



NYSE Leveraged Single Name Index Series

Version 1.0
Valid from
December 7, 2017

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Version History:

Version 1.0 (Effective December 7, 2017)

The methodology document covers the newly-launched NYSE Leveraged Single Name Indexes.

1. Index summary

Factsheet			
	<u>Index Name</u>	<u>Index Ticker</u>	<u>Base Level</u>
	NYSE 2x Leveraged GOOG Index	NY2LGOOG	459.2106
	NYSE 2x Leveraged AMZN Index	NY2LAMZN	346.5140
	NYSE 2x Leveraged AAPL Index	NY2LAAPL	107.4958
	NYSE 2x Leveraged CSCO Index	NY2LCSCO	25.8297
	NYSE 2x Leveraged C Index	NY2LC	61.5584
	NYSE 2x Leveraged KO Index	NY2LKO	35.7886
	NYSE 2x Leveraged DIS Index	NY2LDIS	143.8213
	NYSE 2x Leveraged FB Index	NY2LFB	68.0235
	NYSE 2x Leveraged GE Index	NY2LGE	23.8826
	NYSE 2x Leveraged GS Index	NY2LGS	208.1342
	NYSE 2x Leveraged IBM Index	NY2LIBM	166.4579
	NYSE 2x Leveraged INTC Index	NY2LINTC	23.5740
	NYSE 2x Leveraged JNJ Index	NY2LJNJ	73.8794
	NYSE 2x Leveraged JPM Index	NY2LJPM	56.6173
	NYSE 2x Leveraged MCD Index	NY2LMCD	64.9381
	NYSE 2x Leveraged MSFT Index	NY2LMSFT	31.8417
	NYSE 2x Leveraged NKE Index	NY2LNKE	66.1218
	NYSE 2x Leveraged ORCL Index	NY2LORCL	37.3403
	NYSE 2x Leveraged SBUX Index	NY2LSBUX	58.3387
	NYSE 2x Leveraged V Index	NY2LV	64.7192
	NYSE 2x Leveraged NFLX Index	NY2LNFLX	123.6944
	NYSE 2x Leveraged NVDA Index	NY2LNVDA	3.6798
	NYSE 2x Leveraged CRM Index	NY2LCRM	74.6396
	NYSE 2x Leveraged PFE Index	NY2LPFE	38.8675
	NYSE 2x Leveraged PYPL Index	NY2LPYPL	33.9359
<i>Name / Identifier / Base Level</i>			
<i>Index Types</i>	Net Total Return (USD)		
<i>Index Description</i>	<p>The NYSE Leveraged Single Name Indexes are a series of indexes that track the daily leveraged returns of a series of U.S., U.K. and Italian listed equities. The indexes are constructed assuming physical replication as the tracking method and as such incorporate the use of margin (borrowing) including accounting for intra-day rebalances under certain conditions. Index compositions and corporate actions, including rebalance information, can be accessed from NYSE Market Data at www.nyse.com/market-data/indices .</p>		
<i>Number of Constituents</i>	Each index utilizes a single equity as the underlier.		
<i>Rebalance Schedule</i>	The index is rebalanced daily as to accommodate the use of margin (borrowing) to achieve leverage. In the event of a substantial (20.00%) intra-day price drop of the underlying component the index will undergo an intra-day rebalance meant to model an intra-day margin call.		

Calculation Frequency	Price Return: Every 15 seconds between 03:00 & 18:00 ET	
Historic Data Available Since	July 31, 2015	
Vendor Codes	<u>Bloomberg</u> NY2LGOOG <INDEX> NY2LAMZN <INDEX> NY2LAAPL <INDEX> NY2LCSCO <INDEX> NY2LC <INDEX> NY2LKO <INDEX> NY2LDIS <INDEX> NY2LFB <INDEX> NY2LGE <INDEX> NY2LGS <INDEX> NY2LIBM <INDEX> NY2LINTC <INDEX> NY2LJNJ <INDEX> NY2LJPM <INDEX> NY2LMCD <INDEX> NY2LMSFT <INDEX> NY2LNKE <INDEX> NY2LORCL <INDEX> NY2LSBUX <INDEX> NY2LV <INDEX> NY2LNFLX <INDEX> NY2LNVDA <INDEX> NY2LCRM <INDEX> NY2LPFE <INDEX> NY2LPYPL <INDEX>	<u>Reuters</u> .NY2LGOOG .NY2LAMZN .NY2LAAPL .NY2LCSCO .NY2LC .NY2LKO .NY2LDIS .NY2LFB .NY2LGE .NY2LGS .NY2LIBM .NY2LINTC .NY2LJNJ .NY2LJPM .NY2LMCD .NY2LMSFT .NY2LNKE .NY2LORCL .NY2LSBUX .NY2LV .NY2LNFLX .NY2LNVDA .NY2LCRM .NY2LPFE .NY2LPYPL
Launch Date	December 7, 2017	
Website	https://www.theice.com/market-data/indices	

2. Governance

Index Sponsor & Administrator

ICE Data Indices, LLC (“IDI”) is the Index Sponsor and the Index Administrator.

IDI is responsible for the day-to-day management of the Index, including retaining primary responsibility for all aspects of the index determination process, including implementing appropriate governance and oversight, as required under the International Organization of Securities Commission’s Principles for Financial Benchmarks (the IOSCO Principles). The Governance Committee is responsible for helping to ensure IDI’s overall compliance with the IOSCO Principles, by performing the Oversight Function which includes overseeing the index development, design, issuance and operation of the indices, as well as reviewing the control framework. IDI is also responsible for decisions regarding the interpretation of these rules and the Governance Committee is responsible for reviewing all rule book modifications with respect to the Index to ensure that they are made objectively, without bias, and in accordance with applicable law and regulation and IDI’s policies and procedures. Consequently, all IDI and Governance Committee discussions and decisions are confidential until released to the public.

Cases not covered in rules

In cases which are not expressly covered in these rules, operational adjustments will take place along the lines of the aim of the Index. Operational adjustments may also take place if, in the opinion of the Index Administrator, it is desirable to do so to maintain a fair and orderly market in derivatives on this Index and/or this is in the best interests of the investors in products based on the Index and/or the proper functioning of the markets.

Any such modifications described under this section or exercise of Expert Judgment will also be governed by any applicable policies, procedures and Guidelines in place by IDI at such time.

Rule book changes

The Governance Committee reviews all rule book modifications and Index changes to ensure that they are made objectively, without bias and in accordance with applicable law and regulation and IDI’s policies and procedures. These rules may be supplemented, amended in whole or in part, revised or withdrawn in accordance with applicable law, regulation and IDI policies and procedures. Supplements, amendments, revisions and withdrawals may also lead to changes in the way the Index is compiled or calculated or affect the Index in another way.

Any such modifications described under this section will also be governed by any applicable and outstanding policies and procedures in place by IDI at such time.

3. Index Description

This index is developed with the goal of tracking the leveraged returns of a single constituent on a daily basis utilizing physical replication. As such, the index looks to track exposure to a given single security making the assumption that half of the invested amount has been borrowed. As described in Section 8, the index is calculated on a net of taxes total return basis, whereby published index levels incorporate any declared dividends, taxes on those dividends and any interest charged as a result of any borrowing employed to establish the invested position.

4. Publication

4.1 The opening, intraday and closing or daily publication of index values.

Opening

The first index level is calculated and published around 03:00 ET, when the U.K. equity markets open for their regular trading session. The calculation of that level utilizes the most updated prices available at that moment. In the case of constituents that have a non-traded, halted or suspended status, or have not opened for the current day, the previous day's reference prices or estimated prices (for IPOs, buyouts and swap offers) are used.

Dissemination frequency

The level of the index is in principle published every 15 seconds to the NYSE[®] Global Index Feed (NYSE[®] GIF). The calculated index levels incorporate the latest traded price of each index constituent from within the regular trading session in each underlying index component equity market, respectively. The indexes hold equities listed and traded in the U.S., U.K. and Italy, and thus, intraday calculations of the index utilizing U.S. listed equities would incorporate trades on a consolidated level, from all exchanges including those not designated as the official primary exchange.

The index is calculated from 03:00 until 18:00 ET on those days specified as index business days. Index business days will be classified as days on which the U.S. Equity Markets (NYSE[®], NASDAQ, NYSE[®] American), U.K. Equity Markets (London Stock Exchange) or Italian Equity Markets (Borsa Italiana) are open for a full or partial day of trading.

Closing level

The closing level is the last level disseminated on the trading day and uses the official close prices from the primary listing market for each index constituent. For constituents that have non-traded, halted or suspended status, or have not opened for the current day, the previous day's reference prices or prices based on applicable corporate action notices provided by component companies (for spin-offs, IPOs, buyouts and swap offers) are used instead. In the case of exceptional market conditions, and in accordance with IDI policies and procedures, the Administrator reserves the right to utilize other prices in the calculation of the official closing level, as indicated below in Section 4.2.

Sources of Data

The Consolidated Tape (CTS/UDTF) is the primary market data source for U.S. equity real time and closing prices. The London Stock Exchange is the primary market data source for U.K. equity real

time and closing prices. The Borsa Italiana is the primary market data source for Italian equity and real time and closing prices. Additional sources of data less commonly used include other market data vendors, company announcements, exchange announcements, and other official sources.

4.2 Exceptional market conditions and corrections

The Administrator retains the right to delay the publication of the opening level of the index. Furthermore, the Administrator of the index retains the right to suspend the publication of the level of the index if it believes that circumstances prevent the proper calculation of the index.

If index constituent prices are cancelled, the index will not be recalculated unless the Administrator decides otherwise.

Reasonable efforts are made to ensure the correctness and validity of data used in real-time index calculations. If incorrect price or corporate action data affects index daily closing values, they are corrected retroactively as soon as possible and all revisions are communicated out to the public and market data vendors.

There is the possibility of an exchange or market-wide event resulting in the normal closing auction not going off or official closing prices not being available. In those situations, the index will take guidance from the respective exchange(s) and address on an event-by-event basis. Exchange or market-wide events include, but are not limited to, the following:

- Volatility Halts
 - LULD (Limit Up / Limit Down)
 - Market Wide Circuit Breaker
- Technological Problems / Failures
- Natural Disaster or Other BCP-Related Event

4.3 Announcement policy

Announcement policy

Changes to the index methodology will be announced by an index announcement which will be distributed by IDI via www.nyse.com/indices and NYSE Market Data at www.nyse.com/market-data/indices

As a general rule the announcement periods that are mentioned below will be applied. However, urgently required corporate action treatments, often resulting from late notices from the relevant company or exchange, may require the Administrator to deviate from the standard timing.

Corporate actions

In case of an event that could affect an index constituent, the Administrator will inform the market about the intended treatment of the event in the index shortly after the firm details have become available and have been confirmed. When possible, the corporate action will be announced, even if not all information is known, at least one trading day before the effective date of the action. Once the corporate action has been effectuated, the Administrator will confirm the changes in a separate announcement.

Rule changes

Going forward, barring exceptional circumstances, a period of at least one month should pass between the date a proposed change is published and the date it goes into effect. Exceptions can be made if the change is not in conflict with the interests of a Stakeholder or Subscriber.

Consultations

IDI may from time to time consult with stakeholders on proposed material changes that affect the Index in accordance with IDI's policies and procedures. Such proposals shall be published to the market and all feedback received will be considered by the Index Administrator. Any resulting changes to the Index will be announced prior to it being implemented.

Index Reviews

IDI shall undertake regular reviews of the Index, the methodology and the market which it represents to ensure it continues to meet the index objective, in accordance with IDI's policies and procedures. Should changes to the Index be required or proposed, this will be communicated to the market in accordance with IDI's policies and procedures.

5. Calculation

5.1 Calculation of the index

The index is calculated on a Net of Taxes Total Return basis. The current index level would be calculated by dividing the current modified index market capitalization by the index divisor. The divisor was determined off of the initial capitalization base of the index and the base level. The divisor is updated as a result of corporate actions and/or composition changes.

6. Index rebalances

6.1 General aim of rebalances and frequency

General aim of the periodical rebalance

This index is developed with the goal of tracking the leveraged returns of a single constituent on a daily basis utilizing physical replication. As such, the purpose of the rebalance is to close out the margin account for a given trading day and establish the new principal amount and borrowing for the next trading day.

Frequency

The index will undergo a rebalance after the close of every trading day.

Furthermore as the index is built to accommodate the use of margin (borrowing) as the means of providing leverage there is an accommodation made for days where the underlying security sustains an intra-day loss of 20% or more as measured from the previous day's closing price. In the event of an intra-day loss of 20% or more, the index will undergo an intra-day rebalance which is meant to model an intra-day margin call. The monitoring period for any intra-day rebalance event is based on the market trading hours of the primary listing venue for the underlying security of each index. The regular end of day rebalance will occur irrespective of any intra-day rebalance.

For example, if an index based on a U.S. listed security has a rebalance event at any time during U.S. trading hours an intra-day rebalance will be conducted at that time followed by an end of day rebalance to establish the next day's principle investment and margin borrowing amounts. There is no limit to the number of intra-day margin calls that may be triggered due to the price movements of an underlying security of an index. Regardless of the number of intra-day rebalance events there will always be an end-of-day rebalance to establish the next day's principle investment and margin borrowing amounts.

7. Corporate Actions

7.1 General

The index may be adjusted in order to maintain the continuity of the index level and the composition. The underlying aim is that the index continues to reflect as closely as possible the index's goal of tracking the returns of a physically held leveraged equity portfolio.

Adjustments take place in reaction to events that occur with an index constituent in order to mitigate or eliminate the effect of that event on the index performance.

7.2. Removal of constituents

As these indexes look to replicate the leveraged returns of a single security, removal of any constituent would constitute cessation of the index.

7.2.1. Mergers and Acquisitions

Merger or acquisition between members of the NYSE Single Name Leveraged Index series: In the event a merger or acquisition occurs between members of NYSE Single Name Leveraged Indices, the following actions will be taken:

- (1) At the date of the announcement, no action will be taken. Both indices will continue to be calculated and disseminated as outlined in this methodology guide.
- (2) At the date of the closing of the merger or acquisition the index containing the target company will allocate the notional value of all shares to cash based on the following:
 - a. If an all cash deal, the per share price as prescribed by the terms of the deal
 - b. If an all-stock deal, the last available price of shares prior to the deal closing
 - c. If a combination stock and cash deal, the last available price of shares prior to the deal closing
- (3) The index holding the target company will continue to be calculated and disseminated until any product tracking the index has been delisted. At that time, in accordance with the IDI Transition Policy and Cessation Procedures, IDI shall evaluate the need to continue the index.

Merger or acquisition between a member and a non-member: A non-member is defined as a company that is not a current constituent of a NYSE Single Name Leveraged Index. A merger or acquisition between one member of the Index and one non-member can take two forms:

- (1) The acquiring company is a member of the Index and the acquired company is not. Under this scenario, there will be no action taken within the index.

(2) The acquiring company is not a member, but the acquired company (target company) is a member. The following actions will be taken:

- (1) At the date of the announcement, no action will be taken. The index will continue to be calculated and disseminated as outlined in this methodology guide.
- (2) At the date of the closing of the merger or acquisition the index containing the target company will allocate the notional value of all shares to cash based on the following:
 - a. If an all cash deal, the per share price as prescribed by the terms of the deal
 - b. If an all-stock deal, the last available price of shares prior to the deal closing
 - c. If a combination stock and cash deal, the last available price of shares prior to the deal closing
- (3) The index holding the target company will continue to be calculated and disseminated until any product tracking the index has been delisted. At that time, in accordance with the IDI Transition Policy and Cessation Procedures, IDI shall evaluate the need to continue the index.

7.2.2 Suspensions and company distress

Upon a company filing for bankruptcy, and in accordance with the Transition Policy, an announcement will be made to convert the existing equity position to cash utilizing the last closing price on the listing exchange. If the stock is trading on an over-the-counter (OTC) market, the last trade or price on that market is utilized as the deletion price on that day.

7.2.3 Price sources

In the event that the trading in shares is suspended or halted, the last known price established during regular daytime trading on the primary exchange will be used. Depending on the particular situation, the Administrator may choose to value the security at a price of \$0 for purposes of index calculation and/or index corporate action. This would be applicable for certain extreme cases such as a company bankruptcy or severe distress.

7.3 *Split-up /spin off*

The closing price of the index constituent is adjusted by the value of the spin-off, and the shares of the index constituent will be adjusted to maintain its existing weighting in the index. As the principle investment amount is re-established daily, the cash equivalent of shares acquired through the spinoff will be included in the overall market capitalization of the index. This figure will be used to establish the principle investment amount for the next day's opening.

Spun-off companies will not be added into the index at the time of the event.

7.4. *Dividends*

7.4.1. **Distinction ordinary and special dividend**

The net total return index will be adjusted for dividends that are special in nature, typically through a price adjustment and corresponding cash increase to maintain the overall index market capitalization.

To decide whether a dividend should be considered a special dividend the Administrator will use the following criteria:

- a) the declaration of a company of a dividend additional to those dividends declared as part of the company's normal results and dividend reporting cycle; merely an adjustment to the timing of the declaration of a company's expected dividend would not be considered as a special dividend circumstance; or
- b) identification of an element of a dividend paid in line with a company's normal results and dividend reporting cycle as an element that is unambiguously additional to the company's normal payment.

For the purpose of clarification, the Administrator will make adjustment for the following situations:

1. Payment of ordinary dividends, irrespective of how they are financed;
2. Issue of redeemable shares or any other entitlement in lieu of an ordinary dividend; or
3. Unexpected increase or decrease, resumption or cessation, or change in frequency to an ordinary dividend.

7.5. *Rights issues and other rights*

In the event of a rights issue, the price is adjusted for the value of the right before the open on the ex-date, and the divisor is adjusted in order to maintain continuity in the calculation of index levels. The adjustment assumes that the rights issue is fully subscribed. The amount of the price adjustment is determined from the terms of the rights issue, including the subscription price, and the price of the underlying security. The Administrator shall only enact adjustments if the rights represent a positive value, or are in-the-money, or alternatively, represent or can be converted into a tangible cash value.

7.6 *Bonus issues, stock splits and reverse stock splits*

For bonus issues, stock splits and reverse stock splits, the number of shares included in the index will be adjusted in accordance with the ratio given in the corporate action. Since the event will also incorporate a corresponding price adjustment and won't change the value of the company included in the index, the divisor will not be changed because of this.

7.7 *Changes in number of shares*

Changes in the number of shares outstanding, typically due to share repurchases, tenders, or offerings, will not be reflected in the index.

8. Index Formula

8.1 Index calculation formula

The general formula for the calculation of a real-time **net of taxes total return version** of the Index is:

$$\text{Index(NTR)}_t = \frac{\sum_i [P_{i,t} Q_{i,t}] - \left(\frac{\sum_i [P_{i,t} Q_{i,t}]}{0.5} \times BR \times DT_{t_n} \right) + \text{Cash}}{D_t}$$

Where:

t means Index Calculation Date t

D_t means the Index divisor on Index Calculation Date t

DT_{tn} means the number of days interest is charged on any borrowing

P_{i,t} means the price of Index Constituent i on Index Calculation Date t

Q_{i,t} means the number of shares of Index Constituent i on Index Calculation Date t which includes shares attributed beginning of day principle, any borrowed funds and acquisition utilizing net of taxes dividends

BR means the borrow rate applied to margined assets

Cash means the proceeds of any borrowing used to establish the full shares position and is entered as a negative number

Leverage is introduced into the above equation by including a negative cash amount equal to the amount borrowed.

Borrow rates are dependent on the trading currency of index underlyings. Current rates are as follows:

- i) U.S. Equities: Federal Funds Overnight Rate + 100 Basis Points (1%)
- ii) U.K. Equities: GBP LIBOR Overnight Rate + 100 Basis Points (1%)
- iii) Italian Equities: EURIBOR Overnight Rate +100 Basis Points (1%)

Index Calculation Date means a U.S., U.K. or Italian Business Day where all Constituent Exchanges are open.

Net of taxes dividends are derived using the following formula:

$$\text{Div}_{\text{nt}} = \sum [\text{Dividend}_i \times \text{Shares}_i \times (1 - \text{WR}_i)]$$

Where:

WR_i means the Tax Withholding rate of component (i)

The tax rates used for the NYSE Leveraged Single Name Indexes are from the perspective of a Luxembourg based investor. The current applicable rate is 15%.

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