

PUBLIC FIXED INCOME

The Evolving Long Credit Universe

Introduction

2020 will likely be remembered as a year of records on a number of fronts. In this paper we focus on one that has been especially salient to the fixed income universe: issuance and how it has transformed the investment grade (IG) long credit universe. Last year's \$450+ billion of long index eligible debt came on the back of an already record \$289 billion issued in 2019¹ and will likely set a high-water mark for the foreseeable future. With the increase in volume of new credit came a commensurate growth in deal size as well as a gravitation towards the traditionally less common 20-year and 40-year tenors, satiating the demand for long duration paper. In addition to record issuance, elevated activity in corporate "liability management" exercises (LME) and ratings migration have worked to shape the evolution of the long credit universe. In this paper, we explore how these factors have altered the index not only in size, but sector exposure, issuer concentration, duration, ratings and liquidity. Lastly, we will highlight areas where we expect the index to continue evolving and potential opportunities this evolution may present.

The long credit universe that we define by the Bloomberg Barclays U.S. Long Credit Index (Long Credit Index, or the index), has grown over the years, standing at over \$3 trillion as of year-end 2020.² The growth has been largely fueled by the corporate segment, with over 88% in index market value comprising corporates today, approximately 700 basis points higher compared to just 5 years ago. Remarkably, over 30% of the long credit market has been issued in the last two years, with over 22% issued in just last year alone. While we attempt to highlight risk associated with this issuance to Long Credit investors, it is important to note greater diversification in the index. The market value of the top 15 issuers in long credit today is ~21.7%, compared to 27% fifteen years ago,³ underscoring a significant reduced concentration at the top, even against the backdrop of sizable issuance from some of the larger index constituents.

Remarkably, over 30% of the long credit market has been issued in the last two years, with over 22% issued in just last year alone.

In the early part of the year, corporate borrowers tapped the market at record pace to boost liquidity amid the COVID-19 crisis, but later took advantage of the low yield environment to extend their debt maturity profiles. These two trends combined into a torrent of debt in the primary markets and resulted in 11 of the 20 heaviest issuance weeks ever, including the week of March 30th breaking all records with \$118 billion in supply.⁴ Investment grade credit issuance totaled \$1.8 trillion across 1,949 bonds with an average size of \$902 million, more than double the average size 20 years prior. The 10 largest deals of 2020 (detailed below) accounted for \$140 billion in supply and the top three were among the 20 largest deals in history.

10 Largest Deals of 2020

Pricing Date	Issuer	Sector	Deal Value (\$bn)
4/30/2020	THE BOEING COMPANY	Capital Goods – Aerospace/Defense	25
3/30/2020	ORACLE CORPORATION	Technology	20
4/2/2020	T-MOBILE USA INC	Communications – Wireless	19
5/21/2020	AT&T INC	Communications – Wirelines	12.5
11/10/2020	VERIZON COMMUNICATIONS INC.	Communications – Wirelines	12
5/11/2020	THE WALT DISNEY COMPANY	Communications – Media & Entertainment	11
7/27/2020	AT&T INC	Communications – Wirelines	11
4/15/2020	JPMORGAN CHASE & CO	Financial – Banking	10
6/1/2020	AMAZON.COM, INC.	Consumer Cyclical – Consumer Service	10
8/3/2020	ALPHABET INC	Technology	10

Source: J.P. Morgan, MIM.

Note: The highlighted deal is related to acquisition financing. Issuance above reflected across all maturities. Only new issuance deals included (e.g. tender/exchanges excluded).

Interest rate risk in the long credit universe has significantly increased from both lower rates and emerging issuance trends. The index lengthened by two years of duration since the end of 2018 from 13.3 years to 15.3⁵ and over 22% of the market now has a duration greater than 17.5 years compared to just 1.9% two years ago. While bonds minted in 2020 are 1.8 years longer than the Long Credit Index, on average they yield 10 basis points less.⁶

Issuance Driving Sector Evolution

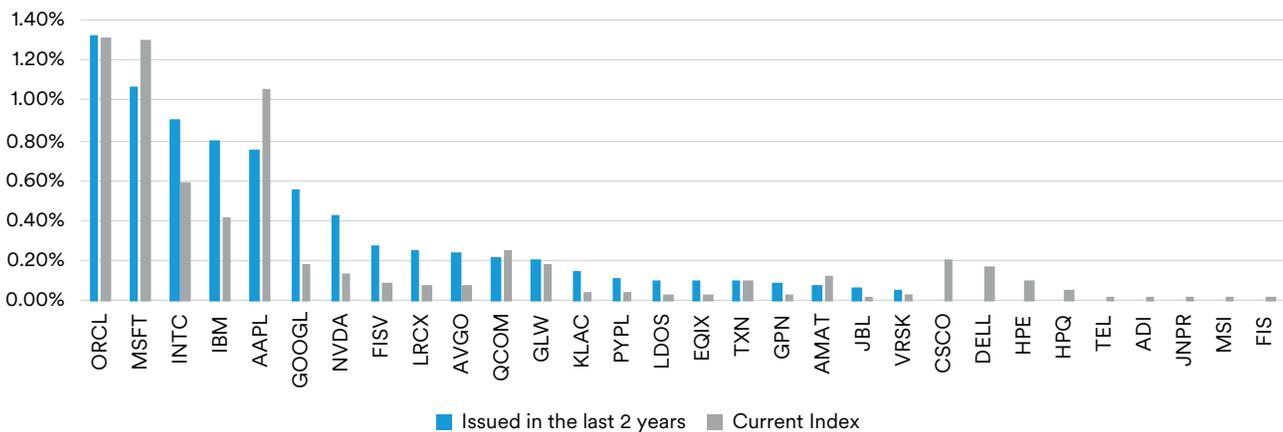
Isolating bonds issued in the past two years compared to the broader Long Credit Index provides a useful lens for analysis of recent issuance's effect of individual sectors, which we detail in the below table. When looking at the issuer (ticker) base close to two-thirds (406 out of 633) of issuers have come to market in the last two years. The sectors highlighted reflect where issuance has deviated significantly in either direction on a market value basis, compared to the current index value (as of 12/31/2020). The sectors that have experienced the largest growth in the past two years have been in Consumer Non-Cyclicals, Communications, Technology and Capital Goods.

	Ticker Count		Market Value %			Duration (yrs)			Price (\$)	
	Issued in '19 and '20	Current Index	Issued in '19 and '20	Current Index	Active	Issued in '19 and '20	Current Index	Active	Issued in '19 and '20	Current Index
Long Credit Index	406	633	100.0%	100.0%	0.0%	16.6	14.9	1.7	115.3	127.0
Agency	12	21	6.4%	6.3%	0.0%	16.2	14.6	1.6	113.1	124.7
IG Corporate	348	519	90.5%	88.4%	2.0%	16.7	15.1	1.6	115.8	126.7
Financial	65	98	12.3%	15.1%	-2.8%	15.5	14.3	1.2	116.5	130.9
Banking	8	19	5.1%	7.8%	-2.7%	15.8	14.1	1.7	121.2	135.7
Brokerage/Asset Managers/Exchanges	6	10	1.1%	0.7%	0.5%	15.0	15.1	-0.1	103.5	114.8
Finance Company	1	2	0.1%	0.5%	-0.4%	9.0	11.2	-2.2	119.8	119.7
Insurance	23	38	3.7%	5.1%	-1.3%	17.4	15.0	2.4	121.0	132.1
REIT	27	29	2.2%	1.1%	1.1%	12.2	13.3	-1.1	107.1	113.2
Industrial	247	372	69.4%	62.7%	6.8%	16.8	15.2	1.6	115.7	125.8
Basic	14	32	2.1%	3.3%	-1.2%	15.9	14.0	1.9	116.8	132.5
Capital Goods	25	41	6.5%	5.3%	1.2%	15.9	14.9	1.0	119.8	126.6
Communications	21	26	17.5%	12.6%	4.8%	16.4	15.0	1.4	111.5	122.7
Consumer Cyclical	26	37	4.3%	5.2%	-0.9%	17.5	15.4	2.0	113.3	127.6
Consumer Non Cyclical	92	135	22.4%	17.6%	4.8%	16.5	15.4	1.0	119.3	126.7
Energy	19	37	4.9%	7.8%	-2.8%	17.2	14.0	3.3	112.8	124.3
Other Industrial	18	22	1.1%	0.9%	0.2%	20.7	20.0	0.7	108.4	121.8
Technology	21	30	7.9%	6.8%	1.1%	18.6	16.4	2.3	115.1	126.0
Transportation	11	12	2.7%	3.2%	-0.4%	17.3	16.1	1.2	118.0	128.1
Utilities	38	52	8.7%	10.7%	-1.9%	17.4	15.3	2.2	115.5	126.4
Electric	32	43	8.0%	9.6%	-1.6%	17.6	15.2	2.3	115.5	126.4
Natural Gas	7	10	0.5%	0.8%	-0.3%	14.8	15.1	-0.4	111.9	125.2
Other Utility	2	3	0.3%	0.2%	0.0%	18.4	16.2	2.2	122.3	129.9
Municipal Securities	46	94	3.2%	5.2%	-2.1%	14.9	12.7	2.2	107.7	135.0

Source: MIM, Aladdin 2020

Technology has been increasing as a proportion of the overall index, with many large issuers joining the market. Advancing from just 2.4% in 2010 to over 6.8% at the end of 2020, the sector is more mature with large, liquid capital structures. Even at the height of the crisis capital markets appeared open for its issuers given robust balance sheets and higher ratings of many of its constituents.⁷ Technology carries a AA-/A+ average rating compared to the A-/BBB+ of the index,⁸ in addition to a longer duration and lower spreads. Combined with the potential disruption from technological innovation, in our view the sector should continue to provide interesting pockets of relative value. However, we believe careful consideration should be paid to the developments in the sector to gain comfort as a longer-term lender, especially in 30+ year tenors.

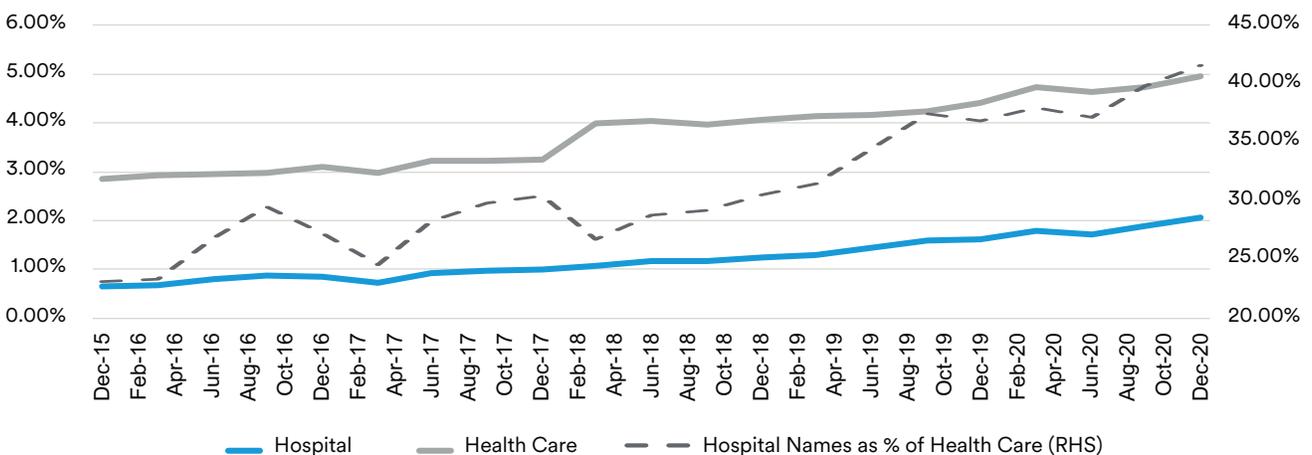
Long Credit Index Technology Sector Market Share



Source: MIM, Aladdin 2020

The **Healthcare** industry has also grown as a proportion of the index, not only in traditional healthcare players, but also hospital and healthcare operators often traded by the municipals desks. The weight of hospital names as a percentage of the overall Health Care sector has been increasing notably over the last two years and contributing to the higher rating quality (see chart below). While it would be difficult for hospital names of the Healthcare sector to buoy it to the likes of Technology in size, the trend of higher quality issuers transforming sector composition is noteworthy.

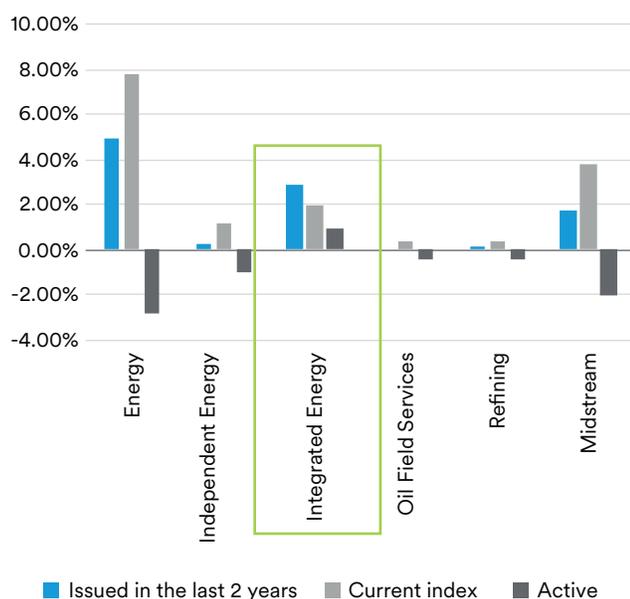
Hospital Credit within the Health Care Sector



Source: MIM, Aladdin 2020

Energy, conversely, was one of the largest decliners in recent history, but not uniformly. The once formidable segment of the index, **Independent Energy** has been steadily decreasing in market value over the last five years from both a lack of issuance and fallen angels. In the last two years, issuance in this subsector comprised only 22 basis points (of index market value). It now stands with eight issuers versus fifteen at the end of 2015 and has less than half its previous market weight in the index. Further consolidation via M&A is possible as companies look to right size their business models and focus on cost reduction, a trend we have already started to see within Energy at the tail end of last year. While the Independent Energy sector has contracted in size, the higher rated (AA and A) **Integrated Energy** amplified during the recent 2-year timeframe with first time, high quality issuers driving the growth and actually increasing the overall quality of the subsector (see chart below). Amid the drop in oil prices, the decision to issue was in part to strengthen the balance sheet and preserve dividend payments for select issuers, even if it meant paying a premium to issue at the height of the pandemic. The push and pull of both Energy subsectors exhibit the ongoing effects of a secular change on index composition.

Evolution in the Energy Sector

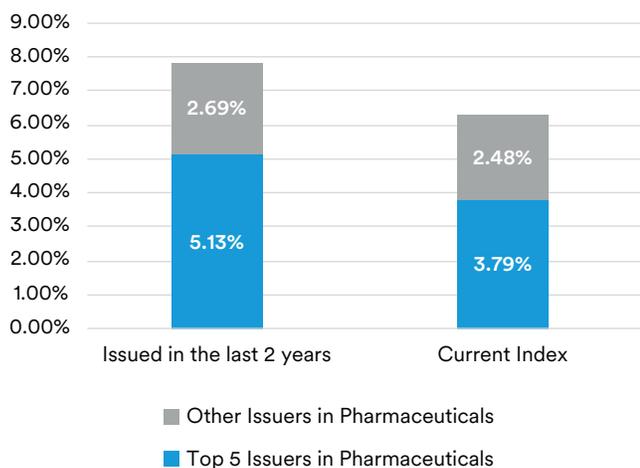


Source: MIM, Aladdin 2020

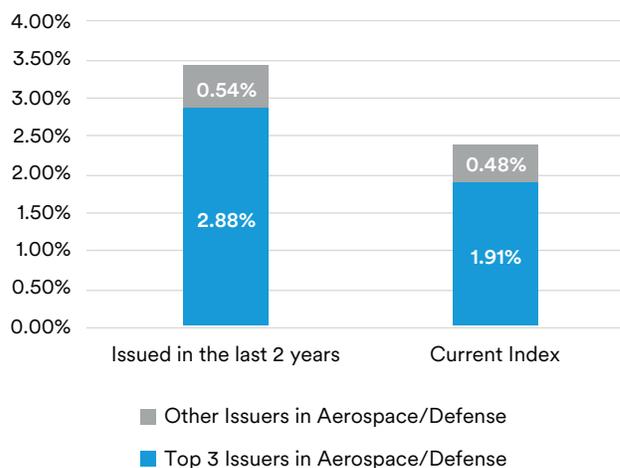
	Issued in the last 2 years	Current Index	Active
Energy	4.9%	7.8%	-2.8%
Independent Energy	0.2%	1.2%	-1.0%
A Rated	0.1%	0.4%	-0.3%
A		0.4%	-0.4%
A-	0.1%	0.1%	0.0%
BBB Rated	0.1%	0.8%	-0.7%
BBB		0.2%	-0.2%
BBB-	0.1%	0.6%	-0.5%
Integrated Energy	2.9%	2.0%	1.0%
AA Rated	2.4%	1.5%	0.9%
AA	1.4%	0.6%	0.8%
AA-	0.9%	0.9%	0.0%
A Rated	0.6%	0.2%	0.4%
A	0.6%	0.2%	0.4%
BBB Rated		0.3%	-0.3%
Oil Field Services		0.4%	-0.4%
Refining	0.1%	0.4%	-0.4%
BBB Rated	0.1%	0.4%	-0.4%
Midstream	1.7%	3.8%	-2.1%
A Rated		0.0%	0.0%
BBB Rated	1.7%	3.8%	-2.0%

Not all growth in the Long Credit market was high quality, and some has been from highly concentrated, debt-funded “mega-deals”. In **Pharmaceuticals**, a lot of the growth took place in 2019, with some of the largest healthcare deals ever, including a large BBB-rated global biopharmaceutical company’s \$30 billion deal and another A-rated pharmaceutical company’s \$19 billion deal to fund acquisitions. These deals contributed heavily to the 0.88% growth in index market weight through the past two years, and significantly increased subsector concentration. Within **Aerospace & Defense**, one of the largest manufacturers of commercial jetliners saw its market value reach 0.91% of the index from just 0.21% a few years prior, post its record bond offering. With ~\$60 billion of gross debt, the issuer is rated BBB- by two of the three ratings agencies. This quantity of lower-quality debt has significantly altered the composition of the previously higher quality subsector and exposes a potential vulnerability of certain areas of the market to such “mega-deals”. The charts below highlight the concentration in these subsectors, mainly dominated by a handful of issuers that have come to market in recent years.

Pharmaceuticals Sector Market Value Composition



Aerospace/Defense Sector Market Value Composition



Source: MIM, Aladdin 2020

Source: MIM, Aladdin 2020

At 12.6%, **Communications** holds a substantive weight in the index and was home to three of the 10 largest deals of the year, but for different reasons. **Media & Entertainment** was notable with the mega issuance of a large Entertainment company to syphon liquidity given the hit to its parks business from COVID-19. The issuer, while still A-rated, was downgraded one notch by S&P to BBB+ last year, with the company's ability to reduce leverage below 3x by the end of 2022 fiscal year put in question.⁹ Communications also welcomed a **Wireless** operator into its Wireless segment, with its inaugural deal in April. The company sold bonds two more times over the year across multiple tranches, in part to finance an acquisition, including a 40-year maturity. In **Wirelines**, a large Communications player has been a sizable issuer this past year, but more so with a focus on liability management (which we also discuss below). While the push for issuance has noticeably differed across the above issuers, what they have in common is they each earned a place on the top 10 issuance pedestal last year.

Growth in Liability Management

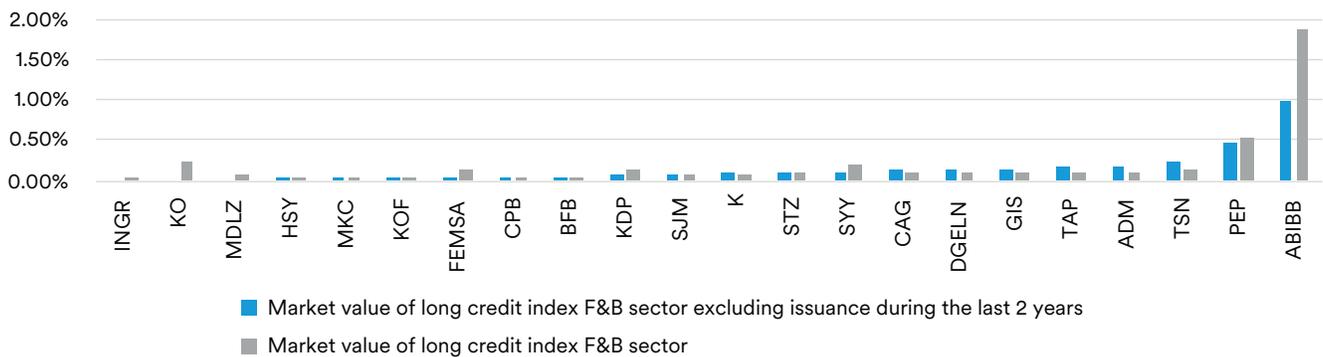
Post the March 2020 sell-off, long credit spreads have tightened over 200 basis points. Spread and yield changes resulted in a significant amount of debt trading above a \$120-dollar price,¹⁰ a level we believe to be significant when companies look to manage their debt maturity profiles. The low yield environment has been a powerful force enticing issuers to join in the liability management parade and reduce costs by retiring select debt, while issuing further out the curve. LME in 2020 came in several different flavors. In the long-end of the curve, some issuers have been retiring off-the-run high coupon debt and replacing it with lower coupon on-the-run issues via **Debt Tender/Exchange offers**. This normally has a net neutral effect on index supply. Issuers also chose to reduce their short-dated debt by tendering for short-dated paper and replacing it with longer-dated debt via **Extension trades**. This terming out of debt, while a positive for many companies in helping reduce near-term refinancing needs, drives increased supply into the Long Credit Index.

Estimates point to LM activity last year up ~59% compared to previous year, with tender offers accounting for \$130 billion in volume in 2020, representing a 39% increase year-on-year. Of the targeted securities, 56% had maturities of 5 years or less.¹¹

In **Wirelines**, the aforementioned communications company has been active this past year, but with a focus on cleaning up its capital structure. In September, it issued over \$20 billion in bonds across multiple maturities in exchange for select outstanding notes, shifting its debt maturity schedule further out the curve and reducing

annual interest expense. The **Food & Beverage** sector has exhibited some of the previously mentioned issuance trends, with many names issuing majority or all their index eligible debt in the past two years and growing nearly 0.30% in market weight despite experiencing a significant fallen angel that comprised 0.60% of market value in the index at the end of 2019. A multinational brewing company was the most active of the group, issuing nearly two thirds of its outstanding debt in the past two years, coming to market four times with as many debt tenders and seven redemptions. While its subsector market weight has grown considerably, the company’s net finance cost to adjusted EBITDA has declined from 3.2 to 2.8 times. Given the large amounts of debt outstanding from such issuers we believe they may be especially incentivized to optimize their liability profile, but smaller issuers could follow their lead in reducing cost of debt on their balance sheets.

Market Value of Long Credit Index F&B Sector



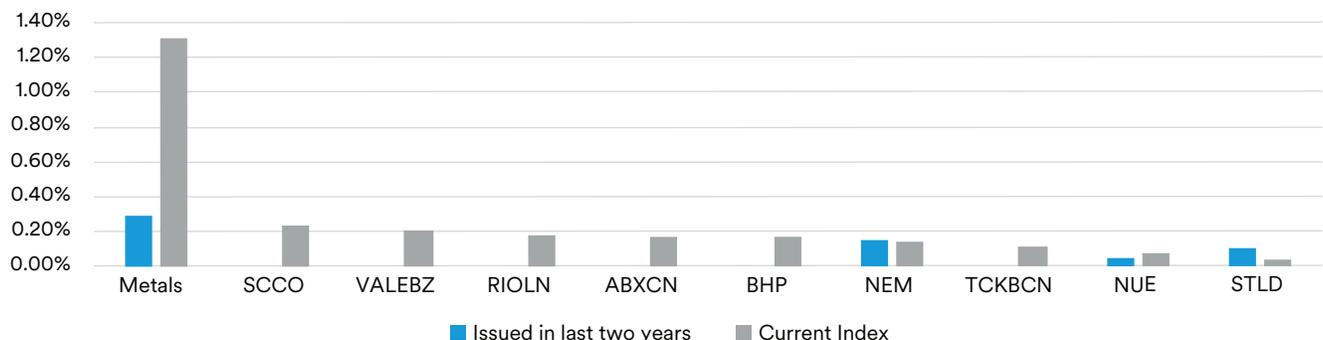
Source: MIM, Aladdin 2020

We highlight above that companies have engaged in liability management with a focus on higher dollar price bonds. However, we see the scope for liability management to expand beyond to debt trading below par. The bevy of 20- and 40-year tenors that has been issued has unequivocally altered the landscape and will need to be digested for years to come. As rates eventually move higher, we could see some of this paper trade below par and develop into ripe candidates for LME.

Implications Going Forward

Given the backdrop of low rates, liability management is likely here to stay, at least in the near-term for companies seeking to simplify their debt capital structures and take advantage of the favorable rate environment. In the last two years while close to two thirds of index issuers have come to market, the **Metals & Mining** subsector within **Basics** has seen scant supply.

Metals & Mining Sector in the Long Credit Index



Source: MIM, Aladdin 2020

The table on the right reflects the higher coupons for the Metals & Mining issuers within the Long Credit Index compared to the average yields. The elevated dollar price within these companies' debt stacks could spell out potential liability management activity for the sector to reduce substantive interest expenses. Also, greater issuance of green, social and sustainability bonds on the horizon is probable, given the tide in demand. This sector, among others (e.g. Energy, Utilities, etc.) could be influenced to demonstrate efforts in carbon and emissions reductions and general improvements in the environmental footprint via ESG bond issuance.

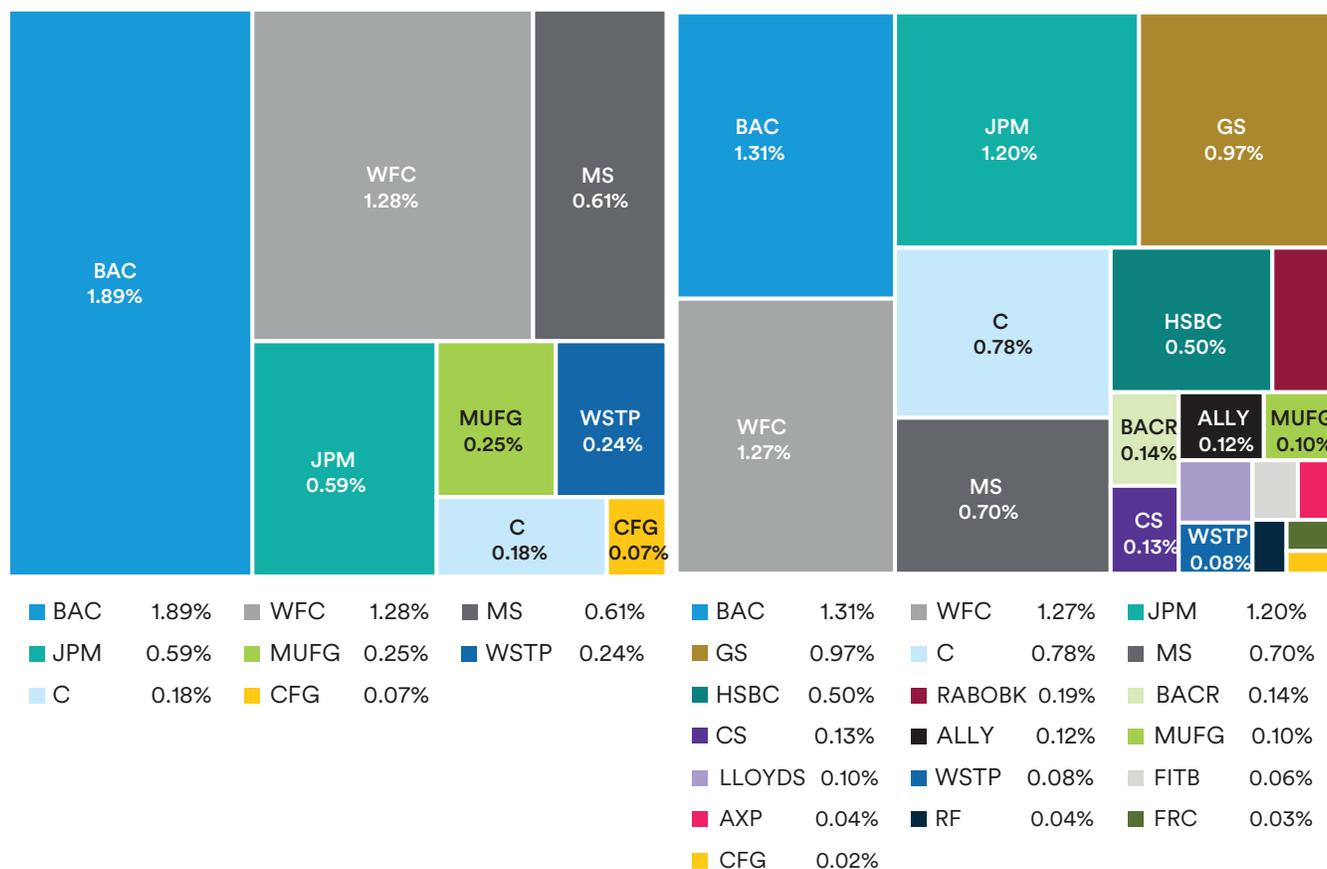
Metals & Mining Issuer	Average Nominal Yield (%)	Average Coupon (%)	Price (\$)
ABXCN	2.90	5.74	142.8
BHP	2.33	4.75	142.0
NEM	2.60	5.58	143.5
NUE	2.63	4.84	134.0
RIOLN	2.13	5.37	143.3
SCCO	3.15	6.26	144.9
STLD	2.37	3.25	108.6
TCKBCN	3.98	5.90	124.7
VALEBZ	3.23	6.94	147.1

Source: MIM, Aladdin, As of December 31, 2020

Metals & Mining in our view is a sector primed for new long-end issuance, and it is not alone. **Financial Services** comprises 15%+ of the index, and for the most part recent issuance was lower compared to the overall share of the index. In total ~\$350 billion of Bank paper was issued in 2020, with less than \$100 billion in the long-end.¹² The concentration of issuance was higher, with approximately two-thirds of long issuance comprising two large issuers. On the flipside, two of the top seven issuers haven't issued a long bond at all as reflected in the chart below. As such, we may see more potential LME activity or more outright issuance in the sector moving forward.

Issued in the last 2 years

Index

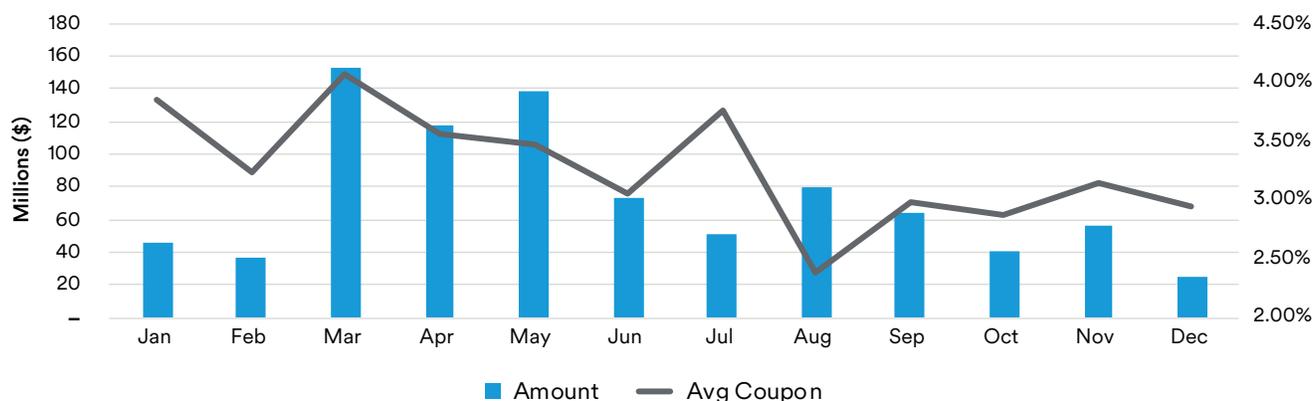


While issuance has markedly changed the Long Credit sector composition, developments have also occurred on the **Quality Spectrum**. After a blip during the height of the crisis, BBB exposure as a percent of the Long Credit Index has resumed its march higher, currently at ~50% of index market value.¹³ The growth of BBBs in the index has been largely a function of credit migration, as ~57% of long-dated paper in 2020 was A-rated or better. As we have noted in our *Closer Look at Long-Dated BBBs* paper in the past, there is a higher likelihood for Single A issuers to make less bondholder-friendly decisions than BBB issuers, which are more inclined to defend their investment grade status. Leverage has increased for both ratings cohorts last year, and at a median level BBB's and A's appear close. An observation on net leverage (2.55x and 2.16x for BBB's and A's, respectively)¹⁴ may call for more caution, as A-rated company net leverage has increased to levels where BBBs were approximately a year ago. Many higher rated companies have taken an opportunity this year to build a war chest of cash, and while some of it could be used to pay down debt, it is possible to see A-rated companies engage in M&A, even if faced with a possibility of a moderate rating downgrade.¹⁵

Additionally, **Fallen Angel** pressure could continue after some elevated pockets of issuance. CreditSights estimates \$150-\$200 billion of U.S. IG debt that could become HY this year, compared to \$260 billion of U.S. IG debt that fell to HY in 2020.¹⁶ Because of the longer duration that long credit fallen angel debt holds compared to the broader HY market, we question the appetite for this debt, which can result in wider spreads and exacerbate the negative price pressure. We contend that most BBB companies will likely do what is within their control to remain investment grade, however, we continue to watch the cross-over BBB-/BB+ for potential migration of rising stars and the further cascade of fallen angels, and believe this is an area managers can differentiate themselves.

With expanded issuance, companies also have increased previously less traditional tenors such as **20- and 40-year tenors**. Close to \$150 billion of 20-year paper was issued last year, or over 2 times that of 2019.¹⁷ This segment of the credit curve has generally traded versus the 30-year U.S. Treasury, but with the growth and improved liquidity of the 20-year UST market, 20-year IG bonds could begin trading versus this closer matching maturity instead. We believe the trend should facilitate long-end issuance moving forward, allowing for larger deals across multiple tenors. August of 2020 serves as a case study for how increased issuance could pressure Long Credit. Companies opportunistically tapped the market in a traditionally much slower month, weighing on index spreads. New issue coupons have hovered at some of the lowest rates, ending at 2.9% compared to 3.9% at the start of the year, with the trough in August (see chart below). While increased supply may not come in the waves of last year, it could lead to higher spreads moving forward without ample demand. The steepening in Treasury curves making U.S. credit more compelling on a currency-hedged basis relative to domestic alternatives has fueled foreign buying of long-dated paper, but any sort of interruption could negatively affect the space.¹⁸

Index Gross Supply and Average Issued Coupon



Source: MIM, Bloomberg Barclays, 2020

Concluding Remarks

With a strident drumbeat of new issuance, as well as developments within corporate liability management, the credit universe continues to evolve. The changes have occurred in multiple facets, from sector and security composition to duration. As active participants in the long credit space, what has been fascinating to us is that despite the growth of the index it is still phenomenally inefficient. The deeper dive into the transformation of the Long Credit Index aims to recognize the various nuances to help capture those inefficiencies and better inform on potential changes to come.

Endnotes

- ¹ Barclays Credit Research
- ² Bloomberg Barclays. The Long Credit Index comprises investment grade, U.S. dollar-denominated, fixed-rate, taxable corporate and government-related debt with at least ten years to maturity, when describing the long credit universe. The index is majority corporate credit, but also encompasses a non-corporate component that includes non-U.S. agencies, sovereigns, supranationals and local authorities.
- ³ Bloomberg Barclays, MIM
- ⁴ J.P. Morgan Markets Research. US High Grade Corporate Bond Issuance Review. 2021.
- ⁵ Bloomberg. Please note this may differ slightly from Aladdin sourced data due to the difference in model assumptions.
- ⁶ Bloomberg Barclays, MIM
- ⁷ Bloomberg
- ⁸ Bloomberg Barclays, composite rating. As of 12/31/20.
- ⁹ S&P, Bloomberg
- ¹⁰ Barclays Credit Research. Take the High (Coupon) Road. September 2020.
- ¹¹ Deutsche Bank. 2020 Debt Capital Markets year in review and 2021 outlook.
- ¹² Barclays Credit Research
- ¹³ Bloomberg Barclays
- ¹⁴ CreditSights
- ¹⁵ Barclays Credit Research. Seeing double digits. 2020.
- ¹⁶ CreditSights. FASTrack: US IG 2021 Forecast. 2020.
- ¹⁷ J.P. Morgan Markets Research. HG 20yr bonds: Unconventional times call for new conventions. 2021.
- ¹⁸ Barclays Credit Research. Lower Yields Still Beget Demand. 2020.

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Steve joined MIM in September 2017, in connection with the acquisition of Logan Circle Partners (LCP) by MetLife. Prior to joining LCP in 2007, he worked on the long duration portfolio management team at Delaware Investments. Prior to joining Delaware Investments, he worked at Ryan Labs where he created custom liability indices and performed asset/liability studies for the firm's clients, including public and private defined benefit plans, insurance companies, and state lotteries. Steve has 19 years of industry experience.

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² As of December 31, 2020. Includes all public fixed income assets managed by MIM.

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Appendix

This appendix contains details for the preceding charts and provides additional information for greater accessibility.

Long Credit Index Technology Sector Market Share

Note:

- All values are approximate
- Source: MIM, Aladdin 2020
- Looking at the order of the companies in the table below, note the following, in general:
 - The bars for “Issued in the last 2 years” decline relatively quickly from companies ORCL to FISV and then decline much slower from LRCX to FIS.
 - The bars for “Current index” fall sharply at company INTC and IBM, rise sharply for APPL, fall sharply again at GOOGL and then vary slightly from then on.

Company	Issued in the last 2 years	Current index
ORCL	1.32%	1.31%
MSFT	1.70%	1.30%
INTC	0.90%	0.59%
IBM	0.80%	0.42%
AAPL	0.75%	1.05%
GOOGL	0.55%	0.18%
NVDA	0.43%	0.14%
FISV	0.27%	0.08%
LRCX	0.25%	0.07%
AVGO	0.23%	0.07%
QCOM	0.22%	0.25%
GLW	0.21%	0.18%
KLAC	0.15%	0.05%
PYPL	0.12%	0.05%
LDOS	0.11%	0.03%
EQIX	0.11%	0.03%
TXN	0.11%	0.11%
GPN	0.11%	0.03%
AMAT	0.10%	0.13%
JBL	0.06%	0.02%
VRSK	0.05%	0.03%
CSCO	n/a	0.20%
DELL	n/a	0.17%
HPE	n/a	0.10%
HPQ	n/a	0.05%
TEL	n/a	0.02%
ADI	n/a	0.02%
JNPR	n/a	0.02%
MSI	n/a	0.02%
FIS	n/a	0.02%

Hospital Credit within the Health Care Sector

Note:

- All values are approximate
- Source: MIM, Aladdin 2020

Date (month-year)	Hospital	Health Care	Hospital Names as % of Health Care
Dec-15	0.70%	2.80%	23.0%
Feb-16	0.75%	2.95%	23.0%
Apr-16	0.75%	3.00%	24.0%
Jun-16	0.80%	3.00%	26.5%
Aug-16	0.85%	3.05%	28.5%
Oct-16	0.85%	3.10%	28.5%
Dec-16	0.80%	3.15%	27.0%
Feb-17	0.75%	3.05%	25.0%
Apr-17	0.75%	3.05%	25.5%
Jun-17	0.95%	3.25%	28.0%
Aug-17	1.00%	3.25%	29.0%
Oct-17	1.00%	3.25%	30.0%
Dec-17	1.05%	3.25%	30.0%
Feb-18	1.05%	3.75%	27.5%
Apr-18	1.10%	4.00%	27.0%
Jun-18	1.20%	4.05%	28.5%
Aug-18	1.20%	4.00%	29.0%
Oct-18	1.25%	4.00%	29.5%
Dec-18	1.30%	4.05%	30.0%
Feb-19	1.35%	4.10%	31.0%
Apr-19	1.40%	4.10%	32.0%
Jun-19	1.45%	4.10%	34.5%
Aug-19	1.55%	4.20%	36.5%
Oct-19	1.60%	4.35%	37.0%
Dec-19	1.60%	4.40%	36.5%
Feb-20	1.75%	4.65%	37.5%
Apr-20	1.80%	4.70%	37.5%
Jun-20	1.75%	4.65%	37.0%
Aug-20	1.85%	4.70%	39.0%
Oct-20	1.95%	4.85%	40.0%
Dec-20	2.05%	4.95%	41.5%

Evolution in the Energy Sector

Note:

- All values are approximate
- The “Integrated Energy” bars are highlighted with a green rectangle. The same is done in the “Integrated Energy” section of the accompanying table to the right of the bar chart.
- Source: MIM, Aladdin 2020

Energy Sector	Issued in the last 2 years	Current index	Active
Energy	5.00%	7.85%	-2.85%
Independent Energy	0.35%	1.30%	-0.95%
Integrated Energy	2.90%	1.95%	1.00%
Oil Field Services	0.00%	0.50%	-0.50%
Refining	0.25%	0.50%	-0.50%
Midstream	1.50%	3.80%	-2.05%

Market Value of Long Credit Index F&B Sector

Note:

- All values are approximate
- Source: MIM, Aladdin 2020
- Looking at the order of the companies in the table below, both sets of bars vary slightly in the range at or below 0.25% and rise rapidly after TSN.

Company	Market value of long credit index F&B sector excluding issuance during the last 2 years	Market value of long credit index F&B sector
INGR	0.00%	0.05%
KO	0.00%	0.25%
MDLZ	0.00%	0.10%
HSY	0.05%	0.05%
MKC	0.05%	0.05%
KOF	0.05%	0.05%
FEMSA	0.05%	0.15%
CPB	0.05%	0.05%
BFB	0.05%	0.05%
KDP	0.10%	0.15%
SJM	0.10%	0.10%
K	0.13%	0.10%
STZ	0.13%	0.13%
SYY	0.13%	0.20%
CAG	0.15%	0.13%
DGELN	0.15%	0.13%
GIS	0.15%	0.13%
TAP	0.18%	0.13%
ADM	0.18%	0.13%
TSN	0.25%	0.15%
PEP	0.45%	0.51%
ABIBB	0.99%	1.75%

Metals & Mining Sector in the Long Credit Index

Note:

- All values are approximate
- Source: MIM, Aladdin 2020

Company/Sector	Issued in last two years	Current index
Metals	0.30%	1.30%
SCCO	0.00%	0.24%
VALEBZ	0.00%	0.20%
RIOLN	0.00%	0.18%
ABXCN	0.00%	0.17%
BHP	0.00%	0.17%
NEM	0.16%	0.14%
TCKBCN	0.00%	0.12%
NUE	0.05%	0.08%
STLD	0.11%	0.04%

Index Gross Supply and Average Issued Coupon

Note:

- All values are approximate
- Source: MIM, Bloomberg Barclays, 2020
- The bar graph rises sharply after February, falls sharply after May, and then varies between 80 million dollars and 25 million dollars.
- The line graph varies widely between 4.10% and 2.37%.

Month	Amount in Millions of Dollars (Bar Graph)	Avg Coupon in Percent (Line Graph)
Jan	47	3.85
Feb	37	3.25
Mar	153	4.10
Apr	118	3.55
May	138	3.45
Jun	74	3.05
Jul	52	3.75
Aug	80	2.37
Sep	65	2.90
Oct	40	2.87
Nov	57	3.12
Dec	25	2.90