

Investor's Ways in Stock Markets: Empirical Stylized Facts

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Financial market participants are known to be heterogeneous in aims and methods. Yet, so far, very little is known of the statistical properties of their resulting behaviours. The lack of data, due to broker secrecy, is unsurprisingly to blame, but only in part, since researchers, even when given large customer datasets of trading activity, have focused on trading gains and herding (Barber, www.gsm.ucdavis.edu). Here we report large-scale statistical analysis of individual trading activity and intensity and discuss their consequences for mainstream financial theory.

We have scrutinized the clients database of the largest Swiss online broker [2], which comprises the details of millions of transactions made since 2001 by over 50'000 investors in major stock markets worldwide. Most properties studied are heavy-tailed distributed as is true for the number of trades, the mean time between two transactions, and the number of different stocks traded, and a remarkable power-law of mean turnover is uncovered. Up to a rescaling, all the distributions hold for the bank's main categories of clients, namely client retails; transcending barrier of nationality, sex and age; asset-managers; and companies.

We have further measured the correlations between clients performance and main features (age, sex, etc.), as well as the correlations between other indicators of their activity, as risk aversion and memory. Our preliminary results reveal interesting trends, as for instance a positive correlation between best performances and number of trades, which evolves dynamically according to market conditions.

Our observations provide a wealth of insights about real investors behavior in markets. Therefore, we believe that they should take an important place among other "empirical stylized facts" such as volatility excess or volatility clustering. They also raise an essential question: How to design models in agreement with the statistical properties of actual investors? The answer to this question may well pave the way to predictive agent-based models in finance in the future.

Keywords

agent-based models in finance, investor behavior, behavioral finance

References

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