

# The Merrill Lynch Factor Model – Exchange Series

The Model is a model established by Merrill Lynch International, as model sponsor (the “Model Sponsor”). The value of the Model changes based on the weighted performance of six Model Factors: S&P 500 Total Return Index, ProShares UltraShort Euro exchange-traded fund, MSCI EAFE US Dollar Net Total Return Index, MSCI Emerging Markets US Dollar Net Total Return Index, Russell 2000 Total Return Index and three month U.S. Treasury Bills (“the Cash Factor”), each described in the section entitled “The Model Factors”. *The Model is not a managed hedge fund and does not track the performance of any hedge fund or group of hedge funds.* Instead, the Model is designed to provide the risk and return characteristics of the hedge fund asset class by targeting a high correlation with the HFRI Composite Index. The Model implements the methodology using non-hedge fund, transparent market measures such as the Model Factors. Weightings with respect to all but one of the Model Factors may be negative.

The initial weights of the Model Factors were determined according to the methodology described below under “— Computation of the Model Factor Weights” for January 3, 2003, the first Model Calculation Day (as defined below). The initial value of the Model was set at 1,000. The weights of the Model Factors are adjusted monthly pursuant to a formula that is intended to assign weights that, had they been assigned at the beginning of a 24-month look-back period, would have resulted in the highest correlation during such period between the monthly changes in the Model Factor levels and the monthly changes in the level of the HFRI Fund Weighted Composite Index (“HFRI Composite Index”) published by Hedge Fund Research, Inc. (“HFRI”), subject to certain parameters, as more fully described below under “— Computation of the Model Factor Weights”. Any returns will be determined by changes in the levels of the Model Factors, not the HFRI Composite Index. The returns may have no correlation to changes in the HFRI Composite Index.

CME Group Index Services LLC (hereinafter referred to as “Dow Jones Indexes”), or another party designated by the Model Sponsor, will act as model calculator (the “Model Calculator”) and will be responsible for the calculation of the value of the Model, using the data and methodologies described in this document and determined by the Model Sponsor. Also, Dow Jones Indexes, as Model Calculator, will report the Model value intraday approximately once

every 15 seconds on its datafeed delivered to the Chicago Mercantile Exchange, which is redistributed to market data vendors. The intraday Model values are published on Bloomberg page MLEIFCTX <Index> and on Reuters page .MLEIFCTX. In addition, the Model Sponsor maintains a website at <http://www.baml.com/factormodelxs> with information related to the Model.

## Computation of the Model Factor Weights

The Model Sponsor will implement the Model Factor weights (each rounded to the nearest one thousandth) monthly on the second Model Calculation Day (the “Model Rebalancing Day”) immediately succeeding the date on which HFRI publishes the “End Update” for the HFRI Composite Index performance for a given month (the “Publication Date”). The End Update is the third published value for the HFRI Composite Index performance for a given month, the first update being the “Flash Update” (typically published five business days after the end of the relevant month) and the second update being the “Mid Update” (typically published 15 calendar days after the end of the relevant month). The “End Update” for a given month is typically published by HFRI on the first Model Calculation Day of the second month immediately following the month for which performance is being measured. If, however, the End Update has not been published by HFRI by 11:00 A.M., New York City time, on the second Model Calculation Day of the relevant month, then the Mid Update is used in place of the End Update in the regression model used to calculate the new Model Factor weights for that month.

The Model Sponsor will determine the weights for the Model Factors other than the Cash Factor using the linear regression model described below that analyzes the relationship between monthly changes in the HFRI Composite Index, reduced by one-month USD LIBOR (as so reduced, the “adjusted HFRI Composite Index”), and corresponding monthly changes in the level of each Model Factor other than the Cash Factor, in each case, with the exception of the EUR-USD Spot Exchange Rate, also reduced by one-Month USD LIBOR (each an “adjusted Model Factor”). The monthly changes analyzed in the linear regression model for each Model rebalancing span 24 consecutive months, ending with the month for which the most recent HFRI Composite Index monthly return is available (the “Observation Period”).

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This month is expected to be the second month immediately preceding the applicable Model Rebalancing Day.

The following is the linear regression model that is applied to each of the 24 monthly subperiods within each Observation Period:

Monthly change in HFRI Composite Index – One Month USD LIBOR Return =

Constant

+ weight 1 \* (monthly change in S&P 500 Total Return Index – One Month USD LIBOR Return)  
+ weight 2 \* (monthly change in Russell 2000 Total Return Index – One Month USD LIBOR Return)  
+ weight 3 \* (monthly change in MSCI EAFE USD Total Return Index – One Month USD LIBOR Return)  
+ weight 4 \* (monthly change in MSCI EMF Total Return Index – One Month USD LIBOR Return)  
+ weight 5 \* (monthly change in the inverse of the EUR-USD Spot Exchange Rate)

**where:**

“One Month USD LIBOR Return” equals:

One-Month USD LIBOR \* (ACTUAL/360)

The LIBOR determination date shall be the last published One-Month USD LIBOR rate for the month immediately preceding the relevant subperiod.

“ACTUAL” means the actual number of days in the relevant calendar month.

“The inverse of the EUR-USD Spot Exchange Rate” is rounded to the nearest ten thousandth.

By performing a regression analysis on this formula over an Observation Period, values for Model Factor weights 1 through 5 can be obtained that will, subject to the parameters described in the next paragraph, produce the highest correlation between the changes in the adjusted HFRI Composite Index values for the 24 monthly subperiods of such Observation Period and the corresponding changes in the five Model Factor values. One-half of weight 5 (or “weight 5b”) will be used for its respective Model Factor and the calculation of the Cash Factor weight. The weight

for the Cash Factor will be equal to one minus the sum of the weights for the Model Factors.

The weight of each Model Factor must have a value equal to or greater than -100% and not more than 100%, except that: (i) the Model Factor weight for the MSCI Emerging Markets US Dollar Net Total Return Index must be equal to or greater than 0% and (ii) the Model Factor weight for the Russell 2000 Total Return Index must be equal to or greater than -30%. In the event that the weighting of one or more Model Factors is limited on any Model Rebalancing Day by these minimum and maximum value constraints, the other Model Factor weights will be computed in the regression model as if no constraints had been imposed. Any negative Model Factor weight will have the same effect on the Model Value as if a short position had been created in the applicable Model Factor for such period. In the event that the sum of the Model Factor weights other than that of the Cash Factor is less than -100% or greater than 100%, then each of these Model Factor weights will be adjusted in the same proportion such that the sum of the weights is between -100% and 100%. As such, the weight of the Cash Factor will have a value equal to or greater than 0% and not more than 200%.

On each Model Rebalancing Date, a constant is included in the statistical model employed by the Model Sponsor. This constant will be used solely to determine the Model Factor weights and will not be used for the purposes of computing the Model value.

“Model Calculation Day” means a day which is an Exchange Business Day.

“Exchange Business Day” means any day upon which all the relevant Exchanges and Related Exchanges are open for trading during their respective regular trading sessions notwithstanding such Exchanges or Related Exchanges closing prior to their scheduled weekday closing time; *provided that*, in the event that any relevant Exchange or Related Exchange is closed for trading, the Model Sponsor may exclude such Exchange or Related Exchange for the purposes of this definition of Exchange Business Day.

“Exchange” means, in respect of each Model Factor comprising the Model, any stock exchange on which a Model Security that is part of that Model Factor is traded and/or any successor stock exchange or trading system on which that Model Security is traded. In the event that a Model Security is listed

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on more than one exchange or quotation system, the Model Sponsor shall select an exchange or quotation system.

“Model Security” means any security traded on an Exchange or a Related Exchange and constituting a Model Factor.

“Related Exchange” means, in respect of a Model Security, each exchange, quotation or market system on which options contracts and futures contracts relating to such Model Security are traded, any successor to such exchange, quotation or market system or any substitute exchange, quotation or market system to which trading in futures or options contracts relating to the Model has temporarily relocated; provided that the Model Sponsor has determined that there is comparable liquidity relative to the futures or options contracts relating to the Model Security on such temporary substitute exchange, quotation or market system as on the original Related Exchange.

## Model Value

In order to compute the Model value as of a Model Calculation Day, the Model Calculator will compute the total return on each individual Model Factor for all Model Factors since the close on the most recent Model Rebalancing Day as of such Model Calculation Day (the “Accumulated Model Factor Total Return” or “AMFTR”) in accordance with the following formula:

$$\begin{aligned} \text{AMFTR} = & \\ & \text{weight 0} * ((3\text{-month Treasury Bill Security Price}_{\text{MCD}} / \\ & 3\text{-month Treasury Bill Security Price}_{\text{RD}}) - 1) \\ & + \text{weight 1} * ((\text{S\&P 500 Total Return Index level}_{\text{MCD}} / \text{S\&P} \\ & 500 \text{ Total Return Index closing level}_{\text{RD}}) - 1) \\ & + \text{weight 2} * ((\text{Russell 2000 Total Return Index level}_{\text{MCD}} / \\ & \text{Russell 2000 Total Return Index closing level}_{\text{RD}}) - 1) \\ & + \text{weight 3} * ((\text{EAFE TR Index level}_{\text{MCD}} / \\ & \text{EAFE TR Index closing level}_{\text{RD}}) - 1) \\ & + \text{weight 4} * ((\text{EMF TR Index level}_{\text{MCD}} / \\ & \text{EMF TR Index closing level}_{\text{RD}}) - 1) \\ & + \text{weight 5b} * ((\text{EUO ETF level}_{\text{MCD}} + \text{EUO ETF} \\ & \text{dividends}_{\text{RD, MCD}}) / \text{EUO ETF closing level}_{\text{RD}}) - 1) \end{aligned}$$

## where:

“MCD” means the applicable Model Calculation Day;

“RD” means the most recently published closing value available as of 4:00 A.M. in the city of New York on the preceding Model Rebalancing Day;

“DAYS” means the actual number of days from (but excluding) the most recent preceding Model Rebalancing Day to (and including) the relevant Model Calculation Day;

“weights 1, 2, 3, 4 and 5b” mean the Model Factor weightings calculated for the most recent preceding Model Rebalancing Day pursuant to the linear regression analysis described above under “—Computation of the Model”.

“weight 0” means an amount equal to 100% – (the sum of weight 1, weight 2, weight 3, weight 4 and weight 5b), the weighting for the Cash Factor. This method of weighting the 3-month US Treasury Bill effectively represents the return on a hypothetical cash position;

“3-month Treasury Bill Security Price<sub>MCD</sub>” means the mid-market price of the U.S. Treasury Bill security that is the active 3-month Treasury Bill as of the most recent preceding Model Rebalancing Day.

“EUO ETF dividends<sub>RD, MCD</sub>” means the value in USD of cash distributions having ex-dividend dates from and excluding the preceding Model Rebalancing Day, to and including the applicable Model Calculation Day

The Model value for and as of each Model Calculation Day will be determined in accordance with the following formula:

$$\text{Model Value}_{\text{MCD}} = (\text{AMFTR} + 1) * \text{Model Closing Value}_{\text{RD}}$$

The daily and intraday Model value is calculated and reported on major market data vendors. In addition, the Model Sponsor maintains a website at <http://www.baml.com/factormodelxs> that displays information related to the Model. This website includes reference to the web addresses of each of the specific Model Factors where you can find additional information regarding the Model Factors.

The Model value will in no event be less than zero. If on any Model Calculation Day the Model value is equal to zero, the Model value from that time forward will be equal to zero and the Model Sponsor will cease to adjust Model Factor weights on future Model Rebalancing Dates.

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If on any Model Calculation Day, there is a Market Disruption Event with respect to any of the Model Factors, the next Model Calculation Day will be the next succeeding Exchange Business Day on which there is no Market Disruption Event; *provided* that if a Market Disruption Event has occurred on each of the two succeeding Exchange Business Days, then (i) such second succeeding Exchange Business Day will be deemed to be the relevant Model Calculation Day for the Model notwithstanding the occurrence of a Market Disruption Event on such day and (ii) with respect to any such second succeeding Exchange Business Day on which a Market Disruption Event occurs, the value of the disrupted Model Factor(s) on such second succeeding Model Business Day will be the mean, as determined by the Model Sponsor, of the values of the disrupted Model Factor(s) on such trading day obtained from recognized dealers in instruments related to such Model Factor(s) and the component securities of such Model Factor(s) selected by the Model Sponsor (which may not exceed three). Bids of the Model Sponsor or any of its affiliates may be included in the calculation of such mean, but only to the extent that any such bid is the highest of the bids obtained.

In the event of a discontinuation of the publication of the HFRI Composite Index, the Model Factor weights will be fixed at their last rebalanced levels if a successor to the HFRI Composite Index is not selected.

“Market Disruption Event” means the occurrence or existence of (i) the failure of the applicable Factor Publisher (as defined below) to publish a closing level for a Model Factor as of the applicable Valuation Time or (ii) an Exchange Disruption which the Model Sponsor determines is material at any time during the one-hour period that ends at the relevant Valuation Time or for any period of more than two hours during the relevant trading day. For the avoidance of doubt, a Market Disruption Event may occur with respect to any of the Model Factors.

“Exchange Disruption” means any event that disrupts or impairs (as determined by the Model Sponsor) the ability of market participants in general (i) to effect transactions in, or obtain market values for, any Model Securities, or (ii) to effect transactions in, or obtain market values for, futures or options contracts relating to a Model Security on any relevant Related Exchange.

“Valuation Time” means, in respect of each Model Factor, (i) the scheduled time for the publication by the Model Sponsor of the closing level of a Model Factor or (ii), in the case of an Exchange Disruption, the close of trading on the relevant Exchange on which a Model Security is traded.

## Model Methodology

The Model uses a methodology different from that used by the Merrill Lynch Factor Model created by the Model Sponsor in 2006 (“the 2006 Model”). The Model Sponsor does not guarantee that any results obtained from the Model are similar to results obtained from the 2006 Model.

The Model Calculator will employ the methodology described above and its determinations in the application of such methodology shall be final, except in the case of manifest error.

In addition, the Model Sponsor may modify the Model without the consent of any person for the purposes of curing any ambiguity or correcting or supplementing any provision contained herein that is defective or inconsistent with the other provisions or replacing any information provider or information source named herein or any previous replacement information provider or source. The Model Sponsor will have no obligation to inform any person about such modification, change or replacement. The Model Sponsor will make reasonable efforts to assure that such modifications, changes and replacements will result in a methodology that is consistent with the methodology described above.

## Discontinuance of Model Factors; Substitution of Model Factors

If a Factor Publisher (as defined below) discontinues publication of a Model Factor and the Factor Publisher or another entity publishes a successor or substitute index that the Model Sponsor determines, in its sole discretion, to be comparable to that Model Factor (a “successor factor”), then, upon the Model Sponsor’s notification of that determination to the Model Calculator, the Model Calculator will substitute the successor factor as calculated by the Factor Publisher or any other entity for the Model Factor. In the event that a Factor Publisher discontinues publication or disallows the use of a Model Factor by the Model and, with respect to any Business Day and:

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a successor factor has not been selected; or  
the successor factor is not published on such  
Business Day,

the Model Sponsor will, in its sole discretion, compute a substitute level for that Model Factor for that Business Day and provide the value to the Model Calculator. If a successor factor is selected or the Model Sponsor calculates and provides to the Model Calculator a level as a substitute for a Model Factor, the successor factor or level will be used as a substitute for that Model Factor for all purposes, including for the purposes of calculating the relevant daily Model closing value and determining whether a Market Disruption Event exists.

Notwithstanding these alternative arrangements, discontinuance of the publication, or disallowing use of a Model Factor may adversely affect trading in any financial instruments linked to the Model.

A “Factor Publisher” means each of Standard & Poor’s, the Frank Russell Company and MSCI.

The Model Sponsor may substitute one or more Model Factors with other indices or other market measures and may make related changes to the methodology for Model Factor weighting in the following events:

- i. If the Model Sponsor concludes that the use of such substitute market measures would produce a better correlation between the performance of the HFRI Composite Index (or successor benchmark index), on the one hand, and the performance of the various Model Factors, including the new market measures, on the other hand.
- ii. If a Factor Publisher disallows the use of a Model Factor by the Model, or if the use of a Model Factor becomes prohibitively expensive.

Any such substitutions would take place as of a Model Rebalancing Day selected by the Model Sponsor. If substitutions are made, the Model Sponsor may in its sole discretion also make changes to the parameters for the component weightings (e.g., that a Model Factor must have a value equal to or greater than -100% and not more than 100%) for the new market measures as well as the Model Factors that have not been substituted in order to improve correlation to the performance of the HFRI Composite Index, or successor benchmark index. From the time of the introduction of any new market measure into the Model, such market measure shall be considered a “Model Factor” for the purposes of the model methodology and may itself be subject to substitution in the future.



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