added).

Some more-recent empirical work conducted during the modern zero-commission, low trading cost environment, is mixed. Some papers, e.g. Kaniel, Liu, Saar, and Titman (2012), Kelley and Tetlock (2013), Boehmer Jones Zhang and Zhang (2021), and Welch (2022) indicate that retail orders have neutral or even positive gross performance. Others, e.g., Barber, Lin, and Odean

(2021) and Barber, Huang, Odean, and Schwarz (2022), find the opposite. The combined evidence indicates there is no strong or consistent relation between retail trading activity and trade performance. It is therefore likely that the true long-run relation is near zero – just as the standard economic theories predict.

References

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