Liquidity in crisis

Navigating portfolio change

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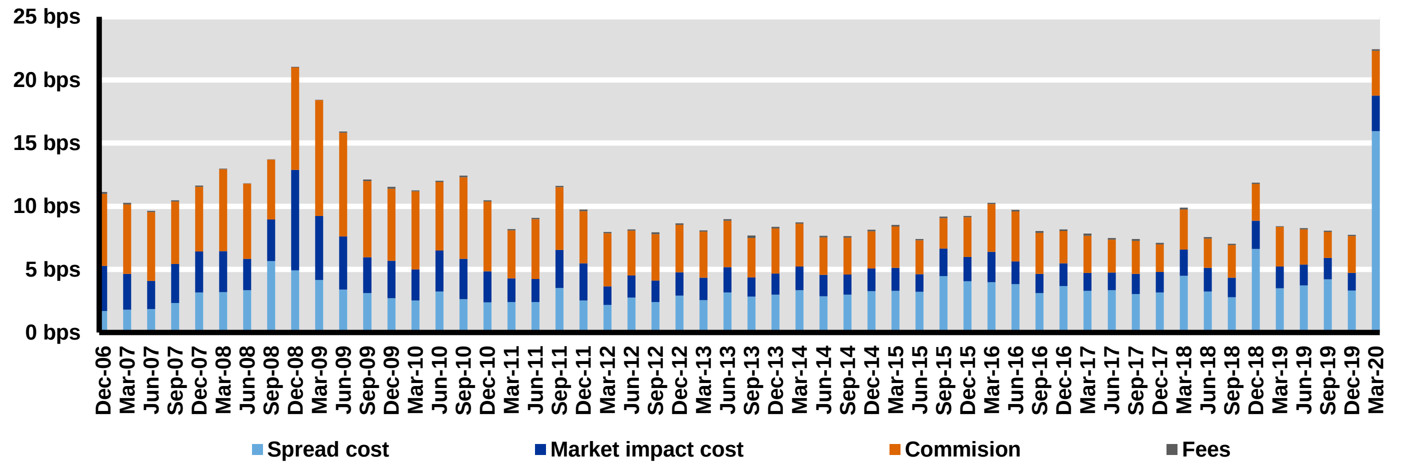
We are living through remarkable and unprecedented times. The COVID-19 crisis is impacting every corner of the globe, and we as investors are facing decisions and the lasting impacts of those decisions. This paper does not prognosticate what the future holds, we'll leave the foretelling to others. This document addresses now – providing insight on current implementation challenges and a perspective on trading costs and liquidity complications during this COVID-19 crisis. Here is what we have learned.

Equities

It should come as no surprise that the cost to trade global equities has increased, but it is the regional discrepancy that is somewhat surprising. One interesting observation is that U.S. equity trading costs have increased dramatically, while non-U.S. equity trading has increased only modestly. Examining large cap U.S. equity, Russell® 1000 spread costs have increased by almost 5X since December 2019.

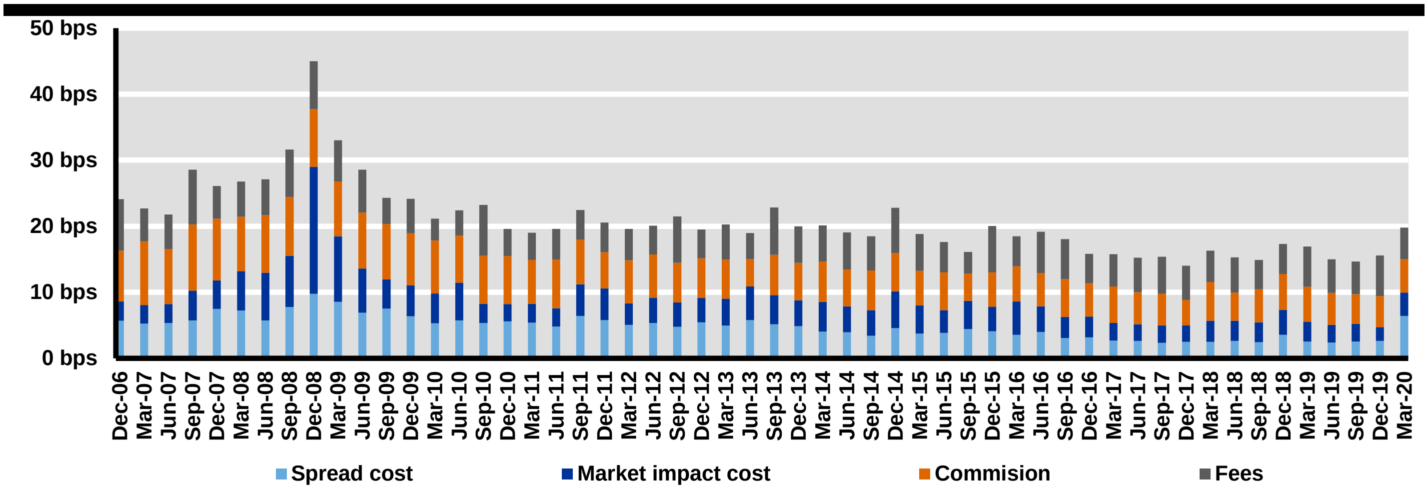
Exhibit 1: Russell® 1000 Transaction Costs - $250 million portfolio value



Source: Virtu Analytics. Data as of December 31, 2006 – March 31, 2020. Fees are based on the total traded in RIIS for that region for the period. It can differ materially from the actual taxes and fees for the index. Spread and impact costs are modeled with Virtu Ace Model.[1]

Non-U.S. equity trading also experienced increases in transaction costs, however the increase is muted relative to U.S. equity trading.

Exhibit 2: MSCI EAFE Transaction Costs - $250 million portfolio value



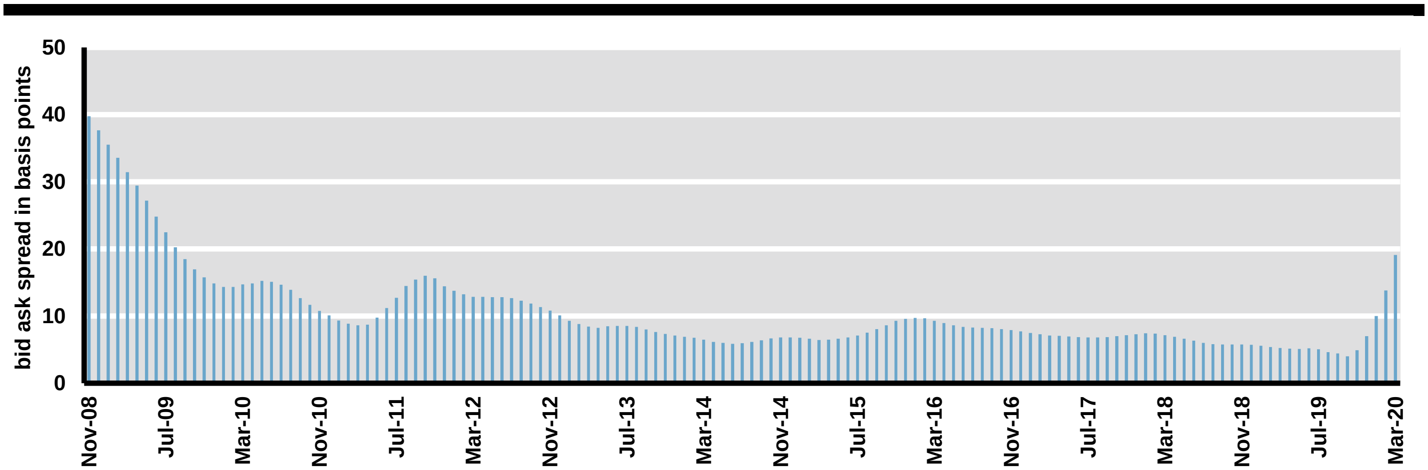
Source: Virtu Analytics. Data as of December 31, 2006 – March 31, 2020. Fees are based on the total traded in RIIS for that region for the period. It can differ materially from the actual taxes and fees for the index. Spread and impact costs are modeled with Virtu Ace Model.[2]

The lower costs in international markets has been attributed to less volatility relative to U.S. markets. The other notable aspect; while spread costs have increased dramatically, market impact costs have only moderately increased. The muted rise in market impact costs is likely related to increased volumes in global markets, in some instances 2X or 3X volumes of historical averages.
Put differently; although costs are higher, there continues to be considerably more liquidity relative to historical averages which dampens market impact effects. You can trade significant volumes in global equities in this market environment, it's just going to cost a little more.

Fixed income

Fixed income liquidity has been more impacted by the current COVID-19 crisis than equities. We are experiencing limited liquidity in credit sectors and even with the implementation of the Federal Reserve's asset purchase programs, credit sectors continue to have difficult trading conditions. Liquidity in corporate bonds is strained and bid offer spreads have widened significantly.

Exhibit 3: MarketAxess BASI (Bid ask spread index)



Data as of November 1, 2008 to March 1, 2020. The Bid Ask Spread Index (the "BASI Index") referred to herein and all information and data in respect of such BASI Index are the proprietary material of MarketAxess and are published on this website for reference only. Any other use of the BASI Index is prohibited unless under the terms of an express written license granted by MarketAxess.[3]

Even U.S. treasuries have been impacted by the crisis, with meaningful increases in bid/offer spreads, particularly for off-the-run treasuries. Like equities, though costs are currently elevated for trading U.S. treasuries, liquidity is still abundant and large volumes of U.S. treasuries are trading daily.

Like everything in fixed income, it's difficult to generalize liquidity. Certain sectors such as basic materials and energy are very difficult to trade relative to other sectors in credit, which makes each portfolio's liquidity profile different. When trading in illiquid sectors of fixed income it's important to understand that the "value"—or price—of the bond may not represent the bond's "worth". In fixed income, there is value (marked-to-market modeled price) and there is worth (what some other person will pay you for it), and many times they are not equal. Particularly, in times of risk off, value is greater than worth, and, in many cases, it is greater to a significant degree. Check the price on a corporate energy bond in your custodian's reporting to the market quotes you will get from dealers in the market on that bond. This is <u>not</u> bid/offer spread, this is the cost of selling an illiquid bond at a discount, when value is greater than worth. This is where transaction costs start to become alarming—when worth is dramatically lower than value. The only way to achieve price transparency, is for an investor to take the asset to the market and get quotes from market participants. Important to note that this *value greater than worth* situation also creates opportunities for active investment managers to add alpha by discovering these opportunities and purchasing assets where worth will eventually elevate to the bond's value. Market dislocations like this can create great opportunities for nimble investors.

Bottom line on liquidity - What does this mean for investors today?

1. There is ample liquidity in equities, but costs to trade are higher (particularly in the U.S.). If investors need to implement changes in equity portfolios, there will be plenty of liquidity, but analyzing the costs prior to making changes will be key to ensuring the investor is making the right decision.
2. Liquidity in fixed income is more nuanced and asset specific. Liquidity in many fixed income sectors is not favorable and can lead to significantly higher transaction costs. A recent example is a potential transition event we examined in January and then again in mid-March. The revised estimate of costs in mid-March revealed a fourfold increase in spread costs. Within the context of fixed income performance, this was just too costly for this client's objectives.
3. Rebalancing and asset-class shifts remain the most actively discussed events at this point in the crisis. The desire to move from fixed income to equities is present for most large institutional investors, but the conditions for making such a move are far from ideal. Investors will need advice and skill to navigate these rebalances with minimal costs. Asset allocation shifts highlight the most impactful consequence of investor decisions – opportunity gains/costs. We examine the increased costs in the scale of basis points, while opportunity gains/costs are in magnitudes of percentages and even double-digit percentages. Important for us all to consider the big picture and manage assets to maximize long-term risk adjusted returns.

What the future holds is difficult to predict, however investors that need to act, can do so with the appropriate partner who is skilled in evaluating the impacts of portfolio change, and with the capabilities to implement change during this very uncertain time. Our experienced implementation team in RIIS are specialists that help our clients navigate portfolio change daily, with decades of experience to apply to any market environment, regardless of how challenging. Perhaps most important, we are completely aligned with our clients. Misalignment of interests may lead to significantly higher costs to transact in times of stress.

[1] Many factors influence market impact cost including order size, volatility, spread and the selected trading style. Virtu's ACE model leverages stock-level inputs for volume (21-day MDV), volatility (60-day standard deviation of daily returns) and spread (5-day time weighted spread) and a user selected trading strategy in addition to a quarterly realized-trade calibration process to estimate stock-specific and list-based costs.

[2] See endnote 1

[3] This prohibition includes but is not limited to uses referred to in Article 3(1)(3) of EU Regulation 2016/1011 (the "Benchmarks Regulation"). This notification serves to satisfy MarketAxess's obligations as an index-provider pursuant to Article 2(2)(h) of the Benchmarks Regulation. MarketAxess and each director, officer, employee, representative, delegate and agent thereof hereby expressly disclaims, to the fullest extent permitted by applicable law, any liability for any error, omission, interruption or delay relating to the BASI Index as well as all warranties of accuracy, completeness, merchantability or fitness for a particular purpose with respect to the BASI Index. MarketAxess shall not be under any obligation to continue the calculation, publication and dissemination of the BASI Index and may cease its calculation publication or dissemination at MarketAxess's discretion without notice.

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