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The Retail Investment Boom and the Cost of Trading Small Stocks

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At first blush, stock trading is dirt cheap. But in addition to the fees presented at the broker's execution reports, retail traders typically pay the bid-ask spread. For small stocks, this implicit cost is on average more than double the commission fee. This article discusses why small stocks are expensive to trade, what the implications for traders are, and how the market structure can be changed to reduce the costs.

The retail investment boom

Stock trading has never been easier. Be it at the bus stop or while ordering an espresso, the equity market is never far away. With just the click of a button, you can add a stock that is trending in social media to your portfolio. It is not only fast and easy, with online brokerage fees at or close to zero, trading also appears to be affordable.

Consequently, hoards of retail investors have been attracted to the stock market. Although broad stock market participation is widely viewed as desirable, it also comes with new risks. Recent research on the US broker Robinhood shows evidence consistent with inexperienced users who respond strongly to investment trends (Barber et al., 2022). App features that makes investing more like a game is also found to trigger their trading activity. In social networks, investment ideas spread by influencers can lead to costly stock market bubbles (Pedersen, 2022).

One risk for aspiring investors with high trading activity is that they may underestimate their trading costs. If you want to finish your trade before the coffee break is over, you do not only pay the broker commission, but also the bid-ask spread. The bid-ask spread is the difference in prices available to buyers and sellers. Although it is never printed in the broker's execution report, it is often an order of magnitude larger than the trading fee.

For example, imagine that you purchase shares for SEK 10,000, only to immediately change your mind and sell them. A common brokerage fee for the two trades would be SEK 50, but chances are that you are left with a loss much bigger than that, say SEK 150. That is not due to bad news hitting the market during your trade, but because you are paying the bid-ask spread.[1]

Although the trades in the example above may sound irrational, the transaction costs are realistic. In relative terms, the brokerage fee of SEK 50 on two SEK 10,000 trades corresponds to 25 basis points per trade. This is the typical fee charged for trades of that size by the Swedish online brokers Avanza and Nordnet. For larger trades, the relative fee is lower. A bid-ask spread of SEK 100, or one percent in relative terms, is common for small stocks. If you ignore the latter, you overlook two thirds of the total cost.

The graph on the next page shows how the bid-ask spread varies over time and across stocks of different size at Nasdaq Nordic. For all three size segments -- small, midsized, and large -- the bid-ask spreads shrunk somewhat from 2010 to 2022. But that time-variation is dwarfed by the differences seen across the size segments. For large stocks, the spread is tiny --

Key Takeaways

- The implicit cost of trading small stocks, the bid-ask spread, is almost ten times higher than for large stocks, and more than double the commission charged by online stock brokers.
- Although the bid-ask spreads have fallen over time, the wedge between large and small stocks persists.
- To address the problem, exchanges and regulators should consider ways to boost the liquidity of small stocks.

* I thank Henrik Talborn for helpful comments.

[1] The bid-ask spread is the most important implicit transaction cost facing retail investors. Professional investors who trade larger blocks of shares are more concerned with how much their trades move prices, known as market impact.

only 9.1 basis points in January 2022. The corresponding statistic for small stocks is more than nine times higher, 84.3 basis points. And those small stocks are often the names that generate buzz on social media.

If you trade often, as the new breed of retail investors tend to, losing one percent per trade quickly eats into your profits. The expected return on stocks is commonly said to be around ten percent per year, but that is before transaction costs. If you turn around your positions five times per year with fees and spreads adding up to one percent per trade, you should expect your annual return to be halved.

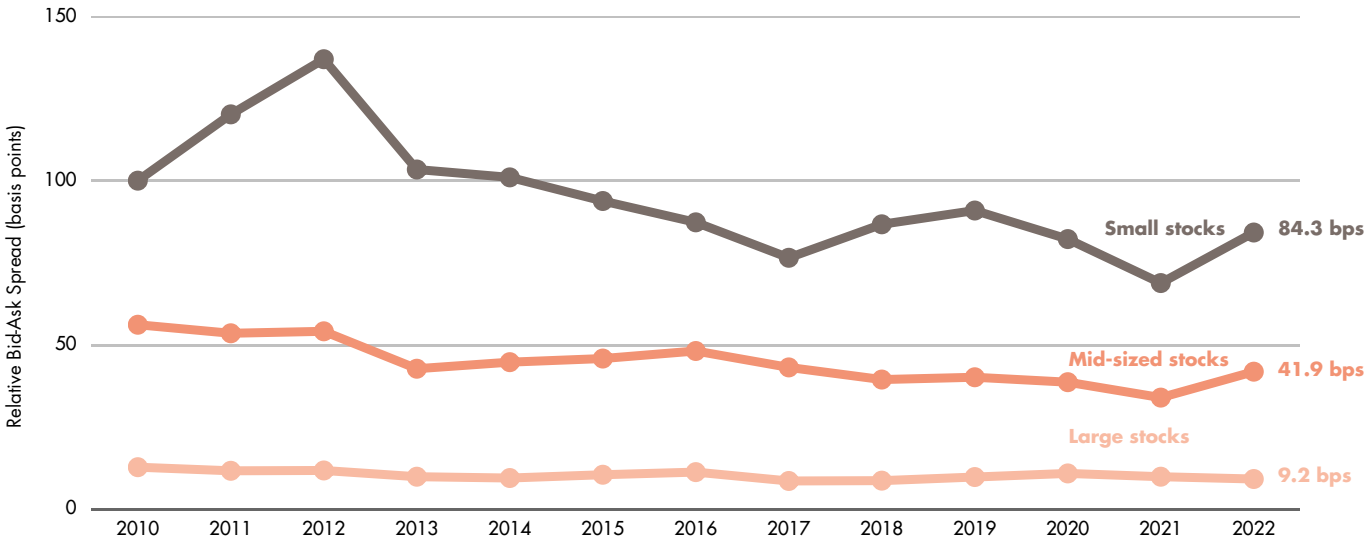
Why are small stocks more expensive to trade?

To see how the bid-ask spread is set, it is useful to view it as the price of a service: liquidity. This service is provided by a professional trader, often known as a market maker, who continuously offers to buy and sell stocks to incoming investors. The market makers sets the price of liquidity, the bid-ask spread, to cover the costs and make a profit. At modern exchanges, anyone can choose to provide liquidity, but a large fraction of patient orders indeed come from professional market makers. To see what the costs of such an operation are, consider a similar line of business: a used car dealership. If you want to buy a used car, the dealer typically offers to purchase your old car as part of the deal. This is a liquidity service that you implicitly pay for by selling the old car cheap. In addition to the obvious expenses for storage, staff and marketing, the low price compensates the dealer for inventory costs and adverse selection costs. The former is the cost of having cash tied up in the car during the process of reselling it. The latter is the cost of hidden faults that the dealer may only discover later. No one knows the car's peculiarities and history better than you, who have driven it for years. If the car is top-notch, you may look for better offers, but if you think it can break down any moment, you are likely to sell to the dealer. The implication is that the dealer will tend to purchase cars with hidden errors, hence the term "adverse selection."

The same types of costs apply to the stock market maker. By standing ready to buy and sell all the time, the market maker takes on inventory whenever someone comes to trade. If buyers and sellers would arrive interchangeably, the inventory cost would be small. In reality, however, a buy order is more likely to be followed by more buyers than by sellers, leading the market maker to build up inventories. This is particularly true for small stocks, where for example a social media story may lead numerous investors to trade in the same direction at the same time.

Just like a used car, a stock may also have hidden faults in the form of information that is not yet public. When offering to buy at a price that is slightly below the true value of the stock, chances are that the market maker purchases from someone who thinks that the stock is over-valued. Regardless if the counterparty bases the trading decision on insider information or clever analysis of public signals, it tends to leave the market maker adversely selected. Again, this is more likely to happen in small stocks, which are often not covered by any stock analysts at all.

Bid-Ask Spreads at Nasdaq Nordic, 2010 - 2022



Note: The bid-ask spread is the difference between the best ask and bid prices, divided by their midpoint. The figure shows annual averages, reported in basis points. The data for 2010 excludes January, and the data for 2022 includes January only.
Data source: Nadaq HFT, Swedish House of Finance.

How can you reduce your trading costs?
For individual investors, the wide bid-ask spread has a simple implication: trade less! If you hold your stocks for years, even a wide bid-ask spread will have a modest impact on the return. This is why truly long-term investors, such as pension funds, tend to hold the most illiquid securities (Amihud and Mendelson, 1986).

An alternative approach is to be more patient when trading. Rather than finishing the trade before the bus arrives, you can submit your buy order at a lower price than what is offered and wait for a counterparty to show up. You can then earn the spread instead of paying it. Be careful though, because you are then in the same position as the market maker. Chances are that your order is hit by someone with private information, or by someone who just read the news more recently than you did. You risk being adversely selected, buying at the time when the price is falling.

Policy implications
So what can policy-makers do about it? The fundamental reason that we have stock exchanges is that buyers and sellers of financial securities are dispersed in time and space. It would be ideal for them to trade with each other, but finding a counterparty costs time and effort. The stock exchange, broadly defined, is there to solve their coordination problem. It matches buyers to sellers and determines a price at which they can agree to trade. The more investors it attracts, the greater the probability of matching interests and efficient prices. Virtually all exchanges nowadays opt for a continuous limit order book model, where liquidity is provided voluntarily by market makers. This model works fine for large stocks that are actively traded throughout the day, but for small stocks it struggles. When trading is rare and the probability of informed trading is high, market makers struggle to make profits.

At Nasdaq Nordic, several policies have been tried to address the problem. For example, the exchange encourages listing firms to contract designated market makers, who in exchange for a fee promise to maintain a given bid-ask spread on a continuous basis. The exchange has also tried to complement the continuous trading with a mid-day auction for small stocks, where buyers and sellers can trade directly with each other instead of going through an intermediary. Following low trading interest, however, the initiative was discontinued. EU regulators tried another way to address the problem of illiquid stocks. In 2018, they imposed greater price discreteness in thinly traded stocks. This should incentivize market making, as it reduces the scope for competition on price. Based on the figure above, however, the problem persists.

> “In today’s complex trading environment, it is really hard to foresee the consequences of regulatory changes without deeper insight into the underlying mechanics.”
>
> —BJÖRN HAGSTRÖMER

A more drastic alternative would be to abandon the continuous limit order book model altogether. In an influential academic article, Budish, Cramton and Shim (2015) point out the fact that trading organised in continuous time fosters arms races in trading speed technology. They advocate that the model is replaced by frequent batch auctions, which have emerged as an alternative in recent years. For small stocks, the auction does not even need to be very frequent. Nasdaq Nordic recently announced that, for the most illiquid stocks, continuous trading will in January 2024 be replaced by five auctions per day. [2] By concentrating all buyer and seller interests to a few fixed points in time per day, these auctions could offer lower implicit costs to investors. But then the trade could no longer be finalized during that coffee break.

[2] https://www.marketsmedia.com/nasdaq-first-north-growth-market-introduces-auction

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