

Bloomberg LATAM Momentum Earnings Revision Index Methodology

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Contents

Introduction	3
Section 1: Overview	3
Section 2: Index Eligibility Process	3
Parent Universe	3
Liquidity Eligibility	3
Multiple Classes of Securities	3
ESG Eligibility	3
Has ADRs	3
Section 3: Index Construction Process	4
Index Selection Process	4
Earnings Revisions Factor	4
Momentum Factor	4
Ranking	5
Selection	5
Selection Exception Rules	6
Index Weighting	6
Index Rebalance and Reconstitution	6
Section 4: Index Maintenance	7
Index Calculation	7
Deletion Policy	7
Addition Policy	7
Replacement Policy	7
Corporate Actions	7
Section 5: Risks and Limitations	7
Risks	7
Limitations of the index	7
Section 6: Benchmark Oversight and Governance	8
Benchmark governance, audit and review structure	8
Index and data reviews	8
Expert judgement	8
Conflicts of interest	8
Restatement policy	8
Benchmark Administrator	8
Appendix A: ESG Disclosure	9

Introduction

The Bloomberg LATAM Momentum and Earning Revision Index (the "Index") is constructed to track the performance of companies that exhibit relatively higher momentum and positive earning revision characteristics within the LATAM Large Mid investable universe. The Index aims to select approximately the top 25 companies that rank in the top 60% within each aforementioned factor, respectively. In addition, securities must meet certain minimum ESG standards.

Section 1: Overview

Name	Bloomberg LATAM Momentum Earnings Revision Index
Base date	2015-03-30
Inception Date	2023-11-10
Rebalance	Quarterly
Publication	Weekdays
Currency	USD
Tickers	LATAMME (Price Return) LATAMMET (Total Return) LATAMMEN (Net Return)

Section 2: Index Eligibility Process

Parent Universe

To be selected for the LATAM Momentum Earnings Revision Index, a security must be a member of the Bloomberg Latin America Large & Mid Cap universe. Please refer to the Bloomberg Global Equity Index methodology through the link below for additional details.

[Bloomberg Global Equity Indices Methodology](#)

Liquidity Eligibility

A security must have a minimum 90-day average daily value traded of \$2 million.

Multiple Classes of Securities

One security per issuer is permitted. If an issuer has multiple securities, then the security currently in the Index will take precedence if it has met all other criteria for eligibility. Otherwise, the security with the highest 90-day average daily value traded is eligible for inclusion in the Index.

ESG Eligibility

Securities must have a maximum ESG Risk Rating Score (SA_ESG_RISK_SCR) of 50 to be eligible for inclusion to the Index. The ESG Risk Rating Score data is sourced externally from Sustainalytics.

The ESG Risk Rating Score methodology applies the concept of risk decomposition to derive the level of unmanaged ESG risk for a company. The score ranges from 0 and 100, with 0 indicating that risks have been fully managed (no unmanaged ESG risks) and 100 indicating the highest level of unmanaged risk.

More details can be found in the link below:

<https://connect.sustainalytics.com/esg-risk-ratings-methodology>

Has ADRs

A security must have a listed American Depository Receipt (ADR) as an underlying security.

Please note, this field is an indicator for only ADRs and not for any other kind of receipts such as GDRs (Global Depository Receipts), NY (New York) Reg Share, IDRs (International Depository Receipts), etc.

Section 3: Index Construction Process

Index Selection Process

Factors

Every security is measured across two factors: Earnings Revisions and Momentum, which are defined by their own descriptors as described below.

Earnings Revisions Factor

Each security's measure of Earnings Revision Factor is determined as the weekly average of Earnings Estimates Revision Ratio taken over the last 12 weeks from the selection date (t), the estimates for FY1 EPS from continuing operations is used for the calculations. A higher value indicates a better Earnings Revisions score measure.

Determination of Earnings Revisions Factor

Earnings Estimates Revision Ratio (EERR) = (revision_up - revision_down - revision_drop) / revision_count

Where :

EPS is the Diluted EPS from Continuing Operations for last 12 weeks (including NA),

- if revision_up, revision_down, revision_drop are all NA then EERR equals NA;
- revision_count is the count of non-NA values

Earnings Revision Factor (ERF): average of weekly EERR

Momentum Factor

Each security's measure of Momentum is determined using four Momentum signals. The signals are derived based on the formulations below. They are then aggregated into a single score through a weighted sum. A higher score indicates a better Momentum score measure.

Determination of Momentum Factors

For a given security (i), each signal is constructed using historical adjusted end of month prices as follows (LN is Natural Logarithm):

$$Price\ Momentum(i, t, tmin, tmax, ccy) = LN \left[\frac{Price(i, t, tmin, ccy)}{Price(i, t, tmax, ccy)} \right], \quad \text{with } tmin < tmax \quad (1)$$

Price(i, t, tmin, ccy) Adjusted price of a given security (i) in the chosen currency (ccy) with an *offset of tmin* periods compared to the estimation time t (Selection Date).

Price(i, t, tmax, ccy) Adjusted price of a given security (i) in the chosen currency (ccy) with an *offset of tmax* periods compared to the estimation time t (Selection date).

- M2: Long Term Price Momentum: Price Momentum (I, t, 1M, 12M, \$USD)
- M3: Medium Term Price Momentum: Price Momentum (I, t, 1M, 6M, \$USD)
- M4: Short Term Price Momentum: Price Momentum (I, t, t, 3M, \$USD)
- M1: Residual Long Term Price Momentum: Price Momentum (I, t, 1M, 12M, \$USD)

Note: if a security does not have sufficient observations to calculate one of the signals above, then the value of the signal is set to N/A for that security.

For M1, for each security passing the Eligibility criteria, a regression is run without an intercept of the daily returns of each security against the daily returns of the Parent (LATAM) Index. The residuals from that regression are extracted and used to rebuild a price series. This new residual price series becomes the input in computing the residual momentum indicator.

We further multiply each momentum signal accordingly:

- $M1 = M1 \times 0.20$
- $M2 = M2 \times 0.20$
- $M3 = M3 \times 0.20$
- $M4 = M2 \times 0.40$

Factor Scoring and Weighting

Uniformization and Normalization

The next step is to apply a Probability Integral Transform to the previously winsorized S values. This transforms a given distribution into a perfect Uniform distribution. For a discrete distribution, this is achieved by means of an algorithm called Rank Transformation. With a perfect uniformly distributed sample, we can further transform the data into a Standard Normal distribution.

Standardization

The next step is to standardize the newly created Z values. This is achieved by applying the following formula:

$$Z_{i,t} = \frac{Z_{i,t} - \text{Mean}(Z)}{\text{Std}(Z)}$$

Where Mean() and Std() represent the arithmetic mean and standard deviation of the dataset Z.

Aggregation of the Factor Scores

On each Selection Date (t), and for a given security (i), the aggregated Momentum Factor Score is given by the sum of all the transformed attributes. Missing values are set to 0.

$$F(i,t) = \frac{1}{n} \times Z(M1_{(i,t)}) + \frac{1}{n} \times Z(M2_{(i,t)}) + \frac{1}{n} \times Z(M3_{(i,t)}) + \frac{1}{n} \times Z(M4_{(i,t)})$$

Robust Scaling

The final step to calculate the aggregate score for a given Factor is to reduce the tails of the created z-scores to further reduce large deviations among values. This is done to add robustness and reduce turnover.

If F represents an aggregate factor score, the modified F values are obtained by removing the median and standardizing the values by their inter-quartile range, according to the following formula:

$$F_{i,t} = \frac{F_{i,t} - \text{Median}(F)}{\text{Quantile}(F, 0.75) - \text{Quantile}(F, 0.25)}$$

Ranking

If either of the two factors are missing after the assignment performed above, they are not eligible to participate in the ranking moving forward.

For each unique [Factor], a percentile is determined for each security within each group of securities such that a higher value for each descriptor indicates a higher percentile. Within each [Factor], securities will have a score from 1% to 100% indicating the securities with the worst [Factor] score to the best [Factor] score, respectively.

Selection

To be included in the Index, a security must be in the top 60% of both the Momentum Factor Score and the Earnings Estimates Revision Factor Score, as defined below:

$$\left(\frac{R_i}{N}\right) \geq 0.40$$

Where:

R_i Rank of the Ranking Factor of security i (in Descending Order) as of the Selection Date
 N Number of securities that are remaining in the Eligible universe

Of the remaining securities, rank the remaining universe by Issuer Float Market Cap and select the top 25 names.

Selection Exception Rules

If the security count is below 20:

1. Determine how many securities to promote into the index by subtracting the amount of index eligible securities from the minimum count (20)
2. Revisit all remaining eligible securities and isolate securities that are in the top 70% of both the Momentum Factor Score and the Earnings Estimates Revision Factor Score, as defined below :

$$\left(\frac{R_i}{N}\right) \geq 0.30$$

3. Of the isolated securities, rank remaining universe by Issuer Float Market Cap.
4. Promote x number of securities into the Final Universe until you meet the required minimum count.

Index Weighting

The Index is modified market cap weighted. The initial weights, W_i , are set, as shown below, according to the Issuer Free Float Market Capitalization as defined above in the Market Cap Screening section.

$$W_i = \frac{FMC_i}{\sum_1^M FMC_i}$$

Where:

W_i	Weight of security i
M	Number of Index Members
FMC_i	Issuer Free Float Market Capitalization of security i

Securities' weights are then capped such that:

- No security's weight shall exceed 15%
- No country's weight shall exceed 70%

Any excess weight from capping is distributed proportionally to all the remaining uncapped securities until all the above conditions are satisfied.

Index Rebalance and Reconstitution

The Index is reconstituted and rebalanced quarterly in March, June, September, and December.

Selection Date

The Index Eligibility Process and Index Construction Process is applied using data as five Business Days prior to the Index Effective Date.

Index Announcement Date

An Index reconstitution and rebalance announcement date shall be three Business Days prior to the Index Effective Date.

Index Effective Date

The Index reconstitutions and rebalances go effective after the close of trading on the 2nd Wednesday in March, June, September, and December, respectively.

Business Date

A Business Day is defined as a weekday where there are no holidays listed on the following exchanges:
{Brazil: BZ, Chile: CL, Colombia: CO, Mexico: ME, Peru: PE}

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Selection Date	T-5 Business Dates from Effective Date			X			X			X			X
Announcement Date	T-3 Business Dates from Effective Date			X			X			X			X
Effective Date	2 nd Wednesday			X			X			X			X

Section 4: Index Maintenance

Index Calculation

Refer to the [Bloomberg Global Equity Indices Methodology](#) for index calculation details.

Deletion Policy

Index securities are not deleted outside of the Index Rebalance and Reconstitution window except in the case of a delisting.

Addition Policy

Index securities are not added outside of the Index Reconstitution.

Replacement Policy

Index securities are not replaced outside of the Index Reconstitution.

Corporate Actions

Refer to [Bloomberg Global Equity Indices Non-Market Cap Corporate Action Methodology](#) for the treatment of corporate actions.

Section 5: Risks and Limitations

Risks

The following is a summary of certain risks associated with the Index but is not meant to be an exhaustive list of all risks associated with the Index. Although the Index is designed to be representative of the markets it is measuring, it may not be representative of every use case. There is also inherent, though transparent, judgment in its construction, as outlined in this Methodology. The Index is designed for general applicability and not to address the individual circumstances and needs of users. BISL does not advise about the usefulness of the Index to a particular circumstance; users are therefore encouraged to seek their own counsel for such matters. This Methodology is subject to change, which may impact its usefulness to users. Although efforts will be made to alert users of any change, every individual user may not be aware of them. Such changes may also significantly impact the usefulness of the Index. BISL may also decide to cease publication of this Index. BISL maintains internal policies regarding user transitions, but no guarantee is given that an adequate alternative is available generally or for a particular use case. Markets for stocks, as with all markets, can be volatile. As the Index is designed to measure this market, it could be materially impacted by market movements, thus significantly affecting the use or usefulness of the Index for some or all users. Also, certain equity markets are less liquid than others – even the most liquid markets may suffer periods of illiquidity. Illiquidity can have an impact on the quality or amount of data available to BISL for calculation and may cause the Index to produce unpredictable results.

Limitations of the index

Though the Index is designed to be representative of the markets it measures or otherwise aligns with its stated objective, it may not be representative in every case or achieve its stated objective in all instances. It is designed and calculated strictly to follow the rules of this Methodology, and any Index level or other output is limited in its usefulness to such design and calculation.

Markets can be volatile, including those market interests that the Index measures or upon which the Index is dependent to achieve its stated objective. For example, illiquidity can have an impact on the quality or amount of data available to the administrator for calculation and may cause the Index to produce unpredictable or unanticipated results.

In addition, market trends and changes to market structure may render the objective of the Index unachievable or to become impractical to replicate by investors.

In particular, the Index measures global equity markets. As with all equity investing, the Index is exposed to market risk. The value of equities fluctuate with the changes in economic forecasts, interest rate policies established by central banks and perceived geopolitical risk. The Index does not take into account the cost of replication and as a result a tracking portfolio's returns will underperform the Index with all else equal. As the Index is designed to measure those markets, it could be materially impacted by market movements, thus significantly impacting the use or usefulness of the fixings for some or all users.

In addition, certain sub-indices may be designed to measure smaller subsets of the Index such as specific styles, size, and sector. Some of these sub-indices have very few qualifying constituents and may have none for a period of time. During such period, the sub-index will continue to be published at its last value, effectively reporting a 0% return, until new constituents qualify. If no constituents are expected to qualify (due to changes in market structure and other factors), the sub-index may be discontinued. In such an event, this discontinuation will be announced to index users.

BISL relies on external data providers for the provision of ESG data used in the selection, weighting and calculation of the benchmarks. This includes climate models, estimations and sourcing of underlying ESG data used to calculate such scores. BISL places reliance on such external data providers with respect to their ESG data and does not have control over, or detailed insight into, the reliability of the raw data sourced external providers and their respective calculation models. The measurement of the benchmark may become unreliable should the ESG data become unavailable or inaccurate.

Section 6: Benchmark Oversight and Governance

Benchmark governance, audit and review structure

Please refer to the BISL Benchmark Procedures Handbook available [here](#).

Index and data reviews

Please refer to the BISL Benchmark Procedures Handbook available [here](#).

Expert judgement

Please refer to the BISL Benchmark Procedures Handbook available [here](#).

Conflicts of interest

Please refer to the BISL Benchmark Procedures Handbook available [here](#).

Restatement policy

Please refer to the BISL Benchmark Procedures Handbook available [here](#).

Benchmark Administrator

This index has been created by Bloomberg Index Services Limited (BISL) in its capacity as a benchmark administrator and BISL retains control over all aspects of the provision of this index.

Appendix A: ESG Disclosure

The below annex is an exhaustive list of the ESG factors taken into account in this benchmark methodology, including where applicable those ESG factors listed in Annex II of Delegated Regulation (EU) 2020/1816 for the underlying asset class.

EXPLANATION OF HOW ESG FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY			
Item 1. Name of the benchmark administrator.		Bloomberg Index Services Limited ("BISL")	
Item 2. Type of benchmark or family of benchmarks. <i>Choose the relevant underlying asset from the list provided in Annex II to Commission Delegated Regulation (EU) 2020/1816.</i>		Equity	
Item 3. Name of the benchmark or family of benchmarks.		Bloomberg LATAM Momentum Earnings Revision Index	
Item 4. Does the benchmark methodology for the benchmark or family of benchmarks take into account ESG factors?		Yes	
<p>Item 5. Where the response to Item 4 is positive, please list below, for each family of benchmarks, those ESG factors that are taken into account in the benchmark methodology, taking into account the ESG factors listed in Annex II to Delegated Regulation (EU) 2020/1816.</p> <p>Please explain how those ESG factors are used for the selection, weighting or exclusion of underlying assets.</p> <p>The ESG factors shall be disclosed at an aggregated weighted average value at the level of the family of benchmarks.</p>			
Combined ESG factors considered		Please see below.	
<p>Item 6. Where the response to Item 4 is positive, please list below, for each benchmark, those ESG factors that are taken into account in the benchmark methodology, taking into account the ESG factors listed in Annex II to Delegated Regulation (EU) 2020/1816, depending on the relevant underlying asset concerned.</p> <p>Please explain how those ESG factors are used for the selection, weighting or exclusion of underlying assets.</p> <p>The ESG factors shall not be disclosed for each constituent of the benchmark, but shall be disclosed at an aggregated weighted average value of the benchmark.</p> <p>Alternatively, all of this information may be provided in the form of a hyperlink to a website of the benchmark administrator included in this explanation. The information on the website shall be easily available and accessible. Benchmark administrators shall ensure that information published on their website remains available for five years.</p>			
Combined ESG factors considered	ESG Risk Rating Score	Selection	<p>Securities must have a maximum ESG Risk Rating Score of 50 to be eligible for inclusion to the Index.</p> <p>The ESG Risk Rating Score measures the magnitude of a company's unmanaged ESG risks. More details on the ESG Risk Rating score can be found here.</p> <p>Securities not covered by the Sustainalytics ESG Risk Ratings research universe will not be eligible for inclusion into the Index.</p>
Item 7. Data and standards used			
(a) Data input. <i>(i) Describe whether the data are reported, modelled or sourced internally or externally.</i> <i>(ii) Where the data are reported, modelled or sourced externally, please name the third party data provider.</i>		<p>All ESG data for the benchmarks is sourced externally from Sustainalytics (reported and modelled from ESG Risk Ratings library).</p> <p>Please refer to the link below for additional details.</p> <p>https://connect.sustainalytics.com/esg-risk-ratings-methodology</p>	

<p>(b) Verification and quality of data. <i>Describe how data are verified and how the quality of those data is ensured.</i></p>	<p>The Indices use the following external data provider, which has robust governance and processes in place to validate the quality and reliability of the data.</p> <p>Sustainalytics</p> <ul style="list-style-type: none"> • Universe Management <ul style="list-style-type: none"> ○ Centralized universe definitions and processes for rebalancing; ○ Quarterly rebalances of Sustainalytics' standard coverage and compliance universes; ○ Clear, transparent and consistent approach to the allocation of research versus coverage entities. • Company Research <ul style="list-style-type: none"> ○ Continuous improvement and maintenance of quality and research standards; ○ Quality reviews of ESG assessments before publication; ○ Reviewing controversy ratings by the Events Oversight Committee - focus on controversy level changes to and from level 4 and 5. • Data and deliverable management <ul style="list-style-type: none"> ○ Quality and reliability of Sustainalytics Covered Company and identifier data through automated quality assurance; ○ Quality and reliability of Sustainalytics proprietary (i.e. research) data through automated quality assurance, prior to publication; ○ Quality and reliability of standard deliverables through end-of-gate quality assurance process. ○ Quality and reliability of custom client deliverables through end-of-gate quality assurance processes (automated and manual); ○ Monitoring and investigating ESG score fluctuations and their root causes using automated tools. • Update cycle <ul style="list-style-type: none"> ○ Sustainalytics aims for annual updates of management indicators for the Covered Companies; ○ Continuous updates are made as incidents occur and feed into updates of event indicators, which is not disclosure driven; ○ Annual updates to the rating framework (selection of material ESG issues, weighting of indicators). <p>An issuers' ESG Risk Rating is updated via an annual research process that includes the following:</p> <ul style="list-style-type: none"> • Review of Sources <ul style="list-style-type: none"> ○ Corporate publications and regulatory filings (e.g. Annual Reports and Corporate Sustainability Reports) ○ News and other media ○ NGO reports/websites ○ Multi-sector information sources (e.g. Global Reporting Initiative, Carbon Disclosure Project reports) ○ Company feedback • Assessment of management indicators o Includes a review of ESG controversies • Processing any issuer feedback on draft ESG report • Analysts' indicator assessments are reviewed through quality assurances processes, including peer and manager review, as well as automated exception checking and change detection.
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<p>(c) Reference standards</p> <p><i>Describe the international standards used in the benchmark methodology.</i></p>	<p>The Sustainalytics ESG Risk Rating includes various standards in the measurement and calculation of E/S/G clusters including:</p> <ul style="list-style-type: none"> • Sustainability Account Standards Board (SASB) • United Nations Principles for Responsible Investment (PRI) • OECD Principles of Corporate Governance 2015 • ISO 9001 quality standards or ISO 14001 environmental management standards <p>Please refer to the link below for additional details.</p> <p>https://connect.sustainalytics.com/esg-risk-ratings-methodology</p>
<p>Date on which information has been last updated and reason for the update:</p>	<p>October 2023, Index Launch.</p>

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