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What's the Best Trading Benchmark?

Teaser [Only used if we want to really space out the content]

If you do any transition management or program trading, you've undoubtedly talked about benchmarks. Watch for our next two posts, where we will explore the challenges with Prior Day's Close (PDC) and suggest another benchmark that we think works better.

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Video in post [Or, video for each article posted -> if we don't push the Teaser]:

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Part 1: Choosing the Benchmark

One of the great challenges when executing a transition management event (or any portfolio-based trade) is **when to start**.

Several issues are intertwined here, including benchmarking, volume, cost, and volatility and how those factors can impact overall performance.

Choosing when to start is not a new phenomenon. Performance measurement has been around since the inception of the markets. But, as a community, we still struggle with its complexities and determining the best benchmark for each trade.

Now, I'm not saying I have the solution - the simple answer is there is no one best benchmark. It all depends. However, some benchmarks are better for certain types of trades.

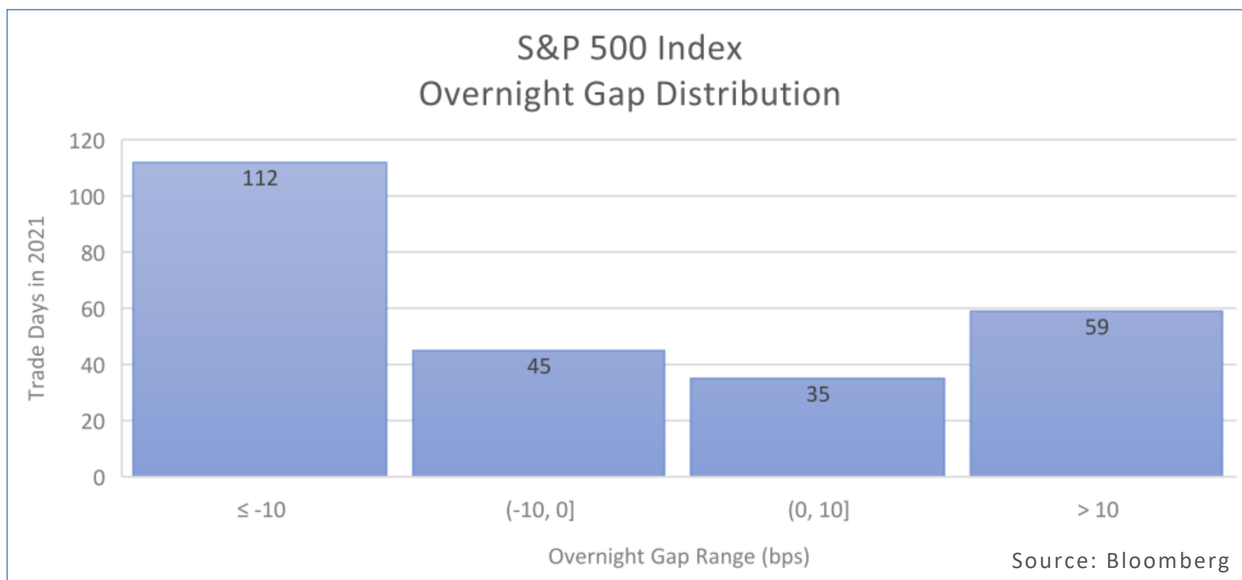
Please do not mistake this for an academic paper (as I am surely not an academic). However, my perspective as someone who has traded and managed transition events for more than 17 years may be helpful.

Historically, transition (or TM) events were almost always benchmarked versus Prior Day's Close (PDC). PDC was seen as an unbiased measure of the TM event. Since this benchmark could include overnight risk (including news or macroeconomic events), TM providers had to be active at the market open. It was the first opportunity to trade and the closest execution point versus the benchmark.

While PDC does provide an unbiased benchmark (relative to the TM trading), it also creates potential noise for both the TM provider and the client. Overnight portfolio movement is often unmanageable (a

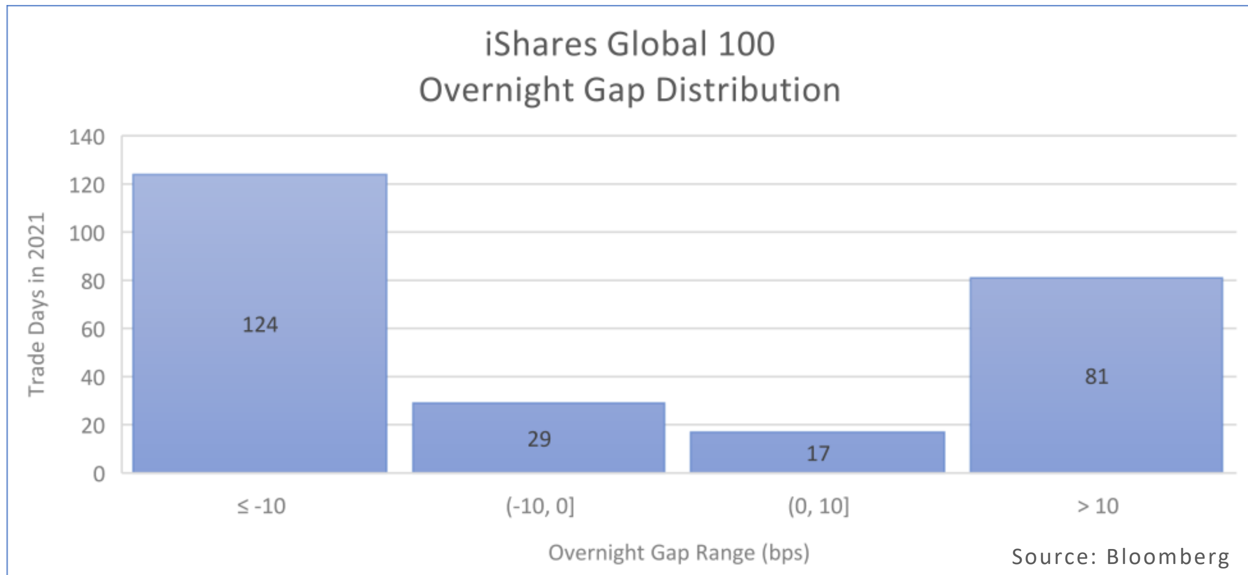
hedge can defer but not completely eliminate this risk), so the start of trading is not a zero point for performance – it can be higher or lower. This defeats the purpose of a trading benchmark since this artificial bias creates pressure for the TM trader to make trade pace decisions based on that artificial performance bias and not necessarily the volume or risk in the market.

If we look past the potential bias of this benchmark, the data supports my theory here. If we look at the S&P 500 during 2021, the overnight gap was greater than +/- 10 bps relative to the closing price about 68% of the time.



Now, maybe a 10 bps doesn't seem significant to you. But, the trend exists even if we expand the gap to +/- 20 bps where we see this happening 42% of the time. The data highlights a considerable risk that a trader would need to manage. Statistically, the overnight gap would likely generate undue and unintended risk for a transition or program trade.

The trend here isn't only seen with US equities. We looked at the iShares Global 100 and found the same pattern but to a greater magnitude. We saw a +/- 10 bps move 82% of the time and a +/- 15 bps move 71% of the time.



So, is there a better benchmark? We think there is – **Arrival.**

At CAPIS, we define the Arrival benchmark as the midpoint when trading begins. Based on our strategy and analysis, this starting point is determined before the transition begins. Equally important, the benchmark is set with the client (to align expectations and be transparent). We start trading after the benchmark is struck, so there is no situation where we influence it or the event's performance measurement.

Be aware there can be variances in this definition, including "bid/ask midpoint price at the time the order is submitted" (Craig Niven, Societe General, 2018). Note the idea of "submitted" versus "begins" can vary depending on the trade type and instructions.

Using Arrival, we ignore what happened before and can accurately measure and analyze the TM strategy and trading performance more accurately, removing potential performance bias from the process. When we provide a post-trade, we compare all our performance to the selected benchmark (e.g., Arrival); however, we include other benchmarks (such as PDC) as part of the post-trade. The variety of benchmarks may help the client understand the performance of markets around the transition trade.

A final caveat – there are times when other benchmarks may work. But, that will always be the case. I believe Arrival will provide better and more transparent results around the TM event execution for most events. Take from this what you will.

Our next article will discuss when to start a trade (it's more complicated than you may think). If you have thoughts, questions, or want to say hi, reach out on LinkedIn or email me at bjenkins@capis.com.

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Part 2: When to start?

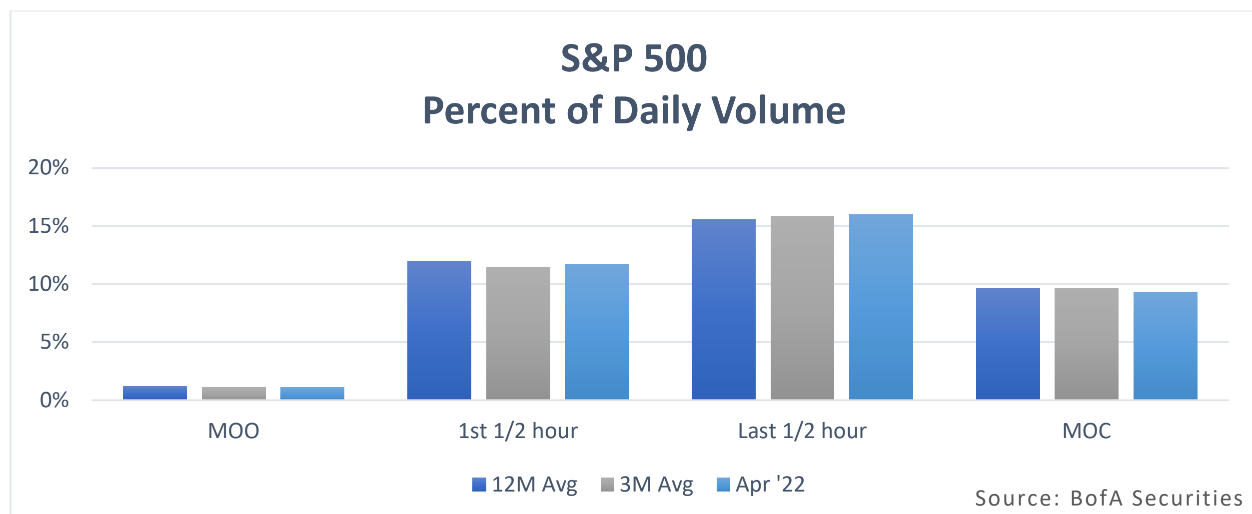
Our last post talked about the challenges of selecting an optimal trading benchmark. If you didn't read it, no worries. The 10-second recap is Arrival is usually (but not always) the optimal benchmark for transition management (or TM) events. It is both unbiased and more reflective of the TM execution performance.

There is no hard and fast answer to the question of when to start a TM or portfolio trade. Every event is different; this is where portfolio analysis, market expertise, and back-tested models come into play. We must understand the assets we are trading and how their volume and volatility change daily.

As in part 1 of this series (insert link?), we used the S&P 500 as a proxy. In this example, we look at the underlying securities for the last 12 months (as of April 2022).

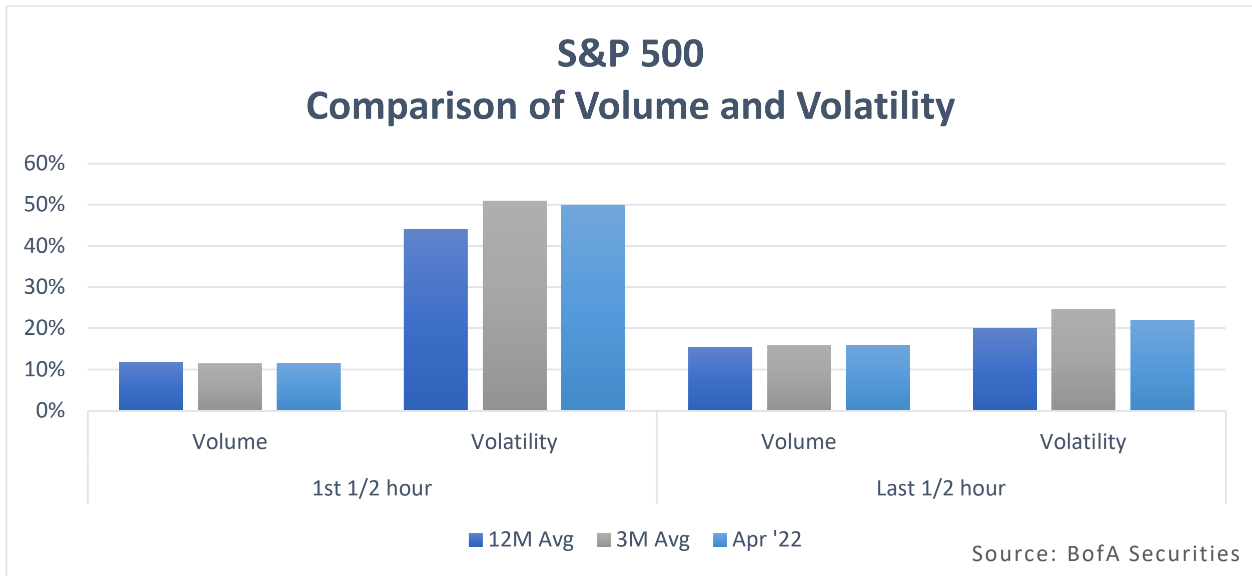
We don't believe starting at the market open is optimal in many situations and often suggest to clients that we wait at least 15-20 minutes to let the markets settle and volumes to improve. This approach can vary widely based on market cap and relative spreads of the trade positions. For example, we may start risk-neutral trading (buys and sells) earlier on larger cap names that are less volatile and have lower spreads sooner than we start trading smaller cap or more volatile names.

Interestingly, there is a consistent volume percentage per period regardless of the period analyzed (e.g., 12 months, 3 months, or 1 month). What is clear from this data is that Market on Open (MOO) has limited volume (less than 2% of the day), which often leads to increased spreads. The volume at Open is significantly smaller than Market on Close (MOC), where we see 9-10% of the day's volume.



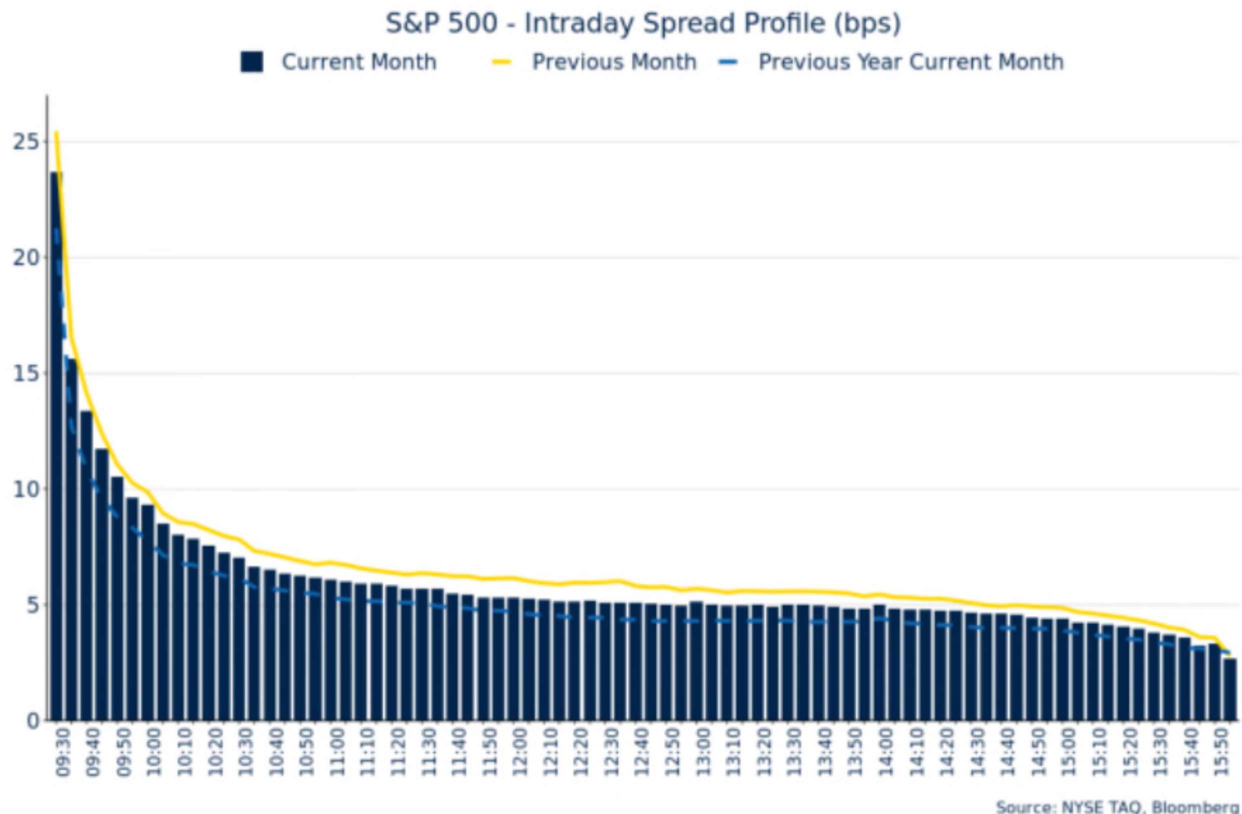
Keep in mind there is a point of diminishing return starting to trade later in the day. Starting too late in the day forces you to become a more significant percentage of the residual day's volume, leading to increased trade costs and a heightened opportunity cost risk (e.g., not being in your model portfolio as soon as possible).

Looking at the same data but comparing volatility relative to volume, we see the volatility outpaces volume 2-3x in the first 30 minutes of the day, which is greater than any other period during the trading day.



We consistently see low volume during the first 30 minutes of the US trading day, which forces volatility much higher. But volume is not the only factor impacting volatility during this period. The volume in the 1st ½ hour is similar to the volume in the last ½ hour. However, the volatility is nearly twice as high when comparing the morning to the afternoon.

Looking at the chart below (BofA Securities, 2022), we can better visualize the spreads throughout the trading day. I think this is one of the best examples of why we often avoid the first 15-20 minutes of the US trading day, as spreads are roughly 2x higher than the rest of the day.



Enough graphs! Let's wrap this up.

There is no perfect time to start a transition trade. However, this is where the art and science of TM come into play. A provider can (and should!) look at near-term historical data (usually 20 days) to better understand the portfolio's volumes, spreads, and volatility. The data helps in the creation of an event's overall trade strategy.

At CAPIS, we often analyze intraday (usually for the last few days) spread and volume for equities to identify the outliers. These positions shouldn't impact overall trade execution or strategy, but we can often build risk-neutralizing baskets of these outliers to reduce opportunity risk and manage trade costs.

If I had to summarize these two posts into a few bullet points, here they are:

- Benchmarks should help you understand trading effectiveness. Pick one that best does that for your specific situation. We like Arrival.
- The first 10 minutes of the US trading day is defined by lower volume but much higher spreads and volatility. We tend to avoid it.
- Generally, excess spreads reduce after the first 20-30 minutes to a more average daily level. This is often a good point to mark your benchmark (Arrival, right?) and start trading.
- When in doubt, trust but verify your provider. Ask questions. Understand why they are recommending the strategy. And ask for a detailed post-trade analysis. These are your assets, after all.

If you have thoughts, questions, or want to say hi, reach out on LinkedIn or email me at bjenkins@capis.com.

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