Social Investing and Hype in the Stock Market

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ABSTRACT

Online group discussions about stocks intensify as trading becomes easier to access and messaging technology develops. Using data from investing-related chat rooms, I find that live group chats help investors find high alpha stocks than individual posts and comments in investing forums. Moreover, sentiment is less important than identifying which stocks are being discussed. I also create a hype measure that positively predicts trading volume, stock volatility, and future returns. Hyped stocks tilt towards small-cap and growth stocks. I find that higher returns are driven more by the continuity of hype than by the day a stock becomes hyped. The returns show an upward drift, and insiders are less likely to sell after they become hyped, suggesting that the trades are informed.

Overview

This paper

- Social Investing: Investors gathering in groups in social media and discussing investment opportunities together via live group chat

- **Part 1-1**: What impact does social investing hype have on trading?
  → FMB regressions, Subsample Analysis
- **Part 1-2**: Two stories of channels – Informed vs. Price pressure
  → Long horizon BHR, Insider trades

- **Part 2**: Does social investing through live group chat provide better returns?
  → Synchronous vs. Asynchronous Comparison, Portfolio Analysis, Sentiment Analysis, Benchmark regressions

Contribution

1. First to use the approach of examining Discord
2. Notable distinction – live group chat feature with moderators
3. Specifically social media-savvy investors – others use a broader measure
4. Instead of general conclusion of either informed or uninformed – "Where is the smart chatter?" "Are the discussions there informed?"
5. Find empirical support for informed discussions from a platform capable of live group chat
6. Social investing – better stocks are discussed more often

Discord and Hype Measure

Discord - Social media platform designed for real-time group communication
- Many similarities with investment clubs
- Previous studies - focus on posts and comments
- Procedure to join servers different
- Moderators monitor the chat
- Easier to prevent spam, bots, fake accounts, minimize off-topic chats
- Exponential growth in users - becoming one of the most popular social media platforms with group chatting capability for investing

Hype Measure
- Similarly follow an approach mentioned in Barber and Odean (2008) that was deemed impractical at the time
- A more direct measure → Observe which stocks investors are discussing the most in real-time investing group chat rooms and make a factor variable

Part 1. Fama and MacBeth (1973) Regression Results

$$Ret[a,b]_{i,t} = \alpha_i + \beta_{1,i}HYPE_{i,t-1} + \sum_{k=1}^{K} \beta_{2,k,i}\,Control_{k,i,t} + \varepsilon_{i,t}$$

- Hype has a positive and significant relation with abnormal volume and stock volatility on the next day and the effect is stronger for smaller firms
- Is the hype deserved or undeserved?
- The steady and continued upward drift over long horizons provides support for the informed trading explanation

$$Ret[a,b]_{i,t} = \alpha_i + \beta_{1,i}ENTRY_{i,t-1} + \beta_{2,i}CONTINUITY_{i,t-1} + \sum_{k=1}^{K} \beta_{3,k,i}\,Control_{k,i,t} + \varepsilon_{i,t}$$

- Above regression results show that staying hyped is a more important driver for higher returns than "fresh" hyped stocks.

Robustness - Insider Trading

$$DepVar = \alpha + \beta_1 Day[-10,-1] + \beta_2 Day[0] + \beta_3 Day[+1,+10]$$
$$+ \sum_{k=1}^{K} \beta_{4,k}\,Control_k + \varepsilon,$$

Does hype seem to be related to the incentives and opportunities for insiders?

- If insiders sell more after a stock becomes hyped, this can be attributed to managerial opportunism → Use of hype for shares to be sold at higher prices
- If insiders sell less or buy more, it supports the informed trading explanation → Positive private information is slowly being embedded into prices
- The post-hype window results are inconsistent with managers exploiting hype to sell their shares at higher prices, providing further support for the informed trading explanation

Part 2. Synchronous vs. Asynchronous Platform

- Compare mentioned stocks in the cross-section and time series
- Compare portfolio performance of buying the stocks that are most discussed from previous day or month
  → Discord – obtain from live chat discussions
  → Other platforms (currently only Reddit WSB, will update soon with Twitter and StockTwits) – obtain from posts and comments
- Compare different rebalancing intervals – daily and monthly
- Compare different weighting schemes – VW and EW
- Compare performance with respect to different benchmark models
- Conduct sentiment analysis

1. I find that the asynchronous platform has more "meme" stock discussions
2. GameStop was one of the most mentioned stocks several months earlier in the asynchronous platform

Portfolio Analysis
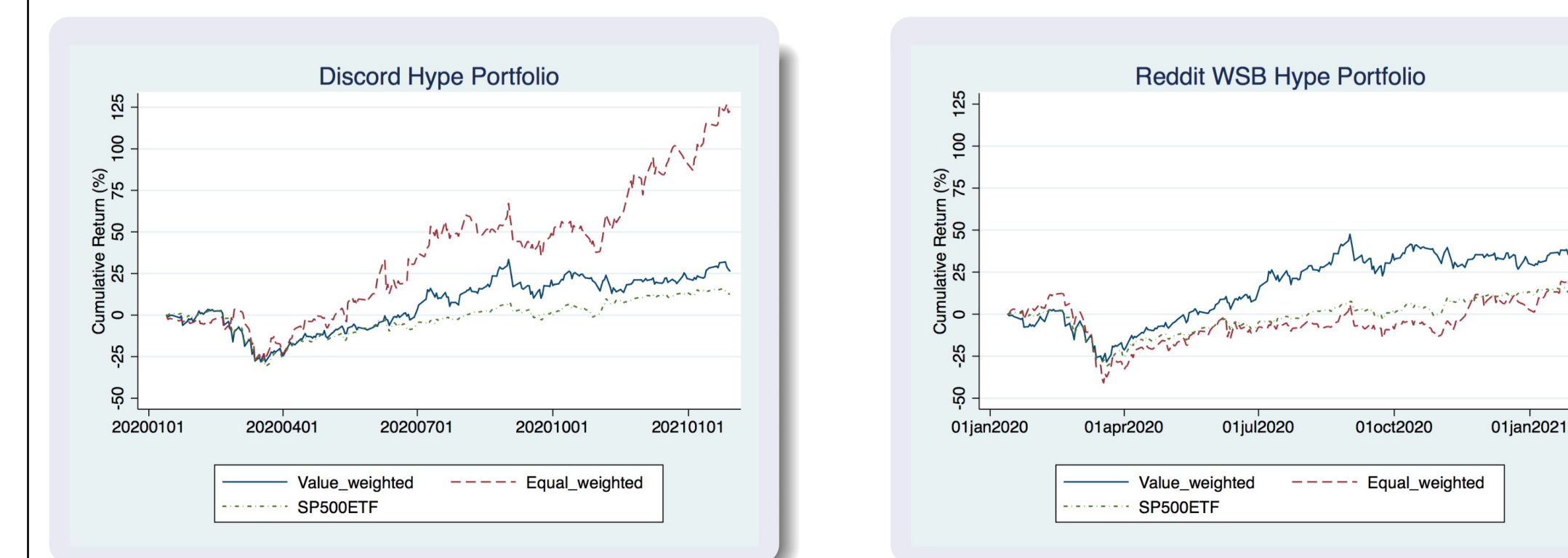
- S&P 500 underperformed compared to other portfolios
- Small and mid-cap stocks outperformed in Discord
- Large-cap stocks outperformed in Reddit WSB portfolio
- Investing in the Discord EW portfolio (left red line) would have been the most profitable
- I find similar results for monthly rebalancing

Sentiment Analysis and Benchmark Regressions

- Consider the direction of the signals by creating a long/short portfolio
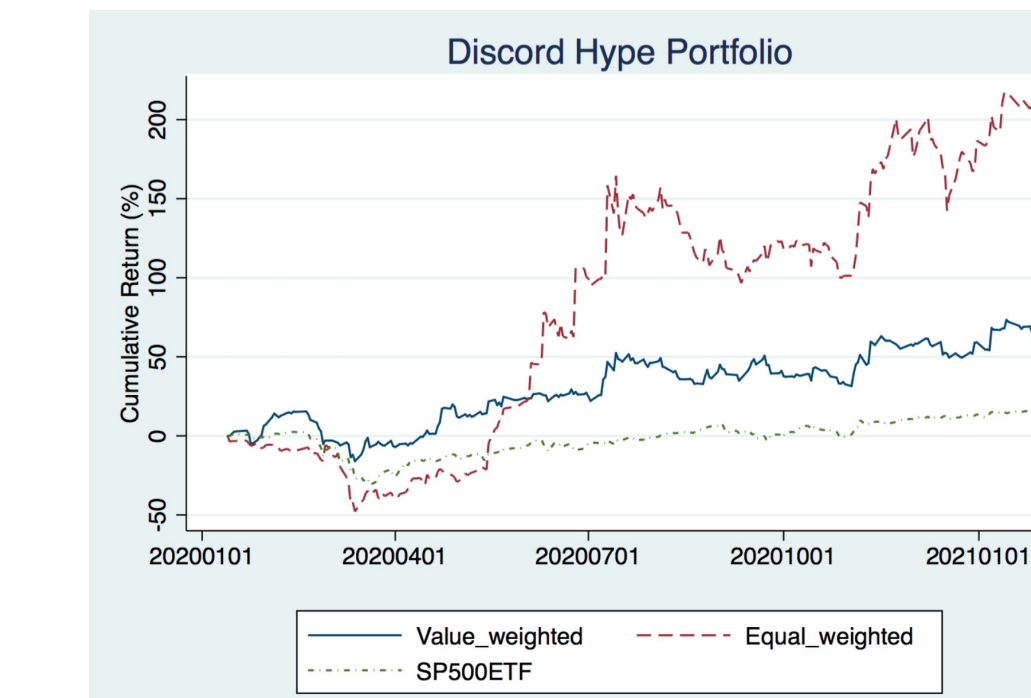
- Tone of the stock discussions is less of an issue than identifying "which" stocks investors are discussing the most since they are mostly positive in sentiment
- Similar results when analyzing the daily and monthly rebalancing return performance of the portfolios with respect to various benchmark models
- Tilts towards small-cap and growth stocks

Implications from Part 2

- Discord portfolio shows that → May be a good idea for investors to join live group chats and find out which stocks everyone is talking about
- Reddit WSB may be more suitable for risk management reasons from hedge funds
  ➢ Much more and much earlier mentions of "meme" stocks
  ➢ Less profitable
  ➢ More correlated with Bitcoin returns

Possible Explanations

Possible explanations for the different results between platforms

➢ Live interactions among familiar users
➢ More relevant information
➢ Faster Bayesian updating

Concluding Remarks

Investigating investing-related live group chat, I find that:

1. Stock selections from live group chats are better
2. Using hype measure – positive relation with future abnormal volume, stock volatility, and returns
   ➢ Tilts towards small-cap and growth stocks
3. Empirical support for informed discussions