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COVID-19: ESTIMATING THE IMPACT OF MARKET DISORDER ON ASSET PRICES

Asset prices contain enormous amounts of information. This information is typically characterized as being both forward-looking and related to the economy—money-weighted investor expectations about future company earnings, defaults, inflation, monetary and fiscal policy. And, in our opinion, this is almost right.

Asset prices consist largely of forward-looking expectations, but they also contain information about the current state of the financial system itself.

Understanding this information and taking a view on the robustness (or otherwise) of the financial system itself can—during periods of stress—be just as important as understanding the forward-looking information when making investment decisions. It can help explain asset price movements and prevent investors from misapplying fundamental views about the economy to investment decisions.

During the first phase of COVID-19-driven markets, the state of the financial system was a big driver of risk asset prices. In this piece we discuss how we assessed the impact of market disorder on valuations and responded during the first phase of the pandemic.

COVID-19 hits the markets

Over the course of March, the global economy came to a sudden stop as governments sought to put much of their countries' economic structures into suspended animation. The financial system began to fall apart: transaction volumes collapsed, firms hoarded cash and lending ceased. Despite central banks cutting interest rates, the rate at which banks could borrow soared and the volumes of money that they could borrow collapsed. It was only the exceptionally swift and massive response on the part of central banks that prevented system-wide failure.

Policy responses that took quarters to deploy during the global financial crisis (GFC) were rolled out in days. And new policies, such as the U.S. Federal Reserve's Primary and Secondary Market Corporate Credit Facilities, which had never been deployed, were added to the mix.

Functioning credit markets are crucial to the real economy and to investors across all asset classes. They allow creditworthy firms to borrow money to pay salaries, fund capital expenditures and service past debts. The price at which these fixed-term borrowings are originated and change hands in the secondary market informs the valuation of other long-dated cash flows like rents and future earnings. Rising corporate bond yields are consistent with a fall in the future value of all future corporate cash flows: they are a profoundly deflationary force for asset prices.

During March credit spreads widened substantially, inducing negative credit returns, while equity markets plummeted. Exhibit 1 shows asset class total returns for the month and standardizes them as "z-scores" to show how large or small these moves were compared to the past 20 years—which includes the period of the GFC. For reference, a z-score of two is something that could be expected to occur a couple of times every three years or so, and a z-score of three might happen once a decade. Exhibit 1 highlights how the magnitude of returns seen in short-dated credit markets, while modestly negative in total return terms, was unusually significant. This was symptomatic of frozen and distressed funding markets.

Exhibit 1: March 2020 total returns and z-scores

Credit	US 1-5yr IG	US 5-10yr IG	EUR 1-5yr IG	EUR 5-10yr IG	GBP 1-5yr IG	GBP 5-10yr IG	US HY	EUR HY
March	-4.0%	-7.9%	-4.3%	-8.5%	-4.1%	-7.5%	-11.7%	-13.4%
z-score	-4.7	-4.8	-6.8	-5.9	-5.6	-4.3	-4.6	-3.2

Government bonds	UST 1-5yr	UST 5-10yr	Gilts 1-5yr	Gilts 5-10yr	EGB 1-5yr	EGB 5-10yr
March	1.7%	3.3%	0.5%	0.7%	-0.7%	-2.0%
z-score	+2.4	+1.8	+0.3	+0.2	-1.7	-2.0

Equities	S&P 500	MSCI ACWI	FTSE 100	MSCI Eur xUK	Topix
March	-12.4%	-13.5%	-13.8%	-14.1%	-7.1%
z-score	-3.0	-3.1	-3.5	-3.0	-1.5

Source: ICE BoAML bond indices, Bloomberg, Columbia Threadneedle Investments, May 15, 2020.
Past performance does not guarantee future results. Indices shown are unmanaged and do not reflect the impact of fees. It is not possible to invest directly in an index.

How much of the jump in corporate bond yields was associated with an informed rise in investor expectations of the future (deteriorating economic conditions, worsening credit metrics and rising default rates), and how much was associated with contemporaneous systemic financial market distress that central banks have sought to offset?

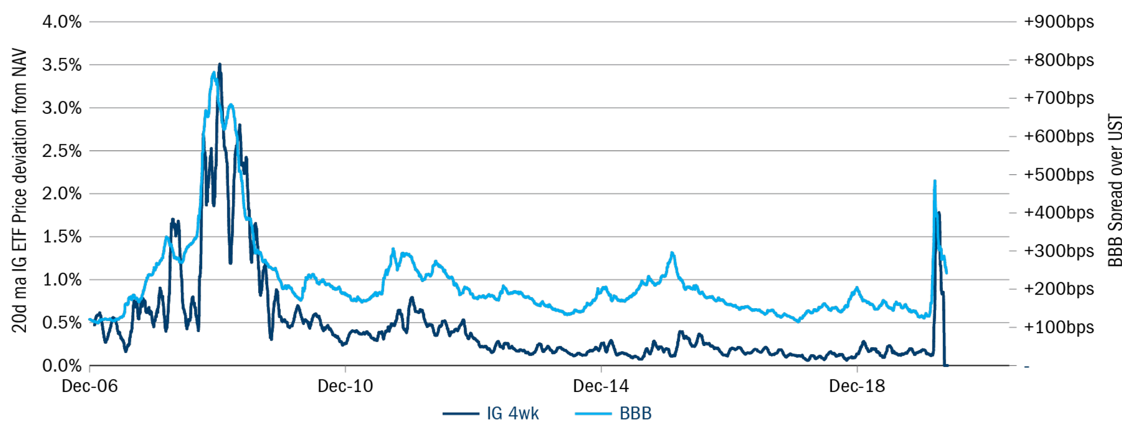
The two are interrelated and the question cannot be answered in black and white. But if risk premia are high because they are pricing in a future collapse in economic activity that will cause businesses to go bust *en masse*, they may very well be rich. Meanwhile, if risk premia reflect simply the brokenness of the financial system, there may be opportunities for medium-term investors. Because while central banks cannot obviate default risk, they can fix a broken financial system—it is part of their mandates and they have substantial firepower at their disposal. As discussed above, they showed immediate willingness to use this firepower.

By looking at ETFs, we can get some quantitative insight into the contemporaneous damage markets have suffered. Exchange-traded funds can be convenient vehicles for investors to use in normal market conditions, but during periods of market stress they may punish investors heavily for seeking to move money into or out of a market: ETF prices and published net asset values depart from one another substantially. Our research has found that the cost inflicted upon ETF investors seeking to move their assets (the disconnect between price and NAV) fits well with more sophisticated but lower-frequency measures, which we maintain to price liquidity risk and so can serve as a pocket guide to liquidity proxy.

In Exhibit 2, we show the average absolute price deviation from NAV for the three largest corporate bond fund ETFs since 2007 and the level of BBB-rated U.S. corporate bond market spreads over government bonds. The degree to which liquidity vanished from the market in March 2020 can be seen clearly. Exhibit 3 shows how the spread level and price deviation from NAVs have been historically related: loosely but positively.

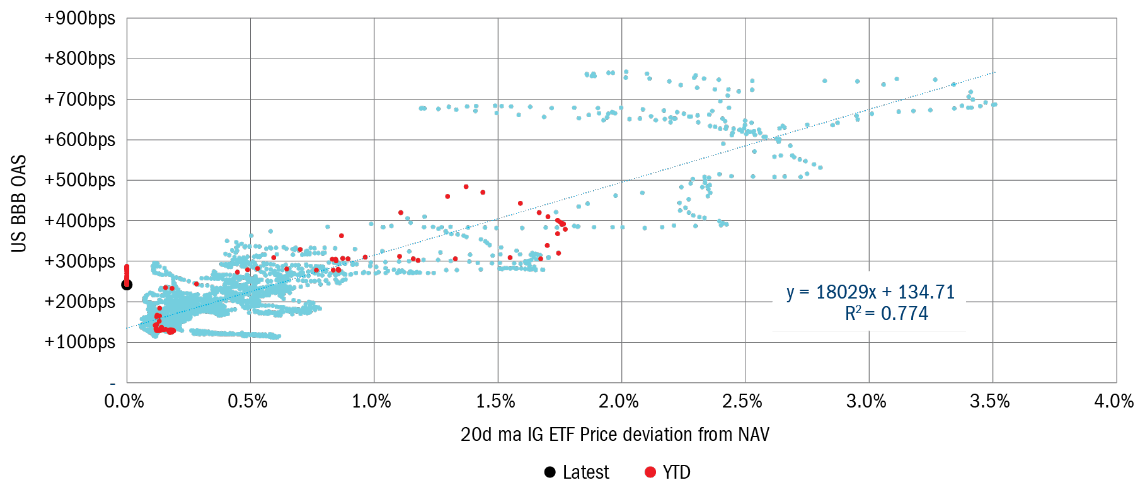
During periods of market dysfunction, spreads move to elevated levels. In the year following the GFC, liquidity was poor and credit risk premia were substantial. We believe that these substantial credit risk premia were meaningfully linked to market scarring left by the GFC, and this qualitative view corresponds to the quantitative measures that our ETF pocket guide signals.

Exhibit 2: ICE BofA BBB U.S. Corporate Bond Index spread over U.S. Treasuries; 20-day moving average price deviation from net asset value of three largest U.S. corporate bond ETFs, 2007-2020.



Source: Columbia Threadneedle Investments, Bloomberg; May 15, 2020. ETFs shown are: iShares IBOXX Investment Grade (LQD US Equity) January 26, 2007 to May 15, 2020; Vanguard Intermediate-Term Corporate (VCIT US Equity) – December 18, 2009 to May 15, 2020; and Vanguard S/T Corp. Bond ETF (VCSH US Equity) December 18, 2009 to May 15, 2020. Past performance does not guarantee future results. Indices shown are unmanaged and do not reflect the impact of fees. It is not possible to invest directly in an index. A basis point (bp) is 1/100th of a percent.

Exhibit 3: ICE BofA BBB U.S. Corporate Bond Index option-adjusted spread vs 20-day moving average price deviation from net asset value of three largest U.S. corporate bond ETFs, 2007-2020.



Source: Columbia Threadneedle Investments, Bloomberg; May 15, 2020. ETFs represented are: iShares IBOXX Investment Grade (LQD) January 26, 2007 to May 15, 2020; Vanguard Intermediate-Term Corporate (VCIT) – December 18, 2009 to May 15, 2020; and Vanguard S/T Corp. Bond ETF (VCSH) December 18, 2009 to May 15, 2020. Past performance does not guarantee future results. Indices shown are unmanaged and do not reflect the impact of fees. It is not possible to invest directly in an index. A basis point (bp) is 1/100th of a percent.

How do things look? As of mid-May our pocket guide for market liquidity showed a sharp improvement in liquidity conditions, coinciding with a fall in credit spreads. In investment-grade markets liquidity premia remain somewhat elevated, although it is important to note that credit risk is also much higher than it was a few months ago and requires higher spreads as compensation.

This quick quantitative measure of elevated illiquidity risk premia corresponds with our more qualitative view that investment-grade credit modestly overcompensates investors for the economic risks ahead—substantial though they are. Our asset allocation decisions have been informed by these insights: for clients with a medium-term horizon, we increased the quantity of risky assets in portfolios during the market mayhem but have increasingly focused portfolios toward higher quality risk assets like investment-grade credit.

The bet was not that the economy would bounce back quickly, but rather that market disorder would ease, and that risk premia associated with this disorder would fade. For investors with a very short horizon, we acknowledge that volatility was, and remains, elevated and a more cautious approach would have been warranted.

Equities in aggregate saw their risk premia increase when investment-grade corporate bond spreads ballooned. And we can also see further evidence of liquidity premia rising within equity markets among less liquid stocks. The insights around elevated risk premia attached to market disorder was not applied to these less liquid stocks, however, given the substantial overlap between the liquidity of a stock and its size.

Smaller companies tend to be (although are not always) more cyclically sensitive. And concerns coming from Columbia Threadneedle Investments' economics team around the length and depth of the downturn—somewhat more cautious than most economic forecasters—make building substantial positions in cyclically sensitive areas of the market less obvious. Instead, the insight around aggregate risk premia suggested we build up positions in quality- growth regional equity allocations in portfolios for investors with medium-term horizons.

And as liquidity premia retreated in credit markets, so valuations across other markets recovered.

The challenge of how to synthesize a collapse in forward-looking expectations regarding economic activity with an appreciation of the huge boost to policy support is one that faces all investors, and one that we will return to in the future. But understanding how contemporaneous market risks flow into starting valuations also helps identify strong risk-adjusted return opportunities.

Source for all data and information is Bloomberg as of May, 15 2020 unless otherwise stated.

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