

Global Credit Perspectives

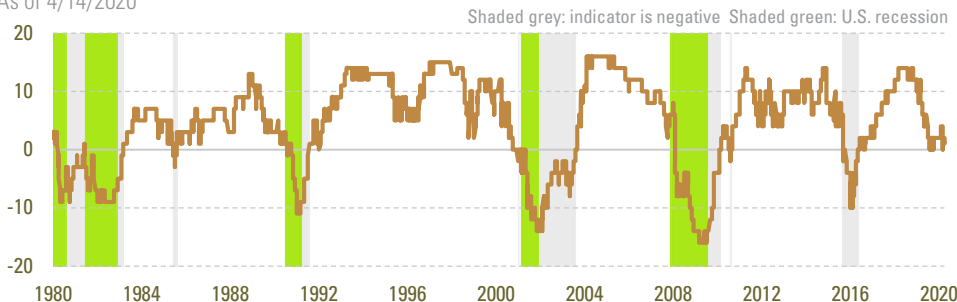
1Q 2020

Overview

We started these pages last quarter with “2020 Hindsight” as we closed 2019 and moved forward to a new decade and new era in global relations. The backdrop was constructive as the U.S. and China had reached a Phase 1A deal—although it seems as if that was an eternity ago and that we have traversed a year in the last four weeks. The risks as we entered 2020 were skewed toward growth as global trade tensions should have abated with the aforementioned trade deal. However, the tides of volatility began to wash over the shores as the U.S. struck at Iranian leadership (while travelling in Iraq) followed by the West acknowledging COVID-19 is a serious healthcare crisis. And in the middle of these events, a battle over oil wages between Saudi Arabia and Russia (see [“The End of the World As We Know It?”](#) on *Around the Curve*).

Figure 1 Brandywine Global: Proprietary U.S. Recession Indicator*

As of 4/14/2020



*Based on 16 components, including interest rates, high yield spreads, business confidence and activity, corporate profits, equity, and lumber price. Source: Brandywine Global

COVID-19

This shock is different than the most recent crisis’—this shock is a demand shock driven by the total lock down of global gross domestic product (GDP). It is an income shock that impacts the day to day economy compared to a financial shock, which is generally caused by monetary policy—monetary policy that is tight, which causes the recession. Policy response has been swift and one might even acknowledge that it has been significant. Globally, central bankers have been supportive of the global economy. Responses by the Federal Reserve (Fed), the European Central Bank (ECB), the Bank of England, and the People’s Bank of China (PBOC) and others has been strong and unwavering. Similarly, and some what surprising, has been the strong response by the political bodies globally. The fiscal response has been quick and decisive with a view that they are willing to do more should the economies require it.

Given the uncertainties surrounding COVID-19 and when the global economy will return to a more normal state, investment grade assets across Europe and the U.S. look rather compelling based on

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current valuations and support that is to be provided by both fiscal and monetary responses. As illustrated in **Figure 2**, investment grade spreads have risen to approximately 400 basis points (bps)—an almost 4 standard deviation move from fair value based on our models.

The challenge that investors continue to face is the unexpected leverage and weak underwriting standards that have been allowed to persist for the last decade. Significant unwinding of risk parity models and margin calls on levered investors is creating significant volatility in high-quality assets (not to mention lower rated assets as well).

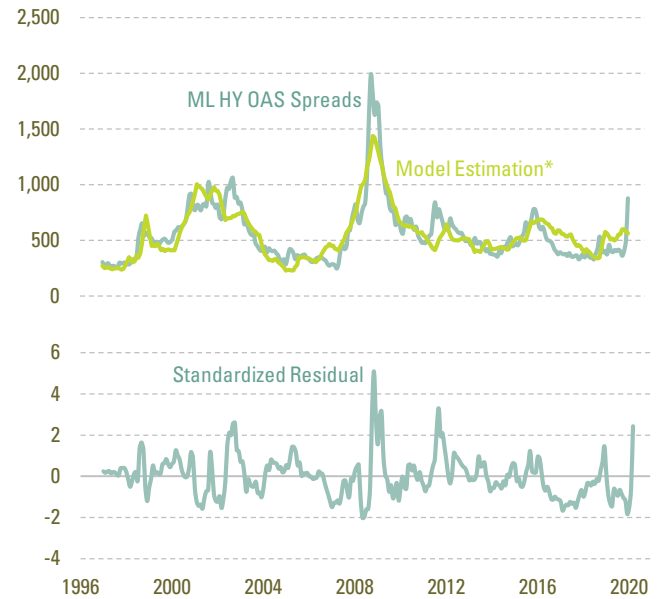
LOOKING FORWARD

The expected base case is for a gradual return to normal as the economy comes out of a complete lockdown. As social distancing has been the primary deterrent to containing the virus, one may expect that the economy will gradually be re-opened and that by the beginning of summer we will have a more normal existence. And we will continue to see the best and brightest minds focusing on improved treatments and possible vaccines to combat the potential for COVID-19 to become a seasonal threat to health and the economy.

However, changes will result from this experience. Supply chains will be rethought—will CEOs be beholden to sourcing from one jurisdiction or will they look to a more diverse global footprint? Consumer and business behaviors will rebound but to what extent—will travel and hospitality industries be impacted? What are the implications should the government take stakes in certain industries—airlines, auto manufacturers? Will the equity valuations recover as quickly?

It will be a whole new world, but in the short term, investment grade assets look compelling.

Figure 2 BOFA ML U.S. Corp. Investment-Grade Bond Spreads Model
 Basis Points; As of 3/31/2020



*Based on Fed loan survey, industrial production, capacity utilization, and 12m trailing default rate.
 Source: Brandywine Global

Index Summary

AS OF MARCH 31, 2020

INVESTMENT GRADE

- While the spread widening witnessed during March was unprecedented, the level of government intervention and support is equally unprecedented. Much of this support was focused on U.S. investment grade credit, which since March 23 has seen considerable tightening after Fed purchase programs and loans to Main Street.
- During the later parts of March and into April, defensive investment grade issuers were able to come to the market if they offered large new issue concessions. These, plus the Fed and U.S. government commitments, lead to significant issuance.
- March 2020 saw the largest issuance for U.S. investment grade corporate paper over the past 12 months. Comparing the last two weeks in March to the same period in previous years shows that recent issuance is over three times the normal volume.

SPREAD/YIELD SUMMARY (bps/%)	3/31/2019		1/31/2020		2/29/2020		3/31/2020	
	SPREAD	YIELD	SPREAD	YIELD	SPREAD	YIELD	SPREAD	YIELD
ICE BAML Global Corporate Index	128	2.88	107	2.01	127	1.92	282	3.13
ICE BAML AA Global Corporate Index	67	2.14	59	1.43	73	1.30	172	1.96
ICE BAML A Global Corporate Index	100	2.58	84	1.78	102	1.66	223	2.54
ICE BAML BBB Global Corporate Index	165	3.28	135	2.31	159	2.26	359	3.91
ICE BAML U.S. Corporate Index	127	3.69	109	2.64	130	2.47	305	3.69

PERFORMANCE SUMMARY (%)	QTD	YTD	1 YEAR	3 YEAR	5 YEAR	10 YEAR
ICE BAML Global Corporate Index	-5.55	-5.55	1.08	2.96	2.45	3.47
ICE BAML AA Global Corporate Index	-2.53	-2.53	2.30	2.98	2.30	2.70
ICE BAML A Global Corporate Index	-3.51	-3.51	2.54	3.31	2.59	3.27
ICE BAML BBB Global Corporate Index	-7.99	-7.99	-0.60	2.59	2.34	4.03
ICE BAML U.S. Corporate Index	-4.05	-4.05	4.37	4.00	3.27	4.87

STRUCTURED CREDIT

- The spread of the COVID-19 pandemic and subsequent efforts to contain it have dealt a critical blow to economies in the U.S. and overseas, reversing the positive outlook from the start of the year. Governments have taken action to alleviate some of the financial impact, but the extent of the total economic damage and the effectiveness of such programs remain to be seen.
- Structured credit markets were not spared from the significant sell-off experienced by credit and equity assets across the board. The sharp and sudden drop was largely driven by the liquidity needs of mortgage Real Estate Investment Trusts (REITs) and asset managers. The senior portion of the cap structure recovered partially by the end of the month, but down-in-credit tranches continue to face liquidity stress and mounting concerns about credit risk in the face of the economic shutdown.
- These recent dislocations have created opportunities in structured credit, where some sectors appear cheap both historically and against comparable corporates. However, we remain cautious as a number of aspects about the pandemic and its economic effects remain unknown.

SPREAD/YIELD SUMMARY (bps/%)	3/31/2019		1/31/2020		2/29/2020		3/31/2020	
	SPREAD	YIELD	SPREAD	YIELD	SPREAD	YIELD	SPREAD	YIELD
ICE BAML U.S. Mortgage-Backed Securities Index	45	3.08	54	2.27	64	1.93	97	1.64
ICE BAML U.S. Fixed Rate CMBS Index	88	3.19	82	2.22	95	1.94	262	3.05

PERFORMANCE SUMMARY (%)	QTD	YTD	1 YEAR	3 YEAR	5 YEAR	10 YEAR
ICE BAML U.S. Mortgage-Backed Securities Index	2.79	2.79	7.06	4.08	2.96	3.29
ICE BAML U.S. Fixed Rate CMBS Index	-1.18	-1.18	3.65	3.49	2.80	4.58

GLOBAL HIGH YIELD & LEVERAGED LOANS

GLOBAL HIGH YIELD

- Distress ratios suggest a pickup in defaults driven by energy
- Default rates increased to more than 3%, dominated by energy over the last 12 months, but distress ratios suggest more defaults to come
- March marked the worst month of performance since the global financial crisis (GFC)

LEVERAGED LOANS

- March performance was the worst since October 2008
- Quarter ended with an average dollar price of \$0.827
- Discount margin ended the quarter in excess of 800bps – widest since GFC

SPREAD/YIELD SUMMARY (bps/%)	3/31/2019		1/31/2020		2/29/2020		3/31/2020	
	SPREAD	YIELD	SPREAD	YIELD	SPREAD	YIELD	SPREAD	YIELD
ICE BAML Global High Yield Index	421	6.14	408	5.25	500	5.83	915	9.44
ICE BAML BB Global High Yield Index	278	4.57	263	3.72	339	4.17	669	6.97
ICE BAML B Global High Yield Index	484	6.94	459	5.88	579	6.70	1095	11.24
ICE BAML CCC & Lower Global High Yield Index	1015	12.23	1066	11.91	1199	12.89	1932	19.65
ICE BAML U.S. High Yield Index	405	6.48	403	5.62	506	6.25	877	9.24
ICE BAML European High Yield Index	392	3.52	335	2.78	409	3.43	754	7.00
Credit Suisse Leveraged Loan Index	467	6.97	456	5.89	510	6.03	974	10.30

PERFORMANCE SUMMARY (%)	QTD	YTD	1 YEAR	3 YEAR	5 YEAR	10 YEAR
ICE BAML Global High Yield Index	-14.10	-14.10	-8.28	0.32	2.66	5.11
ICE BAML BB Global High Yield Index	-11.71	-11.71	-4.99	1.65	3.15	5.46
ICE BAML B Global High Yield Index	-15.56	-15.56	-10.32	-0.45	2.14	4.74
ICE BAML CCC & Lower Global High Yield Index	-23.20	-23.20	-20.11	-4.97	1.17	4.23
ICE BAML U.S. High Yield Index	-13.12	-13.12	-7.45	0.55	2.67	5.50
ICE BAML European High Yield Index	-16.55	-16.55	-11.81	-0.46	1.27	2.82
Credit Suisse Leveraged Loan Index	-13.19	-13.19	-9.51	-0.73	1.21	3.26

EMERGING MARKETS

- Emerging markets saw one of the sharpest sell-offs we have had since the 2008 financial crisis. Prices fell across markets as investors headed for the exits due to the sudden stop of economic activity and collapse in oil prices.
- While prices have rebounded some, one should expect a rise in default rates across vulnerable sovereign credit and corporates. Currencies, which act as the release valve, have adjusted during March at one of the quickest rates we have seen in the last 20 years.

SPREAD/YIELD SUMMARY (bps/%)	3/31/2019		1/31/2020		2/29/2020		3/31/2020	
	SPREAD	YIELD	SPREAD	YIELD	SPREAD	YIELD	SPREAD	YIELD
JP Morgan (JPM) CEMBI Broad	283	5.52	246	4.49	296	4.47	574	6.33
JPM EM Bond Index Global Diversified	371	6.19	297	4.62	352	4.78	577	6.54
JPM GBI-EM Broad Diversified	-	6.42	-	4.99	-	5.05	-	5.51

PERFORMANCE SUMMARY (%)	QTD	YTD	1 YEAR	3 YEAR	5 YEAR	10 YEAR
JPM CEMBI Broad	-10.02	-10.02	-3.01	1.66	3.35	5.10
JPM EM Bond Index Global Diversified	-11.76	-11.76	-5.28	0.44	2.85	4.82
JPM GBI-EM Broad Diversified	-13.60	-13.60	-5.01	-1.01	0.39	0.74

Investment Grade

The ICE BAML Global Corporate Index returned -4.4% in the first quarter while its yield widened to 3.13% and closed the quarter with a spread of 282 bps. For the trailing 12 months, the index returned -1.1%. Lower-quality investment grade bonds (BBB) returned -7.7% for the quarter and -3.1% for the trailing 12 months, worse than AA and A-rated corporate bonds, which returned -1.4% and -3.1% for the quarter and 1.2% and 0.6% for the trailing 12 months, respectively.

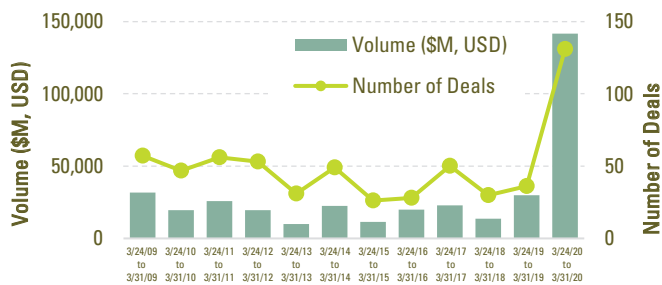
After relatively solid total returns in January and February, developed market investment grade credit was hit hard in March as the COVID-19 pandemic upended economies, financial markets, investor, and market maker operations. Credit and other spread product briefly experienced “offer only” conditions whereby sale of even small-sized, high-quality bonds became problematic.

Particularly hit hard were commercial paper markets, whereby the withdrawal of investor participation led a number of the highest calibre investment grade companies to offer historically attractive yields on longer-dated bond offerings. The wide “new issue concessions” were sufficient to pull in widespread participation. In the latter part of the month, the Fed began unveiling numerous corporate and loan purchase or support programs, unprecedented in both scale and breadth. The early impact of the programs announced in March was to see investment grade spreads move off the wide levels reached March 23, and since quarter end, further clarity around these programs has buttressed investor sentiment within both investment grade and the higher quality tiers of high yield.

Following the large New Issue Concessions (average of 28.9 bps) being required by investors to issue bonds in this current climate, investment grade corporate issuers were able to return to the bond market for much needed capital. Over the last two weeks, new issue size and pace exploded to levels not seen in an extended period. March 2020 has seen the largest issuance for U.S. investment grade Corporate paper than seen in the past 12 months (Figure 3). Comparing the last two weeks in March to the same period in previous years shows the recent issuance is over three-times the normal volume for this period (Figure 4).

Figure 3 Week-to-Date U.S. Investment-Grade New Issuance

As of 3/31/2020



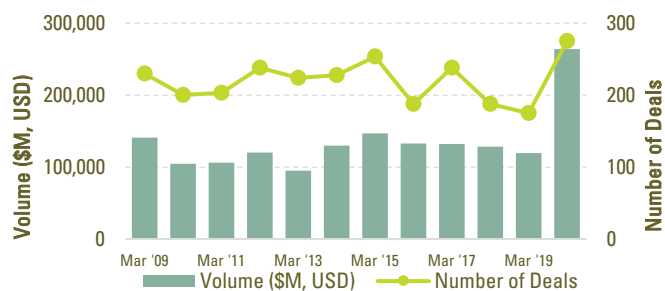
Source: Bloomberg (© 2020, Bloomberg Finance LP)

Financials made up over a quarter of new issuance in March while more defensive sectors such as consumer discretionary, technology, consumer staples, and utilities made up another 50% of issuance. While dispersed across various sectors, these companies that have access to the market tend to better manage liquidity with flexible working capital abilities while growing organically without significant capital expenditures in the near term. Companies most vulnerable to a prolonged slowdown will most likely have further price pressures (Figure 5).

We believe that there is a good opportunity in buying cash bonds issued by high-quality, resilient issuers with good liquidity where there has been an explicit Fed or ECB commitment to purchase those bonds, especially with healthy New Issue Concessions. We are already seeing some of those bonds issued toward the back end of March trading 100-150 bps tighter than issued (Figure 6).

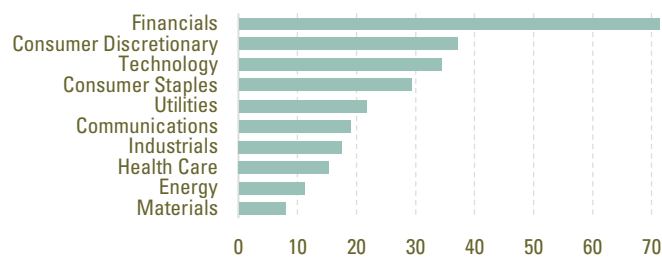
Figure 4 Year-Over Year U.S. Investment-Grade New Issuance

As of 3/31/2020



Source: Bloomberg (© 2020, Bloomberg Finance LP)

Figure 5 Volume in USD



Source: Bloomberg (© 2020, Bloomberg Finance LP)

Figure 6 New Issue Metrics

IG (ex-SSA)	3/31	March	YTD	2019
New Issue Concession (bps)	3.8	28.9	17.2	4.3
Books (Times Covered)	7.0	5.1	4.3	3.2
Compression (bps)	-51.3	-29.3	-25.1	-18.7

Source: Bloomberg (© 2020, Bloomberg Finance LP)

The policy response to this outbreak has been tremendous thus far. In the U.S., the Fed has increased the scope of its asset purchases and has implemented a number of significant tools aimed at the corporate sector, including the Primary and Secondary Corporate Credit Facilities. The central bank is also expected to introduce a lending program specifically for small-to-medium enterprises. The ECB has undertaken its own quantitative easing program, relaxed capital requirements, and lowered rates on the targeted- and long-term refinancing operations.

With unprecedented levels of direct support (aimed at the front end of credit) and the return of a semblance of normality to funding and credit markets, spreads have retraced 33%-50% of the dislocation observed since the COVID-19 shutdown. The yet to be realized path of the pandemic and reopening of the economy will drive relative performance of spread assets, sectors, and specific credit in the coming quarters. While much remains to unfold, the starting place of investment grade is favorable relative to pre-pandemic levels.

Structured Credit

OVERVIEW

What began as a benign environment for structured credit completely reversed due to the onset of the COVID-19 pandemic and its effects on economies worldwide. Financial markets across the spectrum were severely impacted, with equities and credit products suffering steep losses.

These sharp and sudden drops were largely driven by liquidity needs as margin calls battered highly levered mortgage REITs and redemptions mounted among traditional money managers, making them forced sellers of structured credits. However, the threat of increased delinquencies and defaults due to a prolonged economic shutdown also weighed on valuations.

Actions taken by the Fed to provide liquidity have helped structured credits to varying degrees. While prices have recently shown signs of firming across many sectors, the technicals have not yet bottomed as levered REITs may still face further margin calls. Uncertainty exists in credit fundamentals due to business closures and massive unemployment, and the effectiveness of government programs to alleviate financial stress remains to be seen. Caution is warranted in the near term until the financial and economic effects of this crisis become more apparent.

In spite of these serious challenges, we believe positive factors, such as relatively cheaper valuations that have already priced in dire outcomes, historically low mortgage rates, less net supply and shorter duration, should drive future performance once the pandemic abates. Therefore, we maintain our current positioning and seek further opportunities for upside potential as the economy emerges from this crisis. As always, we remain vigilant toward further downside risks that may outweigh these advantages.

U.S. RMBS

New issuance of Agency MBS totaled \$475 billion in 1Q 2020, compared to \$327 billion over the same period in 2019. Non-agency MBS new issuance hit \$29 billion in 1Q 2020, versus \$41 billion in 1Q 2019. Issuance was mainly in jumbo and non-qualified mortgages (QM), Credit Risk Transfer (CRT), and non-performing loans (NPL). Performance varied widely by type and place in the capital structure. CRT bonds showed clear differences down the capital stack, with M1 notes dropping -1.2% to -1.4%, M2s returning -19% to -20%, and Bs falling -46% to -76%. While the speed and severity of these sell-offs were mainly liquidity-driven, uncertainty exists in fundamental factors such as the future pace of delinquencies, how forbearance programs will be applied, and the ability of servicers to advance payments over a sustained period. Agency MBS will directly benefit from the support of the Fed's lending and asset purchase programs, but non-agency, CRT, and legacy MBS are not currently covered by these programs and remain vulnerable to a further leg down in the near term. The apparent unwillingness of the government to lend support to non-agency mortgages and their servicers creates significant uncertainty going forward. However, non-agency and CRT MBS notes continue to provide attractive carry and offer potential value after lagging the recent spread tightening seen in other markets.

CMBS

AAA-rated Commercial MBS (CMBS) returned -3.07%, outperforming comparable investment-grade corporates over the quarter, while BBB- underperformed, with sell-offs of -25.75%. Issuance reached \$59 billion in 1Q 2020 vs. \$72 billion in 1Q 2019, with agency issuance outpacing non-agency. Challenges to the commercial real estate (CRE) market are most prevalent in the lodging and leisure sectors, hard hit by the drop in tourism, and in retail, where the deterioration already taking place will likely accelerate. The Fed's lending and asset purchase programs will directly support valuations of agency CMBS. We see relative value in AAA and single-A conduits, as improved liquidity for investment-grade corporates and agency CMBS have made them comparatively rich.

ABS

Total issuance exceeded \$66 billion in 1Q 2020 compared to \$89 billion in 1Q 2019. Returns ranged from -2.39% for credit cards to -10.36% for fixed-rate home equity loans and -10.54% for "other ABS." Certain sectors such as private student loans and subprime autos are exposed to the financial stress on borrowers from the crisis.

CLO

Returns in collateralized loan obligations (CLOs) varied greatly down the credit structure. AAA CLO ended the quarter down -3.8%. Negative returns to AA classes were greater at -8.3%, while down in credit fared worse, with BBBs having lost -20.3% and BBs down -31.7%. U.S. CLO supply totaled \$14

billion in 1Q 2020, slowing down from \$42 billion for 1Q 2019. Corporate loan borrowers are showing greater signs of deteriorating corporate credit fundamentals, challenging liquidity and negative investor sentiment. The energy sector has been further impacted by an oil price war initiated by Russia and Saudi Arabia. Defaults are increasing and rating agencies have stepped up downgrades, bringing some deals near collateral quality limits and hampering collateral managers' ability to rebuild par.

INTERNATIONAL RMBS

Spanish and U.K. RMBS markets also experienced sell-off as their respective countries grapple with their own COVID-19 outbreaks. However, these markets still possess solid fundamentals, clean-up call upside, and lack of new issue supply. Anticipated actions by the ECB should also provide needed support to these markets. Distributed European ABS issuance totaled \$22 billion in 1Q 2020. In addition to uncertainty caused by the pandemic, questions about the implementation of the Securitisation Regulation and the Brexit overhang have weighed on the pace of issuance.

Global High Yield & Leveraged Loans

Performance in the high yield and leveraged loan indices was historic in the first quarter (Figure 7). Both the BAML ICE US HY Index and CS Total Return Index were down more than 13% in the first quarter of 2020, the second worst quarter of performance since the more than 17.5% negative return of the fourth quarter of 2008. In local currency terms, the European HY Index was down 14.6% for the quarter. The exogenous shock of COVID-19 caused a sudden stop to the global economy and resulted in a significant repricing of credit risk in both high yield bond and leveraged loan markets. The majority of the drawdown occurred in March, but expectations are for further economic woes continuing throughout the second quarter. In response to COVID-19, the Fed and U.S. Treasury, along with other central banks and governments throughout the world, have responded with large fiscal packages and large scale asset purchase programs to support credit markets and avoid a large-scale global default cycle.

After one of the worst quarters for the high yield and leverage loan asset classes, the Fed and U.S. Treasury responded with substantial programs to provide what amounts to bridge financing during the COVID-19 economic crisis. In addition to utilizing programs such as the commercial paper funding facility, the Fed has announced both primary and secondary corporate bond purchase facilities. We favor a nuanced approach to high yield and leveraged loan investing during this highly uncertain time—global central banks and treasuries have responded in unprecedented size and measure, but not all sectors will be spared the upcoming default cycle. Recent events will have a massive pro forma impact on all sectors, and we are working tirelessly to determine which issuers are best positioned to weather the substantial uncertainties facing the global economy for years to come. The political, economic, and social implications of the current crisis will shape the world for years to come. What has not changed is the importance of liquidity—a pillar of our investment process that has served us well throughout this difficult time as we consider access to funding and the covenants that may prohibit this access. Our focus on valuations and the economic cycle has helped us to avoid those sectors most impacted by COVID-19, and this same framework should guide us well as we approach a new normal and balance valuations against the impending recession (see Figure 8).

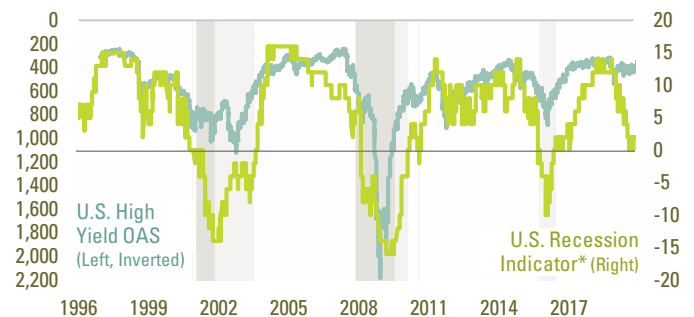
The portfolios are positioned with significant weights in telecommunications and technology sectors as companies prepare for a 5G roll out. COVID-19 also punctuates the need for remote communication and technological advancement in all areas of the economy, particularly healthcare. When it comes to cyclical sectors, particularly commodities, we favor metals and mining over oil and gas. A failure by OPEC to sufficiently cut production will result in storage builds that may drive oil below \$20, which would impair recoveries and hasten the default cycle in the sector; however, reduced oil production may result in less associated gas production and provide a future catalyst for spread tightening in bonds issued by Marcellus gas producers. Metals and mining may benefit from government-imposed mine closures leading to a countercyclical supply response as operations enter care and maintenance mode. Copper, in particular, will be in high demand to meet upcoming technological advancements, electrification of the auto sector, and continued grid buildouts throughout the world. The sector does face substantial headwinds, but global fiscal programs should also provide a tailwind to historically wide spreads.

Figure 7 BAML ICE Data

	1Q20 Change in OAS (bps)	1Q20 Total Return (%)	4Q08 Total Return (%)
USHY Index	517	-13.1	-17.6
BB	422	-10.2	-12.8
B	556	-14.1	-18.6

Source: ICE BofA Merrill Lynch

Figure 8 U.S. High Yield OAS & Recession Indicator
 As of 4/13/2020



*Based on 16 components, including interest rates, high yield spreads, business confidence and activity, corporate profits, equity, and lumber price. Shaded light gray: indicator is negative. Shaded dark gray: U.S. recessions.

Source: Bank of America Merrill Lynch, Macrobond

Emerging Markets

Where do we begin? The year started out with bright prospects for emerging markets following strong returns across hard and local markets in 2019. After being broadly flat for 2019, emerging market currencies were expected to benefit from the trade detente between the U.S. and China and the subsequent pick-up in global growth. Hard-currency sovereign and corporate markets were trading in the tighter end of their historical ranges; however moderate upside was expected. Unfortunately, the tables were flipped in late February and into March, which saw one of the sharpest sell-offs we have had since the 2008 financial crisis (Figure 9). Prices fell across markets with investors heading for the exits due to the sudden stop of economic activity and collapse in oil prices. While prices have rebounded some, one should expect a rise in default rates across vulnerable sovereign credit and corporates. Currencies, which act as the release valve, have adjusted during March at one of the quickest rates we have seen in the last 20 years. Given the onslaught of negative media and research we read each day, it is challenging to be an optimist. While there are many unknowns, we do know that the virus will pass and valuations today are at a more attractive attachment point than where we started the year.

CORPORATE

The JP Morgan CEMBI Broad Diversified Index returned -10.17% for the quarter. On a quality basis, investment grade and high yield returned -6.06% and -15.76%, respectively. March turned out to be the second worst month for EM corporates since October 2008. The yield-to-worst on the index backed-up over 200 bps over the quarter to finish at 6.58% while spreads widened by 330 bps to 599 bps. Total issuance for the quarter was \$132 billion, almost all of it was issued in January and February. While the corporate market has settled down following a period of strong outflows and dislocation, uncertainty remains. With lockdowns in place and shocks to economic growth expected, rising corporate defaults should be expected. For some industries, analyzing liquidity levers will be important to assess the ability to manage through this period. Airlines, hotels, and energy, which have widened out sharply (Figure 10), will be some of the most impacted industries. For airlines, we have seen several announcements related to maintaining liquidity, including 90% reductions in daily flights, voluntary leave for large portions of the workforce, pay cuts as well as negotiations with some of their key partners all in effort to maintain liquidity. Monitoring these levers will be important over the next few months.

SOVEREIGN

Sovereign bonds, as measured by the JPM GBI-EM Global Diversified Index and the hard currency JP Morgan EMBI Global Diversified Index, returned -15.21% and -13.38% during the quarter with the overwhelming majority of the sell-off occurring in March. Given the velocity of the sell-off in March and concerns around a dollar shortage, risks of a liquidity crisis rapidly emerged. The Fed quickly announced two programs including a swap line program with several emerging market central banks and the Foreign and International Monetary Authorities (FIMA) repo facility that will benefit countries holding dollar reserves. The repo facility provides access to U.S. dollars while alleviating the need to sell U.S. treasuries in the market or EM central banks having to sell reserves. Fiscal policies were announced around the world in an attempt to back-stop households and the private sector. While central banks cut rates, they also announced measures to ensure functioning financial markets and even announced quantitative easing measures in a few countries. We are watching the risks around debt monetization in some countries given fiscal constraints they are facing due to sizable haircuts to growth and larger fiscal deficits. If this pandemic is prolonged, one should expect a rise in restructuring in hard-currency markets and more countries going to the IMF for assistance.

Figure 9 GBI-EM
Rolling 3 Months, As of 4/17/2020

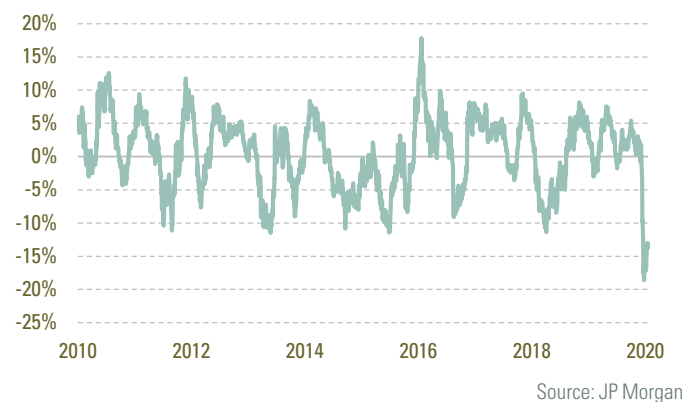
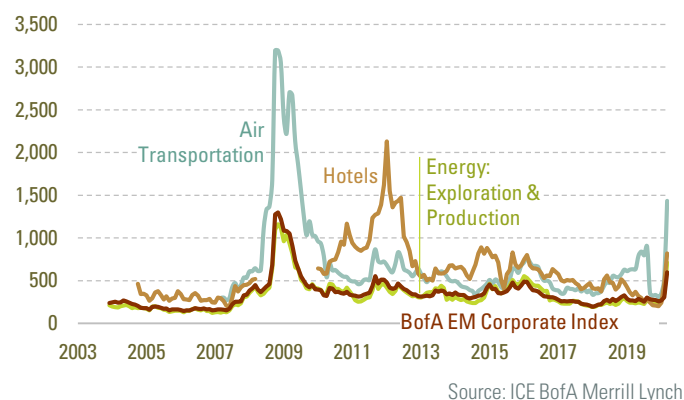


Figure 10 OAS: Airlines, Energy, and Hotel
As of 3/31/2020



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Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P, and Fitch), at least 18 months to final maturity at the time of issuance, at least one year remaining term to final maturity as of the rebalancing date, and a fixed coupon schedule. The ICE BAML AA Global Corporate Index is a subset of the ICE BAML Global Corporate Index, including all securities rated AA1 through AA3, inclusive. The ICE BAML Single-A Global Corporate Index is a subset of the ICE BAML Global Corporate Index, including all securities rated A1 through A3, inclusive. The ICE BAML BBB Global Corporate Index is a subset of The ICE BAML Global Corporate Index, including all securities rated BBB1 through BBB3, inclusive. The ICE BAML U.S. Corporate Index tracks the performance of U.S. dollar-denominated investment grade corporate debt publicly issued in the U.S. domestic market. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P, and Fitch), at least 18 months to final maturity at the time of issuance, at least one year remaining term to final maturity as of the rebalancing date, a fixed coupon schedule, and a minimum amount outstanding of \$250 million. The ICE BAML Global High Yield Index tracks the performance of USD-, CAD-, GBP-, and EUR-denominated below investment grade corporate debt publicly issued in the major domestic or eurobond markets. The ICE BAML BB Global High Yield Index is a subset of the ICE BAML Global High Yield Index, including all securities rated BB1 through BB3, inclusive. The ICE BAML Single-B Global High Yield Index is a subset of The ICE BAML Global High Yield Index, including all securities rated B1 through B3, inclusive. The ICE BAML CCC & Lower Global High Yield Index is a subset of The ICE BAML Global High Yield Index, including all securities rated CCC1 or lower. The ICE BAML U.S. High Yield Index tracks the performance of USD-denominated below investment grade corporate debt publicly issued in the major U.S. markets. The ICE BAML European High Yield index tracks the performance of below-investment grade corporate bonds publicly issued in Europe. The Credit Suisse Leveraged Loan Index tracks the investable market of the U.S. dollar-denominated leveraged loan market. It consists of issues rated "5B" or lower, meaning that the highest-rated issues included in this index are Moody's/S&P ratings of Baa1/BB+ or Ba1/BBB+. All loans are funded term loans with a tenor of at least one year and are made by issuers domiciled in developed countries. The ICE BAML U.S. Mortgage-Backed Securities Index tracks the performance of U.S. dollar-denominated fixed rate and hybrid residential mortgage pass-through securities publicly issued by U.S. agencies in the U.S. domestic market. The ICE BAML U.S. Fixed Rate CMBS Index tracks the performance of U.S. dollar-denominated investment grade fixed rate commercial mortgage-backed securities publicly issued in the U.S. domestic market. The JP Morgan Corporate Emerging Market Bond Index (CEMBI) Broad is a global, liquid corporate emerging markets benchmark that tracks U.S. denominated corporate bonds issued by emerging markets entities. The JPM EM Bond Index Global Diversified is composed of U.S. dollar-denominated Brady bonds, eurobonds, traded loans, and local market debt instruments issued by sovereign and quasi-sovereign entities. The JPM Government Bond Index-Emerging Markets (GBI-EM) Broad Diversified is a comprehensive emerging market debt benchmark that tracks local currency bonds issued by emerging market governments. The unique diversification scheme ensures that weights among the index countries are more evenly distributed by reducing the weight of large countries and redistributing the excess to the smaller-weighted countries with a maximum weight per country of 10%. All data current as of the date at the top of the page unless otherwise noted. This information should not be considered a solicitation or an offer to provide any Brandywine Global service in any jurisdiction where it would be unlawful to do so under the laws of that jurisdiction. **Past performance is no guarantee of future results.**