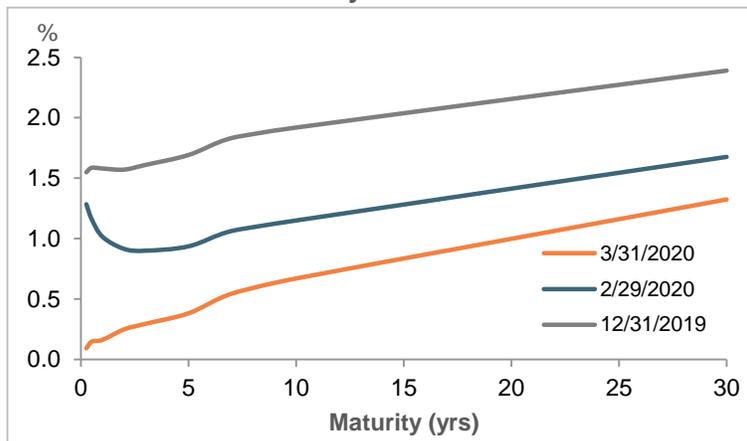


MARKET NEWS

- The continued spread of the coronavirus forced many businesses to temporarily close and, coupled with a dispute among OPEC members, exacerbated an already delicate market environment
 - US jobless claims surged to almost 3.3 million, far surpassing the highest level of 665,000 in the financial crisis, and up from 282,000 the prior week
 - Oil fell from \$45 to almost \$20 a barrel, as Saudi Arabia abandoned output restraints and flooded the market
- Treasury yields across the curve plummeted to below 1%, with the exception of the 30-year Treasury, which closed at 1.32%
- The Federal Reserve (Fed) and US Government implemented emergency monetary and fiscal measures to help prevent the US economy from spiraling into a recession and financial markets from potentially collapsing
 - In addition to cutting the fed funds target range to 0.00-0.25%, the Fed will purchase “in amounts as needed” Treasuries, agency-backed securitized, investment-grade corporates and municipal bonds
 - A \$2 trillion stimulus package was passed to help support struggling households, businesses, and state and local governments, far surpassing the \$800 billion that was provided during the financial crisis
- Liquidity across fixed income markets was challenged as dealers were unwilling to take on risk, with bid/ask spreads widening significantly and odd-lot sized trades struggling to receive bids
 - However, policy measures markedly improved risk appetite for investors; corporate spreads initially widened to 373bps from 122bps in February, before tightening by 101bps in the final six trading days, to close at 272bps
 - Despite the softer tone, corporate issuance totaled over \$259 billion, the highest monthly total on record
- Mortgage-backed securities benefited from Fed operations, which included purchasing up to a pre-determined amount of mortgages per day; operations focused on lower-coupon bonds, but drifted toward higher coupons towards the end of March
- The 10-year muni/Treasury ratio reached as high as 365% – a new record – before ending the month at 215%

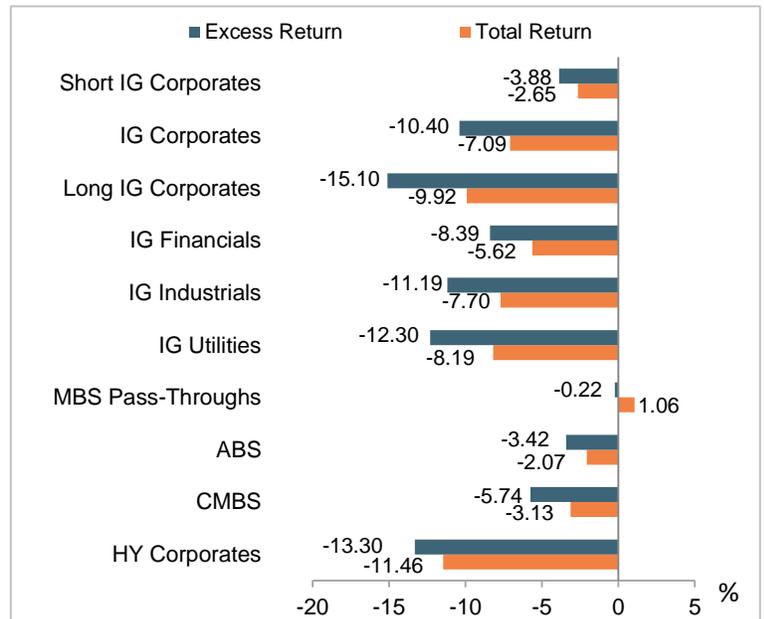
MARKET STATISTICS

Treasury Yield Curve



Maturity	2-year	5-year	10-year	30-year
3/31/2020	0.25	0.38	0.67	1.32
MTD Change	-0.67	-0.56	-0.48	-0.36
YTD Change	-1.32	-1.31	-1.25	-1.07

MTD Returns



As of: 3/31/20. Sources: Bloomberg, Bloomberg Barclays, Citigroup

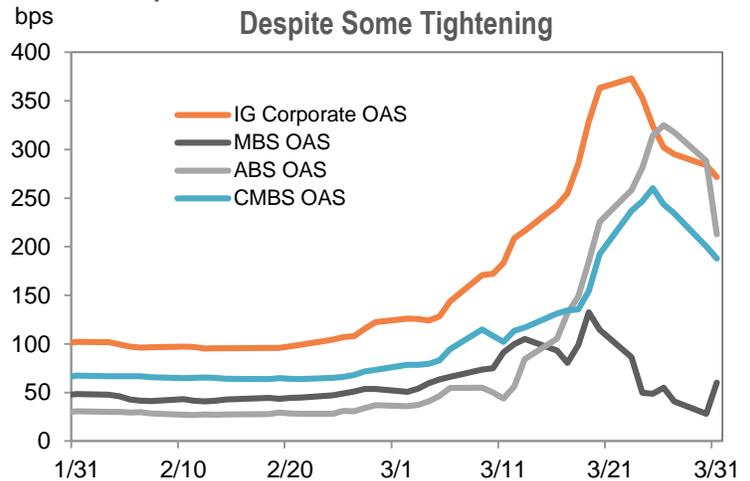
*Excess returns are the curve-adjusted excess return of a given index relative to a term structure-matched position in Treasuries.

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MARKET THEMES

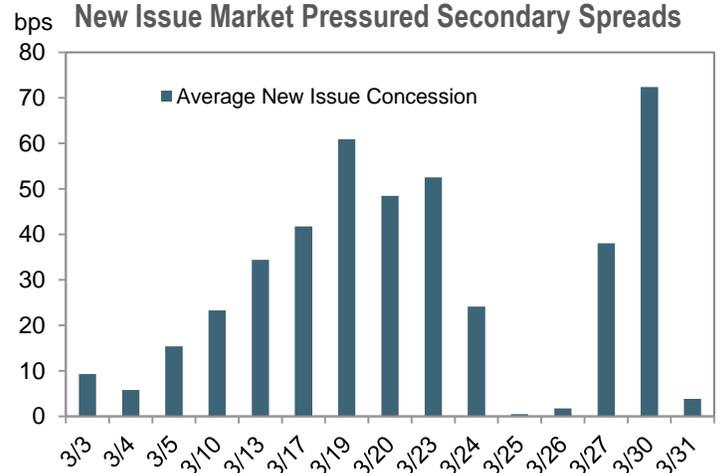
- Spreads across all investment-grade sectors dramatically widened over the month: corporates by 150bps, RMBS by 6bps, ABS by 176bps and CMBS by 115bps
 - Levels remained well below those seen in 2008 when corporate spreads reached over 600bps, but the pace of widening was much faster
- Some ETFs came under pressure, with NAV discounts of 5% at times, highlighting potential liquidity issues
- However, Fed policies appeared to help spreads, with most sectors below peaks
- RMBS spreads tightened to below February levels, as the Fed offered to purchase \$30-50 billion of mortgages each day, and mortgage purchases totaled almost \$300 billion

Spreads Remain Wider Month-over-Month Despite Some Tightening



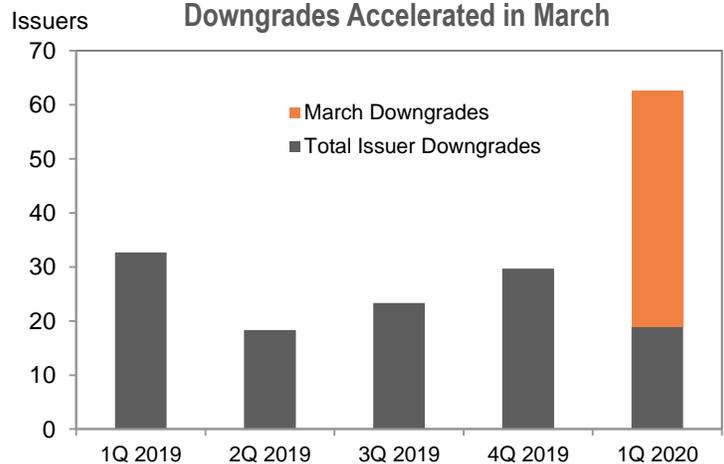
- Investment-grade corporate issuance totaled \$259 billion in March, while issuance in many other sectors was limited
 - High-yield corporate issuance totaled \$4 billion, ABS totaled \$9 billion, and CMBS totaled \$4 billion
- Many corporate issuers remained sidelined amid heightened volatility and a lack of liquidity, however; they quickly emerged with any sign of a supportive tone
- Cash flow concerns and issues with the Commercial Paper market forced many companies to issue long-duration corporate bonds, or tap existing lines of credit for liquidity
- New issue concessions averaged over 28bps in March – versus 3bps in January/February – and re-priced many secondary spreads wider when price discovery was limited and only the highest-quality issuers were receiving bids

New Issue Market Pressured Secondary Spreads



- The pace of downgrades accelerated over the past few weeks, with 20 to 66 investment-grade issuers downgraded by major rating agencies, primarily with energy companies
- Fallen angels totaled roughly \$89 billion, with the majority concentrated in Ford (\$36 billion) and Occidental Petroleum (\$29 billion)
 - \$175-200 billion of fallen angels are expected in 2020
- Bloomberg will remove fallen angels from investment-grade indices at month-end, whereas ICE BofA indices cancelled the monthly index roll
 - Bonds issued in March will also not be included in the April index for ICE BofA indices
 - Bonds maturing within 1-year will not be removed from either index

Downgrades Accelerated in March



Sources: Bloomberg, Bloomberg Barclays, Citigroup as of 3/31/20. Barclays Research as of 3/20/20. Total issuer downgrades and March downgrades calculated by averaging major rating agency totals.

*Excess returns are the curve-adjusted excess return of a given index relative to a term structure-matched position in Treasuries.

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