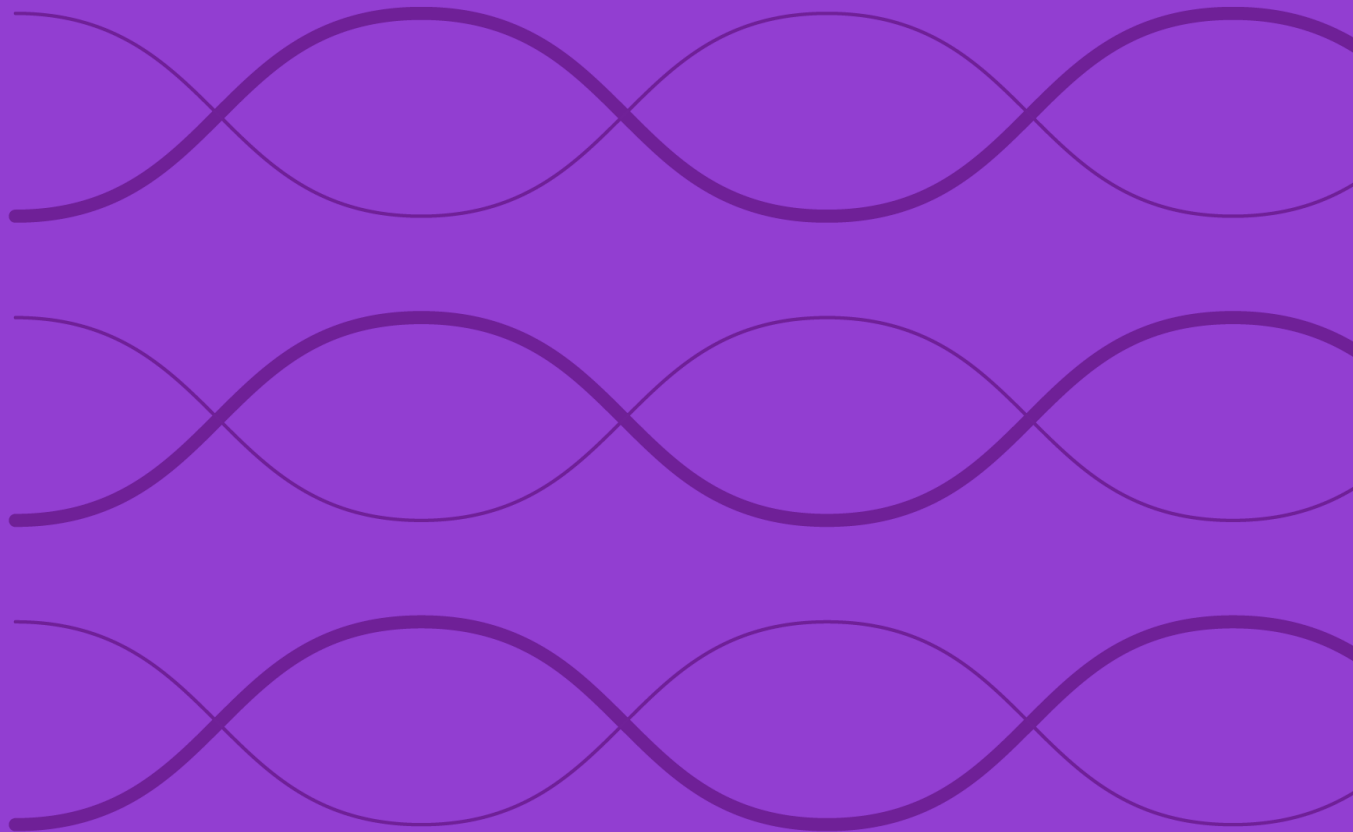


Morningstar Leveraged Loan Indexes Methodology



April 22, 2025

Contents

Introduction.....	5
Index series objective and highlights.....	5
Index series.....	5
Morningstar LSTA US Leveraged Loan Index.....	5
Technical description.....	5
Index history.....	5
Starting universe.....	6
Index eligibility.....	6
Base currency.....	6
Base rate.....	6
Loan interest rate.....	6
Ratings.....	6
Index weighting.....	6
Index pricing.....	7
Rebalancing.....	7
Sub-indexes and sub-index rules.....	7
Morningstar LSTA US Leveraged Loan 100 Index.....	11
Technical description.....	11
Index history.....	11
Starting universe.....	11
Index eligibility.....	11
Base currency.....	11
Base rate.....	11
Loan interest rate.....	11
Ratings.....	12
Index weighting.....	12
Index pricing.....	12
Reconstitution.....	12
Rebalancing.....	12
Sub-indexes and sub-index rules.....	12

Morningstar European Leveraged Loan Index	13
Technical description	13
Index history	13
Starting universe	13
Index eligibility	13
Base currency	14
Base rate	14
Loan interest rate	14
Ratings	14
Index weighting	14
Index pricing	14
Rebalancing	14
Sub-indexes and sub-index rules	14
Morningstar Global Leveraged Loan Index	17
Technical description	17
Index history	17
Starting universe	17
Index eligibility	17
Base currency	17
Base rate	17
Loan interest rate	18
Ratings	18
Index weighting	18
Index pricing	18
Rebalancing	18
Sub-indexes and sub-index rules	18
Index Calculations	20
Total return	20
Price return	20
Interest return	20
Currency return	20
Yield	20
Base rate floor	20

Defaults	20
Currency of calculation and additional index return series	21
Pricing, Trading, Settlement, and Transaction Costs	21
Cash flows	21
Holiday schedule	21
Methodology Review and Index Cessation Policy	21
Index Policy	22
Announcements	22
Rebalancing	22
Ratings changes	22
End-of-day calculation	22
Index-Related Data and Divisor Corrections	22
Sanctions	22
Exceptions	23
Contact information	23
Appendix I	23
Defined Terms	23
Appendix II	24
Methodology changes	24
Appendix III	26
Index calculations	26
Calculation of index loan market values and relative weights	26
Calculation of index loan returns	26
Calculation of index returns and levels	28
Appendix IV	29
Appendix V	41
Disclaimer	43
About Morningstar Indexes	43

Introduction

Index series objective and highlights

The Morningstar Leveraged Loan Indexes are designed to deliver comprehensive, precise coverage of the global leveraged loan market. Underpinned by PitchBook LCD data, the indexes bring transparency to the performance, activity, and key characteristics of the market.

Index series

The index series consists of four flagship indexes. For each flagship index, additional sub-indexes are available.

- **Morningstar LSTA US Leveraged Loan Index**

The Morningstar LSTA US Leveraged Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market.

- **Morningstar LSTA US Leveraged Loan 100 Index**

The Morningstar LSTA US Leveraged Loan 100 Index is designed to measure the performance of the 100 largest facilities in the US leveraged loan market. Index constituents are market value weighted, subject to a single loan facility weight cap of 1.90%.

- **Morningstar European Leveraged Loan Index**

The Morningstar European Leveraged Loan Index is a market value weighted multi-currency index designed to measure the performance of the European leveraged loan market.

- **Morningstar Global Leveraged Loan Index**

The Morningstar Global Leveraged Loan Index is designed to measure the performance of the global leveraged loan market. It is a fixed-weight composite index consisting of 75% weight from the Morningstar LSTA US Leveraged Loan Index and 25% weight from the Morningstar European Leveraged Loan Index.

This methodology document sets out the rules by which the flagship indexes and the related sub-indexes are governed, including index calculation and management procedures, and the various formulas used to calculate index returns and other statistics.

This methodology was created to govern the management of the index series, and to ensure each index achieves the aforementioned objective of measuring the performance of the relevant section of the leveraged loan market. Any changes to or deviations from this methodology are made at the sole judgment and discretion of Morningstar Indexes so that the index(es) continues to achieve its objective.

Morningstar LSTA US Leveraged Loan Index

Technical description

The Morningstar LSTA US Leveraged Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market.

Index history

- Performance inception date (includes back tested history): December 31, 1996
- Live inception date: December 31, 2000

Note: The index was calculated on a monthly basis from December 31, 1996 to December 31, 1998. From January 1, 1999 until March 30, 2007, it was calculated on a weekly basis. From March 31, 2007 onwards, it has been calculated daily.

Starting universe

The starting universe consists of syndicated term leveraged loans that are held within top-tier institutional investor loan portfolios tracked by PitchBook LCD.

Index eligibility

- Seniority: senior secured
- Currency: USD denominated
- Minimum initial term: 1 year
- Minimum initial spread: Base rate + 125 bps
- Minimum initial issue size: \$50 million
- Domicile: all loans must be syndicated in the US, but issuers may be of any origin

Note: A loan in default will remain in the index (but does not accrue interest and is excluded from yield calculations) unless it fails to meet the stated eligibility criteria or has been repaid or restructured. Payment-in-kind (PIK) loans are not eligible for inclusion. Delayed draw term loans are included in the index if they are fully funded.

Base currency

The base currency of calculation for the Morningstar LSTA US Leveraged Loan Index is US dollars. The index is also calculated in additional currency variants.

Base rate

Each loan uses a base rate in the calculation of interest. The base rate is the average of the:

- 30-day rolling average of 1-month CME Term SOFR; and
- 90-day rolling average of 3-month CME Term SOFR

The base rate is determined and applied on Friday¹.

Loan interest rate

For each loan in the index, the loan interest rate is the base rate plus the spread for each loan. Loan spreads are updated weekly at the rebalancing date. At the index level, it is the par amount outstanding weighted average of all loan interest rates in the index.

Ratings

The index uses public facility level ratings from S&P Global Ratings, however, a facility rating is not required for eligibility in the index.

Index weighting

At each rebalance, the index constituents are market value weighted.

¹ Prior to December 27, 2024, the base rate was calculated as the average of the 1-month synthetic USD LIBOR, 3-month synthetic USD LIBOR, 1-month Term SOFR, and 3-month Term SOFR contracted rates on institutional loans according to the Markit WSO Database. See Appendix II for additional details on the base rate methodology change.

Index pricing

Average bid price from LSTA/LSEG Mark-to-Market Pricing² is used to determine the market value of each loan. The index is priced daily using 3:00 PM Eastern Time US (New York) prices.

Rebalancing

The index is rebalanced on a weekly basis every Friday after the close and new membership is effective at the open on Saturday. Par amounts of index loans are adjusted on the weekly rebalancing date due to partial pre-payments, pay-downs, and other activities impacting par amount for each facility:

- Additions: Loans which meet the eligibility criteria will be added.
- Deletions: Loans are removed from the index when they are repaid, are no longer priced, or no longer meet the stated index eligibility criteria.
- Weekly index rebalancing maintenance is based on information available up to and including each Friday morning.

Sub-indexes and sub-index rules

The following sub-indexes are derived from the Morningstar LSTA US Leveraged Loan Index (the parent index). Unless otherwise specified, the sub-indexes follow all of the same index rules as the parent index in addition to the rules noted for each sub-index below:

Performing status

Performing loan indexes are subject to off-cycle (midweek) rebalancing in the event a loan is downgraded to D by S&P Global Ratings. Loans which are downgraded to D will remain in its original index for one day, marked as D. After the close the index will be rebalanced and the D rated loan will move out of the performing loan index and into the D ratings index. A loan which has met other criteria for default but has not yet been rated D will stop accruing interest and will be excluded from yield calculations but will remain in the given index.

All other credit quality movements will be reflected at the weekly rebalance on Fridays and will not be rebalanced midweek.

Morningstar LSTA US Performing Loan Index: The Morningstar LSTA US Performing Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for loans which are not in default as measured by an S&P Rating of D. Loans with ratings BBB- and above as rated by S&P Global Ratings are excluded.

Morningstar LSTA US Performing Loan ex-D Ratings Index: The Morningstar LSTA US Performing Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for loans which are not in default as measured by an S&P Rating of D. Loans with D ratings as rated by S&P Global Ratings are excluded.

Credit quality

Credit quality indexes are subject to off-cycle (midweek) rebalancing in the event a loan is downgraded to D by S&P Global Ratings. Loans which are downgraded to D will remain in its original index for one day, marked as D. After the close the index will be rebalanced and the D rated loan will move out of the original credit rating index and into

² Formerly known as LSTA/Refinitiv Mark-to-Market Pricing.

the D ratings index. A loan which has met other criteria for default but has not yet been rated D will stop accruing interest and will be excluded from yield calculations but will remain in the given index.

All other credit quality movements will be reflected at the weekly rebalance on Fridays and will not be rebalanced midweek.

Morningstar LSTA US BBB Ratings Loan Index: The Morningstar LSTA US BBB Ratings Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for loans with BBB- to BBB+ Ratings as rated by S&P Global Ratings.

Morningstar LSTA US BB Ratings Loan Index: The Morningstar LSTA US BB Ratings Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for loans with BB- to BB+ ratings as rated by S&P Global Ratings.

Morningstar LSTA BB- Ratings and Above Loan Index: The Morningstar LSTA US BB- Ratings and Above Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for loans with BB- ratings and above as rated by S&P Global Ratings.

Morningstar LSTA US B/BB Ratings Loan Index: The Morningstar LSTA US B/BB Ratings Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for loans with B- to BB+ ratings as rated by S&P Global Ratings.

Morningstar LSTA US B/BB Ratings Loan ex Utilities and Energy Index³: The Morningstar LSTA US B/BB Ratings Loan ex Utilities and Energy Index is a market value weighted index designed to measure the performance of the US leveraged loan market for loans with B- to BB+ ratings excluding loans from issuers classified in the utilities and energy sectors.

Morningstar LSTA US B- Ratings and Above Loan Index: The Morningstar LSTA US B- Ratings and Above Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for loans with B- ratings and above as rated by S&P Global Ratings.

Morningstar LSTA US B+ Ratings Loan Index: The Morningstar LSTA US B+ Ratings Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for loans with B+ ratings as rated by S&P Global Ratings.

Morningstar LSTA US B Ratings Loan Index: The Morningstar LSTA US B Ratings Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for loans with B- to B+ Ratings as rated by S&P Global Ratings.

Morningstar LSTA B- Ratings Loan Index: The Morningstar LSTA US B- Ratings Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for loans with B- rating as rated by S&P Global Ratings.

Morningstar LSTA US CCC Ratings Loan Index: The Morningstar LSTA US CCC Ratings Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for loans with CCC- to CCC+ ratings as rated by S&P Global Ratings.

³ The hedged variants of the Morningstar LSTA US B/BB Ratings Loan ex Utilities and Energy Index follows the Morningstar Currency Hedge Index Methodology with one exception as below:

The index is rebalanced monthly, usually on the last trading day of the month, using foreign currency weights and corresponding notional amounts determined as of one business day before the last business day of the month. This approach ensures that index calculation closely resembles the actual implementation lag seen in real-world portfolios. We assume this one day lag throughout the history including the back-tested performance.

Morningstar LSTA US C Ratings Loan Index: The Morningstar LSTA US C Ratings Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for loans with C to CCC+ ratings as rated by S&P Global Ratings.

Morningstar LSTA US C/D Ratings Loan Index: The Morningstar LSTA US C/D Ratings Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for loans with C or D ratings as rated by S&P Global Ratings.

Morningstar LSTA US D Ratings Loan Index: The Morningstar LSTA US D Ratings Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for loans with D ratings as rated by S&P Global Ratings.

Morningstar LSTA Ex C/D Ratings Loan Index: The Morningstar LSTA US Ex C/D Ratings Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for loans excluding loans with D to CCC+ ratings as rated by S&P Global Ratings. Non-rated loans are also excluded.

Morningstar LSTA US Non-Rated Loan Index: The Morningstar LSTA US Non-Rated Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for loans which are not rated by S&P Global Ratings.

The following indexes are not subject to off-cycle (midweek) rebalancing in the event a loan is downgraded to D by S&P Global Ratings. Loans which are downgraded to D will remain in its original index until the weekly rebalance on Friday. A loan which has met other criteria for default but has not yet been rated D will stop accruing interest and will be excluded from yield calculations but will remain in the given index.

All other credit quality movements will be reflected at the weekly rebalance on Fridays and will not be rebalanced midweek.

Morningstar LSTA US BB/B Capped Index: The Morningstar LSTA US Leveraged Loan BB/B Capped Loan Index is a fixed weight index designed to measure the performance of the US leveraged loan market for loans with B- to BB+ loan ratings as rated by S&P Global Ratings. The index is rebalanced to 67% weight in BB rated loans and 33% weight in B rated loans at the weekly rebalance.

Morningstar LSTA US B Ratings and Above ex Financials Loan Index: The Morningstar LSTA US B Ratings and Above ex Financials Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for loans with a rating of B and above as rated by S&P Global Ratings, while excluding Term Loan A issuances and loans from issuers classified in the financials sector.

Initial issue amount

Morningstar LSTA US Leveraged Loan \$500M+ Index: The Morningstar LSTA US Leveraged Loan \$500M+ Index is a market value weighted index designed to measure the performance of the US leveraged loan market for loans with initial issue amounts of \$500M or greater.

Seniority

Morningstar LSTA US Leveraged Loan 1st Lien Index: The Morningstar LSTA US Leveraged Loan 1st Lien Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for first lien loans.

Morningstar LSTA US Leveraged Loan 2nd Lien Index: The Morningstar LSTA US Leveraged Loan 2nd Lien Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for second lien loans.

Private equity relationship

Morningstar LSTA US Leveraged Loan PE-Sponsored Index: The Morningstar LSTA US Leveraged Loan PE-Sponsored Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for loans from PE-sponsored issuers.

Morningstar LSTA US Leveraged Loan PE-Sponsored 1st Lien Index: The Morningstar LSTA US Leveraged Loan PE-Sponsored 1st Lien Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for first lien loans from PE-sponsored issuers.

Morningstar LSTA US Leveraged Loan PE-Sponsored 2nd Lien Index: The Morningstar LSTA US Leveraged Loan PE-Sponsored 2nd lien Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for second lien loans from PE-sponsored issuers.

Morningstar LSTA US Leveraged Loan Non PE-Sponsored Index: The Morningstar LSTA US Leveraged Loan Non PE-Sponsored Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for loans which are not from PE-sponsored issuers.

Morningstar LSTA US Leveraged Loan Non PE-Sponsored 1st Lien Index: The Morningstar LSTA US Leveraged Loan Non PE-Sponsored 1st Lien Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for first lien loans which are not from PE-sponsored issuers.

Morningstar LSTA US Leveraged Loan Non PE-Sponsored 2nd Lien Index: The Morningstar LSTA US Leveraged Loan Non PE-Sponsored 2nd Lien Loan Index is a market value weighted index designed to measure the performance of the US leveraged loan market for second lien loans which are not from PE-sponsored issuers.

Alternative weighting

Morningstar LSTA US Leveraged Loan Select Equal Weight Index: The Morningstar LSTA US Leveraged Loan Select Equal Weight Index is an equal weighted index designed to measure the performance of the US leveraged loan market for facilities with an original minimum par amount outstanding of \$1 billion at the time of entry to the index and no less than \$750 million outstanding for current constituents. In addition, all facilities must be domiciled in the US. At each weekly rebalancing, constituent facilities are assigned an equal weight by applying an adjusted cap factor.

Morningstar LSTA US Leveraged Loan Select Equal Par Value Index: The Morningstar LSTA US Leveraged Loan Select Equal Par Value Index is an equal par value index where at the weekly rebalance each loan is assigned an equal par amount and then is weighted based on price. facilities must have an original minimum par amount outstanding of \$1 billion at the time of entry to the index and no less than \$750 million outstanding for current constituents to remain in the index. In addition, all facilities must be domiciled in the US.

Sector

Sector Indexes: The Morningstar LSTA US Leveraged Loan Index is also offered in a wide array of sector-specific indexes. GICS sectors are used for sector selection and assignment of GICS for each issuer is determined by Standard & Poor's and MSCI. For a complete list of GICS sector indexes, refer to [Appendix IV](#).

Note: Due to market circumstances which impact loan issuance, the number of issuers or facilities in a given sector may fluctuate. Therefore, certain sector indexes may become dormant during periods where there are no issuances associated with an issuer from a given sector. In such cases, index levels will be rolled until such time that a constituent qualifies for a given sector index and returns will begin calculating again.

Morningstar LSTA US Leveraged Loan 100 Index

Technical description

The Morningstar LSTA US Leveraged Loan 100 Index is designed to measure the performance of the 100 largest facilities in the US leveraged loan market. Index constituents are market value weighted, subject to a single loan facility weight cap of 1.90%.

Index history

- Performance inception date (includes back tested history): December 28, 2001
- Live inception date: October 20, 2008

Note: The index was calculated on a weekly basis from December 28, 2001 until March 30, 2007. From March 31, 2007 onwards, it has been calculated daily.

Starting universe

The parent index, the Morningstar LSTA US Leveraged Loan Index, is the starting universe.

Index eligibility

In addition to the eligibility requirements of the parent index, the following requirements must be met:

- CUSIP: must have a publicly issued CUSIP

Note: A loan in default will remain in the index (but does not accrue interest and is excluded from yield calculations) unless it fails to meet the stated eligibility criteria or has been repaid or restructured. Payment-in-kind (PIK) loans are not eligible for inclusion. Delayed draw term loans are included in the index if they are fully funded.

Base currency

The base currency of calculation for the Morningstar LSTA US Leveraged Loan 100 Index is US dollars. The index is also calculated in additional currency variants.

Base rate

Each loan uses a base rate in the calculation of interest. The base rate is the average of the:

- 30-day rolling average of 1-month CME Term SOFR; and
- 90-day rolling average of 3-month CME Term SOFR

The base rate is determined and applied on Friday⁴.

Loan interest rate

For each loan in the index, the loan interest rate is the base rate plus the spread for each loan. At the index level, it is the par amount outstanding weighted average of all loan interest rates in the index.

⁴ Prior to December 27, 2024, the base rate was calculated as the average of the 1-month synthetic USD LIBOR, 3-month synthetic USD LIBOR, 1-month Term SOFR, and 3-month Term SOFR contracted rates on institutional loans according to the Markit WSO Database. See Appendix II for additional details on the base rate methodology change.

Ratings

The index uses public facility level ratings from S&P Global Ratings, however, a facility rating is not required for eligibility in the index.

Index weighting

At each rebalance, the index constituents are market value weighted, subject to a single constituent cap of 1.90% of the total index weight by market value. If a loan facility's weight exceeds 1.90%, the facility's weight is reduced to 1.90% and the excess weight is proportionally redistributed to uncapped constituents. This process proceeds iteratively until no constituent breaches the 1.90% cap.

Index pricing

Average bid price from LSTA/Refinitiv Mark-to-Market Pricing is used to determine the market value of each loan. The index is priced daily using 3:00 PM Eastern time US (New York) prices.

Reconstitution

The index is reconstituted semi-annually after the close of the second Friday in June and December to select the 100 largest loan facilities by par amount outstanding from the parent index for inclusion in the index.

Rebalancing

The index is rebalanced on a weekly basis every Friday after the close and new membership is effective at the open on Saturday.

- Additions: Loans will be added to the index only when a vacancy is created by a constituent deletion in order to maintain 100 index constituents. The next eligible loan facility (based on largest size) that meets the index criteria will be selected.
- Deletions: Loans are removed from the index when they are repaid, are no longer priced, or no longer meet the stated index eligibility criteria.
- In the case of a repricing, the facility remains in the index with a new CUSIP.
- Weekly index rebalancing maintenance is based on information available up to and including each Wednesday close.

Sub-indexes and sub-index rules

The following sub-indexes are derived from the Morningstar LSTA US Leveraged Loan 100 Index (the parent index). Unless otherwise specified, the sub-indexes follow all of the same index rules as the parent index in addition to the rules noted for each sub-index below:

Credit quality

Morningstar LSTA US Leveraged Loan 100 B/BB Ratings Index: The Morningstar LSTA US Leveraged Loan 100 B/BB Ratings Index is a sub-index of the Morningstar LSTA US Leveraged Loan 100 Index (the parent index) and is designed to measure the performance of facilities from within the parent index with B- to BB+ ratings as rated by S&P Global Ratings. At each rebalance, the index constituents are market value weighted, subject to a single constituent cap of 1.90% of the total index weight by market value. If a loan facility's weight exceeds 1.90%, the facility's weight is reduced to 1.90% and the excess weight is proportionally redistributed to uncapped constituents. If the number of loan facilities in the index falls to 50 or below, the constituents are equal market value weighted.

- This index is not subject to off-cycle (midweek) rebalancing in the event a loan is downgraded to D by S&P Global Ratings. Loans which are downgraded to D will remain in its original index until the weekly

rebalance on Friday. A loan which has met other criteria for default but has not yet been rated D will stop accruing interest and will be excluded from yield calculations but will remain in the given index.

- All other credit quality movements will be reflected at the weekly rebalance on Fridays and will not be rebalanced midweek.

Sector

Sector Indexes: The Morningstar LSTA US Leveraged Loan 100 Index is also offered in a wide array of sector-specific indexes. GICS sectors are used for sector selection and assignment of GICS for each issuer is determined by Standard & Poor's and MSCI. For a complete list of GICS sector indexes, refer to [Appendix IV](#).

Note: Due to market circumstances which impact loan issuance, the number of issuers or facilities in a given sector may fluctuate. Therefore, certain sector indexes may become dormant during periods where there are no issuances associated with an issuer from a given sector. In such cases, index levels will be rolled until such time that a constituent qualifies for a given sector index and returns will begin calculating again.

Morningstar European Leveraged Loan Index

Technical description

The Morningstar European Leveraged Loan Index is a market value weighted multi-currency index designed to measure the performance of the European leveraged loan market.

Index history

- Performance inception date (includes back tested history): January 1, 2002
- Live inception date: November 1, 2004

Note: The index was calculated on a monthly basis from January 1, 2002 to December 31, 2003. From January 1, 2004 until May 2, 2013 it was calculated on a weekly basis. From May 3, 2013 onwards, it has been calculated daily.

Starting universe

The starting universe consists of syndicated term leveraged loans that are held within top-tier institutional investor loan portfolios tracked by PitchBook LCD.

Index eligibility

- Seniority: senior secured
- Currency: Euro, Pound sterling, US dollar
- Minimum initial term: 1 year
- Minimum initial spread: Base rate (3-month Euribor/3-month SONIA) + 125 bps
- Minimum initial issue size: no minimum size
- Domicile: all loans must be syndicated in Europe, but issuers may be of any origin

Note: a loan in default will remain in the index (but does not accrue interest and is excluded from yield calculations) unless it fails to meet the stated eligibility criteria or has been repaid or restructured. Payment-in-kind (PIK) loans are not eligible for inclusion. Delayed draw term loans are included in the index if they are fully funded.

Base currency

The base currency of calculation for the Morningstar European Leveraged Loan Index is euros. The index is also calculated in local currency and other additional currency variants.

Base rate

Each loan uses a base rate in the calculation of interest. For European loans, it is 3-month SONIA for GBP denominated loans and 3-month Euribor for EUR denominated loans. The base rate is determined and applied on Friday.

Loan interest rate

For each loan in the index, the loan interest rate is the base rate plus the spread for each loan. At the index level, it is the par amount outstanding weighted average of all loan interest rates in the index.

Ratings

The index uses public facility level ratings from S&P Global Ratings, however, a facility rating is not required for eligibility in the index. Prior to April 1, 2022, private ratings were eligible for use in the ratings based sub-indexes.

Index weighting

At each rebalance, the index constituents are market value weighted.

Index pricing

End of day average bid price from IHS Markit (LoanX) is used to determine the market value of each loan. The index is priced daily.

Rebalancing

The index is rebalanced on a weekly basis every Friday after the close and new membership is effective at the open on Saturday. Par amounts of index loans are adjusted on the weekly rebalancing date due to partial pre-payments, pay-downs, and other activities impacting par amount for each facility.

- Additions: Loans which meet the eligibility criteria will be added.
- Deletions: Loans are removed from the index when they are repaid, are no longer priced, or no longer meet the stated index eligibility criteria.

Sub-indexes and sub-index rules

The following sub-indexes are derived from the Morningstar European Leveraged Loan Index (the parent index). Unless otherwise specified, the sub-indexes follow all of the same index rules as the parent index in addition to the rules noted for each sub-index, below:

Credit quality

Credit quality indexes are subject to off-cycle (midweek) rebalancing in the event a loan is downgraded to D by S&P Global Ratings. Loans which are downgraded to D will remain in its original index for one day, marked as D. After the close the index will be rebalanced and the D rated loan will move out of the original credit rating index and into the D ratings index. A loan which has met other criteria for default but has not yet been rated D will stop accruing interest and will be excluded from yield calculations but will remain in the given index.

All other credit quality movements will be reflected at the weekly rebalance on Fridays and will not be rebalanced midweek.

Morningstar European BB Ratings Loan Index: The Morningstar European BB Ratings Loan Index is a market value weighted multi-currency index designed to measure the performance of the European leveraged loan market for loans with BB- to BB+ ratings as rated by S&P Global Ratings.

Morningstar European B Ratings Loan Index: The Morningstar European B Ratings Loan Index is a market value weighted multi-currency index designed to measure the performance of the European leveraged loan market for loans with B- to B+ ratings as rated by S&P Global Ratings.

Morningstar European B/BB Ratings Loan Index: The Morningstar European B/BB Rating Loan Index is a market value weighted multi-currency index designed to measure the performance of the European leveraged loan market for loans with B- to BB+ ratings as rated by S&P Global Ratings.

Morningstar European CCC Ratings Loan Index: The Morningstar European CCC Ratings Loan Index is a market value weighted multi-currency index designed to measure the performance of the European leveraged loan market for loans with CCC- to CCC+ ratings as rated by S&P Global Ratings.

Morningstar European CCC and D Ratings Loan Index: The Morningstar European CCC and D Ratings Loan Index is a market value weighted multi-currency index designed to measure the performance of the European leveraged loan market for loans with D to CCC+ ratings as rated by S&P Global Ratings.

Currency

Morningstar European Euro Denominated Loan Index: The Morningstar European Euro Denominated Loan Index is a market value weighted single-currency index designed to measure the performance of the European leveraged loan market for euro denominated loans.

Morningstar European Euro Denominated LBO Loan Index: The Morningstar European Euro Denominated LBO Loan Index is a market value weighted single-currency index designed to measure the performance of the European leveraged loan market for euro denominated loans from PE-sponsored issuers.

Regional

Morningstar European Ex PIIGS Loan Index: The Morningstar European Ex PIIGS Loan Index is a market value weighted multi-currency index designed to measure the performance of the European leveraged loan market excluding loans from issuers from PIIGS countries. The PIIGS countries are Portugal, Ireland, Italy, Greece, and Spain.

Morningstar European France Loan Index: The Morningstar European France Loan Index is a market value weighted multi-currency index designed to measure the performance of the European leveraged loan market for loans from issuers in France.

Morningstar European Germany Loan Index: The Morningstar European Germany Loan Index is a market value weighted multi-currency index designed to measure the performance of the European leveraged loan market for loans from issuers in Germany.

Morningstar European Italy Loan Index: The Morningstar European Italy Loan Index is a market value weighted multi-currency index designed to measure the performance of the European leveraged loan market for loans from issuers in Italy.

Morningstar European Netherlands Loan Index: The Morningstar European Netherlands Loan Index is a market value weighted multi-currency index designed to measure the performance of the European leveraged loan market for loans from issuers in the Netherlands.

Morningstar European Nordic Region Loan Index: The Morningstar European Nordic Region Loan Index is a market value weighted multi-currency index designed to measure the performance of the European leveraged loan market for loans from issuers in the Nordic Region. The Nordic Region includes the following countries: Denmark, Finland, Norway and Sweden.

Morningstar European PIIGS Loan Index: The Morningstar European PIIGS Loan Index is a market value weighted multi-currency index designed to measure the performance of the European leveraged loan market for loans from issuers in PIIGS countries. The PIIGS countries are Portugal, Ireland, Italy, Greece, and Spain.

Morningstar European Spain Loan Index: The Morningstar European Spain Loan Index is a market value weighted multi-currency index designed to measure the performance of the European leveraged loan market for loans from issuers in Spain.

Morningstar European UK Loan Index: The Morningstar European UK Loan Index is a market value weighted multi-currency index designed to measure the performance of the European leveraged loan market for loans from issuers in the UK.

Morningstar European Western Europe Loan Index: The Morningstar European Western Europe Loan Index is a market value weighted multi-currency index designed to measure the performance of the European leveraged loan market for loans from issuers in Western Europe. The index includes issuers from Austria, Belgium, France, Germany, Great Britain, Ireland, Italy, Luxembourg, Netherlands, Spain, and Switzerland.

Seniority

Morningstar European Loan First Lien Loan Index: The Morningstar European First Lien Loan Index is a market value weighted multi-currency index designed to measure the performance of the European leveraged loan market for first lien loans.

Morningstar European Loan Second Lien Loan Index: The Morningstar European Second Lien Loan Index is a market value weighted multi-currency index designed to measure the performance of the European leveraged loan market for second lien loans.

Tranches

Morningstar European Term Loan B Loan Index: The Morningstar European Term Loan B Loan Index is a market value weighted multi-currency index designed to measure the performance of the European leveraged loan market for Term Loan B loans.

Morningstar European Term Loan C Index: The Morningstar European Term Loan C Loan Index is a market value weighted multi-currency index designed to measure the performance of the European leveraged loan market for Term Loan C loans.

Private equity relationship

Morningstar European LBO Loan Index: The Morningstar European LBO Loan Index is a market value weighted multi-currency index designed to measure the performance of the European leveraged loan market for loans from PE-sponsored issuers.

Sector

Sector Indexes: The Morningstar European Leveraged Loan Index is also offered in a wide array of sector-specific indexes. GICS sectors are used for sector selection and assignment of GICS for each issuer is determined by Standard & Poor's and MSCI. For a complete list of GICS sector indexes, refer to [Appendix IV](#).

Morningstar Global Leveraged Loan Index

Technical description

The Morningstar Global Leveraged Loan Index is designed to measure the performance of the global leveraged loan market. It is a fixed-weight composite index consisting of 75% weight from the Morningstar LSTA US Leveraged Loan Index and 25% weight from the Morningstar European Leveraged Loan Index.

Index history

- Performance inception date (includes back tested history): January 1, 2002
- Live inception date: October 31, 2013

Note: Since the live inception, the index has been calculated daily. Prior to live inception, a compounding approach was used to calculate daily levels.

Starting universe

The Morningstar Global Leveraged Loan Index derives constituents from two parent indexes, the Morningstar LSTA US Leveraged Loan Index and the Morningstar European Leveraged Loan Index.

Index eligibility

All securities that are included in the two parent indexes of the starting universe are eligible for inclusion in the Morningstar Global Leveraged Loan Index.

Note: a loan in default will remain in the index (but does not accrue interest and is excluded from yield calculations) unless it fails to meet the stated eligibility criteria or has been repaid or restructured. Payment-in-kind (PIK) loans are not eligible for inclusion. Delayed draw term loans are included in the index if they are fully funded.

Base currency

The base currency of calculation for the Morningstar Global Leveraged Loan Index is US dollars. The index is also calculated in local currency and other additional currency variants.

Base rate

Each loan uses a base rate in the calculation of interest. The base rate for US loans is the average of the:

- 30-day rolling average of 1-month CME Term SOFR; and
- 90-day rolling average of 3-month CME Term SOFR

For European loans, it is 3-month SONIA for GBP denominated loans and 3-month Euribor for EUR denominated loans.

The base rate is determined and applied on Friday⁵.

⁵ Prior to December 27, 2024, the base rate for US loans was calculated as the average of the 1-month synthetic USD LIBOR, 3-month synthetic USD LIBOR, 1-month Term SOFR, and 3-month Term SOFR contracted rates on institutional loans according to the Markit WSO Database. See Appendix II for additional details on the US base rate methodology change.

Loan interest rate

For each loan in the index, the loan interest rate is the base rate plus the spread for each loan. At the index level, it is the par amount outstanding weighted average of all loan interest rates in the index.

Ratings

The index uses ratings from S&P Global Ratings, however, a facility rating is not required for eligibility in the index.

Index weighting

The index is fixed-weighted at 75% weight from the Morningstar LSTA US Leveraged Loan Index and 25% weight from the Morningstar European Leveraged Loan Index. Weighting is based on market value in USD.

Index pricing

3:00 PM Eastern Time US (New York) average bid price from LSTA/LSEG Mark-to-Market Pricing is used to determine the market value of each loan in the Morningstar LSTA US Leveraged Loan Index. End of day average bid price from IHS Markit (LoanX) is used to determine the market value of each loan in the Morningstar European Leveraged Loan Index.

The index is priced daily.

Rebalancing

The index is rebalanced on a weekly basis every Friday after the close and new membership is effective at the open on Saturday. to ensure the index maintains the target 75% / 25% weights from the Morningstar LSTA US Leveraged Loan Index and Morningstar European Leveraged Loan Index, respectively. Par amounts of index loans are adjusted on the weekly rebalancing date due to partial pre-payments, pay-downs, and other activities impacting par amount for each facility.

- **Additions:** Index additions are reviewed on a weekly basis for each underlying sub-index.
- **Deletions:** Loans are removed from the index when they are repaid, are no longer priced, or no longer meet the stated index eligibility criteria for each underlying sub-index.

Sub-indexes and sub-index rules

The following sub-indexes are derived from the Morningstar Global Leveraged Loan Index (the parent index). Unless otherwise specified, the sub-indexes follow all of the same index rules as the parent index in addition to the rules noted for each sub-index, below:

Liquidity-based selection

Morningstar Global Leveraged Loan 100 Index: The Morningstar Global Leveraged Loan 100 Index is designed to measure the performance of the 100 largest facilities in the global leveraged loan market.

- **Reconstitution:** At each reconstitution, the 75 largest loans in Morningstar LSTA US Leveraged Loan Index and 25 largest loans in the Morningstar European Leveraged Loan Index are selected for inclusion for a total of 100 loans. Only the largest loan (by par amount outstanding) per issuer is included in the index. The reconstitution takes place on a quarterly basis on the second Friday of each calendar quarter (March, June, September and December). In addition, the constituents stemming from the Morningstar LSTA US Leveraged Loan Index are weighted at 75% and constituents stemming from the Morningstar European Leveraged Loan Index are weighted at 25%.

- **Rebalancing:** At each weekly rebalance, the weights are reset to 75% and 25% for the US and European leveraged loans, respectively.
 - Additions: Loans will be added to the index only when a vacancy is created by a constituent deletion in order to maintain 75 constituents from the US index and 25 constituents from the European index, for a total of 100 index constituents. The next eligible loan facility (based on largest size by par amount outstanding) that meets the index criteria will be selected.
 - Deletions: Loans are removed from the index when they are repaid, are no longer priced, or no longer meet the stated index eligibility criteria.
- Loans do not require a CUSIP.

Morningstar Global Leveraged Loan 150 Issuers Index: The Morningstar Global Leveraged Loan 150 Issuers Index is designed to measure the performance of the 150 largest issuers in the global leveraged loan market.

- **Reconstitution:** At each reconstitution, the 100 largest issuers in the Morningstar LSTA US Leveraged Loan Index and the 50 largest issuers in the Morningstar European Leveraged Loan Index are selected. Issuers are selected based on total par amount outstanding; all issues/tranches from a selected issuer are included in the index with the exception of Term A loans and second lien loans. Each US issuer is subject to a 1.90% index weight cap and each European Issuer is subject to 4.90% weight cap. Index constituents are reconstituted on a quarterly basis on the second Friday of March, June, September, and December.
- **Rebalancing:** At each weekly rebalance US issuers that exceed 1.90% of the market value weight of the index are reduced to 1.90% and European issuers that exceed 4.90% of the market value weight of the index are reduced to 4.90%.
 - **Additions:** An issuer will be added to the index only when a vacancy is created by an issuer deletion in order to maintain 100 issuers from the US index and 50 issuers from the European index, for a total of 150 issuers (the number of total issues will vary). The next eligible issuer (based on largest total par amount outstanding of all eligible issues) will be selected.
 - **Deletions:** Issuers are removed from the index when they are repaid, are no longer priced, or no longer meet the stated index eligibility criteria.
- Loans do not require a CUSIP.

Alternative weighting

Morningstar Global Leveraged Loan 70/30 Index: The Morningstar Global Leveraged Loan 70/30 Index is designed to measure the performance of the global leveraged loan market. It is a fixed-weight composite index consisting of 70% weight from the Morningstar LSTA US Leveraged Loan Index and 30% weight from the Morningstar European Leveraged Loan Index.

Morningstar Global Leveraged Loan 80/20 Index: The Morningstar Global Leveraged Loan 80/20 Index is designed to measure the performance of the global leveraged loan market. It is a fixed-weight composite index consisting of 80% weight from the Morningstar LSTA US Leveraged Loan Index and 20% weight from the Morningstar European Leveraged Loan Index.

Credit quality

Morningstar Global Leveraged Loan B/BB Ratings 85/15 Index: The Morningstar Global Leveraged Loan B/BB Ratings 85/15 Index is designed to measure the performance of the global leveraged loan market for facilities with

B- to BB+ ratings. It is a fixed-weight composite index consisting of 85% weight from the Morningstar LSTA US B/BB Leveraged Loan Index and 15% weight from the Morningstar European B/BB Leveraged Loan Index.

- This index is not subject to off-cycle (midweek) rebalancing in the event a loan is downgraded to D by S&P Global Ratings. Loans which are downgraded to D will remain in its original index until the weekly rebalance on Friday. A loan which has met other criteria for default but has not yet been rated D will stop accruing interest and will be excluded from yield calculations but will remain in the given index.
- All other credit quality movements will be reflected at the weekly rebalance on Fridays and will not be rebalanced midweek.

Index Calculations

Total return

Each loan facility's total return is calculated by aggregating the interest return, price return, and currency return (where applicable). The return of each loan facility is weighted in the index based upon its market value outstanding, which reflects both the prior period's price as well as accrued interest. The overall index return is the composite of each component loan facility's return multiplied by the market value outstanding from the prior time period. Refer to [Appendix III](#) for details.

Price return

Price return reflects the gains or losses due to changes in end-of-day prices, principal prepayments, and amortization payments. Refer to [Appendix III](#) for details.

Interest return

Interest return reflects the return due to interest paid and accrued interest. Refer to [Appendix III](#) for details.

Currency return

The return from FX translation.

Yield

Yield is reflected as the simple margin of the loan facility, with capping applied at 250% (daily). Refer to [Appendix III](#) for details.

Base rate floor

For US loans with a LIBOR or SOFR floor or European loans with a SONIA or Euribor floor as part of the loan's terms and conditions, the spread for the loan will be increased by the difference between the floor and the base rate in the event that the index base rate falls below the loan's stated base rate floor.

Defaults

Defaulted loans remain in the index unless they no longer meet any of the other criteria for inclusion. A defaulted loan will not accrue interest and is not included in the aggregation of index characteristics, such as yield, during the default period. A default may occur when:

- 1) A borrower has missed a principal or interest payment and is not in a forbearance period
- 2) A borrower files for bankruptcy under Chapter 7 or Chapter 11 of the US Bankruptcy Code
- 3) A borrower has hired a restructuring advisor or has entered the restructuring process (applies only to European syndicated loans)
- 4) A loan has been downgraded to D by S&P Global Ratings (does not apply in cases of distressed exchanges)

There may be a lag between the time that default activities occur and S&P Global Ratings downgrades a loan to D. During this period the loans will not accrue interest and will not be included in the aggregation of index characteristics. For indexes which use credit quality as a constraint, defaulted loans will only be removed from the index once the loan has been downgraded to D by S&P Global ratings and the removal will take place at the next scheduled rebalance.

Currency of calculation and additional index return series

WM/Refinitiv foreign exchange rates are taken daily at 4:00 PM London time and used in the calculation of the indexes and to convert index or constituent values to the stated currency, where applicable.

The Morningstar Leveraged Loan Indexes are calculated in a wide array of currency and currency hedged variants. For a complete list of the currency and currency hedged index variants available, refer to the [Morningstar Indexes website](#).

Pricing, Trading, Settlement, and Transaction Costs

Indicative bid side prices are used for all index calculations and are provided daily by outside pricing sources. Bid prices are used when securities are added to an index. Transaction costs and tax consequences are ignored.

Cash flows

WM/Interest payments are considered paid on a rolling 90-day basis from the date each loan enters the index and are reinvested in the index, on a relative weight basis, after 90 days. Pre-payments, pay-downs, and most other forms of cash flow (other than scheduled interest payments) are reconciled at each rebalance.

Holiday schedule

Price return is calculated on all business days of the year following the Securities Industry and Financial Markets Association (SIFMA®) holiday schedule for US and UK market schedules for the US and European loan indexes, respectively. On holidays, prices are rolled from the prior business day. Interest return and total return is calculated daily, regardless of holidays. In the event Friday is a holiday, rebalance information is still processed and distributed on Friday and effective at the open on Saturday.

Methodology Review and Index Cessation Policy

The index methodology is continually reviewed to ensure it achieves all stated objectives. These reviews consider corporate action treatment, eligibility requirements and maintenance procedures. Subscribers to the index will be notified before any methodology changes are made. For more details, refer to the [Morningstar Index Methodology Change Policy](#).

Morningstar Indexes notifies all subscribers and stakeholders of the index that circumstances might arise that require a material change to, or a possible cessation of, the index. These circumstances are generally not within Morningstar's control and may include significant changes to the underlying market structure, inadequate access to necessary data, geo-political events, and regulatory changes. In addition, factors such as low usage or methodology convergence may result in the cessation of an index.

Because the cessation of the index or benchmark index could disrupt subscriber products that reference this index, all subscribers are encouraged to have robust fallback procedures if an index is terminated. For more details, refer to the [Morningstar Index Cessation Process](#).

Index Policy

Announcements

Announcements of any relevant information pertaining to the indexes are made after market close or as determined by Morningstar.

Rebalancing

The Morningstar Indexes Operations Committee may change the date of a given rebalancing for reasons including market holidays occurring on or around the scheduled rebalancing date. Any such change will be announced with proper advance notice where possible.

Ratings changes

Ratings changes on a loan in between rebalancing may carry for up to a week until the next rebalancing. Defaults are reflected same day.

End-of-day calculation

Index levels are calculated at the end of day Monday - Friday unless specified by Morningstar. Saturday and Sunday levels are distributed at end of day on Friday.

Index-Related Data and Divisor Corrections

In general, index calculation data input defects—such as price, dividends, or foreign exchange rates, that do not affect the index weighting factor—if discovered within two trading days, are corrected, and the index is recalculated regardless of the performance impact. Such errors discovered after two trading days typically only result in an index restatement if the impact on performance is material; otherwise, they are corrected prospectively. Errors involving mandatory corporation actions will generally be corrected with a restatement, regardless of the performance impact. For information on the recalculation policy please refer to the [Recalculation Guidelines](#).

Sanctions

Morningstar Indexes reviews and addresses treatment of debt securities from issuers that have been sanctioned or put on a trading prohibition list by US, European Union, or other regulatory authorities on a case-by-case basis.

New debt issuances from sanctioned entities are not eligible for the Morningstar Indexes. Clients will be notified of identified issuers that require blockage of new issuances from entering the Morningstar Fixed Income Indexes and effective implementation date of the block. Existing debt issuances may remain in the Indexes unless sanctions require divestiture, or liquidity and investibility does not meet a sufficient level, as determined by Morningstar Indexes.

The removal of securities from sanctioned entities in between or at upcoming rebalance periods may be required to ensure the ongoing investibility of the indexes. Morningstar Indexes may consult clients on any such removals deemed necessary. Removal decisions will be reviewed and approved by the Morningstar Indexes Methodology Committee and will be communicated to clients via notifications and proforma files where available.

In the event that sanctions are removed, the Morningstar Indexes Methodology Committee will review securities from the previously restricted entities to determine whether such securities meet all index eligibility criteria. If approved to enter or re-enter the Morningstar Indexes, clients will receive notifications and the addition will be reflected in proforma files where available.

Exceptions

While Morningstar will seek to apply the methodology as described within this document, the market environment, supervisory, legal, financial, or tax reasons may require an alternative approach to be adopted. A decision to take an alternative approach will be made by the Morningstar Index Methodology Committee, and in all instances, the exception will be reported to the Morningstar Index Oversight Committee.

Contact information

For questions regarding an index, please contact: indexes@morningstar.com.

Appendix I

Defined Terms

Announcement Date

The date on which changes to the index are published, as further described in the section on index maintenance.

Repricing

Change in spread via an amendment.

Close

The end of a calendar or business day for the purpose of calculating index values and other statistics.

Facility

A syndicated loan (or credit) is comprised of facilities (or tranches). Each facility can have different maturities, sizes, spreads, and terms to fulfil a variety of borrowing needs.

First lien

A loan where the holder has first claim on collateral.

Index loan

A facility that is included in the index.

Cap factor

The cap (adjustment) factor used to reduce or increase the weight of a particular security in the to meet specified issuer or facility weighting caps. The cap factor default is 1.00 which reflects no adjustments.

PE-sponsored

An issuer that is majority owned by a private equity firm. In the case of the European index, this is referred to as an LBO Loan.

Par amount

The total par or "face value" amount outstanding of an index loan or an eligible loan, net of partial calls and tenders.

Rebalancing date

Every Friday after the close when the changes to the index become effective.

Second lien

A loan where the holder has a second priority claim on collateral.

Term A loan

Amortizing term loan. These tranches generally have a gradual amortization until maturity.

Term B loan

Institutional term loan. These tranches traditionally have a bullet repayment with little (1% per annum) or no amortization.

Term C loan

Institutional term loan. These tranches traditionally have a bullet repayment with little (1% per annum) or no amortization.

Appendix II

Methodology changes

Change	Effective Date	Previous Methodology	Updated Methodology
Change in US base rate methodology	December 27, 2024	Each loan uses a base rate in the calculation of interest. The base rate is the average of the 1-month synthetic USD LIBOR, 3-month synthetic USD LIBOR, 1-month Term SOFR, and 3-month Term SOFR contracted rates on institutional loans according to the Markit WSO Database. The base rate is determined on the Wednesday prior to the upcoming rebalance and is applied on Friday.	Each loan uses a base rate in the calculation of interest. The base rate is the average of the: <ul style="list-style-type: none"> • 30-day rolling average of 1-month CME Term SOFR; and • 90-day rolling average of 3-month CME Term SOFR The base rate is determined and applied on Friday.
Change in reconstitution schedule for the Morningstar LSTA US Leveraged Loan 100, Morningstar Global Leveraged Loan 100, Morningstar Global Leveraged Loan 150 Issuers and all related sub-indexes	December 13, 2024	Indexes with a semiannual schedule reconstitute on the last business day of June and December and indexes with a quarterly schedule reconstitute on the last business day of March, June, September and December	Indexes with a semiannual schedule reconstitute on the second Friday of June and December and indexes with a quarterly schedule reconstitute on the second Friday of March, June, September and December

Change in hedge methodology	May 4, 2024	Hedged indexes used S&P Dow Jones Indices Fixed Income Mathematics Methodology	Indexes use the Morningstar Indexes Currency Hedge Index Methodology
Change in calculation agent and administrator	May 3, 2024	Indexes were calculated and administered by S&P Dow Jones Indices, with the final date of calculation as of May 3, 2024.	Indexes are calculated and administered by Morningstar Indexes effective May 4, 2024. Clarifying language has been inserted to correct certain inaccuracies in the previous S&P rulebook or to enable clearer understanding of index rules. Refer to Appendix V for details.
Base rate – US loans	June 30, 2023	Each loan uses a base rate in the calculation of interest. For US loans, the base rate is the average of the 1-month USD LIBOR, 3-month USD LIBOR, 1-month Term SOFR, and 3-month Term SOFR contracted rates on institutional loans according to the Markit WSO Database.	Each loan uses a base rate in the calculation of interest. For US loans, the base rate is the average of the 1-month synthetic USD LIBOR, 3-month synthetic USD LIBOR, 1-month Term SOFR, and 3-month Term SOFR contracted rates on institutional loans according to the Markit WSO Database.
Index Names	August 26, 2022	All indexes are branded as S&P	All indexes are branded as Morningstar
GICS	June 1, 2022	Sector based indexes used LCD sectors	All sector based indexes are based on GICS. Former LCD sector indexes are decommissioned.
Private ratings	April 1, 2022	Public or private ratings may be used for loans in European Loan Indexes.	Only public ratings may be used for loans in the European Loan Indexes.
Base rate – European loans	February 25, 2022	For European syndicated loans, is the average EURIBOR rate obtained from public sources. The base rate, for index calculation purposes, is updated each Monday.	For Euro denominated loans and UK pound denominated loans, the average three-month EURIBOR and or SONIA rates (obtained from public sources) are used, respectively. The base rate, for index calculation purposes, is updated each Monday.

Base rate – US loans	December 31, 2021	Each loan uses a base rate in the calculation of interest. For USD denominated loans, this base rate represents the average contracted LIBOR rate set on institutional loans posted by the Markit WSO Database.	Each loan uses a base rate in the calculation of interest. For USD denominated loans, this base rate represents the average contracted LIBOR and SOFR rates set on institutional loans posted by the Markit WSO Database.
----------------------	-------------------	---	---

Appendix III

Index calculations

Calculation of index loan market values and relative weights

The market value for each index loan is calculated as of the close on each calendar day.

The market value of an index loan on day t is calculated as follows:

$$MV_t = PAR_t * \frac{(P_t + AI_t)}{100}$$

where:

MV_t	=	The market value of Index Loan on day t
PAR_t	=	The par amount of Index Loan as of the last weekly rebalancing, adjusted for principal pre-payments, etc., up to and including day t
P_t	=	The price of Index Loan on day t
AI_t	=	The accrued interest ⁶ on Index Loan up to and including day t

If the valuation date is not a business day, the market value is based on the price as of the immediate prior business day, plus interest accrued to the valuation date.

The relative weight of an Index Loan is defined as the market value of that loan expressed as a percentage of the aggregate market value of all Index Loans in the Index portfolio, as follows:

$$weight_k = \frac{MV_k}{\sum_k MV_k}$$

Calculation of index loan returns

Returns are calculated for all Index Loans on every calendar day.

Total return

The total return, TR , of an Index Loan at time t is the sum of the interest return and the market price return on day t :

$$TR_t = IR_t + PR_t$$

where:

IR_t	=	Interest return on day t
PR_t	=	Price return on day t

⁶ AI_t is calculated on a 360-day basis. Accrued interest is reduce to zero every 90 days after loan enters the index.

Price return measures the return due to the change in the market price of the loan. Interest return (or coupon return) includes the return due to the interest earned on that loan.

Interest return

The formula for the interest return on an individual Index Loan on day t is as follows:

$$IR_t = \frac{(PAR_t * R_t) / 360}{MV_{Beg}}$$

where:

IR_t	=	Interest return on day t
PAR_t	=	Par Amount of the Index Loan as of the last weekly rebalancing, adjusted for principal pre-payments, etc., up to and including day t
R_t	=	Interest rate on day t
MV_{Beg}	=	Market value, at the beginning of day t

Price return

The formula for the price return for an Index Loan on day t is as follows:

$$PR_t = \frac{PAR_t * \left(\frac{P_t - P_{t-1}}{100} \right) + Prin_t * \frac{RP - P_{t-1}}{100}}{MV_{Beg}}$$

where:

PR_t	=	Price return on day t
PAR_t	=	Par amount of the Index Loan as of the last weekly rebalancing, adjusted for principal pre-payments, etc., up to and including day t
P_t	=	Loan price on day t
P_{t-1}	=	Loan price on the previous day
$Prin_t$	=	Principal pre-payments, etc., on day t
MV_{Beg}	=	Market value, beginning of day t
RP	=	Redemption price

Note that the formula for the Price Return (5) itself has two components. The first term, in the numerator on the left side, represents the unrealized return due to any change in the price, while the second term (on the right) represents the realized return due to receiving a principal repayment at the Redemption Price (which could differ from par) rather than at the current end of day price.

Returns in Base Currency

The above returns are calculated in local currency. For multi-currency indexes, the index values are calculated after incorporating FX returns of the respective currencies for each security. The interest return, price return and total return of underlying securities are converted from local currency to index base currency using the formulas shown below:

$$\begin{aligned}
 IR_{i,t,Base} &= (1 + IR_{i,t}) * (1 + FX_{return}) - 1 \\
 PR_{i,t,Base} &= (1 + PR_{i,t}) * (1 + FX_{return}) - 1 \\
 TR_{i,t,Base} &= (1 + TR_{i,t}) * (1 + FX_{return}) - 1 \\
 FX_{return} &= \frac{FX_t - FX_{t-1}}{FX_{t-1}}
 \end{aligned}$$

where:

FX_t = Foreign exchange Spot rate on day t , denominated in terms of base currency per unit of home currency

FX_{t-1} = Foreign exchange Spot rate on day $t-1$, denominated in terms of base currency per unit of home currency

Data Source for FX Rate

The source data for forward and spot rates used in this methodology is WMR London 4 p.m. fixing rates. WMR foreign exchange rates are taken daily at 4 p.m. London time and used in the calculation of the indexes. Unless otherwise noted, this is applicable for all sections where FX Rate is used.

For all non USD currency pairs, the spot and forward rates are calculated from respective USD rates.

Calculation of index returns and levels

Daily index returns

The individual Index Loan returns are aggregated to calculate returns for the index. Specifically, the total return, interest return and price return for the Index, on a given day, are equal to a weighted average of the returns of the Index Loans that constitute the index — with the weight of each Index Loan return being equal to the relative weight of that Index Loan in the index as of the previous calendar day (adjusted for principal pre-payments, etc.).

The formula is as follows:

$$\begin{aligned} IndexTR_t &= \frac{\sum_i^n MV_{i,Beg} * TR_{i,t}}{\sum_i^n MV_{i,Beg}} \\ IndexIR_t &= \frac{\sum_i^n MV_{i,Beg} * IR_{i,t}}{\sum_i^n MV_{i,Beg}} \\ IndexPR_t &= \frac{\sum_i^n MV_{i,Beg} * PR_{i,t}}{\sum_i^n MV_{i,Beg}} \end{aligned}$$

where:

$TR_{i,t}$ = Total return of the Index Loan i on day t
 $IR_{i,t}$ = Interest return of the Index Loan i on day t
 $PR_{i,t}$ = Price return of the Index Loan i on day t
 $MV_{i,Beg}$ = Market value of the Index Loan, beginning of day t

Daily index values

Index values are calculated each day by applying the current day's index return to the previous day's index value, as follows:

$$\begin{aligned} TRIV_t &= TRIV_{t-1} * (1 + TR_t) \\ PRIV_t &= PRIV_{t-1} * (1 + PR_t) \\ IRIV_t &= IRIV_{t-1} * (1 + IR_t) \end{aligned}$$

where:

$TRIV_t$ = Total return index value on day t
 $PRIV_t$ = Price return index value on day t
 $IRIV_t$ = Interest return index value on day t

Yield

$$\begin{aligned} Yield_{i,t} &= BaseRate_{i,t} \times 100 + MS_{i,t} \\ MS_{i,t} &= \frac{100}{Price_{i,t}} \times \left(\frac{100 - Price_{i,t}}{RemainingTerm_{i,t}} + AdjustedSpread_{i,t} \times 100 \right) \end{aligned}$$

$$AdjustedSpread_{i,t} = BaseRateFloor_{i,t} - BaseRate_{i,t} + UnadjustedSpread_{i,t}$$

$$RemainingTerm_{i,t} = \frac{MaturityDate_i - EffectiveDate}{365}$$

where:

$Yield_{i,t}$	=	Yield of the Index Loan i on day t
$BaseRate_{i,t}$	=	Base Rate of the Index Loan i on day t
MS_t	=	Margin Spread of the Index Loan i on day t . If EffectiveDate t is equal to or after the Maturity Date, the Margin Spread equals the Adjusted Spread.
$Price_{i,t}$	=	Price of the Index Loan i on day t
$RemainingTerm_{i,t}$	=	Remaining term to maturity of the Index Loan i on day t
$AdjustedSpread_{i,t}$	=	Adjusted Spread of the Index Loan i on day t . If BaseRate is above BaseRateFloor on day t , the Adjusted Spread equals the UnadjustedSpread.
$BaseRateFloor_{i,t}$	=	The floor of the Base Rate of the Index Loan i on day t
$UnadjustedSpread_{i,t}$	=	Unadjusted Spread of the Index Loan i on day t
$MaturityDate_i$	=	Maturity date of the Index Loan i on day t
$EffectiveDate$	=	Day t

The index level Yield is calculated by aggregating the constituent yields using the open weights:

$$Yield_t = \frac{\sum_i^n MV_{i,Beg} \times Yield_{i,t}}{\sum_i^n MV_{i,Beg}}$$

Defaulted loans are excluded from the index level Yield calculation. In addition, a cap of 250% is applied to individual constituent yields as a part of the index level aggregation.

Hedged returns

Please refer to the [Morningstar Currency Hedge Index Methodology](#) for information on standard hedged calculations.

Appendix IV

List of Sector Indexes

Portfolio ID	Index Name
2921241	Morningstar LSTA US Aerospace & Defense Loan
2922262	Morningstar LSTA US Air Freight & Logistics Loan
2920622	Morningstar LSTA US Airlines Loan
2921242	Morningstar LSTA US Auto Components Loan
2920501	Morningstar LSTA US Automobiles & Components Loan
2922261	Morningstar LSTA US Automobiles Loan
2920624	Morningstar LSTA US Banks Loan

2922266	Morningstar LSTA US Beverages Loan
2920626	Morningstar LSTA US Biotechnology Loan
2921245	Morningstar LSTA US Building Products Loan
2922295	Morningstar LSTA US Capital Goods Loan
2920627	Morningstar LSTA US Capital Markets Loan
2921247	Morningstar LSTA US Chemicals Loan
2922268	Morningstar LSTA US Commercial & Professional Services Loan
2920628	Morningstar LSTA US Commercial Services & Supplies Loan
2920629	Morningstar LSTA US Communications Equipment Loan
2921248	Morningstar LSTA US Construction & Engineering Loan
2920522	Morningstar LSTA US Construction Materials Loan
2920529	Morningstar LSTA US Consumer Durables & Apparel Loan
2921249	Morningstar LSTA US Consumer Finance Loan
2922296	Morningstar LSTA US Consumer Services Loan
2922269	Morningstar LSTA US Containers & Packaging Loan
2920526	Morningstar LSTA US Distributors Loan
2921250	Morningstar LSTA US Diversified Consumer Services Loan
2920631	Morningstar LSTA US Diversified Financial Services Loan
2922271	Morningstar LSTA US Diversified Financials Loan
2920533	Morningstar LSTA US Diversified Telecommunication Services Loan
2922272	Morningstar LSTA US Electric Utilities Loan
2921251	Morningstar LSTA US Electrical Equipment Loan
2920632	Morningstar LSTA US Electronic Equipment, Instruments & Components Loan
2921252	Morningstar LSTA US Energy Equipment & Services Loan
2920534	Morningstar LSTA US Energy Loan

2922273	Morningstar LSTA US Entertainment Loan
2920633	Morningstar LSTA US Equity Real Estate Investment Trusts (REITs) Loan
2920634	Morningstar LSTA US Food & Staples Retailing Loan
2922274	Morningstar LSTA US Food Products Loan
2921253	Morningstar LSTA US Food, Beverage & Tobacco Loan
2920535	Morningstar LSTA US Gas Utilities Loan
2922275	Morningstar LSTA US Health Care Equipment & Services Loan
2921254	Morningstar LSTA US Health Care Equipment & Supplies Loan
2920635	Morningstar LSTA US Health Care Providers & Services Loan
2920536	Morningstar LSTA US Health Care Technology Loan
2920538	Morningstar LSTA US Hotels, Restaurants & Leisure Loan
2920636	Morningstar LSTA US Household & Personal Products Loan
2921255	Morningstar LSTA US Household Durables Loan
2922276	Morningstar LSTA US Household Products Loan
2922283	Morningstar LSTA US Independent Power and Renewable Electricity Producers Loan
2921256	Morningstar LSTA US Industrial Conglomerates Loan
2922277	Morningstar LSTA US Insurance Loan
2920502	Morningstar LSTA US Interactive Media & Services Loan
2920496	Morningstar LSTA US IT Services Loan
2921257	Morningstar LSTA US Leisure Products Loan
2922278	Morningstar LSTA US Life Sciences Tools & Services Loan
2920638	Morningstar LSTA US Machinery Loan
2920500	Morningstar LSTA US Marine Loan
2921258	Morningstar LSTA US Materials Loan
2920641	Morningstar LSTA US Media & Entertainment Loan

922279	Morningstar LSTA US Media Loan
2921259	Morningstar LSTA US Metals & Mining Loan
2922280	Morningstar LSTA US Mortgage Real Estate Investment Trusts (REITs) Loan
2920642	Morningstar LSTA US Multiline Retail Loan
2920503	Morningstar LSTA US Multi-Utilities Loan
2922281	Morningstar LSTA US Oil, Gas & Consumable Fuels Loan
2920643	Morningstar LSTA US Paper & Forest Products Loan
2922282	Morningstar LSTA US Personal Products Loan
2920644	Morningstar LSTA US Pharmaceuticals Loan
2920554	Morningstar LSTA US Pharmaceuticals, Biotechnology & Life Sciences Loan
2921262	Morningstar LSTA US Professional Services Loan
2921240	Morningstar LSTA US Real Estate Loan
2920645	Morningstar LSTA US Real Estate Management & Development Loan
2920558	Morningstar LSTA US Retailing Loan
2921263	Morningstar LSTA US Road & Rail Loan
2922284	Morningstar LSTA US Semiconductors & Semiconductor Equipment Loan
2921264	Morningstar LSTA US Software & Services Loan
2922285	Morningstar LSTA US Software Loan
2920650	Morningstar LSTA US Specialty Retail Loan
2920561	Morningstar LSTA US Technology Hardware & Equipment Loan
2921265	Morningstar LSTA US Technology Hardware, Storage & Peripherals Loan
2922286	Morningstar LSTA US Telecommunication Services Loan
2920562	Morningstar LSTA US Textiles, Apparel & Luxury Goods Loan
2920563	Morningstar LSTA US Tobacco Loan

2921266	Morningstar LSTA US Trading Companies & Distributors Loan
2920652	Morningstar LSTA US Transportation Infrastructure Loan
2922287	Morningstar LSTA US Transportation Loan
2921267	Morningstar LSTA US Utilities Loan
2922288	Morningstar LSTA US Water Utilities Loan
2920653	Morningstar LSTA US Wireless Telecommunication Services Loan
2920568	Morningstar LSTA US Leveraged Loan 100 Automobiles & Components
2921268	Morningstar LSTA US Leveraged Loan 100 Banks
2922289	Morningstar LSTA US Leveraged Loan 100 Capital Goods
2920654	Morningstar LSTA US Leveraged Loan 100 Commercial & Professional Services
2920567	Morningstar LSTA US Leveraged Loan 100 Consumer Durables & Apparel
2921269	Morningstar LSTA US Leveraged Loan 100 Consumer Services
2922290	Morningstar LSTA US Leveraged Loan 100 Diversified Financials
2920655	Morningstar LSTA US Leveraged Loan 100 Energy
2921270	Morningstar LSTA US Leveraged Loan 100 Food & Staples Retailing
2920570	Morningstar LSTA US Leveraged Loan 100 Food, Beverage & Tobacco
2922291	Morningstar LSTA US Leveraged Loan 100 Health Care Equipment & Services
2920614	Morningstar LSTA US Leveraged Loan 100 Household & Personal Products
2920569	Morningstar LSTA US Leveraged Loan 100 Insurance
2921271	Morningstar LSTA US Leveraged Loan 100 Materials
2922292	Morningstar LSTA US Leveraged Loan 100 Media & Entertainment
2920611	Morningstar LSTA US Leveraged Loan 100 Pharmaceuticals, Biotechnology & Life Sciences
2920571	Morningstar LSTA US Leveraged Loan 100 Real Estate

2921272	Morningstar LSTA US Leveraged Loan 100 Retailing
2922293	Morningstar LSTA US Leveraged Loan 100 Semiconductors & Semiconductor Equipment
2920610	Morningstar LSTA US Leveraged Loan 100 Software & Services
2920572	Morningstar LSTA US Leveraged Loan 100 Technology Hardware & Equipment
2921273	Morningstar LSTA US Leveraged Loan 100 Telecommunication Services
2922294	Morningstar LSTA US Leveraged Loan 100 Transportation
2920608	Morningstar LSTA US Leveraged Loan 100 Utilities
2921176	Morningstar European Aerospace & Defense Loan
2920481	Morningstar European Air Freight & Logistics Loan
2916473	Morningstar European Airlines Loan
2921177	Morningstar European Auto Components Loan
2920598	Morningstar European Automobiles & Components Loan
2922211	Morningstar European Automobiles Loan
2916474	Morningstar European Banks Loan
2916475	Morningstar European Beverages Loan
2920602	Morningstar European Biotechnology Loan
2922212	Morningstar European Building Products Loan
2921179	Morningstar European Capital Goods Loan
2922213	Morningstar European Capital Markets Loan
2921180	Morningstar European Chemicals Loan
2922214	Morningstar European Commercial & Professional Services Loan
2921181	Morningstar European Commercial Services & Supplies Loan
2922215	Morningstar European Communications Equipment Loan
2916477	Morningstar European Construction & Engineering Loan

2921182	Morningstar European Construction Materials Loan
2916481	Morningstar European Consumer Durables & Apparel Loan
2920621	Morningstar European Consumer Finance Loan
2922216	Morningstar European Consumer Services Loan
2920606	Morningstar European Containers & Packaging Loan
2916482	Morningstar European Distributors Loan
2920617	Morningstar European Diversified Consumer Services Loan
2921183	Morningstar European Diversified Financials Loan
2922217	Morningstar European Diversified Financial Services Loan
2916484	Morningstar European Diversified Telecommunication Services Loan
2921193	Morningstar European Electric Utilities Loan
2920579	Morningstar European Electrical Equipment Loan
2922218	Morningstar European Electronic Equipment, Instruments & Components Loan
2920578	Morningstar European Energy Equipment & Services Loan
2916485	Morningstar European Energy Loan
2921194	Morningstar European Entertainment Loan
2922219	Morningstar European Equity Real Estate Investment Trusts (REITs) Loan
2921196	Morningstar European Food & Staples Retailing Loan
2920544	Morningstar European Food Products Loan
2922220	Morningstar European Food, Beverage & Tobacco Loan
2916488	Morningstar European Gas Utilities Loan
2922222	Morningstar European Health Care Equipment & Services Loan
2921197	Morningstar European Health Care Equipment & Supplies Loan
2916489	Morningstar European Health Care Providers & Services Loan

2920546	Morningstar European Health Care Technology Loan
2920547	Morningstar European Hotels, Restaurants & Leisure Loan
2916495	Morningstar European Household & Personal Products Loan
2921198	Morningstar European Household Durables Loan
2922223	Morningstar European Household Products Loan
2920520	Morningstar European Independent Power and Renewable Electricity Producers Loan
2921199	Morningstar European Industrial Conglomerates Loan
2922224	Morningstar European Insurance Loan
2922227	Morningstar European Interactive Media & Services Loan
2920548	Morningstar European IT Services Loan
2916497	Morningstar European Leisure Products Loan
2920505	Morningstar European Life Sciences Tools & Services Loan
2921201	Morningstar European Machinery Loan
2922226	Morningstar European Marine Loan
2916498	Morningstar European Materials Loan
2921202	Morningstar European Media & Entertainment Loan
2920507	Morningstar European Media Loan
2916499	Morningstar European Metals & Mining Loan
2920512	Morningstar European Mortgage Real Estate Investment Trusts (REITs) Loan
2921203	Morningstar European Multiline Retail Loan
2922228	Morningstar European Multi-Utilities Loan
2921204	Morningstar European Oil, Gas & Consumable Fuels Loan
2922229	Morningstar European Paper & Forest Products Loan

2916501	Morningstar European Personal Products Loan
2920513	Morningstar European Pharmaceuticals Loan
2921205	Morningstar European Pharmaceuticals, Biotechnology & Life Sciences Loan
2916502	Morningstar European Professional Services Loan
2922231	Morningstar European Real Estate Loan
2921206	Morningstar European Real Estate Management & Development Loan
2916503	Morningstar European Retailing Loan
2920524	Morningstar European Road & Rail Loan
2922232	Morningstar European Semiconductors & Semiconductor Equipment Loan
2920528	Morningstar European Software Loan
2916504	Morningstar European Software & Services Loan
2922233	Morningstar European Specialty Retail Loan
2916505	Morningstar European Technology Hardware & Equipment Loan
2920537	Morningstar European Technology Hardware, Storage & Peripherals Loan
2921208	Morningstar European Telecommunication Services Loan
2921215	Morningstar European Textiles, Apparel & Luxury Goods Loan
2921214	Morningstar European Tobacco Loan
2922235	Morningstar European Trading Companies & Distributors Loan
2920542	Morningstar European Transportation Infrastructure Loan
2916508	Morningstar European Transportation Loan
2916516	Morningstar European Utilities Loan
2921216	Morningstar European Water Utilities Loan
2922237	Morningstar European Wireless Telecommunication Services Loan

2922238	Morningstar Global Aerospace & Defense Loan
2916518	Morningstar Global Air Freight & Logistics Loan
2918825	Morningstar Global Airlines Loan
2922239	Morningstar Global Auto Components Loan
2921218	Morningstar Global Automobiles & Components Loan
2916519	Morningstar Global Automobiles Loan
2918826	Morningstar Global Banks Loan
2918827	Morningstar Global Beverages Loan
2921220	Morningstar Global Biotechnology Loan
2916520	Morningstar Global Building Products Loan
2922241	Morningstar Global Capital Goods Loan
2916521	Morningstar Global Capital Markets Loan
2918828	Morningstar Global Chemicals Loan
2921221	Morningstar Global Commercial & Professional Services Loan
2922242	Morningstar Global Commercial Services & Supplies Loan
2922243	Morningstar Global Communications Equipment Loan
2918829	Morningstar Global Construction & Engineering Loan
2916522	Morningstar Global Construction Materials Loan
2916523	Morningstar Global Consumer Durables & Apparel Loan
2918830	Morningstar Global Consumer Finance Loan
2921223	Morningstar Global Consumer Services Loan
2921222	Morningstar Global Containers & Packaging Loan
2922244	Morningstar Global Distributors Loan
2916524	Morningstar Global Diversified Consumer Services Loan

2921224	Morningstar Global Diversified Financial Services Loan
2920458	Morningstar Global Diversified Financials Loan
2922245	Morningstar Global Diversified Telecommunication Services Loan
2920459	Morningstar Global Electric Utilities Loan
2916525	Morningstar Global Electrical Equipment Loan
2921225	Morningstar Global Electronic Equipment, Instruments & Components Loan
2916526	Morningstar Global Energy Equipment & Services Loan
2916526	Morningstar Global Energy Loan
2920460	Morningstar Global Entertainment Loan
2921226	Morningstar Global Equity Real Estate Investment Trusts (REITs) Loan
2920461	Morningstar Global Food & Staples Retailing Loan
2916527	Morningstar Global Food Products Loan
2922247	Morningstar Global Food, Beverage & Tobacco Loan
2921227	Morningstar Global Gas Utilities Loan
2916528	Morningstar Global Health Care Equipment & Services Loan
2922248	Morningstar Global Health Care Equipment & Supplies Loan
2920480	Morningstar Global Health Care Providers & Services Loan
2921228	Morningstar Global Health Care Technology Loan
2921229	Morningstar Global Hotels, Restaurants & Leisure Loan
2920462	Morningstar Global Household & Personal Products Loan
2922249	Morningstar Global Household Durables Loan
2916529	Morningstar Global Household Products Loan
2920488	Morningstar Global Independent Power and Renewable Electricity Producers Loan
2922250	Morningstar Global Industrial Conglomerates Loan

2920601	Morningstar Global Insurance Loan
2921232	Morningstar Global Interactive Media & Services Loan
2921230	Morningstar Global IT Services Loan
2922251	Morningstar Global Leisure Products Loan
2920603	Morningstar Global Life Sciences Tools & Services Loan
2920482	Morningstar Global Machinery Loan
2921231	Morningstar Global Marine Loan
2922252	Morningstar Global Materials Loan
2920484	Morningstar Global Media & Entertainment Loan
2920605	Morningstar Global Media Loan
2922253	Morningstar Global Metals & Mining Loan
2920607	Morningstar Global Mortgage Real Estate Investment Trusts (REITs) Loan
2920486	Morningstar Global Multiline Retail Loan
2921233	Morningstar Global Multi-Utilities Loan
2922254	Morningstar Global Oil, Gas & Consumable Fuels Loan
2920609	Morningstar Global Paper & Forest Products Loan
2920485	Morningstar Global Personal Products Loan
2921234	Morningstar Global Pharmaceuticals Loan
2922255	Morningstar Global Pharmaceuticals, Biotechnology & Life Sciences Loan
2920612	Morningstar Global Professional Services Loan
2922256	Morningstar Global Real Estate Loan
2921235	Morningstar Global Real Estate Management & Development Loan
2920613	Morningstar Global Retailing Loan
2920487	Morningstar Global Road & Rail Loan

2921236	Morningstar Global Semiconductors & Semiconductor Equipment Loan
2922257	Morningstar Global Software & Services Loan
2920615	Morningstar Global Software Loan
2920491	Morningstar Global Specialty Retail Loan
2921237	Morningstar Global Technology Hardware & Equipment Loan
2922258	Morningstar Global Technology Hardware, Storage & Peripherals Loan
2920616	Morningstar Global Telecommunication Services Loan
2921239	Morningstar Global Textiles, Apparel & Luxury Goods Loan
2921238	Morningstar Global Tobacco Loan
2922259	Morningstar Global Trading Companies & Distributors Loan
2920492	Morningstar Global Transportation Infrastructure Loan
2920618	Morningstar Global Transportation Loan
2922260	Morningstar Global Utilities Loan
2920619	Morningstar Global Water Utilities Loan
2920497	Morningstar Global Wireless Telecommunication Services Loan

Appendix V

Summary of clarifications and other updates to the index methodology document.

Version date	Description
April 22, 2025	Clarified the inclusion requirements for delayed draw term loans
January 14, 2025	Added index rules for the Morningstar LSTA US \$500M+ Index
November 27, 2024	Corrected the description of base rate application for European loans.
October 30, 2024	Clarified the weighting method used when calculating the index level loan spread.

	Other minor clarifications as part of routine review of all relevant index documentation.
September 23, 2024	<p>Added index rules for the Morningstar LSTA US B Ratings and Above ex Financials Loan Index</p> <p>Issued clarifications to:</p> <ul style="list-style-type: none"> • The effective date of weekly rebalances and holiday treatment • Index descriptions for the Morningstar LSTA US Leveraged Loan Select Equal Weight Index and the Morningstar LSTA US Leveraged Loan Select Equal Par Value Index
July 24, 2024	Added index rules for the Morningstar LSTA US B/BB Ratings Loan ex Utilities and Energy Index
June 18, 2024	Added base currency calculation formulas to Calculation of index loan returns section. Added clarification that PIK loans are not eligible for inclusion.

As part of the transition from calculation and Administration by S&P Dow Jones Indices to Morningstar Indexes effective May 4, 2024, Morningstar Indexes identified certain methodology descriptions which required a correction and/or clarification to reflect the actual implementation employed by S&P Dow Jones Indices prior to the transition and the implementation to be employed by Morningstar Indexes effective May 4, 2024 onwards. These items are described in the following table:

Corrections/Clarifications upon transition to Morningstar Indexes as Calculator and Administrator

Capping:

- The Morningstar LSTA US Leveraged Loan 100 Index and Morningstar LSTA US Leveraged Loan 100 B/BB Ratings Index was described as having a 2.0% weight cap on loan facilities in the April 2023 and prior versions of the rulebook. This has been corrected in the May 4, 2024 version to match the actual implementation of 1.9% capping employed by S&P at each rebalance prior to May 4, 2024 and implemented by Morningstar Indexes as of the transition date.
- The Morningstar Global Leveraged Loan 150 Issuers Index was described as having a 2.0% weight cap on US loan facilities and a 5.0% weight cap on European loan facilities. This has been corrected in the May 4, 2024 version to match the actual implementation of 1.9% capping on US facilities and 4.9% capping on European facilities employed by S&P at each rebalance prior to May 4, 2024 and implemented by Morningstar Indexes as of the transition date.
- The Morningstar Global Leveraged Loan 100 Index was described as having a 2.0% weight cap on US loan facilities and a 5.0% weight cap on European loan facilities. This has been corrected in the May 4, 2024 version to match the actual implementation which does not incorporate capping.

European Regional Indexes:

-
- The Morningstar European PIIGS Loan Index and Morningstar European ex-PIIGS Loan Index did not correctly include or exclude the PIIGS countries of Portugal, Ireland, Italy, Greece and Spain in the implementation of the methodology prior to May 4, 2024. Effective May 4, 2024 the correction has been applied.
 - The Morningstar European Nordics Region Loan Index did not include loans from Norway prior to May 4, 2024. Effective May 4, 2024 the correction has been applied.
-

Base rate:

- The date of application of the base rate in the April 2023 and prior versions of the rulebook was described as being applied on Monday. This has been corrected in the May 4, 2024 version to match the actual implementation of application on Friday prior to May 4, 2024 and implemented by Morningstar Indexes as of the transition date.
-

Rebalancing frequency of performing loan and credit rating indexes:

- The April 2023 and prior versions of the rulebook did not reflect that the performing loan and credit ratings indexes are subject to off-cycle (midweek) rebalancing in the event a loan is downgraded to D by S&P Global Ratings. This has been clarified in the May 4, 2024 version of the rulebook for all indexes subject to this treatment to match the actual implementation prior to May 4, 2024 and implemented by Morningstar Indexes as of the transition date.
-

Disclaimer

In the event of any inconsistency between the text below and any version which is translated into any other language, the text below shall prevail.

The indexes are proprietary to Morningstar. No use or publication may be made of an index, or any of its provisions or values, without the prior written consent of Morningstar.

About Morningstar Indexes

Morningstar Indexes were built to keep up with the evolving needs of investors—and to be a leading-edge advocate for them. Our rich heritage as a transparent, investor-focused leader in data and research uniquely equips us to support individuals, institutions, wealth managers and advisors in navigating investment opportunities across major asset classes, styles and strategies. From traditional benchmarks and unique IP-driven indexes, to index design, calculation and distribution services, our solutions span an investment landscape as diverse as investors themselves.

Morningstar Indexes Methodology Committee

The Morningstar Indexes Methodology Committee oversees all new indexes development, index methodology changes, and cessation of indexes for any indexes where Morningstar owns the intellectual property. This committee is also charged with ensuring that indexes align with Morningstar research principles and values. The group is comprised of members of the index team with index research, product development, product management, client service, index implementation and operation expertise who provide the first layer of governance over index design and methodology.

Morningstar Indexes Operations Committee

The Morningstar Indexes Operations Committee governs the processes, systems, and exception handling of the day-to-day management of all live indexes, including index rebalancing and reconstitution, restatements, market classification, and contingency management. The committee oversees the annual review of index methodology (as required by UK & EU Benchmark Regulations), ensuring methodologies remain fit for purpose and continue to achieve their stated investment objectives. This committee is comprised of members of the index team with data, operations, corporate actions, product development, index launch, client service, and index management experience who provide the first layer of governance over index operations.

Morningstar Indexes Oversight Committee

The Morningstar Indexes Oversight Committee is responsible for the index oversight function as per the requirements of the UK & EU Benchmark Regulations ("BMRs"), providing independent oversight of all aspects of the governance of benchmark administration as required by the relevant BMR. Its remit extends to all calculation and administration-related business activities of Morningstar Indexes including administration of Morningstar-owned benchmarks as well as client-owned benchmarks and index calculation. The Morningstar Indexes Oversight Committee is part of the organizational structure of Morningstar, but is separate and independent from the Index business, Index Management, and the other Index Committees.

www.indexes.morningstar.com

Contact Us

indexes@morningstar.com

Disclaimer

©2025 Morningstar. All Rights Reserved. Any matter arising from undocumented events will be resolved at the discretion of Morningstar Index Committee. The information in this document is the property of Morningstar, Inc. Reproduction or transcription by any means, in whole or part, without the prior written consent of Morningstar, Inc., is prohibited. While data contained in this report are gathered from reliable sources, accuracy and completeness cannot be guaranteed. All data, information, and opinions are subject to change without notice. This document may contain back tested or simulated performances and the subsequent results achieved by the investment strategy may be materially different.

LSTA is a trademark of Loan Syndications and Trading Association, Inc. and has been licensed for use by Morningstar.