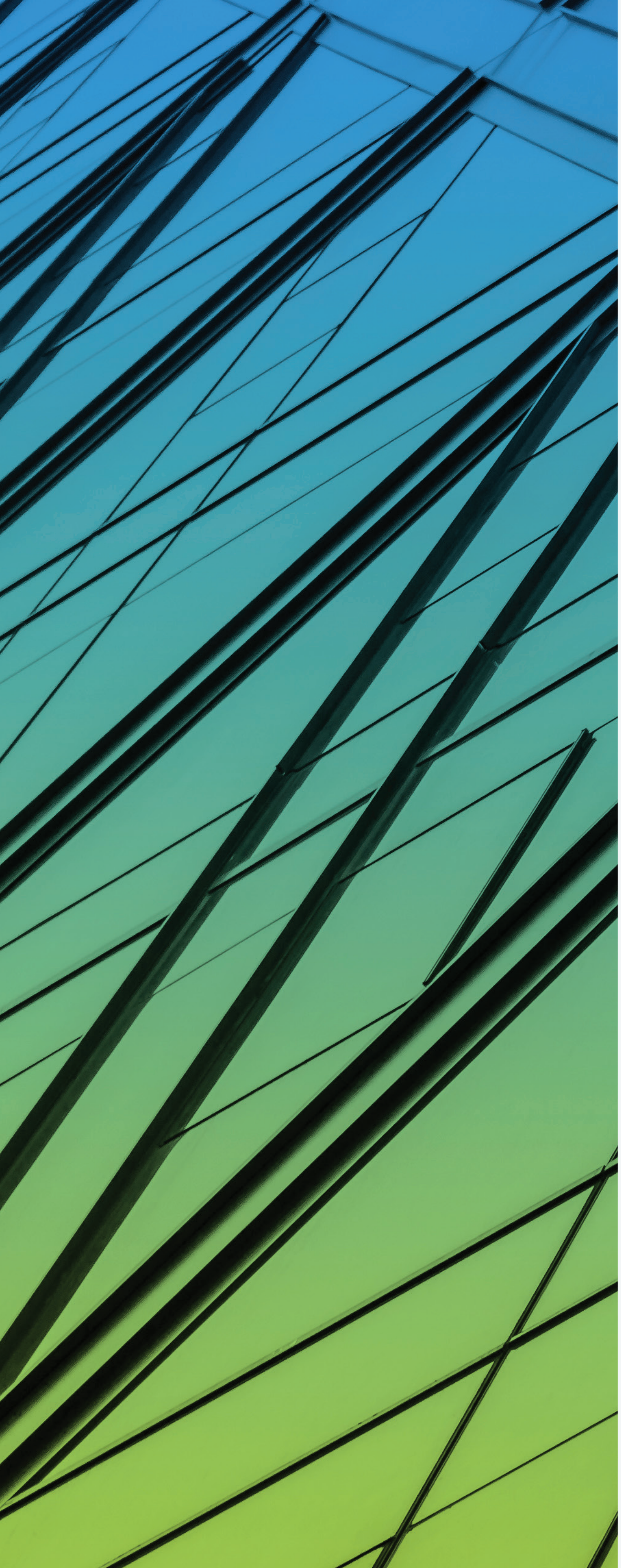


June 21, 2021

PUBLIC FIXED INCOME

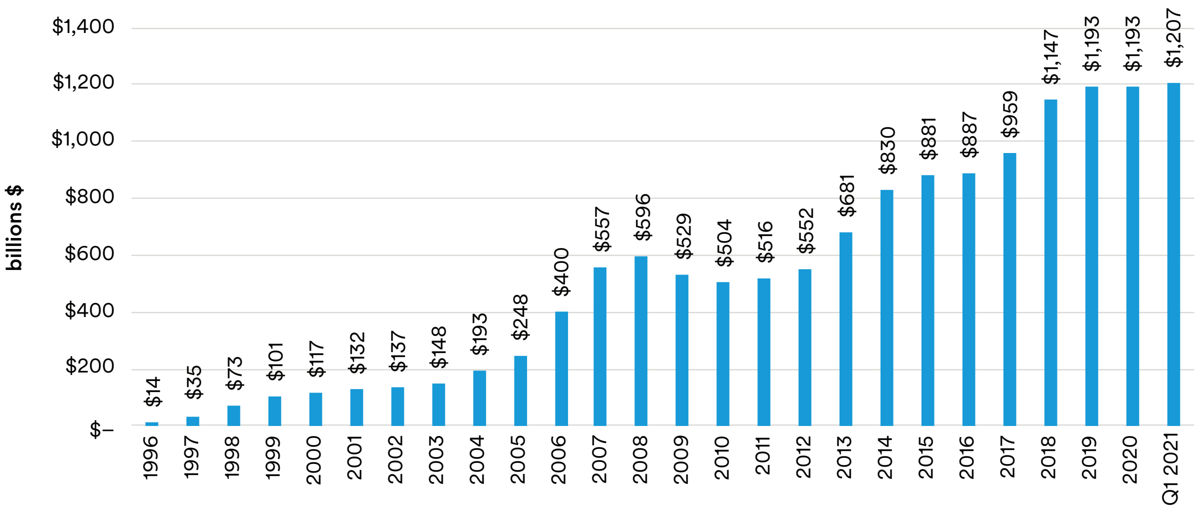
The Case for Investing in Floating Rate Bank Loans

Given the current point in the economic cycle, MetLife Investment Management (MIM) sees value in floating rate bank loans as the economy expands rapidly. The growth in gross domestic product (GDP) is bringing the customary inflationary pressures along with expectations of rising interest rates. This underpins strong fundamentals in the Syndicated Loan[1] market as evidenced by record collateralized loan obligation (CLO) issuance of $39 billion and strong inflows into loan mutual funds and ETFs to the tune of $13 billion through the first quarter of 2021.[2]

MetLife Investment Management

Bank loans represent a large and mature market, standing at $1.1 trillion with over 1,000 issuers. We have seen significant growth in the asset class during the last decade (see chart below). Most recently, the asset class has experienced record primary issuance, with $224.5 billion of institutional loans issued in the first quarter of 2021.[2] This number more than doubled the $91.7 billion in the fourth quarter of 2020 and surpassed the previous record of $211.4 billion in the second quarter of 2007.[2]

U.S. Leveraged Loan Par Amount Outstanding*



*Represents all U.S. Leveraged Loans as set forth by S&P Leveraged Commentary and Data ("S&P LCD") as of March 31, 2021.

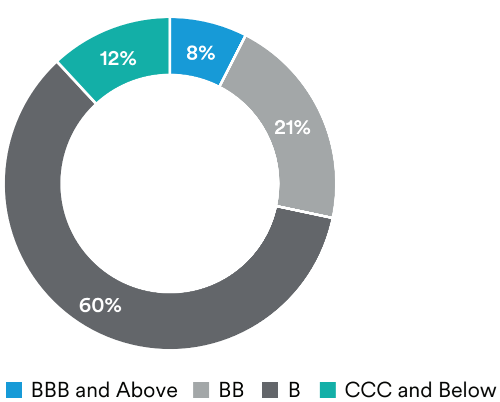
We believe bank loans offer many potential benefits to investors. Investments in bank loans can act as a portfolio diversifier given their historically relatively low correlations with most major asset classes. The correlation between bank loans and IG corporates as well as bank loans and the S&P 500 from 1997 – May 2021 are below 50%, and given that loans are floating rate, they have a negative correlation with the 10-year treasury.[2] Bank loans' low correlation with other fixed-income instruments can be largely attributed to their floating rate structure that differs from that of High Yield and Investment Grade corporate bonds. Bank loans are typically floating-rate instruments that are periodically reset to a spread over LIBOR,[3] or the effective base rate.

In this report, we will explore four segments of the underlying bank loan market as well as highlight the attractive potential benefits of the asset class along with some potential risks.

Investment Grade Loans (By Facility Rating)

Investment grade (IG) loans, which comprise of securities rated BBB- and above, make up 8% of the total loan market and offer not only diversification but can also provide a significant spread pickup compared to 3 and 5 year BBB unsecured bonds. A typical investment grade loan has a spread of LIBOR (L)+175-225 with a 0% LIBOR floor, as exhibited by the top 15 issuers by par value in the S&P/LSTA U.S. Leveraged Loan market in Appendix A, which includes three investment grade issuers. The current nominal spread for investment grade loans as of 3/31/2021 is L+200.[2]

S&P/LSTA Index by Rating



Source: S&P LCD as of March 31, 2021

A LIBOR floor implements a guaranteed lowest level for the base rate of a security. We estimate a notable yield pickup over typical IG bonds, such as those in the Bloomberg Barclays Corporate Index, along with being secured in the capital structure. "Secured" means they are structured to include a lien against the assets of the borrower. In the event of a default, the lender has the right to take possession of these assets, which either can be sold or operated for cash. Bank loans are senior secured instruments and generally are at the top of the corporate capital structure. Bank loans may benefit from a number of structural protections, contained in the credit agreement, including negative covenants. Such covenants seek to provide protection for the buyers, such as maintaining minimum leverage ratios, restricting dividend payments and issuing incremental debt. Issuers have lower secured leverage and stronger market positions within the leveraged loan industry as they move up the rating spectrum (Appendix B).

BB Rated Loans

The BB portion of the loan market constitutes 21% of the total loan market and includes a number of bellwether issuers in the loan market.[2] Many of these companies have improving credit profiles with a long-term target of getting to Investment Grade on an unsecured basis. This portion of the loan market is popular for corporate merger and acquisition (M&A) activity, to finance growth through expansion projects, corporate spinoffs and general corporate purposes. A typical BB loan ranges from L+200-375 with a 0% LIBOR Floor. The current nominal spread for BB rated loans is L+274.[2] The top five sectors by market value weight within the S&P Leveraged Loan BB Rating Index include: Electronics, Cable TV, Utilities, Drugs, and Chemical. In our view, this segment of the loan market is typically a core holding of both High Quality and Total Return portfolios.

Single-B Rated Loans

The single-B portion of the loan market is the largest portion of the loan market with 60% of the total outstanding debt of the asset class.[2] This segment of the loan market has been steadily growing as CLOs typically have a weighted average credit rating of B1 or B2. The demand from CLO issuers for new loans rated single-B has encouraged equity sponsors in Leveraged Buyouts (LBOs) to finance the secured debt at a single-B credit rating, with unsecured debt often at low single-B or CCC ratings. A typical single-B loan ranges from L+325 to L+500 and a 50-100 basis point LIBOR Floor, with an average nominal spread of L+401 for loans in the single-B space.[2] Within the S&P Leveraged Loan B Rating Index, the largest five sectors by market value weight include: Electronics, Business Equipment and Services, Healthcare, Insurance, and Chemical. Middle market opportunities, which are classified as companies with pre-taxed earnings between $5 million and $250 million, are generally syndicated in the single-B market, with typically wider pricing and higher quality credit agreements. These deals can often be clubbed together with 7-20 buyers and can be an attractive subset of a portfolio's single-B allocation. Most LBOs are typically financed in the loan market in the single-B portion of the loan market. Having a skilled credit team, in our view, is imperative to investing in this riskier portion of the loan market. With a steady slate of issuers and a strong market, much of credit research's time is spent underwriting new companies that issue in this portion of the loan market.

CCC & Not Rated (NR) Loans

The CCC and NR portion of the loan market is 12% of the overall market. This segment is a mix of Second Lien loan issuance to finance LBOs and issuers that were downgraded from single-B to CCC.[2] For total return mandates that allow for allocations to CCC issuers, participation in this section of the market is typically opportunistic and is focused on high conviction names. In larger deals, the Second Lien loan issuance is a proxy for High Yield (HY) unsecured bond issuance. High yield is any bonds that are rated BB+ or lower. The potential advantage for Second Lien loans is that the call protection is not as onerous as in the high yield unsecured bond market. For example, a typical call protection for Second Lien loans is 102% for the first year, 101% for the second year, and par thereafter. This makes prepaying the debt much easier than in the high yield bond market.

On downgraded names, we often utilize MIM's special situations team to evaluate if situations are temporary or turnaround in nature versus a permanent loss of value. With low levels of distress, and less than 1.25% of U.S. leveraged loans priced below 80, the market is not expecting a surge in defaults in the near-term.[2]

The improving economic data is driving investors to be more optimistic about the potential of the global recovery. This rebound should help provide a supportive backdrop for the leveraged loan market. As inflation projections continue to rise and drag up rates, leveraged loans can help offset inflationary risk due to their floating rate structure. The current interest rate environment, along with other factors outlined below, emphasize the potential benefits of investing in the leveraged loan universe.

Potential Investor Benefits and Risks

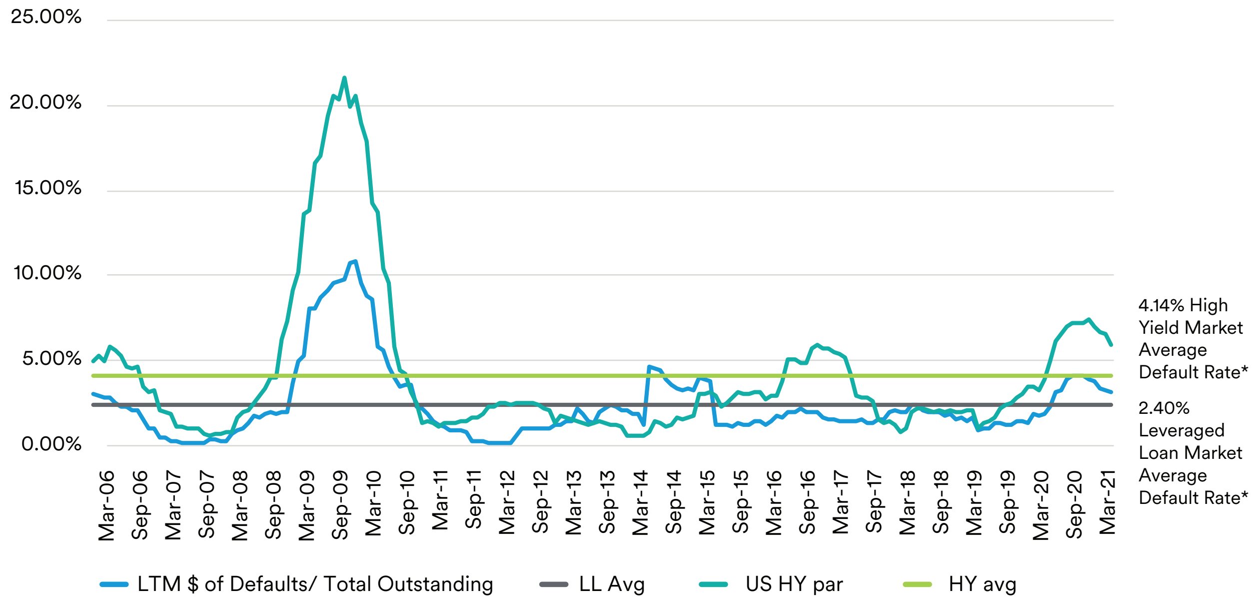
- **Diversification**—Loans are a portfolio diversifier given their relatively low correlations with most major asset classes. The floating rate structure of loans is the driver of the low correlation.

1997 - May-21

Asset Class	S&P/LSTA LL Index	Performing Loans Index	High Yield	10yr Treasury	S&P 500	High Grade Corp
S&P/LSTA Leveraged Loan Index	1.000	0.999	0.791	-0.355	0.489	0.426
Performing Loans Index		1.000	0.785	-0.357	0.487	0.422
ML US High Yield Index			1.000	-0.173	0.647	0.582
ML 10yr US Treasury Index				1.000	-0.284	0.558
S&P 500					1.000	0.271
ML US Corp Index						1.000

- **Lower Volatility**—We believe that bank loans generally exhibit lower volatility compared to High Yield Bonds and private mezzanine debt. The low volatility is due to 2 reasons:
  - Syndicated bank loans' total return is primarily from coupon income, which can increase to the extent that underlying interest rates rise.
  - Syndicated loans have historically tended to have higher recovery rates and lower loss rates relative to high yield bonds, which can serve to reduce volatility.

High Yield and Bank Loan Default Rates



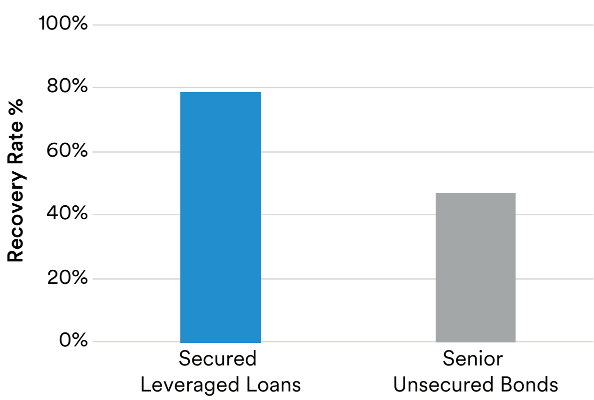
Source: S&P LCD for Leveraged Loan Default Rate and BofA Merrill Lynch Global Research for High Yield Default Rate as of March 31, 2021.

Default rates presented are the LL Index's monthly default rates for Leveraged Loans and the BofA Merrill Lynch U.S. High Yield Index default rates for High Yield bonds, which were calculated by S&P and BofA Merrill Lynch, respectively. S&P defines a defaulted leveraged loan as one: (1) whose issuer files for bankruptcy, (2) that is rated a "D" by either Moody's or S&P or (3) that misses a payment without a forbearance. BofA Merrill Lynch defines a defaulted high yield bond as one deemed as such by a major rating agency. This typically constitutes a missed interest or principal payment, bankruptcy or distressed exchange.

*Average default rates calculated by MIM using data from S&P and BofA Merrill Lynch.

- **Structural Protections**—Syndicated loans are senior secured instruments at the top of the corporate capital structure. Loans can benefit from negative covenants and pledged collateral within the Credit Agreement.
- **Floating Rate Coupon Structure**—Loans are typically floating rate instruments that are periodically reset to a spread over LIBOR or the effective base rate. In a rising rate environment, the floating rate can enable investors to earn higher income over time.
- **Downside Protection Features**— The LIBOR floor present in many loans may help to mitigate the downside from falling interest rates. As of 3/31/2021, 42% of the Leveraged Loan index had LIBOR floors greater than 0 basis points, with an average floor of 90 basis points.[2] Including 0 basis point floors, 98.9% of the index contains a LIBOR floor, with an average floor of 36 basis points.[4]
- **Credit Risk**— Below investment grade debt obligations are regarded as predominately speculative with respect to the borrower's continuing ability to meet principal and interest payments. With 92% of the leveraged loan market in below investment grade securities, investing in the asset

Default Recoveries 1987–2019



Source: S&P Global LossStats; LCD, an offering of S&P Global Market Intelligence as of September 23, 2020.

class will be more dependent on the Manager's analysis than would be the case if an investor were investing in higher quality debt obligations in other asset classes. In addition, lower quality debt obligations may be more susceptible to real or perceived adverse economic and individual corporate developments than would investment grade debt obligations.

- **Interest Rate Risk**—In general, rises in interest rates will negatively impact the value of fixed rate obligations and falling interest rates will have a positive effect on value. Overall, instruments with longer maturities have a greater duration and thus are subject to greater price volatility from changes in interest rates. Adjustable rate instruments also react to interest rate changes in a similar manner although generally to a lesser degree (depending, however, on the characteristics of the reset terms, including the index chosen, frequency of reset and reset caps or floors, among other things).
- **Leveraged Loan Risk**—Leveraged loans hold senior positions in the capital structure of a business entity, are secured with specific collateral and have a claim on the assets and/or stock of the borrower that is senior to that held by unsecured creditors, subordinated debt holders and stockholders of the borrower. However, the risks associated with below investment grade leveraged loans are similar to the risks of other below investment grade instruments, although leveraged loans are senior and secured in contrast to other below investment grade instruments, which are often subordinated and/or unsecured. Nevertheless, if a borrower under a leveraged loan defaults, becomes insolvent or goes into bankruptcy, investors may recover only a fraction of what is owed on the leveraged loan or nothing at all.

Endnotes

1 A syndicated loan is financing offered by a group of lenders (syndicate) who work together to provide funds for a single borrower.

2 Source: S&P LCD, as of 3/31/2021

3 The U.S. dollar London Inter-Bank Offered Rate (LIBOR) will likely be discontinued beginning June 2023; however, U.S. regulators have indicated that banks should stop using LIBOR in new issue contracts by December 2021. The recommended alternative reference rate to replace USD LIBOR is the Secured Overnight Funding Rate (SOFR).

4 Source: MIM, Blackrock Aladdin

Author

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Portfolio Manager - Bank Loans

Matthew McInerny is a portfolio manager and member of the high yield and bank loan team for MetLife Investment Management (MIM) Public Fixed Income.

Matthew has been with MIM since 2012, originally joining MetLife in 2005 as a dedicated syndicated bank loan portfolio manager. In that capacity, he evaluated and monitored credits across multiple portfolios and served as a senior credit committee member for all new high yield bridge transactions. Prior to joining MIM, he worked at Travelers Investments (now Citigroup), managing syndicated bank loans, privately placed debt and investment grade corporate portfolios. While at Citigroup, Matthew underwrote new transactions on both a fixed rate and floating rate basis, establishing comparable benchmark credits, structure covenants and rate/spread negotiations. He has 24 years of industry experience.

Matthew received a Bachelor of Science in business administration from the University of Colorado and a Master of Business Administration in finance from the University of Massachusetts. He is a CFA® charterholder.

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Sara Strauch is the Emerging Market portfolio specialist for MetLife Investment Management (MIM) Public Fixed Income. Sara has been with MIM since 2018. Prior to her current role, she was a portfolio assistant dedicated to public fixed income. Sara received a Bachelor of Science degree with a double major in Finance and Management from The University of South Carolina.

Appendix A

Sum of Initial Amount

Issuer	S&P Rating	Original Spread	Libor Floor	Initial Amount ($mm)
Asurion Corporation	B	525	0	1,640
	B+	275	0	3,338
		300	0	2,250
		325	0	4,600
American Airlines	B-	175	0	3,045
		200	0	2,240
	NR	475	75	3,500
TransDigm Inc	B+	225	0	7,512
Western Digital Corp	BBB-	150	0	5,022
		175	0	2,455
Dell International LLC	BBB-	175	0	3,634
		175	25	3,143
Univision Communications Inc	B	275	100	4,475
		375	100	2,000
Cablevision Systems	BB	225	0	3,775
		250	0	2,500
Charter Communications Holding Co LLC	BBB-	175	0	6,238
Ultimate Software Group	B-	325	75	3,238
		375	0	2,300
	CCC	675	75	600
SFR	B	275	none	1,418
		300	0	2,150
		400	0	2,500
Valeant Pharmaceuticals	BB	275	0	1,500
		300	0	4,565
Envision Healthcare	CCC	375	0	5,450
Restaurant Brands International	BB+	175	0	5,350
SS&C Technologies Inc	BB+	175	0	5,199
ARG IH Corp	B	275	100	2,560
		325	100	2,575

Source: S&P LCD as of May 14, 2021
Investment Grade rated loans include any securities rated BBB- or above. High Yield loans include any securities rated BB+ or lower. If a security is only rated by one rating agency that rating is used, if it is rated by two rating agencies the lower of two is used, and if it is rated by the three main rating agencies the middle of three is used.

Appendix B: Leverage by Rating

Total leverage in 4Q20 based on LTM EBITDA

Corporate Rating	Leverage	# of observations
BB+	3.69	16
BB	4.59	30
BB-	5.32	30
B+	6.44	29
B	7.08	34
B-	8.19	11
CCC+	10.08	3

Source: LCD, an offering of S&P Global Market Intelligence

About MetLife Investment Management | Public Fixed Income

MetLife Investment Management's[1] Public Fixed Income Group has over $362 billion[2] in assets under management. We offer institutional clients around the world a bottom-up, fundamental security selection approach to fixed income investing. We have a deep and experienced team of over 140 Public Fixed Income investment professionals averaging 17 years of industry experience with 20 portfolio managers averaging 23 years. The investment decisions and idea generation are informed by a team-based culture with portfolio managers, credit analysts and traders contributing to trade ideas, and risk management is layered into every step of the portfolio construction process and supplemented by independent oversight. We seek to build long-lasting relationships through a comprehensive approach to understanding each of our client's needs and objectives, and constructing a fixed income portfolio that best meets their goals.

For more information, visit: investments.metlife.com/public-fixed-income

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[2] At estimated fair value as of March 31, 2021. Includes MetLife general account and separate account assets and unaffiliated/third party assets.

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MetLife Investment Management

Appendix

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

U.S. Leveraged Loan Par Amount Outstanding

Note: Represents all U.S. Leveraged Loans as set forth by S&P Leveraged Commentary and Data ("S&P LCD") as of March 31, 2021.

Year	Amount Outstanding (Billions $)
1996	$14
1997	$35
1998	$73
1999	$101
2000	$117
2001	$132
2002	$137
2003	$148
2004	$193
2005	$248
2006	$400
2007	$557
2008	$596
2009	$529
2010	$504
2011	$516
2012	$552
2013	$681
2014	$830
2015	$881
2016	$887
2017	$959
2018	$1,147
2019	$1,193
2020	$1,193
Q1 2021	$1,207

High Yield and Bank Loan Default Rates

Note:

- All values are approximate
- Average default rates calculated by MIM using data from S&P and BofA Merrill Lynch.
- Default rates presented are the LL Index's monthly default rates for Leveraged Loans and the BofA Merrill Lynch U.S. High Yield Index default rates for High Yield bonds, which were calculated by S&P and BofA Merrill Lynch, respectively. S&P denes a defaulted leveraged loan as one: (1) whose issuer files for bankruptcy, (2) that is rated a "D" by either Moody's or S&P or (3) that misses a payment without a forbearance. BofA Merrill Lynch denes a defaulted high yield bond as one deemed as such by a major rating agency. This typically constitutes a missed interest or principal payment, bankruptcy or distressed exchange.
- The High Yield Market Average Default Rate is 4.14% across all dates on the graph.
- The Leveraged Loan Market Average Default Rate is 2.40% across all dates on the graph.
- The "LTM $ of Defaults/ Total Outstanding" and "US HY par" lines have the following characteristics:
    - Except for the period between September 2008 and September 2010, both lines track relatively close to each other, sometimes separating by about 5.00%.
    - Between September 2008 and September 2010, both lines climb sharply, but "US HY par" exceeds 20.00%, while "LTM $ of Defaults/ Total Outstanding" ends up around 11.00%.
- Source: S&P LCD for Leveraged Loan Default Rate and BofA Merrill Lynch Global Research for High Yield Default Rate as of March 31, 2021.

Month-Year	LTM $ of Defaults/ Total Outstanding	US HY par
Mar-06	2.55%	5.05%
Sep-06	2.42%	4.14%
Mar-07	0.05%	1.30%
Sep-07	0.05%	0.62%
Mar-08	0.94%	1.80%
Sep-08	1.85%	4.14%
Mar-09	6.87%	13.75%
Sep-09	9.66%	20.90%
Mar-10	7.50%	14.60%
Sep-10	3.60%	4.04%
Mar-11	1.25%	1.25%
Sep-11	0.22%	1.35%
Mar-12	0.10%	2.40%
Sep-12	1.01%	2.40%
Mar-13	1.80%	1.46%
Sep-13	2.40%	1.35%
Mar-14	1.57%	0.56%
Sep-14	3.48%	1.46%
Mar-15	3.82%	3.03%
Sep-15	1.24%	3.03%
Mar-16	1.57%	2.92%
Sep-16	1.91%	5.17%
Mar-17	1.46%	5.28%
Sep-17	1.46%	2.13%
Mar-18	2.13%	1.46%
Sep-18	1.91%	2.02%
Mar-19	1.35%	1.57%
Sep-19	1.24%	2.40%
Mar-20	1.80%	3.60%
Sep-20	4.14%	7.19%
Mar-21	3.26%	6.29%