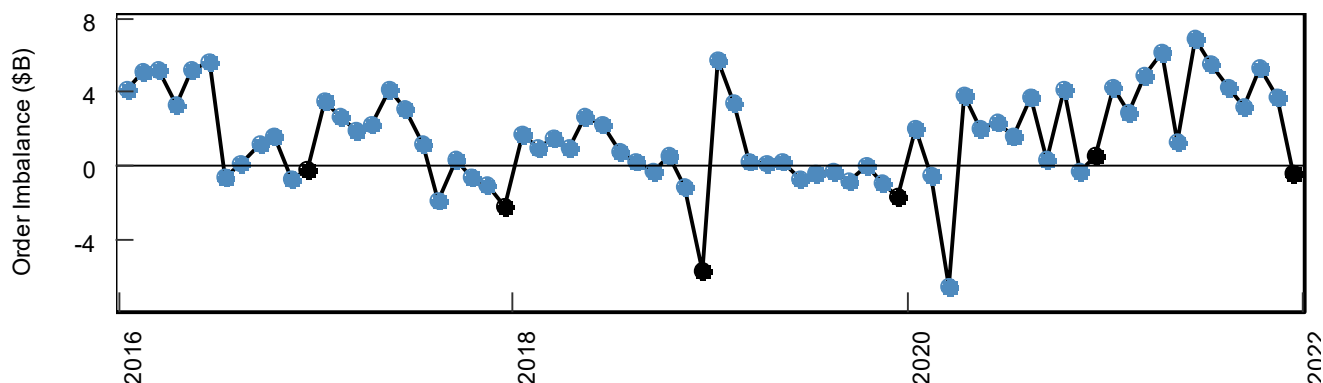


## Big Data and AI Strategies

### Do Retail Investors Harvest Tax Losses? Part II

- Tax loss harvesting is a tax-aware trading strategy where an investor sells their losing positions before the tax year-end in order to generate capital losses and reduce taxes. Previous academic studies have shown that for retail investors it is a rational and profitable strategy and can yield a “tax alpha” of up to 1.1% per year for retail investors.<sup>1</sup>
- In a [previous report](#), using our proprietary retail order flow data, we show that retail investors exhibit a strong tendency to harvest tax losses by selling underperforming stocks at year-end. As a result, a net selling bias is usually observed in December when we examine the aggregate order imbalance of the Russell 3000. This year is no exception (Figure 1).

Figure 1: December retail order flow imbalance of Russell 3000 stocks tends to be negative (black = December)



Source: J.P. Morgan

- Focusing on this past December, we investigate whether the stocks being sold are more likely to be underperformers. To do so, we rank the stocks by their December Standardized Order Imbalance (SOI), as defined by Barber, Lin and Odean (2021).<sup>2</sup> The metric represents the buy orders as a proportion of total orders, adjusting for the number of trades observed and market-wide imbalance. Note that we measure the imbalance by the number of trades rather than notional traded, thereby capturing the behavior of smaller investors.

$$SOI_{it} = \frac{(Imb_{it} - \overline{Imb}_t)}{\sigma_{it}}$$

$$\sigma_{it} = \frac{1}{buy_{it} + sell_{it}} \sqrt{(buy_{it} + sell_{it}) \cdot \overline{Imb}_t \cdot (1 - \overline{Imb}_t)}$$

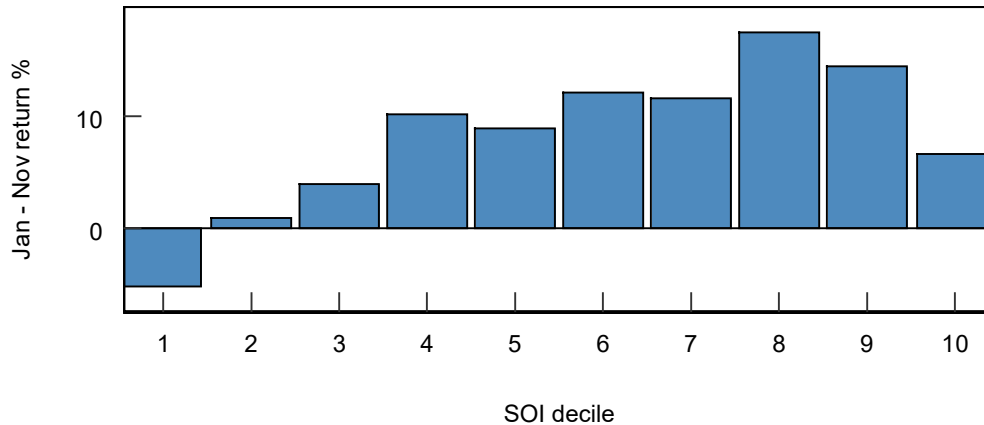
<sup>1</sup> Chaudhuri, Shomesh E., Terence C. Burnham, Andrew W. Lo, 2020, An Empirical Evaluation of Tax-Loss Harvesting Alpha, *Financial Analyst Journal*, Vol 76, Issue 3

<sup>2</sup> Barber, Brad M., Shengle Lin, Terrance Odean, 2021, Resolving a Paradox: Retail Trades Positively Predict Returns but Are Not Profitable, working paper

$$Imb_{it} = \frac{buy_{it}}{buy_{it} + sell_{it}}, \quad \overline{Imb}_t = \frac{\sum_i buy_{it}}{\sum_i buy_{it} + sell_{it}}$$

- Indeed, the stocks that are in the first decile, i.e., most heavily sold in December, have the worst average performance in the first 11 months of the year (Figure 2). The relationship between stock performance and retail order imbalance is largely monotonic until the 9th and 10th deciles. In these most heavily bought deciles, “buy the dip” behavior becomes a confounding factor.

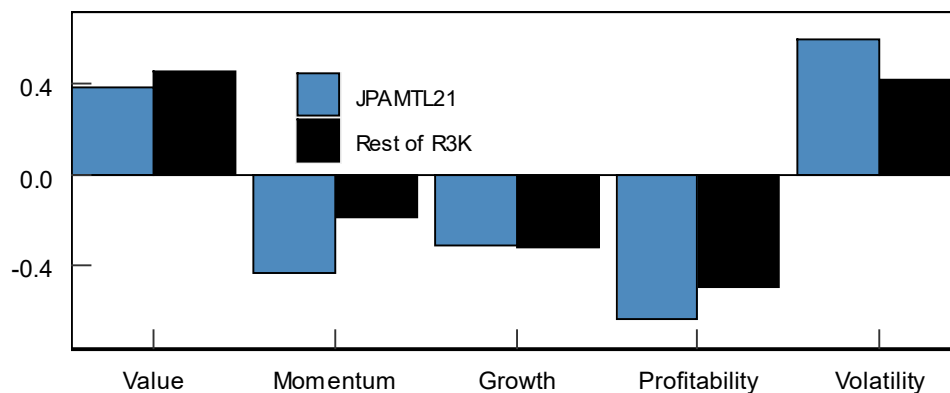
Figure 2: Jan – Nov returns of stocks grouped by SOI deciles



Source: J.P. Morgan

- Our [previous report](#) shows that the stocks that were sold in December are likely to outperform in January. In our view, this is at least in part thanks to the reversal of the aforementioned technical selling pressure. To provide investors with access to those names, we have created a basket with the ticker <JPAMTL21 Index><sup>3</sup>, which contains the stocks the first decile of SOI rankings (most heavily sold in December).
- The factor loadings of the basket vs. the rest of the Russell 3000 index are shown in Figure 3. As we can see the basket has below-average exposure to Momentum (as expected) and above average exposure to Volatility. Interestingly, our equity strategy colleagues [also found](#) that high-volatility (high-beta) stocks tend to be beneficiaries of the January effect.

Figure 3: Equal weighted factor loadings of the basket vs. rest of Russell 3000



Source: J.P. Morgan, Axioma

<sup>3</sup> Bloomberg subscribers can use the ticker JPAMTL21 to access tracking information on baskets created by the J.P. Morgan Delta One desk to leverage the theme discussed in this report. Over time, their performance could diverge from returns quoted in our research, because of differences in methodology. J.P. Morgan Research does not provide research coverage of this basket, and investors should not expect continuous analysis or additional reports relating to it. For more information, please contact your J.P. Morgan salesperson or the Delta One Desk.

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**Big Data, AI and High Frequency Strategy**

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