

Underlying supplement no. 17-I  
To prospectus dated November 14, 2011 and  
prospectus supplement dated November 14, 2011

Registration Statement No. 333-177923  
Dated July 26, 2013  
Rule 424(b)(2)

# JPMORGAN CHASE & CO.

## ***Notes Linked to the J.P. Morgan ETF Efficiente DS 5 Index***

JPMorgan Chase & Co. may, from time to time, offer and sell notes linked in whole or in part to the J.P. Morgan ETF Efficiente DS 5 Index (the "Index"). This underlying supplement no. 17-I describes the Index, the relationship between JPMorgan Chase & Co. and the sponsor of the Index and other relevant information. This underlying supplement no. 17-I supplements the terms described in the accompanying product supplement, prospectus supplement and prospectus. A separate term sheet or pricing supplement, as the case may be, will describe terms that apply to specific issuances of the notes, including any changes to the terms specified below. We refer to such term sheets and pricing supplements generally as terms supplements. The accompanying product supplement, the relevant terms supplement or another accompanying underlying supplement will describe any other index or reference asset to which the notes are linked. If the terms described in the relevant terms supplement are inconsistent with those described herein or in any other accompanying underlying supplement or in the accompanying product supplement, prospectus supplement or prospectus, the terms described in the relevant terms supplement will control. In addition, if this underlying supplement no. 17-I and the accompanying product supplement or another accompanying underlying supplement contain information relating to the same index to which the notes are linked, the information contained in the document with the most recent date will control.

The Index is subject to the deduction of a fee of 1.00% per annum deducted daily.

**Investing in the notes involves a number of risks. See "Risk Factors" in the accompanying product supplement and "Risk Factors" beginning on page US-6.**

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the notes or passed upon the accuracy or the adequacy of this underlying supplement no. 17-I, the accompanying product supplement, prospectus supplement and prospectus, any other accompanying underlying supplement or the relevant terms supplement. Any representation to the contrary is a criminal offense.

***The notes are not bank deposits and are not insured by the Federal Deposit Insurance Corporation or any other governmental agency, nor are they obligations of, or guaranteed by, a bank.***

J.P.Morgan

July 26, 2013

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We have not authorized anyone to provide any information other than that contained or incorporated by reference in the relevant terms supplement, any other accompanying underlying supplement, this underlying supplement no. 17-I and the accompanying product supplement, prospectus supplement and prospectus with respect to the notes offered by the relevant terms supplement and with respect to JPMorgan Chase & Co. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This underlying supplement no. 17-I, together with the relevant terms supplement, any other accompanying underlying supplement and the accompanying product supplement, prospectus supplement and prospectus, contains the terms of the notes and supersedes all other prior or contemporaneous oral statements as well as any other written materials including preliminary or indicative pricing terms, correspondence, trade ideas, structures for implementation, sample structures, fact sheets, brochures or other educational materials of ours. The information in the relevant terms supplement, any other accompanying underlying supplement, this underlying supplement no. 17-I and the accompanying product supplement, prospectus supplement and prospectus may only be accurate as of the dates of each of these documents, respectively.

The notes described in the relevant terms supplement, the accompanying product supplement, any other accompanying underlying supplement and this underlying supplement no. 17-I are not appropriate for all investors, and involve important legal and tax consequences and investment risks, which should be discussed with your professional advisers. You should be aware that the regulations of Financial Industry Regulatory Authority, Inc., or FINRA, and the laws of certain jurisdictions (including regulations and laws that require brokers to ensure that investments are suitable for their customers) may limit the availability of the notes. The relevant terms supplement, this underlying supplement no. 17-I, any other accompanying underlying supplement and the accompanying product supplement, prospectus supplement and prospectus do not constitute an offer to sell or a solicitation of an offer to buy the notes in any circumstances in which such offer or solicitation is unlawful.

In this underlying supplement no. 17-I, any other accompanying underlying supplement, the relevant terms supplement and the accompanying product supplement, prospectus supplement and prospectus, “we,” “us” and “our” refer to JPMorgan Chase & Co., unless the context requires otherwise. To the extent applicable, the index described in this underlying supplement no. 17-I is deemed to be one of the “Indices” referred to in the accompanying product supplement.

## SUPPLEMENTAL TERMS OF NOTES

*The following supplemental terms of the notes supplement, and to the extent they are inconsistent, supersede, the description of the general terms of the debt securities set forth in the accompanying product supplement and under the headings "Description of Notes" in the accompanying prospectus supplement and "Description of Debt Securities" in the accompanying prospectus. A separate terms supplement will describe the terms that apply to specific issuances of the notes, including any changes to the terms specified below. Capitalized terms used but not defined in this underlying supplement no. 17-I have the meanings assigned in the accompanying product supplement, prospectus supplement, prospectus, the relevant terms supplement and any other accompanying underlying supplement.*

### General

The notes are unsecured and unsubordinated obligations of JPMorgan Chase & Co. linked in whole or in part to the J.P. Morgan ETF Efficiente DS 5 Index (the "**ETF Efficiente Index**").

The specific terms of the notes will be described in the relevant terms supplement accompanying this underlying supplement no. 17-I and any additional underlying supplement. The terms described in those documents supplement those described herein and in any other accompanying underlying supplement, the accompanying product supplement, prospectus supplement and prospectus. If the terms described in the relevant terms supplement are inconsistent with those described herein or in any other accompanying underlying supplement, the accompanying product supplement, prospectus supplement or prospectus, the terms described in the relevant terms supplement will control.

### Payment at Maturity

Notwithstanding anything to the contrary in the accompanying product supplement, with respect to the ETF Efficiente Index, a "**trading day**" is, unless otherwise specified in the relevant terms supplement, a day, as determined by the calculation agent, on which (a) trading is generally conducted on the relevant exchange for each Basket Constituent composing the ETF Efficiente Index (other than the Cash Constituent) and the principal options and futures exchanges relating to that Basket Constituent and (b) banking institutions in The City of New York are not otherwise authorized or required by law, regulation or executive order to close.

The "**ETF Constituents**" means the exchange-traded funds (each an "**ETF**," and collectively the "**ETFs**") (or any successor or substitute ETF or index included in the ETF Efficiente Index) composing the ETF Efficiente Index. As of July 26, 2013, the ETF Constituents were the SPDR® S&P 500® ETF Trust, iShares® Russell 2000 ETF, iShares® MSCI EAFE ETF, iShares® 20+ Year Treasury Bond ETF, iShares® iBoxx \$ Investment Grade Corporate Bond ETF, iShares® iBoxx \$ High Yield Corporate Bond ETF, iShares® MSCI Emerging Markets ETF, iShares® J.P. Morgan USD Emerging Markets Bond ETF, iShares® U.S. Real Estate ETF, iShares® S&P GSCI™ Commodity-Indexed Trust, SPDR® Gold Trust and the iShares® TIPS Bond ETF. The "**Cash Constituent**" means the JPMorgan Cash Index USD 3 Month (or any successor or substitute cash index included in the ETF Efficiente Index). The "**Basket Constituents**" means the ETF Constituents together with the Cash Constituent.

We refer to any ETF Constituent that tracks an equity or bond index or invests primarily in equity or debt securities as an "**Equity/Bond ETF Constituent**." We refer to any ETF Constituent that tracks a commodity index or invests primarily in commodities or commodity futures contracts as a "**Commodity ETF Constituent**." "**Reference Index**" means, with respect to a Basket Constituent that is an ETF, the index, if applicable, underlying that Basket Constituent. "**Reference Commodity**" means, with respect to an ETF Constituent, each commodity, if applicable, underlying that ETF Constituent.

The “**index calculation agent**” means J.P. Morgan Securities plc (“**JPMS plc**”) or any affiliate or subsidiary designated by JPMS plc to calculate and publish the official closing level of the ETF Efficiente Index. The index calculation agent is currently JPMS plc. See “The J.P. Morgan ETF Efficiente DS 5 Index” below. JPMS plc is our affiliate and may have interests adverse to you. Please see “Risk Factors — Risks Relating to the ETF Efficiente Index — JPMS plc, the index calculation agent, may adjust the ETF Efficiente Index in a way that affects its level, and JPMS plc has no obligation to consider your interests.”

## **Postponement of a Determination Date**

### ***Notes linked solely to the ETF Efficiente Index***

Notwithstanding anything to the contrary in the accompanying product supplement, for notes linked solely to the ETF Efficiente Index, the following provisions will apply. If a Determination Date is not a trading day or if there is a market disruption event on that Determination Date (any such day, a “**Disrupted Day**”), the applicable Determination Date will be postponed to the immediately succeeding business day that is not a Disrupted Day.

In no event, however, will any Determination Date be postponed to a date that is after the applicable Final Disrupted Determination Date (as defined in the accompanying product supplement). If a Determination Date is or has been postponed to the applicable Final Disrupted Determination Date and that day is a Disrupted Day, the calculation agent will determine the Index closing level for that Determination Date on that Final Disrupted Determination Date in accordance with the formula for and method of calculating the Index closing level last in effect prior to the commencement of the market disruption event (or prior to the non-trading day), using:

- (a) the closing price (or, if trading in the relevant Basket Constituent has been materially suspended or materially limited, the calculation agent’s good faith estimate of the closing price that would have prevailed but for that suspension or limitation or non-trading day) on the business day immediately preceding that Final Disrupted Determination Date of the shares of each Basket Constituent that is an ETF (including any relevant successor or substitute Basket Constituent that is an ETF);
- (b) the official closing price, fixing level, settlement price or any other relevant published trading price or level (or, if trading in the relevant securities, commodities or futures contracts has been materially suspended or materially limited, the calculation agent’s good faith estimate of the closing price, fixing level, settlement price or other trading price or level that would have prevailed but for that suspension or limitation or non-trading day) on the business day immediately preceding that Final Disrupted Determination Date of each security, commodity or futures contract most recently composing each Basket Constituent that is an index (including any relevant successor or substitute Basket Constituent that is an index) (other than the Cash Constituent) and, with respect to any Basket Constituent that holds futures contracts, any futures contract required to roll any expiring futures contract in accordance with the method of calculating that Basket Constituent; and
- (c) the deposit rates underlying the Cash Constituent (or, if such deposit rates are not published on that day, the calculation agent’s good faith estimate of such deposit rates) on the business day immediately preceding that Final Disrupted Determination Date.

### ***Notes linked to the ETF Efficiente Index and other reference assets***

If the notes are linked to the ETF Efficiente Index and other reference assets, the provisions relating to postponement of a Determination Date as set forth in the accompanying product supplement will apply, except that if a Determination Date is or has been postponed to the Final Disrupted Determination Date and, on that day, the Index closing level has not been established in accordance

with the postponement provisions of the accompanying product supplement that apply prior to the applicable Final Disrupted Determination Date, the Index closing level for that Determination Date will be determined by the calculation agent on the applicable Final Disrupted Determination Date in accordance with the formula for and method of calculating the Index closing level last in effect prior to the commencement of the market disruption event (or prior to the non-trading day), using:

- (a) the closing price (or, if trading in the relevant Basket Constituent has been materially suspended or materially limited, the calculation agent's good faith estimate of the closing price that would have prevailed but for that suspension or limitation or non-trading day) on the business day immediately preceding that Final Disrupted Determination Date of the shares of each Basket Constituent that is an ETF (including any relevant successor or substitute Basket Constituent that is an ETF);
- (b) the official closing price, fixing level, settlement price or any other relevant published trading price or level (or, if trading in the relevant securities, commodities or futures contracts has been materially suspended or materially limited, the calculation agent's good faith estimate of the closing price, fixing level, settlement price or other trading price or level that would have prevailed but for that suspension or limitation or non-trading day) on the business day immediately preceding that Final Disrupted Determination Date of each security, commodity or futures contract most recently composing each Basket Constituent that is an index (including any relevant successor or substitute Basket Constituent that is an index) (other than the Cash Constituent) and, with respect to any Basket Constituent that holds futures contracts, any futures contract required to roll any expiring futures contract in accordance with the method of calculating that Basket Constituent; and
- (c) the deposit rates underlying the Cash Constituent (or, if such deposit rates are not published on that day, the calculation agent's good faith estimate of such deposit rates) on the business day immediately preceding that Final Disrupted Determination Date.

## Market Disruption Events

Notwithstanding anything to the contrary in the accompanying product supplement, the following provisions will apply to notes linked in whole or in part to the ETF Efficiente Index. With respect to the ETF Efficiente Index or any relevant successor index, a "**market disruption event**," unless otherwise specified in the relevant terms supplement, means:

- (1) any suspension of, or limitation on, trading imposed by the relevant exchange for any Basket Constituent (other than the Cash Constituent);
- (2) any other event has occurred that disrupts or impairs the ability of market participants in general to effect transactions in, or obtain market values for any Basket Constituent that is an ETF or any securities, commodities or futures contracts, as applicable, that compose 20% or more of (a) with respect to any Basket Constituent that is an ETF, the level of the relevant Reference Index or, if that Basket Constituent does not have a Reference Index, the value of that Basket Constituent or (b) with respect to any Basket Constituent that is an index (other than the Cash Constituent), the level of the relevant Basket Constituent;
- (3) the closure of any relevant exchange for any Basket Constituent (other than the Cash Constituent) prior to its scheduled closing time unless that earlier closing time is announced at least one hour prior to the actual closing time;
- (4) the failure of any relevant exchange with respect to any Basket Constituent (other than the Cash Constituent) to open;

- (5) the closure of a material number of leading commercial banks in The City of New York prior to their scheduled weekday closing time;
- (6) the failure of the British Bankers Association (or any other relevant entity) to report the LIBOR rates used to calculate the Cash Constituent; or
- (7) the failure of the index calculation agent to calculate and publish the official closing level of the ETF Efficiente Index,

in each case as determined by the calculation agent in its sole discretion; and

- in the case of an event described in clause (1), (2) or (3) above, a determination by the calculation agent in its sole discretion that the applicable event described above materially interfered with our ability or the ability of any of our affiliates to adjust or unwind all or a material portion of any hedge with respect to the notes.

A limitation on the hours or number of days of trading will not constitute a market disruption event with respect to the ETF Efficiente Index or any relevant successor index if the limitation results from an announced change in the regular business hours of the relevant exchange or market.

Notwithstanding any contrary definition in the accompanying product supplement, “**relevant exchange**” means, (i) with respect to each Basket Constituent that is an ETF, (1) the primary exchange or market of trading for that Basket Constituent, (2) the primary exchange or market of trading for any security, commodity or futures contract (or, in each case, any combination thereof) included in the Reference Index for that Basket Constituent or (3) if that Basket Constituent does not have a Reference Index, the primary exchange or market of trading for any security, commodity or futures contract (or, in each case, any combination thereof) included in that Basket Constituent, and (ii) with respect to each Basket Constituent that is an index (other than the Cash Constituent, the primary exchange or market of trading for any security, commodity or futures contract (or, in each case, any combination thereof) included in that Basket Constituent.

### **Consequences of a Commodity Hedging Disruption Event**

The concept of a commodity hedging disruption event will apply to notes linked in whole or in part to the ETF Efficiente Index. Please see the accompanying product supplement for more information about commodity hedging disruption events and their consequences.

### **Discontinuation of the ETF Efficiente Index; Alteration of Method of Calculation**

The provisions relating to the discontinuation of an index as set forth in the accompanying product supplement will apply, except that if the calculation agent is to determine the Index closing level for the ETF Efficiente Index or any successor index for any Determination Date because no successor index for the ETF Efficiente Index is available at that time, or the calculation agent has previously selected a successor index for that Index and publication of that successor index is discontinued prior to, and that discontinuation is continuing on, that Determination Date or other relevant date, then the Index closing level will be computed by the calculation agent in accordance with the formula for and method of calculating the ETF Efficiente Index or successor index, as applicable, last in effect prior to that discontinuation, using:

- (a) the closing price (or, if trading in the relevant Basket Constituent has been materially suspended or materially limited, the calculation agent’s good faith estimate of the closing price that would have prevailed but for that suspension or limitation) on that date of the shares of each Basket Constituent that is an ETF (including any relevant successor or substitute Basket Constituent that is an ETF) most recently composing the ETF Efficiente Index or that successor index, as applicable;

- (b) the official closing price, fixing level, settlement price or any other relevant published trading price or level (or, if trading in the relevant securities, commodities or futures contracts has been materially suspended or materially limited, the calculation agent's good faith estimate of the closing price, fixing level, settlement price or other trading price or level that would have prevailed but for that suspension or limitation) on that date of each Basket Constituent that is an index (including any relevant successor or substitute Basket Constituent that is an index) (other than the Cash Constituent) and, with respect to any Basket Constituent that holds futures contracts, any futures contract required to roll any expiring futures contract in accordance with the method of calculating that Basket Constituent most recently composing the ETF Efficiente Index or that successor index, as applicable; and
- (c) the deposit rates underlying the Cash Constituent (or, if such deposit rates are not published on that date, the calculation agent's good faith estimate of such deposit rates) on that date.

## RISK FACTORS

*Your investment in the notes will involve certain risks. Investing in the notes is not equivalent to investing directly in the Index, any of the Basket Constituents or any of the securities, commodities, commodity futures contracts or other assets underlying the Basket Constituents, as applicable, or any futures contracts or exchange-traded or over-the-counter instruments based on, or other instruments linked to, any of the foregoing. You should consider carefully the risks discussed under “Risk Factors” in the accompanying product supplement and in any other accompanying underlying supplement, together with the following discussion of additional risks, before you decide that an investment in the notes is suitable for you.*

### **Risks Relating to the ETF Efficiente Index**

**JPMS plc, the index calculation agent, may adjust the ETF Efficiente Index in a way that affects its level, and JPMS plc has no obligation to consider your interests.**

JPMS plc, one of our affiliates, currently acts as the index calculation agent and is responsible for calculating and maintaining the ETF Efficiente Index and developing the guidelines and policies governing its composition and calculation. It is entitled to exercise discretion in relation to the ETF Efficiente Index, including but not limited to the calculation of the level of the ETF Efficiente Index in the event of an Index Market Disruption Event (as defined in “The J.P. Morgan ETF Efficiente DS 5 Index”). Although JPMS plc acting as the index calculation agent will make all determinations and take all action in relation to the ETF Efficiente Index acting in good faith, it should be noted that the policies and judgments for which JPMS plc is responsible could have an impact, positive or negative, on the level of the ETF Efficiente Index and the value of your notes. JPMS plc may also amend the rules governing the ETF Efficiente Index in certain circumstances.

Although judgments, policies and determinations concerning the ETF Efficiente Index are made by JPMS plc, JPMorgan Chase & Co., as the ultimate parent company of JPMS plc, ultimately controls JPMS plc. JPMS plc has no obligation to consider your interests in taking any actions that might affect the value of your notes. Furthermore, the inclusion of the Basket Constituents in the ETF Efficiente Index is not an investment recommendation by us or JPMS plc of the Basket Constituents or any of the securities, commodities or futures contracts underlying the Basket Constituents. See “The J.P. Morgan ETF Efficiente DS 5 Index.”

**We are affiliated with the sponsor of one of the Basket Constituents and with the sponsor of the index underlying one of the ETF Constituents.**

J.P. Morgan Securities LLC, which we refer to as JPMS, one of our affiliates, is the sponsor of one of the Basket Constituents (the JPMorgan Cash Index USD 3 Month). JPMS will have no obligation to consider your interests as a holder of the notes in taking any actions that might affect the value of your notes.

JPMS is also the sponsor of the JPMorgan EMBI Global Core Index, which is the index underlying the iShares® J.P. Morgan USD Emerging Markets Bond ETF, one of the Basket Constituents. JPMS may, as a last resort, if there are no valid prices available for composite instruments included in the JPMorgan EMBI Global Core Index, price such composite instruments by asking JPMS traders to provide a market bid and ask. Neither JPMS nor we will have any obligation to consider your interests as a holder of the notes in taking any actions that might affect the value of your notes.



**We are currently one of the companies that make up the SPDR® S&P 500® ETF Trust, but, to our knowledge, we are not affiliated with any other company the securities of which are held by the Basket Constituents.**

We are currently one of the companies that make up the SPDR® S&P 500® ETF Trust, but, to our knowledge, we are not currently affiliated with any other issuers the securities of which are held by the Basket Constituents. As a result, we will have no ability to control the actions of the other issuers of such securities, including actions that could affect the value of the securities held by the Basket Constituents or your notes. None of the money you pay us will go to the sponsors of the Basket Constituents or any of the other issuers the securities of which are held by the Basket Constituents and none of those other issuers will be involved in the offering of the notes in any way. Neither those other issuers nor we will have any obligation to consider your interests as a holder of the notes in taking any actions that might affect the value of your notes.

In the event we become affiliated with any other issuers the securities of which are held by any Basket Constituent, we will have no obligation to consider your interests as a holder of the notes in taking any action with respect to such issuer that might affect the value of your notes.

**The ETF Efficiente Index may not be successful, outperform any alternative strategy that might be employed in respect of the Basket Constituents or achieve its target volatility.**

The ETF Efficiente Index follows a notional rules-based proprietary strategy that operates on the basis of pre-determined rules. No assurance can be given that the investment strategy on which the ETF Efficiente Index is based will be successful or that the ETF Efficiente Index will outperform any alternative strategy that might be employed in respect of the Basket Constituents.

**The ETF Efficiente Index may not achieve its target volatility.**

The exposure of the ETF Efficiente Index to the synthetic portfolio of Basket Constituents is determined by a two-step process, composed of a monthly selection process to determine the weighting assigned to each Basket Constituent in the synthetic portfolio tracked by the ETF Efficiente Index and a daily dynamic adjustment of the exposure to the synthetic portfolio intended to achieve a target annualized volatility of 5% on a daily basis. The monthly weights and daily adjustments are based on the historical volatility of the synthetic portfolio over specified measurement periods and are subject to maximum aggregate and individual weighting constraints and minimum and maximum exposure limits. However, there is no guarantee that trends existing in the relevant measurement period will continue in the future. The volatility of the synthetic portfolio on any day may change quickly and unexpectedly. Accordingly, the actual realized annualized volatility of the ETF Efficiente Index on a daily basis may be greater than or less than 5%, which may adversely affect the level of the ETF Efficiente Index and the value of the notes.

**The notes may be subject to increased volatility due to the use of leverage.**

As part of the daily dynamic adjustment of its exposure to the synthetic portfolio of Basket Constituents, the ETF Efficiente Index may have an exposure to the synthetic portfolio of up to 150%. When the volatility of the synthetic portfolio over the relevant measurement period is less than the target volatility of 5%, the ETF Efficiente Index will employ leverage to increase the exposure of the portfolio, up to 150%. When the synthetic portfolio is leveraged, any movements in values of the Basket Constituents may result in greater changes in the value of the Basket Constituents than if leverage was not used. In particular, the use of leverage will magnify any negative performance of the Basket Constituents, which, in turn, could cause you to receive a lower payment at maturity than you would otherwise have received.

**The daily adjustment of the exposure of the ETF Efficiente Index to the synthetic portfolio of Basket Constituents may cause the ETF Efficiente Index not to reflect fully any price appreciation or to magnify any price depreciation of the synthetic portfolio.**

As discussed above, in an effort to achieve the target volatility of 5% on a daily basis, the ETF Efficiente Index adjusts its exposure to the synthetic portfolio of Basket Constituents daily based on the historical volatility of the synthetic portfolio over a specified measurement period, subject to maximum and minimum exposure limits. When the historical volatility is greater than the target volatility, the ETF Efficiente Index will reduce the exposure to the synthetic portfolio. When the historical volatility is less than the target volatility, the ETF Efficiente Index will increase the exposure to the synthetic portfolio. The exposure may vary between 0% and 150%. Due to the daily exposure adjustments, the ETF Efficiente Index may fail to realize gains due to price appreciation of the synthetic portfolio at a time when the exposure is less than 100% or may suffer increased losses due to price depreciation of the synthetic portfolio when the exposure is above 100%. As a result, the ETF Efficiente Index may underperform a similar index that does not include a daily exposure adjustment feature.

**If the values of the Basket Constituents change, the level of the ETF Efficiente Index and the market value of your notes may not change in the same manner.**

Owning the notes is not the same as owning the Basket Constituents. Accordingly, changes in the values of the Basket Constituents may not result in a comparable change in the level of the ETF Efficiente Index or the market value of your notes.

**The ETF Efficiente Index comprises notional assets and liabilities.**

The exposures to the Basket Constituents are purely notional and will exist solely in the records maintained by or on behalf of the index calculation agent. There is no actual portfolio of assets to which any person is entitled or in which any person has any ownership interest. Consequently, you will not have any claim against any of the reference assets that comprise the ETF Efficiente Index. The strategy tracks the excess return of a notional dynamic basket of assets over the Cash Constituent and, as such, any exposure to the Cash Constituent will result in this portion of the synthetic portfolio not being invested. Unless an extraordinary event occurs, the Cash Constituent will be subject to a maximum weight of 50% in the ETF Efficiente Index. See "The J.P. Morgan ETF Efficiente DS 5 Index — Extraordinary Events" for information about the consequences of an extraordinary event.

**The level of the ETF Efficiente Index will include the deduction of a fee.**

One way in which the ETF Efficiente Index may differ from a typical index is that its level will include a deduction from the performance of the Basket Constituents over the Cash Constituent of a fee of 1.00% per annum. This fee will be deducted daily. As a result of the deduction of this fee, the level of the ETF Efficiente Index will trail the value of a hypothetical identically constituted synthetic portfolio from which no such fee is deducted.

**The ETF Efficiente Index has a limited operating history and may perform in unanticipated ways.**

The ETF Efficiente Index was established on September 25, 2012 and therefore has a limited operating history. Past performance should not be considered indicative of future performance.

**The ETF Efficiente Index is subject to market risks.**

The performance of the ETF Efficiente Index is dependent on the performance of the thirteen Basket Constituents. As a consequence, your investment in the notes is exposed to the price performance and credit performance of the Basket Constituents.

**Standard & Poor's downgrade of the U.S. government's credit rating, and any future downgrades by credit rating agencies, may adversely affect the performance of the ETF Efficiente Index and the notes.**

On August 6, 2011, Standard & Poor's Ratings Services ("Standard & Poor's"), downgraded the U.S. government's credit rating from AAA to AA+. Additionally, Standard & Poor's and Moody's Investor Services, Inc. have assigned a negative outlook on the U.S. government's credit rating, meaning that the agencies may downgrade the U.S. government's credit rating in the next year or two. The downgrade has increased and may continue to increase volatility in the global equity and credit markets, which may adversely affect the levels of the Basket Constituents. Future downgrades by credit ratings agencies may also increase this volatility. These events may also increase short-term borrowing costs, including the 3-month LIBOR rate underlying the Cash Constituent, which will adversely affect the level of the ETF Efficiente. All of the above may adversely affect the performance of the ETF Efficiente and the notes.

**An investment in the notes carries the risks associated with the ETF Efficiente Index's momentum investment strategy.**

The ETF Efficiente Index is constructed using what is generally known as a momentum investment strategy. Momentum investing generally seeks to capitalize on positive trends in the price of assets. As such, the weights of the Basket Constituents in the ETF Efficiente Index are based on the performance of the Basket Constituents from the immediately preceding six months. However, there is no guarantee that trends existing in the preceding six months will continue in the future. A momentum strategy is different from a strategy that seeks long-term exposure to a portfolio consisting of constant components with fixed weights. The ETF Efficiente Index may fail to realize gains that could occur as a result of holding assets that have experienced price declines, but after which experience a sudden price spike. As a result, if market conditions do not represent a continuation of prior observed trends, the level of the ETF Efficiente Index, which is rebalanced based on prior trends, may decline. Additionally, even when the closing prices or levels of the Basket Constituents are trending downwards, the ETF Efficiente Index will continue to be composed of the thirteen Basket Constituents. Due to the "long-only" construction of the ETF Efficiente Index, the weight of each Basket Constituent will not fall below zero in respect of each Monthly Re-weighting Date even if the relevant Basket Constituent displayed a negative performance over the relevant six month period. No assurance can be given that the investment strategy used to construct the ETF Efficiente Index will outperform any alternative index that might be constructed from the Basket Constituents.

**The ETF Efficiente Index may perform poorly during periods characterized by short-term volatility.**

The ETF Efficiente Index's strategy is based on momentum investing. Momentum investing strategies are effective at identifying the current market direction in trending markets. However, in non-trending, sideways markets, momentum investment strategies are subject to "whipsaws." A whipsaw occurs when the market reverses and does the opposite of what is indicated by the trend indicator, resulting in a trading loss during the particular period. Consequently, the ETF Efficiente Index may perform poorly in non-trending, "choppy" markets characterized by short-term volatility.

**The investment strategy used to construct the ETF Efficiente Index involves monthly rebalancing and weighting caps that are applied to the Basket Constituents and daily adjustments to the exposure to the synthetic portfolio consisting of the Basket Constituents.**

The Basket Constituents are subject to monthly rebalancing and maximum weighting caps by asset type and on subsets of assets based on historical volatility and daily adjustments to the exposure to the synthetic portfolio consisting of the Basket Constituents. By contrast, a synthetic portfolio that does not rebalance monthly and is not subject to any weighting caps or daily exposure adjustments in this manner could see greater compounded gains over time through exposure to a consistently and rapidly appreciating portfolio consisting of the Basket Constituents. Therefore, your return on the notes may be less than the return you could realize on an alternative investment in the Basket Constituents that is not subject to monthly rebalancing, weighting caps or daily exposure adjustments. No assurance can be given that the investment strategy used to construct the ETF Efficiente Index will outperform any alternative investment in the Basket Constituents.

### **The ETF Efficiente Index may be partially uninvested.**

The aggregate weight of the Cash Constituent at any given time represents the portion of the synthetic portfolio that is uninvested at that time. The ETF Efficiente Index will reflect no return for any uninvested portion (including any portion represented by the Cash Constituent). While the weight of the Cash Constituent is normally limited by a weighting constraint of 50%, if, as a result of an extraordinary event, any Basket Constituent is replaced with the Cash Constituent, as described below, the aggregate weight of the Cash Constituent would be allowed to exceed 50% because a portion of that aggregate weight would be subject to the weighting constraints specific to the replaced Basket Constituent and not the weighting constraint specific to the Cash Constituent. See “The Basket Constituents composing the ETF Efficiente Index may be replaced by a substitute ETF or index in certain extraordinary events” below.

In addition, when the exposure of the ETF Efficiente Index to the synthetic portfolio of Basket Constituents is less than 100% on any day, a portion of the synthetic portfolio will be uninvested. For example, if the daily exposure is set at 70%, and assuming the weight of the Cash Constituent is 0%, 30% of the synthetic portfolio will be uninvested. The ETF Efficiente Index will reflect no return for any uninvested portion.

### **The Basket Constituents composing the ETF Efficiente Index may be replaced by a substitute ETF or index in certain extraordinary events.**

Following the occurrence of certain extraordinary events with respect to a Basket Constituent as described under “The J.P. Morgan ETF Efficiente DS 5 Index — Extraordinary Events,” the affected Basket Constituent may be replaced by a substitute ETF or index. If the index calculation agent determines in its discretion that no suitable substitute ETF or index is available for an affected Basket Constituent (other than the Cash Constituent), then the index calculation agent will replace that Basket Constituent with the Cash Constituent as its substitute. Under such circumstances, the aggregate weight of the Cash Constituent in the ETF Efficiente Index may be greater than the maximum 50% weight limit allocated for the Cash Constituent because a portion of such aggregate weight would be subject to the separate maximum weight limit specific to the affected Basket Constituent. You should realize that the changing of a Basket Constituent may affect the performance of the ETF Efficiente Index, and therefore, the return on the notes, as the replacement Basket Constituent may perform significantly better or worse than the affected Basket Constituent.

### **Any of the ETF Constituents may be replaced by an index under extraordinary circumstances, in which case the risks relating to indices will affect the level of the ETF Efficiente Index and therefore the value of the notes.**

Under certain extraordinary circumstances, any ETF Constituent may be replaced by a substitute index that possesses substantially similar characteristics or provides a substantially similar exposure as the ETF Constituent being replaced, as determined by the index calculation agent in its discretion. As a holder of the notes, you will not have rights that holders of the assets underlying a substitute index would have such as, if applicable, voting rights or rights to dividends or other distributions. If the substitute index is an equity index that is not a total return index, the value of the substitute index will not reflect dividends on the equity securities included in such equity index.

Moreover, the policies of the sponsor of the substitute index concerning the methodology and calculation of the substitute index, including decisions regarding additions, deletions or substitutions of the assets underlying the substitute index could affect the level of the substitute index and therefore the value of the notes. The amount payable on the notes and their market value could also be affected if the sponsor of the substitute index discontinues or suspends calculation or dissemination of the substitute index, in which case it may become difficult to determine the market value of the notes. The index sponsor of the substitute index will have no obligation to consider your interests in calculating or revising such substitute index.

If the assets included in the substitute index are denominated in currencies other than U.S. dollars, then the notes will be subject to currency exchange risk. If the assets underlying a substitute index have been issued by non-U.S. companies or non-U.S. governments, the level of the substitute index and therefore the value of the notes will be affected by political, economic, financial and social factors in the relevant countries, including changes in a relevant country's government, economic and fiscal policies, currency exchange laws and other foreign laws or restrictions. See the relevant terms supplement for additional information regarding the risks associated with any substitute index.

**Correlation of performances among the Basket Constituents may reduce the performance of the notes.**

Performances of the Basket Constituents may become highly correlated from time to time during the term of the notes, including, but not limited to, a period in which there is a substantial decline in a particular sector or asset type represented by the Basket Constituents and which has a higher weighting in the ETF Efficiente Index relative to any of the other sectors or asset types, as determined by the ETF Efficiente Index's strategy. High correlation during periods of negative returns among Basket Constituents representing any one sector or asset type and which Basket Constituents have a substantial percentage weighting in the ETF Efficiente Index could have an adverse effect on any payments on, and the value of, your notes.

**Changes in the value of the Basket Constituents may offset each other.**

Because the notes are linked to the ETF Efficiente Index that is linked to the performance of the Basket Constituents, which collectively represent a diverse range of asset classes and geographic regions, price movements between the Basket Constituents representing different asset classes or geographic regions may not correlate with each other. At a time when the value of a Basket Constituent representing a particular asset class or geographic region increases, the value of other Basket Constituents representing a different asset class or geographic region may not increase as much or may decline. Therefore, in calculating the level of the ETF Efficiente Index, increases in the values of some of the Basket Constituents may be moderated, or more than offset, by lesser increases or declines in the values of other Basket Constituents.

**The value of the notes could be affected by a recent change in ownership of a Reference Index.**

In July 2012, The McGraw-Hill Companies, Inc. ("**McGraw-Hill**"), the owner of the S&P Indices business, and CME Group Inc. ("**CME Group**"), the 90% owner of the CME Group and Dow Jones & Company, Inc. joint venture that owns the Dow Jones Indexes business, formed a new joint venture, S&P Dow Jones Indices, which owns the S&P Indices business and the Dow Jones Indexes business, including the S&P 500® Index, the Dow Jones U.S. Real Estate Index or the S&P GSCI™ Total Return Index. While it's unclear what effect, if any, this change in ownership will have on these Reference Indices or on the notes, any changes to the methodology of a relevant Reference Index could affect adversely the level of the applicable Basket Constituent and, accordingly, the value of your notes.

**Risks Relating to the Equity/Bond ETF Constituents**

**The notes will be subject to currency exchange risk.**

Because the prices of some or all of the securities composing two of the thirteen Basket Constituents (the iShares® MSCI EAFE ETF and the iShares® MSCI Emerging Markets ETF) (the "**Component Securities**") are converted into U.S. dollars for the purposes of calculating the value of the relevant Basket Constituents, holders of the notes will be exposed to currency exchange rate risk with respect to each of the relevant currencies. An investor's net exposure will depend on the extent to which such currencies strengthen or weaken against the U.S. dollar and the weight of the Component Securities in the relevant Basket Constituents denominated in each such currency. If, taking into account such weighting, the U.S. dollar strengthens against those currencies, the value of the relevant Basket Constituents will be adversely affected and any return on the notes may be reduced.

Of particular importance to potential currency exchange risk are:

- existing and expected rates of inflation;
- existing and expected interest rate levels;
- the balance of payments;
- political, civil or military unrest; and
- the extent of governmental surpluses or deficits in the relevant countries and the United States.

All of these factors are, in turn, sensitive to the monetary, fiscal and trade policies pursued by the governments of various countries, the United States and other countries important to international trade and finance.

**If the prices of the securities held by an ETF Constituent holding primarily foreign securities (a “foreign ETF Constituent”) are not converted into U.S. dollars for purposes of calculating the net asset value of that foreign ETF Constituent, the amount payable on the notes at maturity will not be adjusted for changes in exchange rates that might affect that foreign ETF Constituent.**

Because the prices of the securities held by a foreign ETF Constituent are not converted into U.S. dollars for purposes of calculating the net asset value of that foreign ETF Constituent and although the securities held by that foreign ETF Constituent are traded in currencies other than U.S. dollars, and the ETF Efficient Index, which is linked in part to that foreign ETF Constituent, are denominated in U.S. dollars, the amount payable on the notes at maturity, if any, will not be adjusted for changes in the exchange rate between the U.S. dollar and each of the currencies in which the securities held by that foreign ETF Constituent are denominated. Changes in exchange rates, however, may reflect changes in various non-U.S. economies that in turn may affect the value of the notes. Any payments in respect of the notes will be determined solely in accordance with the procedures described in the relevant terms supplement.

**Changes in the volatility of exchange rates, and the correlation between those rates and the prices of the iShares® MSCI EAFE ETF and the iShares® MSCI Emerging Markets ETF are likely to affect the market value of the notes.**

The exchange rate between the U.S. dollar and each of the currencies in which the Component Securities are denominated refers to a foreign exchange spot rate that measures the relative values of two currencies – the particular currency in which a Component Security is denominated and the U.S. dollar. This exchange rate reflects the amount of the particular currency in which a Component Security is denominated that can be purchased for one U.S. dollar and thus increases when the U.S. dollar appreciates relative to the particular currency in which a Component Security is denominated. The volatility of the exchange rate between the U.S. dollar and each of the currencies in which the Component Securities are denominated refers to the size and frequency of changes in that exchange rate.

Because the iShares® MSCI EAFE ETF and the iShares® MSCI Emerging Markets ETF are calculated, in part, by converting the closing prices of the Component Securities into U.S. dollars, the volatility of the exchange rate between the U.S. dollar and each of the currencies in which the Component Securities are denominated could affect the market value of the notes.

The correlation of the exchange rate between the U.S. dollar and each of the currencies in which the Component Securities are denominated and the value of the relevant Basket Constituent refer to the relationship between the percentage changes in that exchange rate and the percentage changes in the net asset value of that Basket Constituent. The direction of the correlation (whether positive or negative) and the extent of the correlation between the percentage changes in the exchange rate

between the U.S. dollar and each of the currencies in which the Component Securities are denominated and the percentage changes in the net asset value of that Basket Constituent could affect the value of the notes.

**An investment in the notes is subject to risks associated with non-U.S. securities markets, including emerging markets.**

Some or all of the equity securities that are held by the iShares® MSCI EAFE ETF and the iShares® MSCI Emerging Markets ETF, two of the Basket Constituents, have been issued by non-U.S. issuers. In addition, the iShares® iBoxx \$ Investment Grade Corporate Bond ETF and the iShares® iBoxx \$ High Yield Corporate Bond ETF, which are also Basket Constituents, may include U.S. dollar-denominated bonds of foreign corporations. Investments in securities linked to the value of non-U.S. securities involve risks associated with the securities markets in those countries, including risks of volatility in those markets, governmental intervention in those markets and cross shareholdings in companies in certain countries. Also, there is generally less publicly available information about companies in some of these jurisdictions than about U.S. companies that are subject to the reporting requirements of the Securities and Exchange Commission (the “SEC”), and generally non-U.S. companies are subject to accounting, auditing and financial reporting standards and requirements and securities trading rules different from those applicable to U.S. reporting companies.

Moreover, the bonds held by the iShares® J.P. Morgan USD Emerging Markets Bond ETF have been issued by 33 countries. Investments in the notes, which are linked in part to the economic stability and development of such countries, involve risks associated with investments in, or the securities markets in, those countries.

The prices of securities and government bonds in non-U.S. markets may be affected by political, economic, financial and social factors in such markets, including changes in a country’s government, economic and fiscal policies, currency exchange laws or other laws or restrictions. Moreover, the economies of these countries may differ favorably or unfavorably from the economy of the United States in such respects as growth of gross national product, rate of inflation, capital reinvestment, resources and self-sufficiency. These countries may be subjected to different and, in some cases, more adverse economic environments.

The economies of emerging market countries in particular face several concerns, including relatively unstable governments that may present the risks of nationalization of businesses, restrictions on foreign ownership and prohibitions on the repatriation of assets, and which may have less protection of property rights than more developed countries. These economies may also be based on only a few industries, be highly vulnerable to changes in local and global trade conditions and may suffer from extreme and volatile debt burdens or inflation rates. In addition, local securities markets may trade a small number of securities and may be unable to respond effectively to increases in trading volume, potentially making prompt liquidation of holdings difficult or impossible at times.

Some or all of these factors may influence the value of the relevant Basket Constituents, and therefore, the ETF Efficient Index. The impact of any of the factors set forth above may enhance or offset some or all of any change resulting from another factor or factors. You cannot predict the future performance of such Basket Constituents based on their historical performance. The value of any such Basket Constituents may decrease, resulting in a decrease in the level of the ETF Efficient Index, which may adversely affect the value of the notes.

**The notes are subject to significant risks associated with fixed-income securities, including interest rate-related risks.**

Five of the Basket Constituents (the iShares® 20+ Year Treasury Bond ETF, the iShares® iBoxx \$ Investment Grade Corporate Bond ETF, the iShares® iBoxx \$ High Yield Corporate Bond ETF, the iShares® J.P. Morgan USD Emerging Markets Bond ETF and the iShares® TIPS Bond ETF, which we

collectively refer to as the “**Bond ETFs**”) are bond ETFs that attempt to track the performance of indices composed of fixed-income securities. Investing in the notes linked indirectly to these Basket Constituents differs significantly from investing directly in bonds to be held to maturity as the values of the Bond ETFs change, at times significantly, during each trading day based upon the current market prices of their underlying bonds. The market prices of these bonds are volatile and significantly influenced by a number of factors, particularly the yields on these bonds as compared to current market interest rates and the actual or perceived credit quality of the issuer of these bonds. The market prices of the bonds underlying each of the iShares® iBoxx \$ Investment Grade Corporate Bond ETF and the iShares® iBoxx \$ High Yield Corporate Bond ETF are determined by reference to the bid and ask quotations provided by 9 contributing banks, one of which is our parent company, JPMorgan Chase & Co. JPMS is also the sponsor of the JPMorgan EMBI Global Core Index, which is the index underlying the iShares® J.P. Morgan USD Emerging Markets Bond ETF. JPMS may, as a last resort, if there are no valid prices available for instruments included in the JPMorgan EMBI Global Core Index, price such instruments by asking JPMS traders to provide a market bid and ask.

In general, fixed-income securities are significantly affected by changes in current market interest rates. As interest rates rise, the price of fixed-income securities, including those underlying the Bond ETFs, is likely to decrease. Securities with longer durations tend to be more sensitive to interest rate changes, usually making them more volatile than securities with shorter durations. The eligibility criteria for the securities included in the indices that underlie the Bond ETFs, which each mandate that each security must have a minimum term remaining to maturity (ranging from one year to 20 years) for continued eligibility, means that, at any time, only longer-term securities underlie the Bond ETFs, which thereby increases the risk of price volatility in the underlying securities and, consequently, the volatility in the value of the ETF Efficient Index. As a result, rising interest rates may cause the value of the bonds underlying the Bond ETFs, the Bond ETFs and the ETF Efficient Index to decline, possibly significantly.

Interest rates are subject to volatility due to a variety of factors, including:

- sentiment regarding underlying strength in the U.S. economy and global economies;
- expectations regarding the level of price inflation;
- sentiment regarding credit quality in the U.S. and global credit markets;
- central bank policies regarding interest rates; and
- the performance of U.S. and foreign capital markets.

Prices of U.S. treasury notes have recently fallen after trading near historic high prices for an extended period of time. If the price of the U.S. treasury notes reverts to its historic mean or otherwise continues to fall, as a result of a general increase in interest rates, Federal Reserve policies or actions, or perceptions of reduced credit quality of the U.S. government or otherwise, the value of the bonds underlying the iShares® 20+ Year Treasury Bond ETF will decline, which could have a negative impact on the performance of the Index and the return on your notes.

In addition, for the iShares® TIPS Bond ETF, if inflation is low, the benefit received from the inflation-protected feature of the underlying bonds may not sufficiently compensate you for their reduced yield.

In addition, the iShares® TIPS Bond ETF includes inflation-protected bonds, which typically have lower yields than conventional fixed-rate bonds because of their inflation adjustment feature. For the iShares® TIPS Bond ETF, if inflation is low, the benefit received from the inflation-protected feature of the underlying bonds may not sufficiently compensate you for this reduced yield.



**The notes are subject to significant risks associated with fixed-income securities, including credit risk.**

The prices of the underlying bonds are significantly influenced by the creditworthiness of the issuers of the bonds. The bonds underlying the Bond ETFs may have their credit ratings downgraded, including in the case of the bonds included in the iShares® iBoxx \$ Investment Grade Corporate Bond ETF, a downgrade from investment grade to non-investment grade status, or have their credit spreads widen significantly. Following a ratings downgrade or the widening of credit spreads, some or all of the underlying bonds may suffer significant and rapid price declines. These events may affect only a few or a large number of the underlying bonds. For example, during the recent credit crisis in the United States, credit spreads widened significantly as the market demanded very high yields on corporate bonds and, as a result, the prices of the bonds underlying the Bond ETFs dropped significantly. There can be no assurance that some or all of the factors that contributed to this credit crisis will not continue or return during the term of the notes, and, consequently, depress the price, perhaps significantly, of the underlying bonds and therefore the value of the Bond ETFs, the ETF Efficient Index and the notes.

Further, the iShares® iBoxx \$ High Yield Corporate Bond ETF is designed to provide a representation of the U.S. dollar high yield corporate market and is therefore subject to high yield securities risk, being the risk that securities that are rated below investment grade (commonly known as “junk bonds,” including those bonds rated at BB+ or lower by S&P or Fitch or Ba1 or lower by Moody’s) may be more volatile than higher-rated securities of similar maturity. High yield securities may also be subject to greater levels of credit or default risk than higher-rated securities. The value of high yield securities can be adversely affected by overall economic conditions, such as an economic downturn or a period of rising interest rates, and high yield securities may be less liquid and more difficult to sell at an advantageous time or price or to value than higher-rated securities. In particular, high yield securities are often issued by smaller, less creditworthy companies or by highly leveraged (indebted) firms, which are generally less able than more financially stable firms to make scheduled payments of interest and principal.

**An investment in the notes is subject to risks associated with small capitalization stocks.**

The stocks that constitute the Russell 2000® Index and that are held by the iShares® Russell 2000 ETF are issued by companies with relatively small market capitalization. The stock prices of smaller companies may be more volatile than stock prices of large capitalization companies. Small capitalization companies may be less able to withstand adverse economic, market, trade and competitive conditions relative to larger companies. These companies tend to be less well-established than large market capitalization companies. Small capitalization companies are less likely to pay dividends on their stocks, and the presence of a dividend payment could be a factor that limits downward stock price pressure under adverse market conditions.

**Risks associated with the real estate industry will affect the price of shares of the iShares® U.S. Real Estate ETF Constituent and the value of the notes.**

The real estate industry is cyclical and has from time to time experienced significant difficulties. The prices of the securities included in the Dow Jones U.S. Real Estate Index and held by the iShares® U.S. Real Estate ETF and, in turn, the level of the Dow Jones U.S. Real Estate Index and the price of shares of the iShares® U.S. Real Estate ETF, as applicable, will be affected by a number of factors that may either offset or magnify each other, including:

- employment levels and job growth;
- the availability of financing for real estate;
- interest rates;
- consumer confidence;

- the availability of suitable undeveloped land;
- federal, state and local laws and regulations concerning the development of land, construction, home and commercial real estate sales, financing and environmental protection; and
- competition among companies that engage in the real estate business.

The difficulties described above could cause a downturn in the real estate industry generally or regionally and could cause the value of the securities included in the Dow Jones U.S. Real Estate Index and held by the iShares® U.S. Real Estate ETF and the level of the Dow Jones U.S. Real Estate Index and the price of shares of the iShares® U.S. Real Estate ETF, as applicable, to decline or remain flat during the term of the notes.

**Risks associated with Real Estate Investment Trusts will affect the value of the notes.**

The Dow Jones U.S. Real Estate Index and the iShares® U.S. Real Estate ETF are composed of a variety of real-estate-related stocks including real estate investment trusts (“REITs”). REITs invest primarily in income-producing real estate or real-estate-related loans or interests. Investments in REITs, though not direct investments in real estate, are still subject to the risks associated with investing in real estate. The following are some of the conditions that might impact the structure of and cash flow generated by REITs and, consequently, the value of REITs and, in turn, the Dow Jones U.S. Real Estate Index and the iShares® U.S. Real Estate ETF:

- a decline in the value of real estate properties;
- extended vacancies of properties;
- increases in property and operating taxes;
- increased competition or overbuilding;
- a lack of available mortgage funds or other limits on accessing capital;
- tenant bankruptcies and other credit problems;
- limitation on rents, including decreases in market rates for rents;
- changes in zoning laws and governmental regulations;
- costs resulting from the clean-up of, and legal liability to third parties for, damages resulting from environmental problems;
- investments in developments that are not completed or that are subject to delays in completion;
- risks associated with borrowing;
- changes in interest rates;
- casualty and condemnation losses; and
- uninsured damages from floods, earthquakes or other natural disasters.

The factors above may either offset or magnify each other. To the extent that any of these conditions occur, they may negatively impact a REIT’s cash flow and cause a decline in the share price of a REIT, and, consequently, the level of the Dow Jones U.S. Real Estate Index and the price of shares of the iShares® U.S. Real Estate ETF. In addition, some REITs have relatively small market capitalizations, which can increase the volatility of the market price of securities issued by those REITs. Furthermore, REITs are dependent upon specialized management skills, have limited diversification and are, as a result, subject to risks inherent in operating and financing a limited number of projects. To the extent that such risks increase the volatility of the market price of securities issued by REITs, they

may also, consequently, increase the volatility of the Dow Jones U.S. Real Estate Index and the iShares® U.S. Real Estate ETF.

**There will be no direct correlation between the value of the notes or the price of the iShares® U.S. Real Estate ETF and residential housing prices.**

There is no direct linkage between the price of shares of the iShares® U.S. Real Estate ETF and residential housing prices in specific regions or residential housing prices in general. While residential housing prices may be one factor that could affect the prices of the securities held by the Real Estate Constituent and consequently the price of shares of the iShares® U.S. Real Estate ETF, the price of shares of the iShares® U.S. Real Estate ETF and therefore the value of the notes are not directly linked to movements of residential housing prices and may be affected by factors unrelated to such movements.

**There are risks associated with the Equity/Bond ETF Constituents.**

The Equity/Bond ETF Constituents may have a limited operating history. Although the Equity/Bond ETF Constituents are listed for trading and a number of similar products have been traded on the same and other securities exchanges for varying periods of time, there is no assurance that an active trading market will continue for the ETF Constituents or that there will be liquidity in the trading market.

In addition, the Equity/Bond ETF Constituents are subject to management risk, which is the risk that the applicable investment adviser's investment strategy, the implementation of which is subject to a number of constraints, may not produce the intended results. These constraints could adversely affect the market prices of the shares of the Equity/Bond ETF Constituents, and consequently, the value of the notes. See the relevant Basket Constituent description below or the relevant terms supplement for additional information.

**The policies of the investment adviser for an ETF Constituent, and the sponsor of a Reference Index, could affect the value and the amount payable on the securities.**

The policies of the investment adviser for an ETF Constituent concerning the calculation of the ETF Constituent's net asset value, additions, deletions or substitutions of securities, commodities, commodity futures contracts or other assets underlying the ETF Constituent and manner in which changes affecting the Reference Index of the ETF Constituent are reflected in the ETF Constituent could affect the market price of shares of the ETF Constituent and, therefore, affect the value of the notes before maturity. Any payments on the notes could also be affected if the investment adviser changes these policies, for example, by changing the manner in which it calculates the ETF Constituent's net asset value, or if the investment adviser discontinues or suspends calculation or publication of the ETF Constituent's net asset value, in which case it may become difficult to determine the value of the notes.

In addition, the sponsor of the index underlying an ETF Constituent, which we refer to as the Reference Index, is responsible for the design and maintenance of such Reference Index. The policies of the sponsor concerning the calculation of the Reference Index, including decisions regarding the addition, deletion or substitution of the securities included in the Reference Index, could affect the value of the Reference Index and, consequently, could affect the market prices of the ETF Constituent and, therefore, the value of the notes before maturity.

**The performance of each Equity/Bond ETF Constituent may not correlate with the performance of its Reference Index.**

Each Equity/Bond ETF Constituent (other than the SPDR® S&P 500® ETF Trust) uses a representative sampling indexing strategy to attempt to track the performance of its Reference Index. Pursuant to such representative sampling indexing strategy, each Equity/Bond ETF Constituent (other than the

SPDR® S&P 500® ETF Trust) invests in a representative sample of securities that collectively has an investment profile similar to its Reference Index; however, each Equity/Bond ETF Constituent (other than the SPDR® S&P 500® ETF Trust) may not hold all or substantially all of the securities included in its Reference Index. Therefore, while the performance of each Equity/Bond ETF Constituent (other than the SPDR® S&P 500® ETF Trust) is linked principally to the performance of its Reference Index, the performance of each Equity/Bond ETF Constituent (other than the SPDR® S&P 500® ETF Trust) is also generally linked in part to assets other than the securities included in the Reference Index because the investment adviser to each Equity/Bond ETF Constituent (other than the SPDR® S&P 500® ETF Trust), generally may invest up to a certain percentage of the Equity/Bond ETF Constituent's assets in securities not included in the Reference Index, but which its investment adviser believes will help the Equity/Bond ETF Constituent track the Reference Index, and in other assets, including shares of money market funds affiliated with or advised by its investment adviser.

In addition, the performance of each Equity/Bond ETF Constituent (including the SPDR® S&P 500® ETF Trust) will reflect additional transaction costs and fees that are not included in the calculation of the relevant Reference Index. Also, the component stocks of each Equity/Bond ETF Constituent (including the SPDR® S&P 500® ETF Trust), if applicable, may be unavailable in the secondary market or due to other extraordinary circumstances. Corporate actions with respect to the sample of securities (such as mergers and spin-offs) also may impact the variance between each Equity/Bond ETF Constituent (including the SPDR® S&P 500® ETF Trust) and its Reference Index. Finally, because the shares of each Equity/Bond ETF Constituent (including the SPDR® S&P 500® ETF Trust) are traded on the NYSE Arca, Inc. and are subject to market supply and investor demand, the market value of one share of each Equity/Bond ETF Constituent may differ from the net asset value per share of the each such Equity/Bond ETF Constituent.

For all of the foregoing reasons, the performance of each Equity/Bond ETF Constituent (including the SPDR® S&P 500® ETF Trust) may not correlate with the performance of the relevant Reference Index. Consequently, the return on the notes will not be the same as investing directly in any Equity/Bond ETF Constituent or any relevant Reference Index or in the securities held by any Equity/Bond ETF Constituent or included in any relevant Reference Index, and will not be the same as investing in a security or another financial product with a payment linked to the performance of the relevant Reference Index.

### **Risks Relating to the Commodity ETF Constituents**

**Suspension or disruptions of market trading in the relevant commodity and related futures markets may adversely affect the value of the notes.**

The commodity markets are subject to temporary distortions or other disruptions due to various factors, including the lack of liquidity in the markets, the participation of speculators and government regulation and intervention. In addition, U.S. futures exchanges and some foreign exchanges have regulations that limit the amount of fluctuation in futures contract prices that may occur during a single day. These limits are generally referred to as "daily price fluctuation limits" and the maximum or minimum price of a contract on any given day as a result of these limits is referred to as a "limit price." Once the limit price has been reached for a particular contract, no trades may be made at a different price. Limit prices have the effect of precluding trading in a particular contract or forcing the liquidation of contracts at disadvantageous times or prices. These circumstances could adversely affect the price of shares of the iShares® S&P GSCI™ Commodity-Indexed Trust and the SPDR® Gold Trust and therefore, the level of the ETF Efficient Index and the value of your notes.

**The notes will not be regulated by the Commodity Futures Trading Commission.**

The notes are our debt securities. The net proceeds to be received by us from the sale of the notes will not be used to purchase or sell any commodity futures contracts or options on futures contracts for your benefit. An investment in the notes thus neither constitutes an investment in futures contracts,

options on futures contracts nor a collective investment vehicle that trades in these futures contracts (*i.e.*, the notes will not constitute a direct or indirect investment by you in the futures contracts), and you will not benefit from the regulatory protections of the Commodity Futures Trading Commission, commonly referred to as the “CFTC.” Among other things, this means that we are not registered with the CFTC as a futures commission merchant and you will not benefit from the CFTC’s or any other non-U.S. regulatory authority’s regulatory protections afforded to persons who trade in futures contracts on a regulated futures exchange through a registered futures commission merchant. For example, the price you pay to purchase notes will be used by us for our own purposes and will not be subject to customer funds segregation requirements provided to customers that trade futures on an exchange regulated by the CFTC.

Unlike an investment in the notes, an investment in a collective investment vehicle that invests in futures contracts on behalf of its participants may be subject to regulation as a commodity pool and its operator may be required to be registered with and regulated by the CFTC as a commodity pool operator, or qualify for an exemption from the registration requirement. Because the notes will not be interests in a commodity pool, the notes will not be regulated by the CFTC as a commodity pool, we will not be registered with the CFTC as a commodity pool operator, and you will not benefit from the CFTC’s or any non U.S. regulatory authority’s regulatory protections afforded to persons who invest in regulated commodity pools.

**The commodity futures contracts underlying the iShares® S&P GSCI™ Commodity-Indexed Trust or related to gold underlying the SPDR® Gold Trust are subject to legal and regulatory regimes that may change in ways that could affect our ability to hedge our obligations under the notes, may have an adverse effect on the level of the ETF Efficient Index and/or could lead to a commodity hedging disruption event and its attendant consequences.**

Futures contracts and options on futures contracts markets, including the futures contracts underlying the iShares® S&P GSCI™ Commodity-Indexed Trust or related to gold underlying the SPDR® Gold Trust, are subject to extensive regulation and margin requirements. The CFTC and the exchanges on which such futures contracts trade, are authorized to take extraordinary actions in the event of a market emergency, including, for example, the retroactive implementation of speculative position limits or higher margin requirements, the establishment of daily limits and the suspension of trading. Furthermore, certain exchanges have regulations that limit the amount of fluctuations in futures contract prices that may occur during a single five-minute trading period. These limits could adversely affect the market prices of relevant futures contracts and forward contracts. The regulation of commodity transactions in the U.S. is subject to ongoing modification by government and judicial action. In addition, various non-U.S. governments have expressed concern regarding the disruptive effects of speculative trading in the commodity markets and the need to regulate the derivative markets in general. The effect on the value of the notes of any future regulatory change is impossible to predict, but could be substantial and adverse to the interests of holders of the notes.

Notably, with respect to agricultural and exempt commodities as defined in the Commodity Exchange Act (generally, physical commodities such as agricultural commodities, energy commodities and metals), the Dodd-Frank Act, which was enacted on July 21, 2010, provides the CFTC with authority to establish limits on the number of positions, other than bona fide hedge positions, that may be held by any person in a commodity through futures contracts, options on futures contracts and other related derivatives, such as swaps, that are economically equivalent to those contracts. The Dodd-Frank Act also provides the CFTC with authority to establish limits for each month, including related hedge exemption positions, on the aggregate number of positions in contracts based upon the same underlying commodity, as defined by the CFTC, that may be held by any person, including any group or class of traders. In addition, designated contract markets and swap execution facilities, as defined in the Dodd-Frank Act, are authorized to establish and enforce position limits or position accountability requirements on their own markets or facilities, which must be at least as stringent as the CFTC’s where CFTC limits also apply.

In 2011 the CFTC adopted final rules that established position limits that would have applied to 28 agricultural, metals and energy futures and options contracts and swaps that are economically equivalent to those futures and options contracts. In 2012, the U.S. District Court for the District of Columbia vacated the CFTC rules. The CFTC has appealed the District Court's decision, but no subsequent decision has yet been made. It is expected the the CFTC will also re-propose position limit rules. Any such rules also narrow the existing exemption for hedge positions. The rules may interfere with our ability to enter into or maintain hedge positions to hedge our obligations under the notes.

Upon the occurrence of legal or regulatory changes that the calculation agent determines have interfered with our or our affiliates' ability to hedge our obligations under the notes, including the CFTC's adoption of the position limit rules mentioned above, or if for any other reason we or our affiliates are unable to enter into or maintain hedge positions the calculation agent deems necessary to hedge our obligations under the notes, a commodity hedging disruption event may occur. Please see the accompanying product supplement for more information about commodity hedging disruption events and their attendant consequences.

**Commodity futures prices may change unpredictably, affecting the price of shares of the iShares® S&P GSCI™ Commodity-Indexed Trust and the value of your notes in unforeseeable ways.**

Trading in commodity futures contracts underlying the iShares® S&P GSCI™ Commodity-Indexed Trust is speculative and can be extremely volatile. A decrease in the price of any of the commodities upon which the futures contracts that compose the iShares® S&P GSCI™ Commodity-Indexed Trust are based may have a material adverse effect on the value of the notes and your return on an investment in the notes. Market prices of the commodities on which the futures contracts that compose the iShares® S&P GSCI™ Commodity-Indexed Trust are based may fluctuate rapidly based on numerous factors, including: changes in supply and demand relationships; governmental programs and policies, national and international monetary, trade, political and economic events, wars and acts of terror, changes in interest and in exchange rates, speculation and trading activities in commodities and related contracts, weather, and agricultural, trade, fiscal and exchange control policies. The price volatility of each commodity also affects the value of the futures and forward contracts related to that commodity and therefore its price at any such time. The price of any one commodity may be correlated to a greater or lesser degree with any other commodity and factors affecting the general supply and demand as well as the prices of other commodities may affect the particular commodity in question. In respect of commodities in the energy sector, due to the significant level of its continuous consumption, limited reserves, and oil cartel controls, energy prices are subject to rapid price increases in the event of perceived or actual shortages. The commodities markets are subject to temporary distortions or other disruptions due to various factors, including the lack of liquidity in the markets, the participation of speculators and government regulation and intervention. Many commodities are also highly cyclical. These factors, some of which are specific to the nature of each such commodity, may cause the value of the different commodities upon which the futures contracts that compose the iShares® S&P GSCI™ Commodity-Indexed Trust are based, as well as the futures contracts themselves, to move in inconsistent directions at inconsistent rates. This, in turn, will affect the value of shares of the iShares® S&P GSCI™ Commodity-Indexed Trust and the value of the notes. It is not possible to predict the aggregate effect of all or any combination of these factors.

**Some of the commodities underlying the iShares® S&P GSCI™ Commodity-Indexed Trust will be subject to pronounced risks of pricing volatility.**

As a general matter, the risk of low liquidity or volatile pricing around the maturity date of a commodity futures contract is greater than in the case of other futures contracts because (among other factors) a number of market participants take physical delivery of the underlying commodities. Many commodities, like those in the energy and industrial metals sectors, have liquid futures contracts that expire every month. Therefore, in the calculation of the iShares® S&P GSCI™ Commodity-Indexed Trust these contracts are rolled forward every month. Contracts based on certain other commodities, most

notably agricultural and livestock products, tend to have only a few contract months each year that trade with substantial liquidity. Thus, these commodities, with related futures contracts that expire infrequently, roll forward less frequently than every month in the calculation of the iShares® S&P GSCI™ Commodity-Indexed Trust, and can have further pronounced pricing volatility during extended periods of low liquidity. The risk of aberrational liquidity or pricing around the maturity date of a commodity futures contract is greater than in the case of other futures contracts because (among other factors) a number of market participants take delivery of the underlying commodities. Due to the significant level of continuous consumption, limited reserves, and oil cartel controls, energy commodities are subject to rapid price increases in the event of perceived or actual shortages. These factors (when combined or in isolation) may affect the price of futures contracts and, as a consequence, the level of the ETF Efficient Index and your return on the notes.

**The iShares® S&P GSCI™ Commodity-Indexed Trust does not offer direct exposure to commodity spot prices.**

The value of the iShares® S&P GSCI™ Commodity-Indexed Trust is intended to track generally the performance of commodity-futures contracts on physical commodities included in the S&P GSCI™ Index, not physical commodities (or their spot prices). The price of a futures contract reflects the expected value of the commodity upon delivery in the future, whereas the spot price of a commodity reflects the immediate delivery value of the commodity. A variety of factors can lead to a disparity between the expected future price of a commodity and the spot price at a given point in time, such as the cost of storing the commodity for the term of the futures contract, interest charges incurred to finance the purchase of the commodity and expectations concerning supply and demand for the commodity. The price movements of a futures contract are typically correlated with the movements of the spot price of the reference commodity, but the correlation is generally imperfect and price movements in the spot market may not be reflected in the futures market (and vice versa). Accordingly, the notes may underperform a similar investment that reflects the return on physical commodities.

**Higher future prices of the commodity futures contracts constituting the iShares® S&P GSCI™ Commodity-Indexed Trust relative to their current prices may decrease the amount payable at maturity.**

The iShares® S&P GSCI™ Commodity-Indexed Trust is composed of futures contracts on physical commodities. Unlike equities, which typically entitle the holder to a continuing stake in a corporation, commodity futures contracts normally specify a certain date for delivery of the underlying physical commodity. As the exchange-traded futures contracts that compose the iShares® S&P GSCI™ Commodity-Indexed Trust approach expiration, they are replaced by contracts that have a later expiration. For example, a contract purchased and held in August may specify an October expiration. As time passes, the contract expiring in October is replaced by a contract for delivery in November. This is accomplished by selling the October contract and purchasing the November contract. This process is referred to as “rolling.” Excluding other considerations, if the market for these contracts is in “contango,” where the prices are higher in the distant delivery months than in the nearer delivery months, the purchase of the November contract would take place at a price that is higher than the price of the October contract, thereby creating a *negative* “roll yield.” Moreover, many commodities have historically exhibited contango markets. The presence of contango in the commodity markets could adversely affect the price of shares of the iShares® S&P GSCI™ Commodity-Indexed Trust and, therefore, the level of the ETF Efficient Index and the value of your notes.

**An increase in the margin requirements for commodity futures contracts included in the iShares® S&P GSCI™ Commodity-Indexed Trust may adversely affect the level of the ETF Efficient Index.**

Futures exchanges require market participants to post collateral in order to open and to keep open positions in futures contracts. If an exchange increases the amount of collateral required to be posted

to hold positions in commodity futures contracts underlying the iShares® S&P GSCI™ Commodity-Indexed Trust, market participants who are unwilling or unable to post additional collateral may liquidate their positions, which may cause the price of the relevant commodity futures contracts to decline significantly. As a result, the level of the ETF Efficient Index and the value of the notes may be adversely affected.

**The price of gold is volatile and is affected by numerous factors.**

The value of the SPDR® Gold Trust is closely related to the price of gold. A decrease in the price of gold may have a material adverse effect on the value of the notes and your return on your investment in the notes. Gold is subject to the effect of numerous factors. The following describes some of the factors affecting gold.

The price of gold is primarily affected by the global demand for and supply of gold. The market for gold bullion is global, and gold prices are subject to volatile price movements over short periods of time and are affected by numerous factors, including macroeconomic factors such as the structure of and confidence in the global monetary system, expectations regarding the future rate of inflation, the relative strength of, and confidence in, the U.S. dollar (the currency in which the price of gold is usually quoted), interest rates, gold borrowing and lending rates, and global or regional economic, financial, political, regulatory, judicial or other events. Gold prices may be affected by industry factors such as industrial and jewelry demand as well as lending, sales and purchases of gold by the official sector, including central banks and other governmental agencies and multilateral institutions that hold gold. Additionally, gold prices may be affected by levels of gold production, production costs and short-term changes in supply and demand due to trading activities in the gold market. It is not possible to predict the aggregate effect of all or any combination of these factors.

**Economic or political events or crises could result in large-scale purchases or sales of gold, which could affect the price of gold and may adversely affect the value of your notes.**

Many investors, institutions, governments and others purchase and sell gold as a hedge against inflation, market turmoil or uncertainty or political events. Under such circumstances, significant large-scale purchases or sales of gold by market participants may affect the price of gold, which could adversely affect the value of your notes. Crises in the future may impair gold's price performance which would, in turn, adversely affect the shares of the SPDR® Gold Trust and your investment in the notes.

**Substantial sales of gold by governments or public sector entities could result in price decreases, which would adversely affect the value of your notes.**

Governments and other public sector entities, such as agencies of governments and multi-national institutions, regularly buy, sell and hold gold as part of the management of their reserves. In the event that economic, political or social conditions or pressures require or motivate public sector entities to sell gold, in a coordinated or uncoordinated manner, the resulting purchases could cause the price of gold to decrease substantially, which could adversely affect the value of your notes.

**Gold is traded on the London Bullion Market Association, so an investment in the notes may be subject to risks associated with the London Bullion Market Association.**

The ETF Efficient Index is linked to the SPDR® Gold Trust, which is closely related to its underlying commodity (*e.g.*, gold) that is traded on the London Bullion Market Association (the "LBMA"). Investments in securities indexed to the value of commodities that are traded on non-U.S. exchanges involve risks associated with the markets in those countries, including risks of volatility in those markets and governmental intervention in those markets.



The final price of gold will be determined by reference to fixing prices reported by the LBMA. The LBMA is a self-regulatory association of bullion market participants. Although all market-making members of the LBMA are supervised by the Bank of England and are required to satisfy a capital adequacy test, the LBMA itself is not a regulated entity. If the LBMA should cease operations, or if bullion trading should become subject to a value added tax or other tax or any other form of regulation currently not in place, the role of LBMA price fixings as a global benchmark for the value of gold may be adversely affected. The LBMA is a principals' market which operates in a manner more closely analogous to an over-the-counter physical commodity market than regulated futures markets, and certain features of U.S. futures contracts are not present in the context of LBMA trading. For example, there are no daily price limits on the LBMA which would otherwise restrict fluctuations in the prices of LBMA contracts. In a declining market, it is possible that prices would continue to decline without limitation within a trading day or over a period of trading days.

**The relevant exchange for gold has no obligation to consider your interests.**

The price of the SPDR® Gold Trust is closely related to the price of gold. The relevant exchange for gold is responsible for calculating the official settlement price or fixing level, as applicable, for gold. The relevant exchange may alter, discontinue or suspend calculation or dissemination of the official settlement price or fixing level, as applicable, for gold. Any of these actions could adversely affect the value of the notes. The relevant exchange has no obligation to consider your interests in calculating or revising the official settlement price or fixing level, as applicable, for gold.

**Termination of the SPDR® Gold Trust could affect adversely the value of the notes.**

The SPDR® Gold Trust may be required to terminate and liquidate at a time that is disadvantageous to you. If the SPDR® Gold Trust is required to terminate and liquidate, such termination and liquidation could occur at a time that is disadvantageous to you, such as when the price of gold is higher than the price of gold at the time when you purchased your notes.

**There are risks associated with the Commodity ETF Constituents.**

The Commodity ETF Constituents may have a limited operating history. Although the Commodity ETF Constituents are listed for trading and a number of similar products have been traded on the same and other securities exchanges for varying periods of time, there is no assurance that an active trading market will continue for the Commodity ETF Constituents or that there will be liquidity in the trading market.

**The policies of the sponsors of the Commodity ETF Constituents and changes that affect the Commodity ETF Constituents could affect the net asset value of the Commodity ETF Constituents and the value of your notes.**

The policies of the sponsors of the Commodity ETF Constituents concerning the net asset value of the Commodity ETF Constituents, additions, deletions or substitutions of assets in the Commodity ETF Constituents and the manner in which changes affecting the Commodity ETF Constituents are reflected in the price of the Commodity ETF Constituents could affect the price of the Commodity ETF Constituents and, therefore, the level of the ETF Efficient Index and the value of your notes before maturity. Any payments on the notes could also be affected if the sponsor of a Commodity ETF Constituent changes these policies, for example, by changing the manner in which it calculates the price of the relevant Commodity ETF Constituent or if the sponsor discontinues or suspends calculation or publication of the relevant closing price, in which case it may become difficult to determine the value of your notes.

**The performance of the iShares® S&P GSCI Commodity-Indexed Trust may not correlate with the performance of its Reference Index, the S&P GSCI™ Total Return Index.**

Substantially all of the assets of the iShares® S&P GSCI Commodity-Indexed Trust (the “**Commodity-Indexed Trust**”) consist of its holdings of the limited liability company interests in the iShares® S&P GSCI™ Commodity-Indexed Investing Pool LLC (the “**Investing Pool**”), which holds long positions in futures contracts on the S&P GSCI™ Excess Return Index called “CERFs” and posts as margin cash or short-term securities to collateralize its CERF positions. The investment objective of the Commodity-Indexed Trust is to seek investment results that correspond generally, but are not necessarily identical, to the performance of the S&P GSCI™ Total Return Index, which we refer to as the Reference Index for the Commodity-Indexed Trust, before the payment of expenses and liabilities of the Commodity-Indexed Trust and the Investing Pool. Differences between the returns of the Commodity-Indexed Trust and the S&P GSCI™ Total Return Index may be based on, among other factors, any differences between the return on the assets used by the Investing Pool to collateralize its CERF positions and the U.S. Treasury rate used to calculate the return component of the S&P GSCI™ Total Return Index, timing differences, differences between the portion of the Investing Pool’s assets invested in CERFs and the portion of the return of the S&P GSCI™ Total Return Index contributed by the S&P GSCI™ Excess Return Index, and the payment of expenses and liabilities by the Commodity-Indexed Trust and the Investing Pool.

The net asset value of the Commodity-Indexed Trust will reflect the performance of the Investing Pool, its sole investment. However, because the shares of the Commodity-Indexed Trust are traded on NYSE Arca, Inc. and are subject to market supply and investor demand, the market value of one Share of the Commodity-Indexed Trust may differ from the net asset value per share of the Commodity-Indexed Trust.

For all of the foregoing reasons, the performance of the Commodity-Indexed Trust may not correlate with the performance of the S&P® GSCI™ Total Return Index. Consequently, the return on the notes will not be the same as investing directly in the Commodity-Indexed Trust or the S&P® GSCI™ Total Return Index or in the commodity futures contracts or other assets held by the Commodity-Indexed Trust or included in the S&P® GSCI™ Total Return Index, and will not be the same as investing in a note or another financial product with payments linked in part to the performance of the S&P® GSCI™ Total Return Index.

**The performance of the SPDR® Gold Trust may not correlate with the price of gold.**

The performance of SPDR® Gold Trust may not fully replicate the performance of the price of gold due to the fees and expenses charged by the SPDR® Gold Trust or by restrictions on access to gold due to other circumstances. The SPDR® Gold Trust does not generate any income and as the SPDR® Gold Trust regularly sells gold to pay for its ongoing expenses, the amount of gold represented by each share gradually declines over time. The SPDR® Gold Trust sells gold to pay expenses on an ongoing basis irrespective of whether the trading price of the shares rises or falls in response to changes in the price of gold. The sale of SPDR® Gold Trust’s gold to pay expenses at a time of low gold prices could adversely affect the level of the ETF Efficient Index and the value of the notes. Additionally, there is a risk that part or all of the SPDR® Gold Trust’s gold could be lost, damaged or stolen due to war, terrorism, theft, natural disaster or otherwise.

The net asset value of the SPDR® Gold Trust will reflect the performance of gold. However, because the shares of the SPDR® Gold Trust are traded on NYSE Arca, Inc. and are subject to market supply and investor demand, the market value of one Share of the SPDR® Gold Trust may differ from the net asset value per share of the SPDR® Gold Trust.

For all of the foregoing reasons, the performance of the SPDR® Gold Trust over the term of the notes may not correlate with the performance of the return on gold over the same period. Consequently, the return on the notes will not be the same as investing directly in the SPDR® Gold

Trust, gold or other exchange-traded or over-the-counter instruments based on gold, and will not be the same as investing in a note or another financial product with payments linked in part to the performance of the SPDR® Gold Trust.

### **Risks Relating to the Cash Constituent**

**The JPMorgan Cash Index USD 3 Month will be affected by a number of factors.**

The performance of the JPMorgan Cash Index USD 3 Month will depend on a number of factors that can affect the levels of 3-month LIBOR, including, but not limited to:

- *changes in, or perceptions about, future rates:* increased interest rate volatility is historically associated with an increased spread between long- and short-term interest rates and, conversely, decreased volatility is historically associated with tighter spreads;
- *general economic conditions:* the economic, financial, political, regulatory and judicial events that affect financial markets generally will affect 3-month LIBOR;
- *prevailing interest rates:* 3-month LIBOR is subject to daily fluctuations depending on the levels of prevailing interest rates in the market generally; in addition, lower overall interest rates are historically associated with an increased spread between long and short-term interest rates and, conversely, higher overall interest rates are historically associated with tighter spreads; and
- *policy of the Federal Reserve Board regarding interest rates:* an easing of monetary policy is historically associated with an increased spread between long and short-term interest rates and, conversely, a tightening of monetary policy is historically associated with tighter spreads.

These and other factors may have a negative effect on the performance of the JPMorgan Cash Index USD 3 Month.

**Three-month LIBOR and the manner in which it is calculated may change in the future.**

There can be no assurance that the method by which 3-month LIBOR is calculated will not change. Such changes in the method of calculation could reduce the level of 3-month LIBOR. Accordingly, the return of the JPMorgan Cash Index USD 3 Month may be significantly reduced.

**Three-month LIBOR may be volatile.**

Three-month LIBOR is subject to volatility due to a variety of factors affecting interest rates generally, including:

- sentiment regarding underlying strength in the U.S., European and global economies;
- expectation regarding the level of price inflation;
- sentiment regarding credit quality in U.S., European and global credit markets;
- central bank policy regarding interest rates; and
- performance of capital markets.

Decreases in 3-month LIBOR will have a negative effect on the performance of the JPMorgan Cash Index USD 3 Month.

**The relevant terms supplement or a separate underlying supplement will provide additional risk factors relating to any other index or reference assets to which the notes are linked.**

## THE J.P. MORGAN ETF EFFICIENTE DS 5 INDEX

### General

The J.P. Morgan ETF Efficiente DS 5 Index (the “**ETF Efficiente Index**” or the “**Index**”) was developed and is maintained and calculated by J.P. Morgan Securities plc (“**JPMS plc**”). The description of the Index and methodology included in this underlying supplement is based on rules formulated by JPMS plc (the “**Rules**”). The Rules, and not this description, will govern the calculation and constitution of the Index and other decisions and actions related to their maintenance. The Rules in effect as of the date of this underlying supplement are included as part of the Rules attached as Annex A to this underlying supplement. The Index is the intellectual property of JPMS plc, and JPMS plc reserves all rights with respect to its ownership of the Index. The Index is reported by Bloomberg L.P. under the ticker symbol “EEJPDS5E.”

The ETF Efficiente Index is a notional dynamic basket that tracks the excess return of a portfolio of twelve exchange-traded funds (each an “**ETF Constituent**,” and collectively the “**ETF Constituents**”), with dividends notionally reinvested, and the JPMorgan Cash Index USD 3 Month (including any successor or substitute cash index included in the Index, the “**Cash Constituent**”) over the return of the Cash Constituent, while targeting a specific volatility on a daily basis. We refer to the ETF Constituents and the Cash Constituent together as the “**Basket Constituents**.” The ETF Constituents represent a diverse range of asset classes and geographic regions.

The J.P. Morgan ETF Efficiente DS 5 Index rebalances monthly a synthetic portfolio composed of the Basket Constituents. The Index is based on the “modern portfolio theory” approach to asset allocation, which suggests how a rational investor should allocate his capital across the available universe of assets to maximize return for a given risk appetite. The Index uses the concept of an “efficient frontier” to define the asset allocation of the Index. An efficient frontier for a portfolio of assets defines the optimum return of the portfolio for a given amount of risk. The Index uses the volatility of returns of hypothetical portfolios as the measure of risk. This strategy is based on the assumption that the most efficient allocation of assets is one that maximizes returns per unit of risk.

The strategy assigns the weights to the Basket Constituents after determining the returns and volatilities of multiple hypothetical portfolios comprising the Basket Constituents measured over the previous six months. The re-weighting methodology seeks to identify the weights for each Basket Constituent that would have resulted in the hypothetical portfolio with the highest return over the relevant measurement period subject to an annualized volatility over the same period of 5% or less. Thus, the portfolio exhibiting the highest return with an annualized volatility of 5% or less is then selected, with the weighting for that portfolio applied to the Basket Constituents. In the event that none of the portfolios has an annualized volatility equal to or less than 5%, this volatility threshold is increased by 1% until a portfolio is selected.

In addition, the ETF Efficiente Index targets an annualized volatility of 5% on a daily basis by dynamically adjusting its exposure to the synthetic portfolio of Basket Constituents. The exposure of the ETF Efficiente Index to the synthetic portfolio is equal to the target volatility of 5% *divided* by the annualized volatility of the same portfolio over the prior month, subject to certain constraints described below, including a minimum exposure of 0% and a maximum exposure of 150%. Accordingly, as the volatility of the portfolio increases, the exposure to the portfolio decreases, and as the volatility of the portfolio decreases, the exposure to the portfolio increases. Accordingly, if the volatility of the synthetic portfolio is less than the target volatility of 5%, the Index employs leverage, subject to the maximum exposure of 150%.

No assurance can be given that the investment strategy used to construct the ETF Efficiente Index will be successful or that the ETF Efficiente Index will outperform any alternative basket or strategy that might be constructed from the Basket Constituents. Furthermore, no assurance can be given that the ETF Efficiente Index will achieve its target volatility of 5%. The actual realized volatility of the ETF Efficiente Index may be greater or less than 5%.

The aggregate weight of the Cash Constituent at any given time represents the portion of the synthetic portfolio of Basket Constituents that is uninvested at that time. The ETF Efficiente Index will reflect no return for any uninvested portion (including any portion represented by the Cash Constituent). While the weight of the Cash Constituent is normally limited by the Weighting Constraint of 50% that applies to the Cash Constituent, if any Basket Constituent is replaced with the Cash Constituent due to the occurrence of an Extraordinary Event, as described below, the aggregate weight of the Cash Constituent would be allowed to exceed 50% because a portion of that aggregate weight would be subject to the Weighting Constraints specific to the replaced Basket Constituent and not the Weighting Constraints specific to the Cash Constituent. In addition, when the exposure of the ETF Efficiente Index to the synthetic portfolio of Basket Constituents is less than 100% on any day, a portion of the synthetic portfolio will be uninvested.

The Index is described as a “notional” or synthetic portfolio or basket of assets because there is no actual portfolio of assets to which any person is entitled or in which any person has any ownership interest. The Index merely references certain assets, the performance of which will be used as a reference point for calculating the Index Level (as defined below).

#### **The Index Calculation Agent; Amendment of Rules; Limitation of Liability**

JPMS plc or any affiliate or subsidiary designated by it will act as calculation agent for the Index (the “**index calculation agent**”). The index calculation agent’s determinations in respect of the Index and interpretations of the Rules will be final. The Rules may be supplemented, amended or restated from time to time at the discretion of JPMS plc in its capacity as index calculation agent.

The index calculation agent will act in good faith and in a commercially reasonable manner with respect to the performance of its obligations and the exercise of its discretions pursuant to the Rules.

While the Rules are intended to be comprehensive, ambiguities may arise. In those circumstances, the index calculation agent will resolve those ambiguities in a reasonable manner and, if necessary, amend the Rules to reflect that resolution.

Neither the index calculation agent nor any of its affiliates or subsidiaries or any of their respective directors, officers, employees, representatives, delegates or agents (each a “**Relevant Person**”) will have any responsibility to any person (whether as a result of negligence or otherwise) for any determinations made or anything done (or omitted to be determined or done) in respect of the Index and any use to which any person may put the Index or the Index Levels. No Relevant Person will take your interests into account in making any determination in respect of the Index. All determinations of the index calculation agent in respect of the Index will be final, conclusive and binding and no person will be entitled to make any claim against any of the Relevant Persons in respect thereof. Once a determination or calculation is made or action taken by the index calculation agent in respect of the Index, neither the index calculation agent nor any other Relevant Person will be under any obligation to revise any determination or calculation made or action taken for any reason.

#### **The Basket Constituents of the Index**

Subject to the occurrence of an Extraordinary Event (as defined below), the Basket Constituents are set out in Table 1 below. Table 1 also contains the Bloomberg ticker for each Basket Constituent, as well as the primary exchange and Related Exchange for each ETF Constituent.

Table 1

	Basket Constituent Name	Bloomberg Ticker	Primary Exchange	Related Exchange
1	SPDR® S&P 500® ETF Trust	SPY	NYSE Arca, Inc. (“NYSE Arca”)	All Exchanges
2	iShares® Russell 2000 ETF	IWM	NYSE Arca	All Exchanges
3	iShares® MSCI EAFE ETF	EFA	NYSE Arca	All Exchanges
4	iShares® 20+ Year Treasury Bond ETF	TLT	NYSE Arca	All Exchanges
5	iShares® iBoxx \$ Investment Grade Corporate Bond ETF	LQD	NYSE Arca	All Exchanges
6	iShares® iBoxx \$ High Yield Corporate Bond ETF	HYG	NYSE Arca	All Exchanges
7	iShares® MSCI Emerging Markets ETF	EEM	NYSE Arca	All Exchanges
8	iShares® J.P. Morgan USD Emerging Markets Bond ETF	EMB	NYSE Arca	All Exchanges
9	iShares® U.S. Real Estate ETF	IYR	NYSE Arca	All Exchanges
10	iShares® S&P GSCI™ Commodity-Indexed Trust	GSG	NYSE Arca	All Exchanges
11	SPDR® Gold Trust	GLD	NYSE Arca	All Exchanges
12	iShares® TIPS Bond ETF	TIP	NYSE Arca	All Exchanges
13	JPMorgan Cash Index USD 3 Month	JPCAUS3M	N/A	N/A

### Determining the Monthly Basket Constituent Weights for the Basket Constituents

The Index will be rebalanced on the first Index Business Day of each calendar month (each such day a “**Monthly Re-weighting Date**”), subject to adjustment if an Index Market Disruption Event has occurred and is continuing. With respect to a Monthly Re-weighting Date, the Monthly Basket Constituent Weights (as defined under “— (c) Determining the Monthly Basket Constituent Weight to be assigned to each Basket Constituent with respect to the relevant Monthly Re-weighting Date”) assigned to the Basket Constituents are determined two Index Business Days before the scheduled Monthly Re-weighting Date (the “**Monthly Re-weighting Selection Date**”), subject to adjustment. Each Monthly Re-weighting Selection Date will be associated with a reference portfolio composed of the Basket Constituents with weights set equal to the Monthly Basket Constituent Weights determined as of that Monthly Re-weighting Selection Date (the “**Monthly Reference Portfolio**”).

An “**Index Business Day**” means a day (i) on which the New York Stock Exchange is scheduled to open for trading for its regular trading session and (ii) that is a Dealing Day for all Basket Constituents.

**“Dealing Day”** means (a) in respect of any Basket Constituent that is an index, including the Cash Constituent, a day upon which the Closing Level for the Basket Constituent is (or, but for the occurrence of an Index Market Disruption Event, would have been) scheduled to be calculated and published by the relevant Basket Constituent Sponsor and (b) in respect of an ETF Constituent, each day on which the primary exchange in the United States for that ETF Constituent is scheduled to be open for trading for its regular trading session.

**“Basket Constituent Sponsor”** means, in respect of a Basket Constituent, the sponsor or successor sponsor of that Basket Constituent.

(a) *Identifying the Performance Observation Periods*

The Monthly Basket Constituent Weights are based on the returns and volatilities of multiple hypothetical portfolios comprising the Basket Constituents over the period of 126 Weekdays prior to and including each Monthly Re-weighting Selection Date, as identified by the index calculation agent (each, a **“Performance Observation Period”**).

A **“Weekday”** is any day other than a Saturday or a Sunday.

(b) *Identifying the Unique Portfolio for each Performance Observation Period*

With respect to the applicable Performance Observation Period identified by the index calculation agent, on each Monthly Re-weighting Selection Date, the index calculation agent identifies the weights of the hypothetical portfolio with the strongest Performance that has an annualized volatility of 5% or less (subject to adjustment) using the following methodology:

1. The index calculation agent calculates the Closing TR Level of each ETF Constituent and obtains the Closing Level of each Basket Constituent that is an index, including the Cash Constituent, for each Weekday during the relevant Performance Observation Period. If any Weekday is not a Dealing Day with respect to a Basket Constituent or if the index calculation agent cannot obtain relevant reliable information from third party sources, the Closing TR Level or Closing Level, as the case may be, for that Basket Constituent in respect of that Weekday will be deemed to be the Closing TR Level or the Closing Level, as the case may be, for that Basket Constituent as of the immediately preceding Dealing Day for that Basket Constituent for which the index calculation agent can obtain relevant reliable information from third party sources.

**“Closing TR Level”** means, subject to the provisions of “— Index Market Disruption Events” below, with respect to an ETF Constituent and a Dealing Day, the Closing Level of that ETF Constituent with the dividends re-invested, determined for each ETF Constituent on each Dealing Day as the product of (x) the Closing TR Level of that ETF Constituent as of the immediately preceding Dealing Day and (y) the quotient of (a) the Closing Level of that ETF Constituent as of that Dealing Day *plus* the Gross Dividend Amount in respect of that ETF Constituent for that Dealing Day (if that Dealing Day is an Ex-Dividend Date for that ETF Constituent) *divided by* (b) the Closing Level of that ETF Constituent as of the immediately preceding Dealing Day.

**“Closing Level,”** means, subject to the provisions of “— Index Market Disruption Events” and “— Extraordinary Events” below, (a) in respect of a Basket Constituent that is an index, including the Cash Constituent, and a Dealing Day, (i) the official closing level of the applicable Basket Constituent published by the relevant Basket Constituent Sponsor for such Dealing Day; *provided, however*, that if the index calculation agent determines that the official closing level reflects manifest error on the part of the relevant Basket Constituent Sponsor, the index calculation agent will determine the closing level of that Basket Constituent in good faith and in a commercially reasonable manner or (ii) in such circumstances as set out in the definition of Non-Publication Event relating to the calculation of a Proxy Calculated Level, the Proxy Calculated Level and (b) in respect of an ETF Constituent and a Dealing Day, the official closing price of the regular trading session on that Dealing Day on the

principal U.S. securities exchange registered under the Securities Exchange Act of 1934, as amended, on which that ETF Constituent is listed or admitted to trading.

**"Gross Dividend Amount"** means, in respect of an ETF Constituent and an Ex-Dividend Date for that ETF Constituent, 100% of the amount of any dividend or other distribution per share of that ETF Constituent that a shareholder in that ETF Constituent on that Ex-Dividend Date would no longer have the right to receive due to the occurrence of that Ex-Dividend Date, as determined by the index calculation agent in its discretion as the sum of (x) the amount of any cash dividend paid or other cash distribution made and (y) the fair market value of any distribution of shares of capital stock, evidences of indebtedness or other assets or property of that ETF Constituent (other than share dividends or distributions). If a portion of that distribution consists of property traded on the Ex-Dividend Date on a U.S. national securities exchange, the fair market value of that portion will equal the closing price of that distributed property on that Ex-Dividend Date.

**"Ex-Dividend Date"** means, with respect to a dividend or other distribution for an ETF Constituent, the first trading day on which transactions in the shares of that ETF Constituent trade on the relevant primary exchange without the right to receive that dividend or other distribution.

2. The index calculation agent identifies all possible Eligible Portfolios as described below under "**(d) Eligible Portfolios and Weighting Constraints.**"

3. The index calculation agent calculates the Performance of each Eligible Portfolio over the relevant Performance Observation Period, which is equal to the sum of the weighted returns of each Basket Constituent (based on the weights assigned to the Basket Constituents in the relevant Eligible Portfolio) over the relevant Performance Observation Period, minus one.

**"Performance"** means, in respect of an Eligible Portfolio and a Performance Observation Period, the performance of that Eligible Portfolio over that Performance Observation Period, as determined by the index calculation agent using the algorithm(s) set out in the Rules.

4. The index calculation agent calculates the annualized realized volatility of each Eligible Portfolio over the relevant Performance Observation Period (the **"Realized Volatility"**) based on a pre-determined formula.

5. The index calculation agent selects the Eligible Portfolio with the highest Performance over the relevant Performance Observation Period that has an annualized Realized Volatility equal to or less than the Target Volatility, which is subject to adjustment as described below. The Eligible Portfolio that satisfies these criteria is known as the **"Unique Portfolio"** for that Performance Observation Period.

The **"Target Volatility"** means 5% and is subject to adjustment as described in step 6 below.

6. If none of the Eligible Portfolios has an annualized Realized Volatility equal to or less than the Target Volatility, the index calculation agent will increase the Target Volatility by 1% and repeat step 5 above until a Unique Portfolio is selected. These steps, including an increase to the Target Volatility, may be repeated further until a Unique Portfolio is selected.

(c) *Determining the Monthly Basket Constituent Weight to be assigned to each Basket Constituent with respect to the relevant Monthly Re-weighting Date*

The weight assigned to each Basket Constituent within the Monthly Reference Portfolio with respect to any Monthly Re-weighting Date will be determined by the index calculation agent as the weight assigned to that Basket Constituent within the Unique Portfolio identified with respect to the immediately preceding Monthly Re-weighting Selection Date (the **"Monthly Basket Constituent Weight"**).



The actual weight of each of the Basket Constituents within a Monthly Reference Portfolio determined on the relevant Monthly Re-weighting Selection Date may fluctuate after the relevant Monthly Re-weighting Date due to movements in the levels of the Basket Constituents.

(d) *Eligible Portfolios and Weighting Constraints*

For the ETF Efficiente Index, an “**Eligible Portfolio**” is any hypothetical portfolio of Basket Constituents that is composed of all 13 of the Basket Constituents and that satisfies the following (the “**Weighting Constraints**”):

1. the minimum possible Monthly Basket Constituent Weight assigned to any Basket Constituent is 0%;
2. the Monthly Basket Constituent Weight assigned to each Basket Constituent is an integral multiple of 5%;
3. the maximum possible Monthly Basket Constituent Weight assigned to (x) either of the JPMorgan Cash Index USD 3 Month\* or the iShares® TIPS Bond ETF is 50%, (y) the iShares® Russell 2000 ETF or the iShares® S&P GSCI™ Commodity-Indexed Trust or the SPDR® Gold Trust is 10%, and (z) any other Basket Constituent is 20%;
4. the sum of the Monthly Basket Constituent Weights assigned to the Basket Constituents numbered 1 through 3 in Table 1 above will not be greater than 50%. For the avoidance of doubt, the sum of the Monthly Basket Constituent Weights assigned to the SPDR® S&P 500® ETF Trust, iShares® Russell 2000 ETF and the iShares® MSCI EAFE ETF will not be greater than 50%;
5. the sum of the Monthly Basket Constituent Weights assigned to the Basket Constituents numbered 4 through 6 in Table 1 above will not be greater than 50%. For the avoidance of doubt, the sum of the Monthly Basket Constituent Weights assigned to the iShares® 20+ Year Treasury Bond ETF, iShares® iBoxx \$ Investment Grade Corporate Bond ETF and iShares® iBoxx \$ High Yield Corporate Bond ETF will not be greater than 50%;
6. the sum of the Monthly Basket Constituent Weights assigned to the Basket Constituents numbered 7 and 8 in Table 1 above will not be greater than 25%. For the avoidance of doubt, the sum of the Monthly Basket Constituent Weights assigned to the iShares® MSCI Emerging Markets ETF and iShares® J.P. Morgan USD Emerging Markets Bond ETF will not be greater than 25%;
7. the sum of the Monthly Basket Constituent Weights assigned to Basket Constituents numbered 9 through 11 in Table 1 above will not be greater than 25%. For the avoidance of doubt, the sum of the Monthly Basket Constituent Weights assigned to the iShares® U.S. Real Estate ETF, iShares® S&P GSCI™ Commodity-Indexed Trust and SPDR® Gold Trust will not be greater than 25%;
8. the sum of the Monthly Basket Constituent Weights assigned to the Basket Constituents numbered 12 and 13 in Table 1 above will not be greater than 50%.\* For the avoidance of doubt, the sum of the Monthly Basket Constituent Weights assigned to the iShares® TIPS Bond ETF and the JPMorgan Cash Index USD 3 Month will not be greater than 50%;\* and
9. the sum of the Monthly Basket Constituent Weights assigned to all the Basket Constituents will be equal to 100%.

The following table summarizes the Weighting Constraints described above.

**Table 2**

	Sector Cap	Basket Constituent	Asset Cap
1	Developed Equities 50%	SPDR® S&P 500® ETF Trust	20%
2		iShares® Russell 2000 ETF	10%
3		iShares® MSCI EAFE ETF	20%
4	Bonds 50%	iShares® 20+ Year Treasury Bond ETF	20%
5		iShares® iBoxx \$ Investment Grade Corporate Bond ETF	20%
6		iShares® iBoxx \$ High Yield Corporate Bond ETF	20%
7	Emerging Markets 25%	iShares® MSCI Emerging Markets ETF	20%
8		iShares® J.P. Morgan USD Emerging Markets Bond ETF	20%
9	Alternative Investments 25%	iShares® U.S. Real Estate ETF	20%
10		iShares® S&P GSCI™ Commodity-Indexed Trust	10%
11		SPDR® Gold Trust	10%
12	Inflation Protected Bonds and Cash 50%	iShares® TIPS Bond ETF	50%
13		JPMorgan Cash Index USD 3 Month*	50%

\* For the avoidance of doubt, as a result of the replacement of any Basket Constituent with the Cash Constituent due to the occurrence of an Extraordinary Event, as described below, the aggregate weight of the Cash Constituent would be allowed to exceed the Weighting Constraints specific to the Cash Constituent because a portion of that aggregate weight would be subject to the Weighting Constraints specific to the replaced Basket Constituent and not the Weighting Constraints specific to the Cash Constituent.

Consequently, (a) the Monthly Basket Constituent Weight assigned to each Basket Constituent numbered 1, 3, 4, 5, 6, 7, 8 or 9 in Table 1 above in an eligible portfolio may be any of 0%, 5%, 10%, 15% and 20%; (b) the Monthly Basket Constituent Weight assigned to each Basket Constituent numbered 2, 10 or 11 in Table 1 above may be any of 0%, 5% and 10%; and (c) the Monthly Basket Constituent Weight assigned to the Basket Constituent numbered 12 or 13 in Table 1 above may be any of 0%, 5%, 10%, 15%, 20%, 25%, 30%, 35%, 40%, 45% or 50%, *provided* that Weighting Constraints (4) through (9) are satisfied.

### Calculation of the Index Level

Unless an Index Market Disruption Event has occurred and is continuing, the index level of the ETF Efficient Index (the “**Index Level**”) will be calculated by the index calculation agent for each Index Trading Day. The Index Level for the Index was set at 100 on December 1, 1999 (the “**Base Date**”). The Index Level for the Index on September 25, 2012 (the “**Start Date**”) was 212.72. The Index Level is reported to two decimal places.

“**Index Trading Day**” means, for the Index, (i) an Index Business Day that (a) is not an Effective Monthly Re-weighting Date) and (b) is not a Portfolio Disruption Day (as defined under “— Index Market Disruption Events — Disruptions Affecting Exposure Determination and Calculation of Index

Levels in Connection with Index Market Disruption Events”), (ii) an Index Business Day that is an Effective Monthly Re-weighting Date or (iii) an Index Business Day that is a Portfolio Disruption Determination Date (as defined under “— Index Market Disruption Events — Disruptions Affecting Exposure Determination and Calculation of Index Levels in Connection with Index Market Disruption Events”).

An “**Effective Monthly Re-weighting Date**” means (i) a scheduled Monthly Re-weighting Date that occurs as originally scheduled (and is not postponed pursuant to “— Index Market Disruption Events — Disruption Affecting a Monthly Re-weighting Date”) or (ii) a Postponed Monthly Re-weighting Date as described under “— Index Market Disruption Events — Disruption Affecting a Monthly Re-weighting Date.”

#### *The Monthly Reference Portfolios*

On each Effective Monthly Re-weighting Date, the ETF Efficient Index is rebalanced from the Monthly Reference Portfolio associated with the previous Monthly Re-weighting Selection Date and into the Monthly Reference Portfolio associated with the current Monthly Re-weighting Selection Date.

On the Start Date, the ETF Efficient Index was composed of notional holdings in the Monthly Reference Portfolio determined as of the Monthly Re-weighting Selection Date immediately preceding the Start Date (the “**Starting Selection Date**”). References to (i) the “Monthly Re-weighting Dates” include references to the Monthly Re-weighting Date with respect to Monthly Reference Portfolio determined as of the Starting Selection Date (the “**Initial Re-weighting Date**”) and (ii) the “Monthly Re-weighting Selection Date” include references to the Starting Selection Date.

#### *The Levels of the Monthly Reference Portfolios*

On an Effective Monthly Re-weighting Date, the level of the Monthly Reference Portfolio determined as of the Monthly Re-weighting Selection Date for that Effective Monthly Re-weighting Date is equal to 1.0. On each Index Business Day from but excluding an Effective Monthly Re-weighting Date to and including the immediately following Effective Monthly Re-weighting Date, the level of the Monthly Reference Portfolio determined as of the Monthly Re-weighting Selection Date for the current Effective Monthly Re-weighting Date is determined as follows:

$$RP_{k,t} = RP_k \times \left[ 100\% + \left( \sum_{i=1}^{13} \frac{S_t^i}{S_k^i} \times W_k^i \right) - \frac{S_t^{13}}{S_k^{13}} \right]$$

where:

t means an Index Business Day from but excluding the current Effective Monthly Re-weighting Date to and including the immediately following Effective Monthly Re-weighting Date; and

$RP_{k,t}$  means the level of the Monthly Reference Portfolio associated with the Monthly Re-weighting Selection Date for the current Effective Monthly Re-weighting Date as of Index Business Day t;

$RP_k$  means the level of the Monthly Reference Portfolio associated with the Monthly Re-weighting Selection Date for the current Effective Monthly Re-weighting Date as of the current Effective Monthly Re-weighting Date, which equals 1.0;

$S_t^i$  means, for i=1 through 12, the Closing TR Level of Basket Constituent i as of Index Business Day t if that Basket Constituent is an ETF Constituent or the Closing Level of Basket Constituent i for Index Business Day t if that Basket Constituent is an index;

$S_k^i$  means, for  $i=1$  through 12, the Closing TR Level of Basket Constituent  $i$  as of the current Effective Monthly Re-weighting Date if that Basket Constituent is an ETF Constituent or the Closing Level of Basket Constituent  $i$  as of the current Effective Monthly Re-weighting Date if that Basket Constituent is an index;

$W_k^i$  means the Monthly Basket Constituent Weight set for Basket Constituent  $i$  in the Monthly Reference Portfolio determined as of Monthly Re-weighting Selection Date  $k$ ;

$S_t^{13}$  means the Closing Level of the Cash Constituent as of Index Business Day  $t$ ;

$S_k^{13}$  means the Closing Level the Cash Constituent as of the current Effective Monthly Re-weighting Date; and

$i$  means, for each Basket Constituent, the number (1 through 13) assigned to that Basket Constituent in Table 1 above.

With respect to the Monthly Reference Portfolio determined as of any Monthly Re-weighting Selection Date, the level of that Monthly Reference Portfolio on any Index Business Day reflects the sum of the weighted returns of the Basket Constituents over the period between the first Monthly Re-weighting Date following that Monthly Re-weighting Selection Date and that Index Business Day, net of the return of the Cash Constituent over the same period.

#### *Determining the Underlying Portfolio Volatility*

The ETF Efficiente Index aims to achieve its Target Volatility on a daily basis by dynamically adjusting its Exposure to the relevant Monthly Reference Portfolio on each Index Trading Day during the month, as described below, based on the historical volatility (the “**Underlying Portfolio Volatility**”) of the relevant Monthly Reference Portfolio underlying the ETF Efficiente Index.

#### *Identifying the Volatility Measurement Period*

In respect of each Index Trading Day, the index calculation agent will identify the applicable Volatility Measurement Period for that Index Trading Day as the period of 21 Index Trading Days prior to and ending with the Index Trading Day that is 2 Index Trading Days immediately preceding the current Index Trading Day (the “**Volatility Measurement Period**”). Accordingly, the first Index Trading Day of each Volatility Measurement Period in respect of the current Index Trading Day (the “**Volatility Measurement Start Date**”) is the Index Trading Day that is 22 Index Trading Days immediately preceding the current Index Trading Day, and the last Index Trading Day of each Volatility Measurement Period in respect of the current Index Trading Day is the Index Trading Day that is 2 Index Trading Days immediately preceding the current Index Trading Day.

#### *Volatility Calculation*

For the Volatility Measurement Period in respect of an Index Trading Day, the index calculation agent will determine for each Basket Constituent (including any Basket Constituent whose Monthly Basket Constituent Weight in the Monthly Reference Portfolio is zero) (a) the Closing TR Level for each Index Trading Day in the Volatility Measurement Period for each ETF Constituent and (b) the Closing Level for each Index Trading Day in the Volatility Measurement Period for each Basket Constituent that is an index.

The Underlying Portfolio Volatility on any Index Trading Day will be the annualized realized volatility over the Volatility Measurement Period of a portfolio whose weights are set equal to the Monthly Basket Constituent Weights for the Monthly Reference Portfolio associated with the most recent Effective Monthly Re-weighting Date. For the avoidance of doubt, if an Index Trading Day is an

Effective Monthly Re-weighting Date, the Underlying Portfolio Volatility on that Index Trading Day will be the volatility of a portfolio whose weights are set equal to the Monthly Basket Constituent Weights for the Monthly Reference Portfolio associated with that Effective Monthly Re-weighting Date.

As described under “— Calculating the Index Level” below, the Index Level on any Index Trading Day is calculated based on the exposure to the Monthly Reference Portfolio(s) determined at the end of the previous Index Trading Day. Accordingly, the exposure to the Monthly Reference Portfolio(s) on any Effective Monthly Re-weighting Date described in this “— Volatility Calculation” section will be reflected only in the Index Level on the next Index Trading Day.

If the index calculation agent has made a good faith estimate (or correction thereof) pursuant to “— Index Market Disruption Events — Disruptions Affecting Exposure Determination and Calculation of Index Levels in Connection with Index Market Disruption Events” below of a Closing TR Level for an ETF Constituent or a Closing Level for a Basket Constituent that is an index for an Index Trading Day that falls in the Volatility Measurement Period, the index calculation agent will use that good faith estimate (or correction thereof) for purposes of this “— Volatility Calculation” section.

For any Index Trading Day in the Volatility Measurement Period, if the index calculation agent cannot obtain relevant reliable information from third party sources for a Basket Constituent, for purposes of this “— Volatility Calculation” section, the Closing TR Level or the Closing Level, as the case may be, for that Basket Constituent in respect of that Index Trading Day will be deemed to be the Closing TR Level or the Closing Level, as the case may be, for that Basket Constituent as of the immediately preceding Dealing Day for that Basket Constituent for which the index calculation agent can obtain relevant reliable information from third party sources; *provided* that if the index calculation agent has made a good faith estimate (or correction thereof) pursuant to “— Index Market Disruption Events — Disruptions Affecting Exposure Determination and Calculation of Index Levels in Connection with Index Market Disruption Events” below of that Closing TR Level or that Closing Level, as the case may be, the index calculation agent will instead use such good faith estimate (or correction thereof) for purposes of this “— Volatility Calculation” section.

#### *Exposure Calculation*

Subject to “— Index Market Disruption Events — Disruptions Affecting Exposure Determination and Calculation of Index Levels in Connection with Index Market Disruption Events” below, the exposure of the ETF Efficiente Index to the Monthly Reference Portfolio(s) (the “**Exposure**”) as of any Index Trading Day, which is effective as of the end of that Index Trading Day, will be a non-negative number equal to (a) the Target Volatility of 5% *divided by* (b) the Underlying Portfolio Volatility with respect to that Index Trading Day, *provided* that the exposure of the ETF Efficiente Index at the end of that Index Trading Day will not be:

- greater than 150%; or
- less than 0%.

The Exposure on the Start Date was 138.13%.

#### *Calculating the Index Level*

Subject to the provisions of “— Index Market Disruption Events” below, on each Index Trading Day from but excluding an Effective Monthly Re-weighting Date to and including the immediately following Effective Monthly Re-weighting Date, the Index Level for the ETF Efficiente Index will be calculated in accordance with the following formula:

$$\text{Index}_t = \text{Index}_{t-1} \times \left[ 1 + \text{Exp}_{t-1} \times \left( \frac{\text{RP}_{k,t}}{\text{RP}_{k,t-1}} - 1 \right) - \text{Fee} \times \frac{\text{Days}_{t-1,t}}{360} \right]$$

where:

$\text{Index}_t$  means the Index Level of the ETF Efficient Index as of Index Trading Day  $t$ ;

$\text{Index}_{t-1}$  means the Index Level of the ETF Efficient Index as of Index Trading Day  $t-1$ ;

$\text{RP}_{k,t}$  means the level of the Monthly Reference Portfolio associated with the Monthly Re-weighting Selection Date for the current Effective Monthly Re-weighting Date as of Index Trading Day  $t$ ;

$\text{RP}_{k,t-1}$  means the level of the Monthly Reference Portfolio associated with the Monthly Re-weighting Selection Date for the current Effective Monthly Re-weighting Date as of Index Trading Day  $t-1$ ;

Fee means 1.00% per annum;

$\text{Days}_{k,t}$  means the number of calendar days from but excluding Index Trading Day  $t-1$  to and including Index Trading Day  $t$ ; and

$\text{Exp}_{t-1}$  means the Exposure of the ETF Efficient Index to the Monthly Reference Portfolio as of Index Trading Day  $t-1$ , which is effective as of the end of that Index Trading Day, as determined pursuant to “— Exposure Calculation” above.

Subject to the provisions of “— Index Market Disruption Events” below, on each Index Trading Day from but excluding an Effective Monthly Re-weighting Date to and including the immediately following Effective Monthly Re-weighting Date, the Index Level on any Index Trading Day reflects the return of the Monthly Reference Portfolio over the period between the immediately preceding Index Trading Day and that Index Trading Day, taking into account the Exposure of the ETF Efficient Index to the Monthly Reference Portfolio at the end of the immediately preceding Index Trading Day, *minus* the portion of the Fee that has accrued over the same period.

## Index Market Disruption Events

### *General*

An “**Index Market Disruption Event**” occurs if the index calculation agent in its sole discretion determines that on any Dealing Day there has been:

- (i) in respect of any Basket Constituent that is an index or any Reference Index of any ETF Constituent, a failure by the relevant sponsor to calculate and publish the Closing Level for that index on that Dealing Day, or any event that, in the determination of the index calculation agent, disrupts or impairs the ability of market participants generally to effect transactions in or obtain market values for any securities or components that compose the relevant index, any options on instruments related to those securities or components, or relevant futures related to those securities or components, if that disruption relates to securities or components and related options or futures on the same or additional securities or components which securities and components in the aggregate compose 20% or more of the level of the relevant index;
- (ii) in respect of a Basket Constituent that is an equity index (including, for the avoidance of doubt, an index composed of interests in REITs) or any Reference Index of any ETF Constituent that is an equity index, an Equity Index Disruption Event (including, for the avoidance of doubt, an index composed of interests in REITs);

(iii) in respect of a Basket Constituent that is a commodity index, any Reference Index of any ETF Constituent that is a commodity index or any Reference Commodities of any ETF Constituent, a Commodity Disruption Event; or

(iv) in respect of an ETF Constituent, an ETF Disruption Event; and

the index calculation agent determines in its sole discretion that the applicable event described above could materially interfere with the ability of market participants to transact in positions with respect to the Index, any Basket Constituent or the Reference Index of any ETF Constituent.

For the purpose of determining whether an Index Market Disruption Event with respect to an index and a Dealing Day exists at any time, if trading in a security or component included in the applicable index is materially suspended or materially limited at that time, then the relevant percentage contribution of that security to the level of the applicable index will be based on a comparison of (x) the portion of the level of the applicable index attributable to that security relative to (y) the overall level of the applicable index, in each case immediately before that suspension or limitation.

An **"Equity Index Disruption Event"** means, in each case as determined by the index calculation agent in its sole discretion:

- (i) the occurrence or existence of a suspension, absence or material limitation of trading of securities then constituting 20% or more of the level of the equity index (including, for the avoidance of doubt, an index composed of interests in REITs) on the relevant exchanges for those securities for more than two hours of trading during, or during the last one-half hour period preceding the close of, the principal trading session on those relevant primary exchanges; or
- (ii) if applicable, the occurrence or existence of a suspension, absence or material limitation of trading on the primary exchange or market for trading in futures or options contracts related to the equity index (including, for the avoidance of doubt, an index composed of interests in REITs) for more than two hours of trading during, or during the last one-half hour period preceding the close of, the principal trading session on that applicable exchange or market.

A **"Commodity Disruption Event"** means, in each case as determined by the index calculation agent in its sole discretion:

- (i) a material limitation, suspension, discontinuation or disruption of trading in one or more of the relevant Reference Commodities;
- (ii) a material limitation, suspension, discontinuation or disruption of trading in one or more options or futures contracts on (x) a relevant commodity or commodities related to the relevant commodity index or (y) the relevant Reference Commodities, which results in failure by the relevant exchange on which any such option(s) and/or futures contract(s) is/are traded to report an official settlement price for such option(s) and/or futures contract(s) on the day on which that event occurs or any succeeding day on which it continues;
- (iii) a limitation, suspension or disruption of trading in one or more options or futures contracts on (x) a relevant commodity or commodities related to the relevant commodity index or (y) the relevant Reference Commodities, by reason of movements exceeding "limit up" or "limit down" levels permitted by the relevant exchange and which the index calculation agent determines is material to trading volume and market conditions in such option(s) or futures contract(s) on a Dealing Day;

- (iv) publication by the relevant exchange of a “limit price” as the official settlement price for any futures contract on (x) the relevant commodity or commodities related to the relevant commodity index or (y) the relevant Reference Commodities (by reason of movements exceeding “limit up” or “limit down” levels permitted by the relevant exchange);
- (v) the occurrence of a Non-Publication Event;
- (vi) the relevant exchange for any futures contracts on (x) the relevant commodity or commodities related to the relevant commodity index or (y) the relevant Reference Commodities is not open for trading during its regular trading session as scheduled for the relevant day; or
- (vii) the relevant market for any Reference Commodity is not open for trading during its regular trading session as scheduled for the relevant day.

“**Non-Publication Event**” means the failure by the relevant exchange, index sponsor of the relevant commodity index or other price source to announce publicly or publish the following (or the information necessary for determining the following): (a) the official settlement price for any relevant futures contract on (x) the relevant commodity or commodities related to the relevant commodity index or (y) the relevant Reference Commodities; or (b) the closing level of the relevant commodity index, in either case by noon (London time) on the immediately following Dealing Day, *provided, however,* that the occurrence of such an event will not constitute a Non-Publication Event in the case of clause (b) hereof if the index calculation agent determines in its sole discretion by noon (London time) on such immediately following Dealing Day that the information necessary for determining the closing level of the relevant commodity index has been announced publicly or published by the relevant exchange, index sponsor of the relevant commodity index or other price source in which case the index calculation agent will determine the closing level of that commodity index (the closing level so determined being a “**Proxy Calculated Level**”) in good faith and in a commercially reasonable manner.

An “**ETF Disruption Event**” means, in each case as determined by the index calculation agent in its sole discretion:

- (i) the occurrence or existence of a suspension, absence or material limitation of trading of the shares of an ETF Constituent on the relevant primary exchange for such shares for more than two hours of trading during, or during the last one-half hour period preceding the close of, the principal trading session on that relevant primary exchange;
- (ii) a breakdown or failure in the price and trade reporting systems of the relevant primary exchange for the shares of an ETF Constituent as a result of which the reported trading prices for those shares are materially inaccurate for more than two hours of trading during, or during the last one-half hour preceding the close of, the principal trading session on that relevant primary exchange;
- (iii) if applicable, the occurrence or existence of a suspension, absence or material limitation of trading on the primary exchange or market for trading in futures or options contracts related to the shares of an ETF Constituent or on any Related Exchange for that ETF Constituent for more than two hours of trading during, or during the last one-half hour period preceding the close of, the principal trading session on the applicable exchange or market;
- (iv) the net asset value of an ETF Constituent is not calculated or is not announced by the Basket Constituent Sponsor; or
- (v) the relevant sponsor of an ETF Constituent suspends creations or redemptions of shares of that ETF Constituent.



For the purpose of determining whether an Equity Index Disruption Event or an ETF Disruption Event has occurred:

- (i) a limitation on the hours or number of days of trading will not constitute an Equity Index Disruption Event or an ETF Disruption Event if it results from an announced change in the regular business hours of the relevant primary exchange or the primary exchange or market for trading in futures or options contracts related to the relevant shares;
- (ii) limitations pursuant to the rules of any relevant primary exchange similar to New York Stock Exchange Rule 80B (or any applicable rule or regulation enacted or promulgated by any other self-regulatory organization or any government agency of scope similar to New York Stock Exchange Rule 80B as determined by the index calculation agent) on trading during significant market fluctuations will constitute a suspension, absence or material limitation of trading;
- (iii) a suspension of trading in futures or options contracts on the applicable equity index (including, for the avoidance of doubt, an index composed of interests in REITs) or shares of an ETF Constituent by the primary exchange or market for trading in those contracts or shares by reason of (a) a price change exceeding limits set by that exchange or market, (b) an imbalance of orders relating to those contracts or shares or (c) a disparity in bid and ask quotes relating to those contracts or shares, will constitute a suspension, absence or material limitation of trading in futures or options contracts related to that equity index or the shares of that ETF Constituent; and
- (iv) a suspension, absence or material limitation of trading on any relevant primary exchange or, if applicable, on the primary exchange or market on which futures or options contracts related to the applicable equity index (including, for the avoidance of doubt, an index composed of interests in REITs) or the shares of an ETF Constituent are traded will not include any time when that exchange or market is itself closed for trading under ordinary circumstances.

A **“Related Exchange”** means, in respect of any ETF Constituent, each exchange or quotation system, if any, specified as such in Table 1 above, any successor to that exchange or quotation system or any substitute exchange or quotation system to which trading in futures or options contracts relating to that ETF Constituent has temporarily relocated (*provided* that the index calculation agent has determined that there is a comparable liquidity relative to the futures or options contracts relating to that ETF Constituent on that temporary substitute exchange or quotation system as on the original Related Exchange), *provided, however*, that where **“All Exchanges”** is specified as the Related Exchange, **“Related Exchange”** means each exchange or quotation system (as determined by the index calculation agent) where trading has a material effect (as determined by the index calculation agent) on the overall market for futures or options contracts relating to that ETF Constituent.

**“Reference Index”** means, with respect to an ETF Constituent, the index underlying that ETF Constituent.

**“Reference Commodity”** means, with respect to an ETF Constituent, each commodity underlying that ETF Constituent.

*Disruption Affecting a Monthly Re-weighting Selection Date*

If a Monthly Re-weighting Selection Date is a Dealing Day on which an Index Market Disruption Event occurs or is continuing (an **“Index Disrupted Day”**) in respect of any Basket Constituent (for these purposes, each such Basket Constituent, an **“Affected Basket Constituent”**), then the relevant Monthly Re-weighting Selection Date will remain the originally scheduled Monthly Re-weighting Selection Date and the Closing TR Level or the Closing Level, as the case may be, for each Affected Basket Constituent will be deemed to be the Closing TR Level or the Closing Level, as the case may be, for that Affected Basket Constituent as of the immediately preceding day that was both (a) a Dealing Day for that Affected Basket Constituent and (b) not an Index Disrupted Day for that Affected Basket Constituent.

#### *Disruption Affecting a Monthly Re-weighting Date*

If an originally scheduled Monthly Re-weighting Date is an Index Disrupted Day in respect of any Basket Constituent, then that Monthly Re-weighting Date (an **"Affected Monthly Re-weighting Date"**) will be postponed to the first to occur of the following (which day shall be a **"Postponed Monthly Re-weighting Date"**):

- (a) the first following Index Business Day that is not an Index Disrupted Day for any Basket Constituent; and
- (b) the fifth Index Business Day following the date on which that Affected Monthly Re-weighting Date was originally scheduled to occur.

#### *Disruptions Affecting Exposure Determination and Calculation of Index Levels in Connection with Index Market Disruption Events*

If a Postponed Monthly Re-weighting Date is an Index Disrupted Day for any Basket Constituent, then that Postponed Monthly Re-weighting Date will be a **"Re-weighting Disruption Determination Date."** If a Portfolio Disruption Day immediately follows five consecutive Portfolio Disruption Days, then that Portfolio Disruption Day will be a **"Portfolio Disruption Determination Date."** **"Final Disruption Determination Date"** means a day that is either a Re-weighting Disruption Determination Date or a Portfolio Disruption Determination Date.

**"Portfolio Disruption Day"** means an Index Business Day that (i) is not an Effective Monthly Re-weighting Date and (ii) is an Index Disrupted Day for any Basket Constituent that has a non-zero Monthly Basket Constituent Weight in the Monthly Reference Portfolio determined as of the Monthly Re-weighting Selection Date associated with the most recent Monthly Re-weighting Date.

On each Final Disruption Determination Date, the index calculation agent will calculate its good faith estimate of the Exposure of the ETF Efficient Index (that is otherwise determined pursuant to **"— Determining the Underlying Portfolio Volatility — Exposure Calculation"**) and the Index Level as of that Final Disruption Determination Date (notwithstanding the fact that that Final Disruption Determination Date is an Index Disrupted Day for at least one Basket Constituent) using its good faith estimate of (i) the Closing TR Level for any ETF Constituent, if that Final Disruption Determination Date is an Index Disrupted Day for that ETF Constituent, (ii) the Closing Level for any Basket Constituent that is an index, if that Final Disruption Determination Date is an Index Disrupted Day for that Basket Constituent and (iii) the level of any Monthly Reference Portfolio that affects the calculation of the Index Level. Any estimated levels may be subject to correction on any of (x) the first succeeding Index Business Day that is not a Final Disruption Determination Date for the ETF Efficient Index, (y) the first succeeding Index Business Day that is not an Index Disrupted Day in respect of any Basket Constituent and (z) the first succeeding Index Business Day that is not an Index Disrupted Day for a Basket Constituent with respect to which that estimated level was determined pursuant to this **"— Disruptions Affecting Exposure Determination and Calculation of Index Levels in Connection with Index Market Disruption Events"** section. Any Final Disruption Determination Date will be deemed to be an Index Trading Day, notwithstanding the fact that it is an Index Disrupted Day for at least one Basket Constituent.

For the avoidance of doubt, on each Re-weighting Determination Date, the Index Calculation Agent will re-weight the Index on that day in accordance with **"— Determining the Underlying Portfolio Volatility — Volatility Calculation"** using its good faith estimates pursuant to this **"— Disruptions Affecting Exposure Determination and Calculation of Index Levels in Connection with Index Market Disruption Events"** section.

For purposes of determining the Closing TR Level for any ETF Constituent on any Dealing Day, if the immediately preceding Dealing Day (the “**Prior Dealing Day**”) for that ETF Constituent is an Index Disrupted Day then, in the formula for determining the Closing TR Level for that Dealing Day, (i) the Closing TR Level for that Prior Dealing Day will be replaced with the Closing TR Level on the immediately preceding Dealing Day that was not an Index Disrupted Day (the “**Prior Non-Disrupted Dealing Day**”) for that ETF Constituent, (ii) the Closing Level for that Prior Dealing Day will be replaced with the Closing Level on the Prior Non-Disrupted Dealing Day for that ETF Constituent, and (iii) the Gross Dividend Amount of the ETF Constituent in respect of that Dealing Day will be replaced with the sum of the Gross Dividend Amounts of the ETF Constituent in respect of all days from and excluding the Prior Non-Disrupted Dealing Day to and including that Dealing Day.

### Extraordinary Events

Certain events may have the effect of any one or more of the thirteen Basket Constituents set out in Table 1 above being succeeded to, being subject to a material change in its calculation or being cancelled. We refer to each of these events individually as an Extraordinary Event, as described in detail below.

For any Basket Constituent,

- (a) if its level or net asset value is not calculated and is not announced by the Basket Constituent Sponsor for the relevant Basket Constituent, but is calculated and announced by a successor sponsor acceptable to the index calculation agent, or
- (b) in the case of an index, if it is replaced by a successor index using, in the determination of the index calculation agent, the same or a substantially similar formula for and method of calculation as used in the calculation of that Basket Constituent, or
- (c) in the case of an ETF Constituent, if it is replaced by a successor ETF whose Reference Commodities are the same as that of the replaced ETF Constituent or whose Reference Index is either the same as that of the replaced ETF Constituent or is an index using, in the determination of the index calculation agent, the same or a substantially similar formula for and method of calculation as used in the calculation of the replaced ETF Constituent’s Reference Index

and, in any case, whose sponsor is acceptable to the index calculation agent, then, in the case of clause (a), (b) or (c) above, that Basket Constituent thereafter will be deemed to be the successor index or ETF so calculated and announced by that successor sponsor described in clause (a) above or that successor index or ETF described in clause (b) or (c) above, as the case may be, with effect from a date determined by the index calculation agent, which may make such adjustments to the Rules as it determines in good faith are appropriate to account for that change.

For the avoidance of doubt, the index calculation agent will not accept a particular successor ETF or successor index if the index calculation agent determines, in its discretion, that doing so would immediately result in the occurrence of an Extraordinary Event. Upon the acceptance of a successor ETF or successor index, that successor will take the place of the relevant Basket Constituent. For the avoidance of doubt, the prior performance of that successor will be used in the identification of the Unique Portfolio for future Performance Observation Periods and for determining Exposure.

If an Extraordinary Event occurs in respect of a Basket Constituent, the index calculation agent, acting in good faith and a commercially reasonable manner, will select as a substitute for that Basket Constituent

- (a) an exchange-traded fund or
- (b) an index

that, in either case, the index calculation agent determines, in its discretion, possesses substantially similar characteristics or provides substantially similar exposure (as considered prior to the occurrence of that Extraordinary Event, with the understanding that an exchange-traded fund can be substantially similar to an index and vice versa) as compared to the Basket Constituent that is being replaced (that substitute ETF or index being referred to herein as a “**substitute ETF**” or “**substitute index**,” respectively).

In that case, the index calculation agent will, in good faith, make such adjustment(s) that it determines to be appropriate to any variable, calculation methodology, valuation terms or any other rule in relation to the ETF Efficient Index to account for that substitution; *provided* that

- (a) the index calculation agent will not select a substitute ETF for the Cash Constituent, but may select a substitute index for the Cash Constituent;
- (b) for any Basket Constituent other than the Cash Constituent, if the index calculation agent determines, in its discretion, that no such substitute ETF and no such substitute index is available, then the index calculation agent will, in its discretion, (x) determine its good faith estimate of the closing price of that Basket Constituent as of a date on or prior to the occurrence of that Extraordinary Event and use such estimate of the closing price (without modification over time) in respect of that Basket Constituent in subsequent calculations of the Index Level of the ETF Efficient Index until the immediately following Effective Monthly Re-weighting Date, (y) replace that Basket Constituent with the Cash Constituent as its substitute and (z) in good faith, make such adjustments that it determines to be appropriate to any variable, calculation methodology, valuation terms or any other rule in relation to the Index to account for that substitution (for the avoidance of doubt, as a result of such a replacement of any Basket Constituent with the Cash Constituent, the aggregate weight of the Cash Constituent would be allowed to exceed the Weighting Constraints specific to the Cash Constituent, because a portion of that aggregate weight would be subject to the Weighting Constraints specific to the replaced Basket Constituent and not the Weighting Constraints specific to the Cash Constituent);
- (c) for the Cash Constituent if the index calculation agent determines, in its discretion, that no such substitute index is available, then the index calculation agent will, in its discretion, calculate the level of the Cash Constituent using, in lieu of a published level for the Cash Constituent, the level for the Cash Constituent as of any future Index Business Day as determined by the index calculation agent in accordance with the formula for and method of calculating the Cash Constituent last in effect prior to the occurrence of that Extraordinary Event, but using only the types of components that composed the Cash Constituent immediately prior to that Extraordinary Event (and in the case of components with an expiration or maturity, any components required to roll any expiring positions in accordance with the formula for and method of calculating the Cash Constituent will be permitted).

For the avoidance of doubt, the index calculation agent shall not select a particular substitute ETF or substitute index if the index calculation agent determines, in its discretion, that doing so would immediately result in the occurrence of an Extraordinary Event. Upon the selection of a substitute ETF or substitute index, that substitute will take the place of the relevant Basket Constituent. For the avoidance of doubt, the prior performance of that substitute will be used in the identification of the Unique Portfolio for future Performance Observation Periods and for determining Exposure.

**“Extraordinary Event”** in respect of a Basket Constituent means:

- (1) for any Basket Constituent that is an index (including, for the avoidance of doubt, the Cash Constituent), the Basket Constituent Sponsor makes a material change in the formula for or the method of calculating that index or in any other way materially modifies that index (other than a modification prescribed in that formula or method to maintain that index in routine circumstances);

- (2) for any ETF Constituent that has a Reference Index, the sponsor of the relevant Reference Index of the ETF makes a material change in the formula for or the method of calculating that Reference Index of the ETF or in any other way materially modifies that Reference Index of the ETF (other than a modification prescribed in that formula or method to maintain that Reference Index of the ETF in routine circumstances);
- (3) for any ETF Constituent, the Basket Constituent Sponsor replaces the Reference Commodities or replaces the Reference Index of the ETF with a successor index that does not, in the determination of the index calculation agent, use the same or a substantially similar formula for and method of calculation as used in the calculation of the replaced Reference Index of the ETF;
- (4) for any ETF Constituent for which shares of the relevant exchange-traded fund are issued by a trust (such issuer trust, the “**Trust Issuer**”), the trust agreement or any similar governing document of the Trust Issuer is terminated, or the Trust Issuer becomes, for any reason, subject to termination, liquidation, dissolution or winding-up or any other analogous proceeding;
- (5) for any Basket Constituent, the Basket Constituent Sponsor permanently cancels the Basket Constituent, and no successor exists, or the Basket Constituent’s level or net asset value is not calculated and is not announced by the Basket Constituent Sponsor for the relevant Basket Constituent, and is not calculated and announced by a successor sponsor acceptable to the index calculation agent;
- (6) in respect of any Basket Constituent that is an index, a failure by the relevant sponsor to calculate and publish the Closing Level for such index for five consecutive Dealing Days;
- (7) an ETF Constituent is de-listed from the relevant primary exchange (as specified in Table 1 above) for that ETF Constituent, liquidated or otherwise terminated;
- (8) a Lock-In Event occurs in respect of an ETF Constituent;
- (9) in respect of a Basket Constituent, at any time, the license granted (if required) by a non-affiliate of the index calculation agent to the index calculation agent (or its affiliates) to use that Basket Constituent for the purposes of the ETF Efficient Index terminates, or the index calculation agent’s rights to use the Basket Constituent for the purpose of the ETF Efficient Index is otherwise disputed by a non-affiliate of the index calculation agent, impaired or ceases (for any reason; or
- (10) the occurrence or continuation of a Change in Law.

A “**Lock-In Event**” occurs when one or more of the following events occurs or continues, and the index calculation agent determines in its sole discretion that that event or combination of events is material (although, for the avoidance of doubt, the index calculation agent has no obligation to monitor actively whether or not any of the following events has occurred):

- (a) there is an amendment, variation or modification to the offering documents of any ETF Constituent that, in the reasonable determination of the index calculation agent, would materially adversely affect the ability of market participants to trade in shares of the ETF Constituent;
- (b) the Average Daily Trading Volume of any ETF Constituent other than those specified in clause (c) of this definition of Lock-in Event declines or remains below \$50 million;
- (c) the Average Daily Trading Volume of the ETF Constituent numbered 8 (iShares® J.P. Morgan USD Emerging Markets Bond ETF) or the ETF Constituent numbered 10 (iShares® S&P GSCI™ Commodity-Indexed Trust) in Table 1 above or any successor to or substitute for any of these ETF Constituents declines or remains below \$7.5 million;

- (d) the Market Capitalization of any ETF Constituent declines or remains below \$500 million;
- (e) the net asset value of any ETF Constituent is not calculated or is not announced by the relevant Basket Constituent Sponsor for five consecutive Dealing Days for that ETF Constituent;
- (f) the relevant sponsor of the Reference Index of any ETF Constituent fails to calculate and publish the Closing Level for that index for five consecutive Dealing Days; or
- (g) the relevant sponsor of any ETF Constituent suspends creations or redemptions of shares of that ETF Constituent for 5 consecutive Dealing Days or announces a suspension of unlimited duration of such creations or redemptions.

**“Average Daily Trading Volume”** means, with respect to an ETF Constituent and an Index Business Day, the product of (a) the average volume of trading in the shares of that ETF Constituent on all exchanges over the preceding 6 month period, as reported by Bloomberg using the function ETF Ticker US HP and selecting a 6 month range or another provider selected by the index calculation agent, and (b) the Closing Level of that ETF Constituent on that Index Business Day.

**“Market Capitalization”** means, with respect to an ETF Constituent and an Index Business Day, the market capitalization of that ETF Constituent as provided by Bloomberg on the “DES” page or by another information provider selected by the index calculation agent for that ETF Constituent on that Index Business Day.

A **“Change in Law”** occurs when, due to either:

- (a) the adoption of, or any change in, any applicable law, regulation or rule (including, without limitation, (x) any tax law or (y) adoption or promulgation of new regulations authorized or mandated by existing statute); or
- (b) the promulgation of, or any change in, the announcement or statement of a formal or informal interpretation by any court, tribunal or regulatory authority with competent jurisdiction of any applicable law, rule, regulation or order (including, without limitation, as implemented by the U.S. Commodity Futures Trading Commission, the U.S. Securities and Exchange Commission or any exchange or trading facility); and

the index calculation agent determines in good faith that (x) it is contrary to such law, rule, regulation or order for any market participants that are brokers or financial intermediaries (individually or collectively) to hold, acquire or dispose of (in whole or in part) any Basket Constituent, any transaction referencing any Basket Constituent or any component of any Basket Constituent or of any Reference Index of any ETF Constituent or (y) holding a position in any Basket Constituent, any transaction referencing any Basket Constituent or any component of any Basket Constituent or of any Reference Index of any ETF Constituent is (or, but for the consequent disposal or termination thereof, would otherwise be) in excess of any allowable position limit(s) applicable to any market participants that are brokers or financial intermediaries (individually or collectively) under any such law, rule or regulation in relation to that Basket Constituent, transaction referencing the Basket Constituent or component of the Basket Constituent or of the Reference Index of the ETF Constituent, including in any case traded on any exchange(s) or other trading facility (including, without limitation, any relevant exchange).

### **Anti-dilution Adjustments**

With respect to each ETF Constituent (or the relevant successor or substitute ETF), the index calculation agent will make anti-dilution adjustments to the Closing Level of that ETF Constituent only (a) if the shares of that ETF Constituent are subject to a share split or reverse share split, once such split has become effective, and (b) if that ETF Constituent is subject to (i) an issuance of additional shares of that ETF Constituent that is given ratably to all or substantially all holders of shares of that ETF

Constituent or (ii) a distribution of shares of that ETF Constituent as a result of the triggering of any provision of the corporate charter of that ETF Constituent, once the dividend or distribution has become effective and the shares of that ETF Constituent are trading ex-dividend. The index calculation agent will be solely responsible for the determination and calculation of any anti-dilution adjustments and any related determinations and calculations, and its determinations and calculations with respect thereto will be conclusive in the absence of manifest error.

### **Corrections**

If (a) the Closing Level of any Basket Constituent as of any date which is published or otherwise made available in respect of the relevant Basket Constituent is subsequently corrected and that correction is published or otherwise made available in respect of that Basket Constituent; or (b) the index calculation agent identifies an error or omission in any of its calculations or determinations in respect of the ETF Efficiente Index, then the index calculation agent may, if practicable and if the index calculation agent determines acting in good faith that such correction, error or omission (as the case may be) is material, adjust or correct the relevant calculation or determination and/or the Index Level as of any Index Business Day to take into account that correction.

## BASKET CONSTITUENTS OF THE INDEX

### BACKGROUND ON THE SPDR® S&P 500® ETF TRUST

We have derived all information contained in this underlying supplement regarding the SPDR® S&P 500® ETF Trust (the “**SPY Fund**”) from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, State Street Bank and Trust Company, as trustee of the SPY Fund (“**SSBTC**”), and PDR Services LLC, as sponsor of the SPY Fund (“**PDRS**”). The SPY Fund is a unit investment trust that issues securities called “**Trust Units**” or “**Units**.” The SPY Fund is an exchange-traded fund (“**ETF**”) that trades on the NYSE Arca, Inc. (“**NYSE Arca**”) under the ticker symbol “**SPY**.”

The SPY Fund is an investment company registered under the Investment Company Act of 1940, as amended. Trust Units represent an undivided ownership interest in a portfolio of all, or substantially all, of the common stocks of the S&P 500® Index. Information provided to or filed with the SEC by the SPY Fund pursuant to the Securities Act of 1933, as amended, and the Investment Company Act of 1940, as amended, can be located by reference to SEC file numbers 033-46080 and 811-06125, respectively, through the SEC’s website at <http://www.sec.gov>. For additional information regarding the SPY Fund, SSBTC and PDRS, please see the SPY Fund’s prospectus. In addition, information about the SPY Fund, SSBTC and PDRS may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the SPY Fund website at <https://www.spdrs.com/product/fund.seam?ticker=SPY>. We make no representation or warranty as to the accuracy or completeness of such information. Information contained in the SPY Fund’s website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

#### Investment Objective and Strategy

The SPY Fund’s objective is to provide investment results that, before expenses, generally correspond to the price and yield performance of the S&P 500® Index. See “— The S&P 500® Index” below for more information about the S&P 500® Index. The Trust holds stocks and cash and is not actively managed by traditional methods, which typically seeks to outperform a benchmark index. To maintain the correspondence between the composition and weightings of the stocks held by the SPY Fund and the component stocks of the S&P 500® Index, which we refer to as “**Index Securities**,” SSBTC adjusts the holdings of the SPY Fund from time to time to conform to periodic changes in the identity and/or relative weightings of the Index Securities. SSBTC aggregates certain of these adjustments and makes changes to the holdings of the SPY Fund at least monthly or more frequently in the case of significant changes to the S&P 500® Index.

The return of the SPY Fund may not match or achieve a high degree of correlation with the return of the S&P 500® Index because the total return generated by the SPY Fund’s portfolio of stocks and cash is reduced by the expenses of the SPY Fund and transaction costs incurred in adjusting the SPY Fund’s portfolio. In addition, it is possible that the SPY Fund may not always fully replicate the performance of the S&P 500® Index due to the unavailability of certain Index Securities in the secondary market or due to other extraordinary circumstances.

#### Holdings Information

The following tables summarize the SPY Fund’s top holdings in individual companies and by sector as of July 24, 2013.



### Top Holdings in Individual Securities as of July 24, 2013

Name	Weight
Exxon Mobil Corporation	2.81%
Apple Inc.	2.75%
Johnson & Johnson	1.73%
General Electric Company	1.69%
Chevron Corporation	1.63%
Google Inc.	1.62%
Microsoft Corporation	1.60%
The Procter & Gamble Company	1.46%
Wells Fargo & Co.	1.45%
J.P. Morgan Chase & Co.	1.42%

### Top Holdings by Sector as of July 24, 2013

Sector	Percentage of Total Holdings
Information Technology	17.57%
Financials	16.85%
Health Care	12.86%
Consumer Discretionary	12.22%
Energy	10.59%
Consumer Staples	10.40%
Industrials	10.29%
Materials	3.27%
Utilities	3.26%
Telecommunication Services	2.58%

The information above was compiled from the SPY Fund's website, without independent verification. Information contained in the SPY Fund's website is not incorporated by reference in, and should not be considered a part of, this underlying supplement.

### The S&P 500® Index

We have derived all information contained in this underlying supplement regarding the S&P 500® Index, including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, Standard & Poor's Financial Services LLC ("S&P"). The S&P 500® Index was developed by S&P and is calculated, maintained and published by S&P. S&P has no obligation to continue to publish, and may discontinue the publication of, the S&P 500® Index.

The S&P 500® Index is reported by Bloomberg L.P. under the ticker symbol "SPX."

In July 2012, The McGraw-Hill Companies, Inc. ("McGraw-Hill"), the owner of the S&P Indices business, and CME Group Inc. ("CME Group"), the 90% owner of the CME Group and Dow Jones & Company, Inc. joint venture that owns the Dow Jones Indexes business, formed a new joint venture,

S&P Dow Jones Indices LLC, which owns the S&P Indices business and the Dow Jones Indexes business, including the S&P 500® Index.

The S&P 500® Index is intended to provide a performance benchmark for the U.S. equity markets. The calculation of the level of the S&P 500® Index (discussed below in further detail) is based on the relative value of the aggregate Market Value (as defined below) of the common stocks of 500 companies (the “**S&P Component Stocks**”) as of a particular time as compared to the aggregate average Market Value of the common stocks of 500 similar companies during the base period of the years 1941 through 1943. Historically, the “Market Value” of any S&P Component Stock was calculated as the product of the market price per share and the number of the then-outstanding shares of such S&P Component Stock. As discussed below, on March 21, 2005, S&P began to use a new methodology to calculate the Market Value of the S&P Component Stocks and on September 16, 2005, S&P completed its transition to the new calculation methodology. The 500 companies are not the 500 largest companies listed on the New York Stock Exchange (the “**NYSE**”) and not all 500 companies are listed on such exchange. S&P chooses companies for inclusion in the S&P 500® Index with the objective of achieving a distribution by broad industry groupings that approximates the distribution of these groupings in the common stock population of the U.S. equity market. S&P may from time to time, in its sole discretion, add companies to, or delete companies from, the S&P 500® Index to achieve the objectives stated above. Relevant criteria employed by S&P include the viability of the particular company, the extent to which that company represents the industry group to which it is assigned, the extent to which the company’s common stock is widely-held and the Market Value and trading activity of the common stock of that company.

The S&P 500® Index is a float-adjusted index. Under float adjustment, the share counts used in calculating the S&P 500® Index reflect only those shares that are available to investors, not all of a company’s outstanding shares. Float adjustment excludes shares that are closely held by control groups, other publicly traded companies or government agencies.

S&P currently defines three groups of shareholders whose holdings are subject to float adjustment if the relevant group’s holdings exceed 10% of the outstanding shares:

- holdings by other publicly traded corporations, venture capital firms, private equity firms, strategic partners, or leveraged buyout groups;
- holdings by government entities, including all levels of government in the United States or foreign countries; and
- holdings by current or former officers and directors of the company, founders of the company or family trusts of officers, directors or founders, as well as holdings of trusts, foundations, pension funds, employee stock ownership plans, or other investment vehicles associated with and controlled by the company.

Under the current float-adjustment rules, in cases where holdings in a group exceed 10% of the outstanding shares of a company, the holdings of that group will be excluded from the float-adjusted count of shares to be used in the S&P 500® Index calculation. Mutual funds, investment advisory firms, pension funds or foundations not associated with the company and investment funds in insurance companies and shares that trust beneficiaries may buy or sell without difficulty or significant additional expense beyond typical brokerage fees are currently part of the float.

Beginning in September 2012, all share-holdings with a position greater than 5% of a stock’s outstanding shares, other than holdings by “block owners,” will be removed from the float for purposes of calculating the S&P 500® Index. Generally, these “control holders” will include officers and directors, private equity, venture capital & special equity firms, other publicly traded companies that hold shares for control, strategic partners, holders of restricted shares, ESOPs, employee and family trusts, foundations associated with the company, holders of unlisted share classes of stock or government entities at all levels (other than government retirement/pension funds) and any individual

person who controls a 5% or greater stake in a company as reported in regulatory filings. Holdings by block owners, such as depository banks, pension funds, mutual funds & ETF providers, 401(k) plans of the company, government retirement/pension funds, investment funds of insurance companies, asset managers and investment funds, independent foundations and savings and investment plans, will ordinarily be considered part of the float.

Treasury stock, stock options, equity participation units, warrants, preferred stock, convertible stock and rights are generally not part of the float. However, shares held in a trust to allow investors in countries outside the country of domicile (*e.g.*, ADRs, CDIs and Canadian exchangeable shares) are normally part of the float unless those shares form a control block. If a company has more than one class of stock outstanding, shares in an unlisted or non-traded class are treated as a control block.

For each stock, an investable weight factor (“IWF”) is calculated by dividing the available float shares by the total shares outstanding. Available float shares are currently defined as the total shares outstanding less shares held in one or more of the three groups listed above where the group holdings exceed 10% of the outstanding shares. Beginning in September 2012, available float shares will be defined as total shares outstanding less shares held by control holders. The S&P 500® Index is calculated by dividing the sum of the IWF multiplied by both the price and the total shares outstanding for each stock by the Index Divisor.

As of the date of this underlying supplement, the S&P 500® Index is calculated using a base-weighted aggregate methodology: the level of the S&P 500® Index reflects the total Market Value of all 500 S&P Component Stocks relative to the S&P 500® Index’s base period of 1941–43 (the “**Base Period**”).

An indexed number is used to represent the results of this calculation in order to make the value easier to work with and track over time.

The actual total Market Value of the S&P Component Stocks during the Base Period has been set equal to an indexed value of 10. This is often indicated by the notation 1941–43=10. In practice, the daily calculation of the S&P 500® Index is computed by dividing the total Market Value of the S&P Component Stocks by a number called the Index Divisor. By itself, the Index Divisor is an arbitrary number. However, in the context of the calculation of the S&P 500® Index, it is the only link to the original Base Period level of the S&P 500® Index. The Index Divisor keeps the S&P 500® Index comparable over time and is the manipulation point for all adjustments to the S&P 500® Index (“**Index Maintenance**”).

Index Maintenance includes monitoring and completing the adjustments for company additions and deletions, share changes, stock splits, stock dividends and stock price adjustments due to company restructurings or spin-offs.

To prevent the level of the S&P 500® Index from changing due to corporate actions, all corporate actions which affect the total Market Value of the S&P 500® Index require an Index Divisor adjustment. By adjusting the Index Divisor for the change in total Market Value, the level of the S&P 500® Index remains constant. This helps maintain the level of the S&P 500® Index as an accurate barometer of stock market performance and ensures that the movement of the S&P 500® Index does not reflect the corporate actions of individual companies in the S&P 500® Index. All Index Divisor adjustments are made after the close of trading and after the calculation of the closing level of the S&P 500® Index. Some corporate actions, such as stock splits and stock dividends, require simple changes in the common shares outstanding and the stock prices of the companies in the S&P 500® Index and do not require Index Divisor adjustments.

The table below summarizes the types of Index Maintenance adjustments and indicates whether or not an Index Divisor adjustment is required.

Type of Corporate Action	Comments	Divisor Adjustment
Company added/ deleted	Net change in market value determines divisor adjustment.	Yes
Change in shares outstanding	Any combination of secondary issuance, share repurchase or buy back – share counts revised to reflect change.	Yes
Stock split	Share count revised to reflect new count. Divisor adjustment is not required since the share count and price changes are offsetting.	No
Spin-off	If the spun-off company is not being added to the index, the divisor adjustment reflects the decline in index market value ( <i>i.e.</i> , the value of the spun-off unit).	Yes
Spin-off	Spun-off company added to the index, another company removed to keep number of names fixed. Divisor adjustment reflects deletion.	Yes
Change in IWF due to a corporate action or a purchase or sale by an inside holder	Increasing (decreasing) the IWF increases (decreases) the total market value of the index. The divisor change reflects the change in market value caused by the change to an IWF.	Yes
Special dividend	When a company pays a special dividend the share price is assumed to drop by the amount of the dividend; the divisor adjustment reflects this drop in index market value.	Yes
Rights offering	Each shareholder receives the right to buy a proportional number of additional shares at a set (often discounted) price. The calculation assumes that the offering is fully subscribed. Divisor adjustment reflects increase in market cap measured as the shares issued multiplied by the price paid.	Yes

Stock splits and stock dividends do not affect the Index Divisor, because following a split or dividend, both the stock price and number of shares outstanding are adjusted by S&P so that there is no change in the Market Value of the S&P Component Stock. All stock split and dividend adjustments are made after the close of trading on the day before the ex-date.

Each of the corporate events exemplified in the table requiring an adjustment to the Index Divisor has the effect of altering the Market Value of the S&P Component Stock and consequently of altering the aggregate Market Value of the S&P Component Stocks (the “**Post-Event Aggregate Market Value**”). In order that the level of the S&P 500® Index (the “**Pre-Event Index Value**”) not be affected by the altered Market Value (whether increase or decrease) of the affected Component Stock, a new Index Divisor (“**New Divisor**”) is derived as follows:

$$\frac{\text{Post-Event Aggregate Market Value}}{\text{New Divisor}} = \text{Pre-Event Index Value}$$

$$\text{New Divisor} = \frac{\text{Post-Event Aggregate Market Value}}{\text{Pre-Event Index Value}}$$

A large part of the Index Maintenance process involves tracking the changes in the number of shares outstanding of each of the S&P 500® Index companies. Four times a year, on a Friday close to the end of each calendar quarter, the share totals of companies in the S&P 500® Index are updated as required by any changes in the number of shares outstanding. After the totals are updated, the Index Divisor is adjusted to compensate for the net change in the total Market Value of the S&P 500® Index. In addition, any changes over 5% in the current common shares outstanding for the S&P 500® Index companies are carefully reviewed on a weekly basis, and when appropriate, an immediate adjustment is made to the Index Divisor.

## BACKGROUND ON THE iSHARES® RUSSELL 2000 ETF

We have derived all information contained in this underlying supplement regarding the iShares® Russell 2000 ETF (the “**IWM Fund**”) from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, iShares® Trust, BlackRock Institutional Trust Company, N.A. (“**BTC**”) and BlackRock Fund Advisors (“**BFA**”). The IWM Fund is an investment portfolio maintained and managed by iShares® Trust. BFA is currently the investment adviser to the IWM Fund. The IWM Fund is an exchange-traded fund (“**ETF**”) that trades on the NYSE Arca, Inc. (“**NYSE Arca**”) under the ticker symbol “IWM.”

On July 1, 2013, the name of the IWM Fund was changed from the iShares® Russell 2000 Index Fund to the current name.

iShares® Trust is a registered investment company that consists of numerous separate investment portfolios, including the IWM Fund. Information provided to or filed with the SEC by iShares® Trust pursuant to the Securities Act of 1933, as amended, and the Investment Company Act of 1940, as amended, can be located by reference to SEC file numbers 333-92935 and 811-09729, respectively, through the SEC’s website at <http://www.sec.gov>. For additional information regarding iShares® Trust, BFA and the IWM Fund, please see the prospectus. In addition, information about iShares® Trust and the IWM Fund may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the iShares® website at [www.ishares.com](http://www.ishares.com). We make no representation or warranty as to the accuracy or completeness of such information. Information contained in the iShares® website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

### Investment Objective and Strategy

The IWM Fund seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the Russell 2000® Index. See “— The Russell 2000® Index” below for more information about the Russell 2000® Index.

The IWM Fund uses a representative sampling indexing strategy (as described below under “Representative Sampling”) to try to track the Russell 2000® Index. The IWM Fund generally invests at least 90% of its assets in the securities of the Russell 2000® Index or in depositary receipts representing securities included in the Russell 2000® Index. The IWM Fund may invest the remainder of its assets in certain futures, options and swap contracts, cash and cash equivalents, including money market funds advised by BFA or its affiliates, as well as in securities not included in the Russell 2000® Index, but which BFA believes will help the IWM Fund track the Russell 2000® Index.

### Representative Sampling

BFA uses a “representative sampling” indexing strategy to manage the IWM Fund. “Representative sampling” is an indexing strategy that involves investing in a representative sample of securities that collectively has an investment profile similar to the Russell 2000® Index. The securities selected are expected to have, in the aggregate, investment characteristics (based on factors such as market capitalization and industry weightings), fundamental characteristics (such as return variability and yield) and liquidity measures similar to those of the Russell 2000® Index. The IWM Fund may or may not hold all of the securities in the Russell 2000® Index.

### Correlation

The Russell 2000® Index is a theoretical financial calculation while the IWM Fund is an actual investment portfolio. The performance of the IWM Fund and the Russell 2000® Index may vary due to transaction costs, non-U.S. currency valuations, asset valuations, corporate actions (such as mergers and spin-offs), timing variances and differences between the IWM Fund’s portfolio and the Russell 2000®

Index resulting from legal restrictions (such as diversification requirements) that apply to the IWM Fund but not to the Russell 2000® Index or to the use of representative sampling. “Tracking error” is the divergence of the performance (return) of a fund’s portfolio from that of its underlying index. BFA expects that, over time, the IWM Fund’s tracking error will not exceed 5%. Because the IWM Fund uses a representative sampling indexing strategy, it can be expected to have a larger tracking error than if it used a replication indexing strategy. “Replication” is an indexing strategy in which a fund invests in substantially all of the securities in its underlying index in approximately the same proportions as in the underlying index.

### Industry Concentration Policy

The IWM Fund will concentrate its investments (*i.e.*, hold 25% or more of its total assets) in a particular industry or group of industries, which may include large-, mid- or small-capitalization companies, to approximately the same extent that the Russell 2000® Index is concentrated. For purposes of this limitation, securities of the U.S. government (including its agencies and instrumentalities) and repurchase agreements collateralized by U.S. government securities are not considered to be issued by members of any industry.

### Holdings Information

As of July 24, 2013, 99.936% of the IWM Fund’s holdings consisted of equity securities, 0.06% consisted of cash and 0.00% consisted of other assets, including dividends booked but not yet received. The following tables summarize the IWM Fund’s top holdings in individual securities and by sector as of that date.

**Top holdings in individual securities as of July 24, 2013**

<b>Company</b>	<b>Percentage of Total Holdings</b>
Athenahealth, Inc.	0.27%
CoStar Group, Inc.	0.25%
CommVault Systems, Inc.	0.25%
FirstMerit Corporation	0.25%
Acuity Brands, Inc.	0.25%
The Ultimate Software Group, Inc.	0.24%
Prosperity Bancshares, Inc.	0.24%
The Middleby Corporation	0.23%
WEX Inc.	0.22%
Parametric Technology Corporation	0.22%

### Top holdings by sector as of July 24, 2013

Sector	Percentage of Total Holdings
Financial Services	24.17%
Consumer Discretionary	14.84%
Technology	14.19%
Producer Durables	13.96%
Health Care	12.57%
Materials & Processing	7.28%
Energy	5.21%
Utilities	4.28%
Consumer Staples	3.43%
S-T Securities	0.06%

The information above was compiled from the iShares® website, without independent verification. Information contained in the iShares® website is not incorporated by reference in, and should not be considered a part of, this underlying supplement.

### The Russell 2000® Index

We have derived all information contained in this underlying supplement regarding the Russell 2000® Index, including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, Russell Investments (“**Russell**”). The Russell 2000® Index was developed by Russell Investment Group (formerly, Frank Russell Company) and is calculated, maintained and published by Russell, a subsidiary of Russell Investment Group. Russell has no obligation to publish, and may discontinue the publication of, the Russell 2000® Index.

The Russell 2000® Index is reported by Bloomberg L.P. under the ticker symbol “RTY.”

The Russell 2000® Index measures the capitalization-weighted price performance of the small-cap stocks included in the Russell 2000® Index (the “**Component Stocks**”) and is designed to track the performance of the small capitalization segment of the U.S. equity market. All stocks included in the Russell 2000® Index are traded on a major U.S. exchange. The companies included in the Russell 2000® Index are the middle 2,000 of the companies that form the Russell 3000E™ Index, which is composed of the 4,000 largest U.S. companies as determined by market capitalization and represents approximately 99% of the U.S. equity market. The Russell 3000E™ Index is not the same as the Russell 3000® Index, which is a subset of the Russell 3000E™ Index.

*Selection of Stocks Underlying the Russell 2000® Index.* The Russell 2000® Index is a sub-index of the Russell 3000E™ Index. To be eligible for inclusion in the Russell 3000E™ Index, and, consequently, the Russell 2000® Index, a company’s stock must be listed on the last trading day in May of a given year, and Russell must have access to documentation on that date verifying the company’s eligibility for inclusion. Eligible initial public offerings are added to Russell U.S. indices at the end of each calendar quarter, based on total market capitalization rankings within the market-adjusted capitalization breaks established during the most recent reconstitution. To be added to any Russell U.S. index during a quarter outside of reconstitution, initial public offerings must meet all eligibility criteria and, as of the most recent reconstitution, must (i) be priced and traded and (ii) rank larger in total market capitalization than the market-adjusted smallest company in the Russell 3000E™ Index.



U.S. companies are eligible for inclusion in the Russell 3000<sup>™</sup> Index and, consequently, the Russell 2000<sup>®</sup> Index. Russell uses the following method for determining whether a company is a U.S. company. If a company incorporates in, has a stated headquarters location in, and also trades in the same country (ADRs and ADSs are not eligible), the company is assigned to its country of incorporation. If any of the three do not match, Russell then defines 3 Home Country Indicators (“HCIs”). The HCIs are as follows:

- country of incorporation;
- country of headquarters; and
- country of the most liquid exchange as defined by 2-year average daily dollar trading volume (“ADDTV”) from all exchanges within a country.

After the HCIs are defined, the next step in the country assignment involves an analysis of assets by location. Russell cross-compares the primary location of the company’s assets with the three HCIs. If the primary location of assets matches ANY of the HCIs, then the company is assigned to its primary asset location.

If there is not enough information to determine a company’s primary country of assets, Russell uses the primary location of the company’s revenue for the same cross-comparison and assigns the company to the appropriate country in a similar fashion. In 2011, Russell began using an average of two years of assets or revenues data for analysis to reduce potential turnover.

If conclusive country details cannot be derived from assets or revenue, Russell assigns the company to the country where its headquarters are located unless the country is a Benefit Driven Incorporation (“BDI”) country. If the country in which its headquarters are located is a BDI country, the company is assigned to the country of its most liquid stock exchange. The BDI countries are Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, Bonaire, British Virgin Islands, Cayman Islands, Channel Islands, Cook Islands, Curacao, Faroe Islands, Gibraltar, Isle of Man, Liberia, Marshall Islands, Panama, Saba, Sint Eustatius, Sint Maarten and Turks and Caicos Islands.

The following securities are specifically excluded from the Russell U.S. indices: (i) stocks that are not traded on a major U.S. exchange (Bulletin Board, Pink Sheet and over-the-counter (OTC) securities are not eligible); (ii) preferred stock, convertible preferred stock, redeemable shares, participating preferred stock, warrants, rights and trust receipts; and (iii) royalty trusts, limited liability companies, closed-end investment companies (business development companies, or “BDCs,” are eligible), blank check companies, special purpose acquisition companies (“SPACs”) and limited partnerships.

The primary criterion used to determine the initial list of securities eligible for the Russell 3000<sup>™</sup> Index and, consequently, the Russell 2000<sup>®</sup> Index is total market capitalization, which is determined by multiplying total outstanding shares by the market price as of the last trading day in May for those securities being considered at annual reconstitution. Initial public offering eligibility is determined each quarter. Common stock, non-restricted exchangeable shares and partnership units/membership interests (in certain cases) are used to calculate a company’s total market capitalization. Exchangeable shares are shares that may be exchanged at any time, at the holder’s option, on a one-for-one basis for common stock. Partnership units/membership interests represent an economic interest in a limited partnership or limited liability company. Russell includes partnership units/membership interests as part of total market capitalization when the company in question is a holding company whose sole asset is its partnership units/membership interests in an underlying entity. In these cases, total market capitalization will be calculated based on 100% of the value of all partnership units/membership interests. Any other form of shares—such as preferred or convertible preferred stock, redeemable shares, participating preferred stock, warrants and rights or trust receipts—is excluded from the calculation. If multiple share classes of common stock exist, they are combined. In cases where the common stock share classes act independently of each other (*e.g.*, tracking stocks), each class is considered for inclusion separately.

During annual reconstitution, a stock's closing price on its primary exchange on the last trading day in May is used to determine total market capitalization. If a stock does not trade on its primary exchange, the lowest price from another major U.S. exchange is used. In cases where multiple share classes have been combined, the price of the primary trading vehicle (usually the most liquid) is used in the total market capitalization calculations. Primary trading vehicles are determined by the last two years' average trading volume, as of the last trading day in May. For new members, the common share class with the highest trading volume will be considered the primary trading vehicle, and its associated price and trading symbol will be included in the Russell U.S. indices.

Companies with only a total market capitalization of less than \$30 million are not eligible for inclusion in the Russell 3000E™ Index or, consequently, the Russell 2000® Index.

In addition, companies with only 5% or less of their shares available in the marketplace are not eligible for inclusion in the Russell 3000E™ Index or, consequently, the Russell 2000® Index. Also, stocks must have a closing price at or above \$1.00 on their primary exchange on the last trading day in May to be eligible for inclusion in the Russell 2000® Index at annual reconstitution. In order to reduce unnecessary turnover, if an existing Russell 2000® Component Stock's closing price is less than \$1.00 on its primary exchange on the last trading day in May, it will be considered eligible if the average of the daily closing prices from its primary exchange during the month of May is equal to or greater than \$1.00. Furthermore, if a stock, new or existing, does not have a close price at or above \$1.00 on its primary exchange on the last trading day in May, but does have a close price at or above \$1.00 on another major U.S. exchange on that day, the stock will be eligible for inclusion. Quarterly initial public offering additions must have a close price at or above \$1.00 on the last day of their eligibility period in order to qualify for index inclusion.

Companies that produce unrelated business taxable income (UBTI) are restricted from ownership for tax-exempt investors. In recognition of this, Russell screens all REITs and PTPs, removing any security from eligibility that generates or has historically generated UBTI and has not taken steps to block UBTI to equity holders. The research process is conducted as part of Russell's annual rebalance effort. Additional screening will not be assessed or changed outside of the reconstitution period. Information used to confirm UBTI impact includes the following publicly available sources: 10-K, SEC Form S-3, K-1, company annual report, dividend notices and the company website.

The Russell 2000® Index is reconstituted annually to reflect changes in the marketplace. The list of companies is ranked based on total market capitalization as of the last trading day in May, with the actual reconstitution occurring on the last Friday in June each year, except that if the last Friday in June of any year falls on the 29<sup>th</sup> or 30<sup>th</sup>, reconstitution will occur on the preceding Friday.

*Capitalization Adjustments.* As a capitalization-weighted index, the Russell 2000® Index reflects changes in the capitalization, or market value, of the Component Stocks relative to the capitalization on a base date. The current Russell 2000® Index value is calculated by adding the market values of the Component Stocks, which are derived by multiplying the price of each stock by the number of available shares, to arrive at the available market capitalization of the 2,000 stocks. The available market capitalization is then divided by a divisor, which represents the "adjusted" capitalization of the Russell 2000® Index on the base date of December 31, 1986. To calculate the Russell 2000® Index, last sale prices will be used for exchange-traded and NASDAQ stocks. If a Component Stock is not open for trading, the most recently traded price for that security will be used in calculating the Russell 2000® Index. In order to provide continuity for the Russell 2000® Index's value, the divisor is adjusted periodically to reflect events including changes in the number of common shares outstanding for Component Stocks, company additions or deletions, corporate restructurings and other capitalization changes.

Available shares are assumed to be shares available to the public for purchase. Exclusion of capitalization held by other listed companies and large holdings of private investors (10% or more) is based on information recorded in SEC corporate filings, including DEF 14, 424B and 10K filings (but not 13F filings), or other reliable sources in the event of missing or questionable data.

The following types of shares are removed from total market capitalization to arrive at available market capitalization:

- Corporate cross-owned shares — shares of a company in the Russell 2000® Index held by another member of a Russell index (including Russell Global Indexes). Any percentage held in this class will be adjusted;
- Large corporate and private holdings — shares held by a listed corporation not in the Russell 2000® Index, by an individual or by a group of individuals acting together if the holding constitutes 10% or more of shares outstanding. However, not to be included in this class are institutional holdings, which are shares held by investment companies, partnerships, insurance companies, mutual funds, banks or venture capital firms, unless these firms have a direct relationship to the company in the Russell 2000® Index, in which case the holdings are considered strategic holdings and are excluded;
- ESOP or LESOP shares — shares held by an Employee Stock Ownership Plan (“**ESOP**”) or a Leveraged Employee Stock Ownership Plan (“**LESOP**”) that comprise 10% or more of shares outstanding;
- Unlisted share classes — classes of common stock that are not traded on a U.S. securities exchange;
- Initial public offering lock-ups — shares locked up during an initial public offering are not available to the public and will be excluded from the market value at the time the initial public offering enters the Russell 2000® Index; and
- Government Holdings:
  - Direct government holders — those holdings listed as “government of” are considered unavailable and will be removed entirely from available shares;
  - Indirect government holders — shares held by government investment boards and/or investment arms will be treated similarly to large private holdings and removed if the holding is greater than 10% of shares outstanding; and
  - Government pensions — any holding by a government pension plan is considered an institutional holding and will not be removed from available shares.

*Corporate Actions Affecting the Russell 2000® Index.* The Russell 2000® Index is adjusted in response to certain corporate actions when the actions are final. Russell determines whether a corporate action is final based on sources of public information including company press releases, SEC filings, exchange notifications and Bloomberg or other sources that Russell deems reliable. If Russell determines that an action was not final after communication was given to clients, the changes to the Russell 2000® Index will still occur. Prior to the completion of a corporate action, Russell estimates the effective date. Russell then adjusts the anticipated effective date based on public information until the date is considered final. Depending on the time on a given day that an action is determined to be final, Russell either (1) applies the action after the close of the current market day (t); or (2) applies the action after the close of the following day (t+1). Russell applies the following methodology guidelines when adjusting the Russell 2000® Index in response to corporate actions:

- “No Replacement” Rule — Securities that leave the Russell 2000® Index, between reconstitution dates, for any reason (*e.g.*, mergers, acquisitions or other similar corporate activity) are not replaced. Thus, the number of securities in the Russell 2000® Index over a year will fluctuate according to corporate activity.
- Mergers and Acquisitions — Mergers and acquisitions result in changes to the membership and weighting of members within the Russell 2000® Index. In the event a merger or acquisition occurs between a member of the Russell 2000® Index and another member of a Russell index, the acquired company is deleted and its market capitalization moves to the acquiring company’s stock according to the terms of the merger; hence, if the merger or acquisition occurs between members of the Russell 2000® Index, it has no effect on the Russell 2000® Index’s total capitalization. Cross-ownership of the surviving entity is determined by a weighted average (by market value as of t-1) of the cross-ownership of the two previous companies. If Russell is able to determine that the action is final prior to 1:00 p.m. Eastern Standard Time on a given day, the action will be applied after the close of the current day (t). If Russell is able to determine that the action is final after 1:00 p.m. Eastern Standard Time on a given day, the action will be applied after the close of the following day (t+1). If the acquiring company is a member of the Russell 2000® Index but the acquired company is not a member of any Russell index, the acquiring company’s shares are adjusted at month-end. If the acquired company is a member of the Russell 2000® Index but the acquiring company is not a member of any Russell index, there are two possibilities:
  - Reverse Merger — If the acquiring company is a private, non-publicly traded company or OTC company, Russell will review the action to determine if it is considered a reverse merger, defined as a transaction that results in a publicly traded company that meets all requirements for inclusion in a Russell index. If it is determined that an action is a reverse merger, the newly formed entity will be placed in the appropriate market capitalization index after the close of the day following the completion of the merger (t+1), using the market-adjusted breakpoints from the most recent reconstitution. The acquired company will be removed from the current index simultaneously. Cross-ownership will be determined on the basis of the most recent SEC filings.
  - Standard Action — The acquired company is deleted after the action is final. If Russell is able to determine that the action is final prior to 1:00 p.m. Eastern Standard Time on a given day, the action will be applied after the close of the current day (t). If Russell is able to determine that the action is final after 1:00 p.m. Eastern Standard Time on a given day, the action will be applied after the close of the following day (t+1).
- Reincorporations — Members of the Russell 2000® Index that reincorporate to another country are analyzed for country assignment during annual reconstitution, as long as they continue to trade in the United States. Members of the Russell 2000® Index that reincorporate to another country and no longer trade in the United States are immediately deleted from the Russell 2000® Index. Companies that reincorporate to the United States are assessed for membership during annual reconstitution.
- Reclassifications of Shares (Primary Vehicles) — Primary vehicles will not be assessed or changed outside of a reconstitution period unless the existing class ceases to exist. In the event of extenuating circumstances signaling a necessary primary vehicle change, proper notification will be made.
- Rights Offerings — A right offered to shareholders is reflected in the Russell 2000® Index only if the value of the right is at a premium to the market price. If the subscription price is at a premium to the market price, the right is reflected in the Russell 2000® Index at the market open on the ex-date (for both transferable and non-transferable rights). The price is adjusted

to account for the value of the right, and shares are increased according to the terms of the offering. If the rate is not available by the market close on the ex-date, the changes will be applied at the end of the subscription period. If the rate becomes available on the ex-date, the changes will be delayed one day. Late notifications also will delay the price and share adjustments by one day. Russell will not apply rights issued in anticipation of a takeover event or entitlements that give shareholders the right to purchase ineligible securities such as convertible debt.

- **Changes to Shares Outstanding** — Changes to shares outstanding due to buybacks (including Dutch auctions), secondary offerings, merger activity with a non-Russell index member and other potential changes are updated at the end of the month (with the exception of June) in which the change is reflected in vendor-supplied updates and verified by Russell using an SEC filing. For a change in shares to occur, the cumulative change to available shares must be greater than 5%. These share changes are communicated to premier clients three trading days prior to month-end and include shares provided by the vendor and verified by Russell four days prior to month-end. The float factor determined at reconstitution is applied to the new shares issued or bought back. If any new shares issued are unavailable according to the filing, that portion will not be added to the Russell 2000® Index.
- **Spin-offs and Initial Public Offerings** — The only additions between reconstitution dates are as a result of spin-offs and initial public offerings. Spin-off companies are added to the parent company's index and capitalization tier of membership if the spin-off company is sufficiently large. To be eligible, the spun-off company must rank larger in total market capitalization than the market-adjusted smallest company in the Russell 3000E™ Index as of the most recent reconstitution. If the spun-off company is not large enough to be added to the Russell 2000® Index and is not trading on a "when-issued" basis, the Russell 2000® Index will recognize the performance of the spin-off during its first day of trading through a synthetic price/performance of the parent company. This will allow holders one trading day to liquidate positions and replicate the Russell 2000® Index. If the spun-off company is not large enough to be added to the Russell 2000® Index but is trading on a when-issued basis, the Russell 2000® Index will remove the spun-off company's value by using the when-issued price. If the price of a spun-off company is not available by market close on the trading day before the ex-date, Russell will use an exchange-provided estimate. If the exchange does not provide an estimate, Russell will delay the application of the spin-off by one day unless other circumstances (such as a merger or tender offer) make it possible to calculate an estimate. In the absence of trade of the spin-off company on the ex-date, a value of the spin-off will be determined by using the difference between the close price on the trading day before the ex-date and the open price on the ex-date. If a delay is required, a synthetic price/performance will be calculated after the close of trading on the ex-date to account for the actual opening price (or Russell calculated open price) of the spin-off. This price/performance is calculated to capture the accurate performance of both the spin-off and parent for the day. Real-time calculations will reflect only the estimated performance of the two companies as actual performance is not captured until end of day. On occasion, if Russell is able to establish an appropriate estimated value of the spin-off, this may be used in order to prevent a delay.
- **Tender Offers** — A company acquired as a result of a tender offer is removed if (1) the initial tender offer has expired, (2) shareholders have validly tendered, not withdrawn, and the share have been accepted for payment, (3) all regulatory requirements have been fulfilled and (4) the acquirer will seek to complete the acquisition via a short-form merger or by compulsorily acquiring any remaining shares outstanding. In the case where a tender offer completes and does not result in the full acquisition of the target company, Russell will make a share adjustment to the target company's shares, on a date pre-announced by Russell, in cases where the available shares have decreased by 30% or more. If the acquiring company is issuing stock as part of the tender offer, the float-adjusted shares of that company will be increased concurrently with the decrease in the target company's float-adjusted shares.

- **Delisted Stocks** — When Component Stocks are deleted as a result of exchange delisting or reconstitution, the price used will be the closing primary exchange price on the day the action is final (t) or the closing OTC price on the following day (t+1). For stocks continuing to trade on the primary exchange, if Russell determines that the action is final prior to 1:00 p.m. Eastern Standard Time on a given day, the deletes will be applied after the close of the current day (t), using the last traded price. If, instead, Russell determines that the action is final after 1:00 p.m. Eastern Standard Time on a given day, the deletes will be applied after the close of the following day (t+1), using the closing OTC price. Stocks previously halted that fail to trade on the primary exchange prior to being moved to OTC will always be removed the following day (t+1) at the OTC closing price, regardless of the time of notification.
- **Bankruptcy and Voluntary Liquidations** — A company that files for a Chapter 7 liquidation bankruptcy or that files a liquidation plan will be removed from the Russell 2000® Index at the time of filing. A company that files for a Chapter 11 reorganization bankruptcy will remain a member of the Russell 2000® Index, unless the company's stock is delisted from the primary exchange, in which case normal delisting rules apply. If a company files for bankruptcy, its stock is delisted, and it can be confirmed that the stock will not trade OTC, Russell may remove the stock at a nominal price of \$0.0001.
- **Change of Company Structure** — In the event that a company changes its corporate designation from that of a Business Development Corporation, Russell will remove the member as ineligible for index inclusion and provide two-days' notice of its removal.
- **Stock Distributions** — A price adjustment for a stock distribution is applied on the ex-date of the distribution. When the distribution is a fixed amount of stock distributed on the ex-date, Russell increases the number of shares on the ex-date. When the distribution is an undetermined amount of stock based on future earnings and profits to be distributed at a future date, Russell increases the number of shares on the pay-date.
- **Dividends** — Gross dividends are included in the daily total return calculation of the Russell 2000® Index on the basis of their ex-dates. The ex-date is used rather than the pay-date because the marketplace price adjustment for the dividend occurs on the ex-date. Monthly, quarterly and annual total returns are calculated by compounding the reinvestment of dividends daily. The reinvestment and compounding is at the total index level, not at the security level. Stock prices are adjusted to reflect special cash dividends on the ex-date. If a dividend is payable in stock and cash and the stock rate cannot be determined by the ex-date, the dividend is treated as all cash. If the number of shares to be issued as a stock dividend is announced subsequently, Russell will give effect to the share change with appropriate notice.
- **Halted Stocks** — When a stock's trading has been halted, Russell holds the stock at its most recent closing price until trading is resumed or it is officially delisted. In addition, Russell will review stocks in two categories for removal: (1) stocks halted due to financial difficulty, debt or cash flow issues for a period longer than 40 calendar days and (2) those stocks suspended due to exchange listing rules or legal regulatory issues longer than one calendar quarter. Determination for removal will be made on a case-by-case basis and based upon reasonable likelihood of trade resumption and likelihood of residual value returned to equity holders. Should removal be deemed appropriate, it will be announced with monthly share changes and removed on month-end at zero value (though for system purposes the actual value used is \$0.0001).

*Pricing of Securities Included in the Russell 2000® Index.* Primary exchange closing prices are used in the daily Russell 2000® Index calculations. FT Interactive data is used as the primary source for U.S. security prices, income, and total shares outstanding.

## BACKGROUND ON THE iSHARES® MSCI EAFE ETF

We have derived all information contained in this underlying supplement regarding the iShares® MSCI EAFE ETF (the “**EFA Fund**”) from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, iShares® Trust, BlackRock Institutional Trust Company, N.A. (“**BTC**”) and BlackRock Fund Advisors (“**BFA**”). The EFA Fund is an investment portfolio maintained and managed by iShares® Trust. BFA is currently the investment adviser to the EFA Fund. The EFA Fund is an exchange-traded fund (“**ETF**”) that trades on the NYSE Arca, Inc. (“**NYSE Arca**”) under the ticker symbol “**EFA**.”

On July 1, 2013, the name of the EFA Fund was changed from the iShares® MSCI EAFE Index Fund to the current name.

iShares® Trust is a registered investment company that consists of numerous separate investment portfolios, including the EFA Fund. Information provided to or filed with the SEC by iShares® Trust pursuant to the Securities Act of 1933, as amended, and the Investment Company Act of 1940, as amended, can be located by reference to SEC file numbers 333-92935 and 811-09729, respectively, through the SEC’s website at <http://www.sec.gov>. For additional information regarding iShares® Trust, BFA and the EFA Fund, please see the EFA Fund’s prospectus. In addition, information about iShares® Trust and the EFA Fund may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the iShares® website at [www.ishares.com](http://www.ishares.com). We make no representation or warranty as to the accuracy or completeness of such information. Information contained in the iShares® website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

### Investment Objective and Strategy

The EFA Fund seeks to provide investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI EAFE® Index. The MSCI EAFE® Index was developed by MSCI Inc. (“**MSCI**”) as an equity benchmark for international stock performance, and is designed to measure equity market performance in certain developed markets. For more information about the MSCI EAFE® Index, please see “Background on the MSCI Indices” in this underlying supplement.

As of June 30, 2013, the EFA Fund holdings by country consisted of the following 27 countries: Australia, Austria, Belgium, Bermuda, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Japan, Jersey, Luxembourg, Macau, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the United States. In addition, as of July 24, 2013, the EFA Fund’s three largest holdings by country were Japan, the United Kingdom and Switzerland.

The EFA Fund uses a representative sampling indexing strategy (as described below under “Representative Sampling”) to try to track the MSCI EAFE® Index. The EFA Fund generally invests at least 90% of its assets in the securities of the MSCI EAFE® Index or in depositary receipts representing securities included in the MSCI EAFE® Index. The EFA Fund may invest the remainder of its assets in certain futures, options and swap contracts, cash and cash equivalents, including money market funds advised by BFA or its affiliates, as well as in securities not included in the MSCI EAFE® Index, but which BFA believes will help the EFA Fund track the MSCI EAFE® Index.

## **Representative Sampling**

BFA uses a “representative sampling” indexing strategy to manage the EFA Fund. “Representative sampling” is an indexing strategy that involves investing in a representative sample of securities that collectively has an investment profile similar to the MSCI EAFE® Index. The securities selected are expected to have, in the aggregate, investment characteristics (based on factors such as market capitalization and industry weightings), fundamental characteristics (such as return variability and yield) and liquidity measures similar to those of the MSCI EAFE® Index. The EFA Fund may or may not hold all of the securities in the MSCI EAFE® Index.

## **Correlation**

The MSCI EAFE® Index is a theoretical financial calculation while the EFA Fund is an actual investment portfolio. The performance of the EFA Fund and the MSCI EAFE® Index may vary due to transaction costs, non-U.S. currency valuations, asset valuations, corporate actions (such as mergers and spin-offs), timing variances and differences between the EFA Fund’s portfolio and the MSCI EAFE® Index resulting from legal restrictions (such as diversification requirements) that apply to the EFA Fund but not to the MSCI EAFE® Index or to the use of representative sampling. “Tracking error” is the divergence of the performance (return) of a fund’s portfolio from that of its underlying index. BFA expects that, over time, the EFA Fund’s tracking error will not exceed 5%. Because the EFA Fund uses a representative sampling indexing strategy, it can be expected to have a larger tracking error than if it used a replication indexing strategy. “Replication” is an indexing strategy in which a fund invests in substantially all of the securities in its underlying index in approximately the same proportions as in the underlying index.

## **Industry Concentration Policy**

The EFA Fund will concentrate its investments (*i.e.*, hold 25% or more of its total assets) in a particular industry or group of industries, which may include large-, mid- or small-capitalization companies, to approximately the same extent that the MSCI EAFE® Index is concentrated. For purposes of this limitation, securities of the U.S. government (including its agencies and instrumentalities) and repurchase agreements collateralized by U.S. government securities are not considered to be issued by members of any industry.

## **Holdings Information**

As of July 24, 2013, 99.45% of the EFA Fund’s holdings consisted of equity securities, 0.00% consisted of cash and 0.54% was in other assets, including dividends booked but not yet received. The following tables summarize the EFA Fund’s top holdings in individual securities and by sector as of that date.



**Top holdings in individual securities as of July 24, 2013**

<b>Company</b>	<b>Percentage of Total Holdings</b>
Nestle S.A.	1.78%
HSBC Holdings plc	1.71%
Toyota Motor Corporation	1.46%
Roche Holding AG	1.45%
Novartis AG	1.38%
Vodafone Group plc	1.20%
BP p.l.c.	1.14%
Royal Dutch Shell plc	1.06%
GlaxoSmithKline plc	1.04%
Sanofi	1.04%

**Top holdings by sector as of July 24, 2013**

<b>Sector</b>	<b>Percentage of Total Holdings</b>
Financials	25.29%
Industrials	12.47%
Consumer Discretionary	11.82%
Consumer Staples	11.46%
Health Care	10.09%
Materials	7.98%
Energy	6.94%
Telecommunication Services	5.17%
Information Technology	4.29%
Utilities	3.68%

The information above was compiled from the iShares® website, without independent verification. Information contained in the iShares® website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

## BACKGROUND ON THE MSCI INDICES

We have derived all information contained in this underlying supplement regarding the MSCI EAFE® Index and the MSCI Emerging Markets Index (each, an “**MSCI Index**” and together, the “**MSCI Indices**”), including, without limitation, their make-up, method of calculation and changes in their components, from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, MSCI Inc. (“**MSCI**”). The MSCI Indices are calculated, maintained and published by MSCI. MSCI has no obligation to continue to publish, and may discontinue publication of, any of the MSCI Indices.

### Transition

On March 28, 2007, MSCI announced changes to the methodology used by MSCI to calculate its Standard and Small Cap Indices. The transition of the Standard and Small Cap Indices to the MSCI Global Investable Market Indices occurred in two phases, the first completed as of November 30, 2007 and the second completed as of May 30, 2008. The current index calculation methodology used to formulate the MSCI Indices (and which is also used to formulate the MSCI Global Investable Market Indices) (the “**MSCI Global Investable Market Indices Methodology**”) was implemented as of June 1, 2008.

### The MSCI EAFE® Index

The MSCI EAFE® Index is a free float-adjusted market capitalization index intended to measure the equity market performance of certain developed markets. The MSCI EAFE® Index is calculated daily in U.S. dollars and published in real time every 15 seconds during market trading hours. As of July 24, 2013, the MSCI EAFE® Index consisted of the following 22 developed market country indices: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland and the United Kingdom. The MSCI EAFE® Index is reported by Bloomberg L.P. under the ticker symbol “MXEA.”

### The MSCI Emerging Markets Index

The MSCI Emerging Markets Index is a free float-adjusted market capitalization index that is designed to measure equity market performance of global emerging markets. The MSCI Emerging Markets Index is calculated daily in U.S. dollars and published in real time every 15 seconds during market trading hours. As of July 24, 2013, the MSCI Emerging Markets Index consisted of the following 21 emerging market country indices: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Malaysia, Mexico, Morocco, Peru, Philippines, Poland, Russia, South Africa, South Korea, Taiwan, Thailand and Turkey. The MSCI Emerging Markets Index is reported by Bloomberg L.P. under the ticker symbol “MXEF.”

### Constructing the MSCI Global Investable Market Indices

MSCI undertakes an index construction process that involves: (i) defining the Equity Universe; (ii) determining the Market Investable Equity Universe for each market; (iii) determining market capitalization size segments for each market; (iv) applying Index Continuity Rules for the MSCI Standard Index; (v) creating style segments within each size segment within each market; and (vi) classifying securities under the Global Industry Classification Standard (the “**GICS**”).

The “**relevant market**” with respect to a single country index is equivalent to the single country, except in DM-classified countries in Europe (as described below), where all such countries are first aggregated into a single market for index construction purposes. Subsequently, individual DM Europe country indices within the MSCI Europe Index are derived from the constituents of the MSCI Europe Index under the MSCI Global Investable Market Indices Methodology.

The “**relevant market**” with respect to a composite index includes each of the single countries which comprise the composite index.

The “**Global Investable Equity Universe**” is the aggregation of all Market Investable Equity Universes. The “**DM Investable Equity Universe**” is the aggregation of all the Market Investable Equity Universes for Developed Markets.

#### *Defining the Equity Universe*

(i) **Identifying Eligible Equity Securities:** The Equity Universe initially looks at securities listed in any of the countries in the MSCI Global Index Series, which will be classified as Developed Markets (“**DM**”), Emerging Markets (“**EM**”) or Frontier Markets (“**FM**”). All listed equity securities, or listed securities that exhibit characteristics of equity securities, except mutual funds, exchange traded funds, equity derivatives, limited partnerships, and most investment trusts, are eligible for inclusion in the Equity Universe. Real Estate Investment Trusts (“**REITs**”) in some countries and certain income trusts in Canada are also eligible for inclusion.

(ii) **Country Classification of Eligible Securities:** Each company and its securities (*i.e.*, share classes) are classified in one and only one country, which allows for a distinctive sorting of each company by its respective country.

#### *Determining the Market Investable Equity Universes*

A Market Investable Equity Universe for a market is derived by applying investability screens to individual companies and securities in the Equity Universe that are classified in that market. A market is equivalent to a single country, except in DM Europe, where all DM countries in Europe are aggregated into a single market for index construction purposes. Subsequently, individual DM Europe country indices within the MSCI Europe Index are derived from the constituents of the MSCI Europe Index under the Global Investable Market Indices methodology.

The investability screens used to determine the Investable Equity Universe in each market are as follows:

- (i) **Equity Universe Minimum Size Requirement:** This investability screen is applied at the company level. In order to be included in a Market Investable Equity Universe, a company must have the required minimum full market capitalization. A company will meet this requirement if its cumulative free float-adjusted market capitalization is within the top 99% of the Equity Universe sorted in descending order by full market capitalization.
- (ii) **Equity Universe Minimum Float-Adjusted Market Capitalization Requirement:** This investability screen is applied at the individual security level. To be eligible for inclusion in a Market Investable Equity Universe, a security must have a free float-adjusted market capitalization equal to or higher than 50% of the Equity Universe Minimum Size Requirement.
- (iii) **DM and EM Minimum Liquidity Requirement:** This investability screen is applied at the individual security level. To be eligible for inclusion in a Market Investable Equity Universe, a security must have adequate liquidity as measured by the Annualized Traded Value Ratio (“**ATVR**”) and the Frequency of Trading. The ATVR screens out extreme daily trading volumes, taking into account the free float-adjusted market capitalization size of securities. The aim of the 12-month and 3-month ATVR together with 3-month Frequency of Trading is to select securities with a sound long and short-term liquidity. A minimum liquidity level of 20% of 3-month ATVR and 90% of 3-month Frequency of Trading over the last 4 consecutive quarters, as well as 20% of 12-month ATVR are required for the inclusion of a security in a Market Investable Equity Universe of a Developed Market. A minimum liquidity level of 15%

of 3-month ATVR and 80% of 3-month Frequency of Trading over the last 4 consecutive quarters, as well as 15% of 12-month ATVR are required for the inclusion of a security in a Market Investable Equity Universe of an Emerging Market.

In instances when a security does not meet the above criteria, the security will be represented by a relevant liquid eligible Depository Receipt if it is trading in the same geographical region. Depository Receipts are deemed liquid if they meet all the above mentioned criteria for 12-month ATVR, 3-month ATVR and 3-month Frequency of Trading.

- (iv) **Global Minimum Foreign Inclusion Factor Requirement:** This investability screen is applied at the individual security level. To be eligible for inclusion in a Market Investable Equity Universe, a security's Foreign Inclusion Factor ("FIF") must reach a certain threshold. The FIF of a security is defined as the proportion of shares outstanding that is available for purchase in the public equity markets by international investors. This proportion accounts for the available free float of and/or the foreign ownership limits applicable to a specific security (or company). In general, a security must have an FIF equal to or larger than 0.15 to be eligible for inclusion in a Market Investable Equity Universe.
- (v) **The Minimum Length of Trading Requirement:** This investability screen is applied at the individual security level. For an initial public offering ("IPO") to be eligible for inclusion in a Market Investable Equity Universe, the new issue must have started trading at least four months before the implementation of the initial construction of the index or at least three months before the implementation of a semi-annual index review. This requirement is applicable to small new issues in all markets. Large IPOs and large primary / secondary offerings of non-index-constituents are not subject to the Minimum Length of Trading Requirement and may be included in a Market Investable Equity Universe and the Standard Index outside of a Quarterly or semi-annual index review.

#### *Defining Market Capitalization Size Segments for Each Market*

Once a Market Investable Equity Universe is defined, it is segmented into the following size-based indices:

- Investable Market Index (Large + Mid + Small)
- Standard Index (Large + Mid)
- Large Cap Index
- Mid Cap Index
- Small Cap Index

Creating the Size Segment Indices in each market involves the following steps: (i) defining the Market Coverage Target Range for each size segment; (ii) determining the Global Minimum Size Range for each size segment; (iii) determining the Market Size-Segment Cutoffs and associated Segment Number of Companies; (iv) assigning companies to the size segments; and (v) applying final size-segment investability requirements and index continuity rules.

### *Index Continuity Rules for the Standard Indices*

In order to achieve index continuity, as well as provide some basic level of diversification within a market index, notwithstanding the effect of other index construction rules, a minimum number of five constituents will be maintained for a DM Standard Index and a minimum number of three constituents will be maintained for an EM Standard Index.

If after the application of the index construction methodology, a Standard Index contains fewer than five securities in a Developed Market or three securities in an Emerging Market, then the largest securities by free float-adjusted market capitalization are added to the Standard Index in order to reach five constituents in that Developed Market or three in that Emerging Market. At subsequent index reviews, if the free float-adjusted market capitalization of a non-index constituent is at least 1.50 times the free float-adjusted market capitalization of the smallest existing constituent after rebalancing, the larger free float-adjusted market capitalization security replaces the smaller one.

### *Creating Style Indices within Each Size Segment*

All securities in the investable equity universe are classified into Value or Growth segments using the MSCI Global Value and Growth methodology.

### *Classifying Securities under the Global Industry Classification Standard*

All securities in the Global Investable Equity Universe are assigned to the industry that best describes their business activities. To this end, MSCI has designed, in conjunction with Standard & Poor's, the Global Industry Classification Standard ("**GICS**"). The GICS entails four levels of classification: (1) sector; (2) industry groups; (3) industries; (4) sub-industries. Under the GICS, each company is assigned uniquely to one sub-industry according to its principal business activity. Therefore, a company can belong to only one industry grouping at each of the four levels of the GICS.

## **Maintenance of the MSCI Global Investable Market Indices**

The MSCI Global Investable Market Indices are maintained with the objective of reflecting the evolution of the underlying equity markets and segments on a timely basis, while seeking to achieve index continuity, continuous investability of constituents and replicability of the indices, and index stability and low index turnover.

In particular, index maintenance involves:

- (i) semi-annual index reviews ("**SAIRs**") in May and November of the Size Segment and Global Value and Growth Indices, which include:
  - updating the indices on the basis of a fully refreshed Equity Universe;
  - taking buffer rules into consideration for migration of securities across size and style segments; and
  - updating FIFs and Number of Shares ("**NOS**").

The objective of the SAIRs is to systematically reassess the various dimensions of the Equity Universe for all markets on a fixed semi-annual timetable. A SAIR involves a comprehensive review of the Size Segment and Global Value and Growth Indices.

- (ii) quarterly index reviews ("**QIRs**") in February and August of the Size Segment Indices aimed at:
  - including significant new eligible securities (such as IPOs that were not eligible for earlier inclusion) in the index;

- allowing for significant moves of companies within the Size Segment Indices, using wider buffers than in the SAIR; and
- reflecting the impact of significant market events on FIFs and updating NOS.

QIRs are designed to ensure that the indices continue to be an accurate reflection of the evolving equity marketplace. This is achieved by a timely reflection of significant market driven changes that were not captured in the index at the time of their actual occurrence but are significant enough to be reflected before the next SAIR. QIRs may result in additions or deletions due to migration to another Size Segment Index, and changes in FIFs and in NOS. Only additions of significant new investable companies are considered, and only for the Standard Index. The buffer zones used to manage the migration of companies from one segment to another are wider than those used in the SAIR. The style classification is reviewed only for companies that are reassigned to a different size segment.

- (iii) Ongoing event-related changes. Ongoing event-related changes to the indices are the result of mergers, acquisitions, spin-offs, bankruptcies, reorganizations and other similar corporate events. They can also result from capital reorganizations in the form of rights issues, bonus issues, public placements and other similar corporate actions that take place on a continuing basis. These changes generally are reflected in the indices at the time of the event. Significantly large IPOs are included in the indices after the close of the company's tenth day of trading.

### **Announcement Policy**

The results of the SAIRs are announced at least two weeks in advance of their effective implementation dates as of the close of the last business day of May and November. The results of the QIRs are announced at least two weeks in advance of their effective implementation dates as of the close of the last business day of February and August. All changes resulting from corporate events are announced prior to their implementation.

The changes are typically announced at least ten business days prior to the changes becoming effective in the indices as an "expected" announcement, or as an "undetermined" announcement, when the effective dates are not known yet or when aspects of the event are uncertain. MSCI sends "confirmed" announcements at least two business days prior to events becoming effective in the indices, provided that all necessary public information concerning the event is available. The full list of all new and pending changes is delivered to clients on a daily basis, between 5:30 p.m. and 6 p.m., US Eastern Time through the Advance Corporate Events (ACE) File.

In exceptional cases, events are announced during market hours for same or next day implementation. Announcements made by MSCI during market hours are usually linked to late company disclosure of corporate events or unexpected changes to previously announced corporate events.

In the case of secondary offerings representing more than 5% of a security's number of shares for existing constituents, these changes will be announced prior to the end of the subscription period when possible and a subsequent announcement confirming the details of the event (including the date of implementation) will be made as soon as the results are available.

Both primary equity offerings and secondary offerings for U.S. securities, representing at least 5% of the security's number of shares, will be confirmed through an announcement during market hours for next day or shortly after implementation, as the completion of the events cannot be confirmed prior to the notification of the pricing.

Early deletions of constituents due to bankruptcy or other significant cases are announced as soon as practicable prior to their implementation.

## Index Calculation

### *Price Index Level*

The MSCI Indices are calculated using the Laspeyres' concept of a weighted arithmetic average together with the concept of chain-linking. As a general principle, today's index level is obtained by applying the change in the market performance to the previous period index level.

$$PriceIndexLevelUSD_t = PriceIndexLevelUSD_{t-1} \times \frac{IndexAdjustedMarketCapUSD_t}{IndexInitialMarketCapUSD_t}$$

$$PriceIndexLevelLocal_t = PriceIndexLevelLocal_{t-1} \times \frac{IndexAdjustedMarketCapForLocal_t}{IndexInitialMarketCapUSD_t}$$

Where:

- $PriceIndexLevelUSD_{t-1}$  is the Price Index level in USD at time t-1.
- $IndexAdjustedMarketCapUSD_t$  is the Adjusted Market Capitalization of the index in USD at time t.
- $IndexInitialMarketCapUSD_t$  is the Initial Market Capitalization of the index in USD at time t.
- $PriceIndexLevelLocal_{t-1}$  is the Price Index level in local currency at time t-1.
- $IndexAdjustedMarketCapForLocal_t$  is the Adjusted Market Capitalization of the index in USD converted using FX rate as of t-1 and used for local currency index at time t.

Note:  $IndexInitialMarketCapUSD$  was previously called  $IndexUnadjustedMarketCapPreviousUSD$

### *Security Price Index Level*

$$SecurityPriceIndexLevel_t = SecurityPriceIndexLevel_{t-1} \times \frac{SecurityAdjustedMarketCapForLocal_t}{SecurityInitialMarketCapUSD_t}$$

$$SecurityAdjustedMarketCapForLocal_t =$$

$$\frac{EndOfDayNumberOfShares_{t-1} \times PricePerShare_t \times InclusionFactor_t \times PAF_t}{FXrate_{t-1}} \times \frac{ICI_t}{ICI_{t-1}}$$

$$SecurityInitialMarketCapUSD_t = \frac{EndOfDayNumberOfShares_{t-1} \times PricePerShare_{t-1} \times InclusionFactor_t}{FXrate_{t-1}}$$

Where:

- $SecurityPriceIndexLevel_{t-1}$  is Security Price Index level at time t-1.
- $SecurityAdjustedMarketCapForLocal_t$  is the Adjusted Market Capitalization of security s in USD converted using FX rate as of t-1.
- $SecurityInitialMarketCapUSD_t$  is the Initial Market Capitalization of security s in USD at time t.
- $EndOfDayNumberOfShares_{t-1}$  is the number of shares of security s at the end of day t-1.
- $PricePerShare_t$  is the price per share of security s at time t.
- $PricePerShare_{t-1}$  is the price per share of security s at time t-1.

- $InclusionFactor_t$  is the inclusion factor of security  $s$  at time  $t$ . The inclusion factor can be one or the combination of the following factors: Foreign Inclusion Factor, Domestic Inclusion Factor, Growth Inclusion Factor, Value Inclusion Factor, Index Inclusion Factor.
- $PAF_t$  is the Price Adjustment Factor of security  $s$  at time  $t$ .
- $FXrate_{t-1}$  is the FX rate of the price currency of security  $s$  vs USD at time  $t-1$ . It is the value of 1 USD in foreign currency.
- $ICI_t$  is the Internal Currency Index of price currency at time  $t$ . The ICI is different than 1 when a country changes the internal value of its currency (*e.g.*, from Turkish Lira to New Turkish Lira – ICI = 1,000,000).
- $ICI_{t-1}$  is the Internal Currency Index of price currency at time  $t-1$ .

#### *Index Market Capitalization*

$IndexAdjustedMarketCapUSD_t =$

$$\sum_{s \in I, t} \frac{EndOfDayNumberOfShares_{t-1} \times PricePerShare_t \times InclusionFactor_t \times PAF_t}{FXrate_t}$$

$IndexAdjustedMarketCapForLocal_t =$

$$\sum_{s \in I, t} \frac{EndOfDayNumberOfShares_{t-1} \times PricePerShare_t \times InclusionFactor_t \times PAF_t}{FXrate_{t-1}} \times \frac{ICI_t}{ICI_{t-1}}$$

$IndexInitialMarketCapUSD_t =$

$$\sum_{s \in I, t} \frac{EndOfDayNumberOfShares_{t-1} \times PricePerShare_t \times InclusionFactor_t}{FXrate_{t-1}}$$

Where:

- $EndOfDayNumberOfShares_{t-1}$  is the number of shares of security  $s$  at the end of day  $t-1$ .
- $PricePerShare_t$  is the price per share of security  $s$  at time  $t$ .
- $PricePerShare_{t-1}$  is the price per share of security  $s$  at time  $t-1$ .
- $InclusionFactor_t$  is the inclusion factor of security  $s$  at time  $t$ . The inclusion factor can be one or the combination of the following factors: Foreign Inclusion Factor, Domestic Inclusion Factor, Growth Inclusion Factor, Value Inclusion Factor, Index Inclusion Factor.
- $PAF_t$  is the Price Adjustment Factor of security  $s$  at time  $t$ .
- $FXrate_t$  is the FX rate of the price currency of security  $s$  vs USD at time  $t$ . It is the value of 1 USD in foreign currency.
- $FXrate_{t-1}$  is the FX rate of the price currency of security  $s$  vs USD at time  $t-1$ . It is the value of 1 USD in foreign currency.
- $ICI_t$  is the Internal Currency Index of price currency at time  $t$ . The ICI is different than 1 when a country changes the internal value of its currency (*e.g.*, from Turkish Lira to New Turkish Lira – ICI = 1,000,000).
- $ICI_{t-1}$  is the Internal Currency Index of price currency at time  $t-1$ .



## Corporate Events

### *Mergers and Acquisitions*

As a general principle, MSCI implements M&As as of the close of the last trading day of the acquired entity or merging entities (last offer day for tender offers), regardless of the status of the securities (index constituents or non-index constituents) involved in the event. MSCI uses market prices for implementation. This principle applies if all necessary information is available prior to the completion of the event and if the liquidity of the relevant constituent(s) is not expected to be significantly diminished on the day of implementation. Otherwise, MSCI will determine the most appropriate implementation method and announce it prior to the changes becoming effective in the indices.

### *Tender Offers*

In tender offers, the acquired or merging security is generally deleted from an index at the end of the initial offer period, when the offer is likely to be successful and / or if the free float of the security is likely to be substantially reduced (this rule is applicable even if the offer is extended), or once the results of the offer have been officially communicated and the offer has been successful and the security's free float has been substantially reduced, if all required information is not available in advance or if the offer's outcome is uncertain. The main factors considered by MSCI when assessing the outcome of a tender offer (not in order of importance) are: the announcement of the offer as friendly or hostile, a comparison of the offer price to the acquired security's market price, the recommendation by the acquired company's board of directors, the major shareholders' stated intention whether to tender their shares, the required level of acceptance, the existence of pending regulatory approvals, market perception of the transaction, official preliminary results if any, and other additional conditions for the offer.

In certain cases, securities may be deleted earlier than the last offer day. For example, in the case of tender offers in the United Kingdom, a security is typically deleted two business days after the offer is declared unconditional in all respects.

Increases in a security's number of shares resulting from acquisition of non-listed companies and conversion of unlisted shares are implemented at the next regularly scheduled Index Review following completion of the event.

Increases in a security's number of shares resulting from acquisition of listed non-index constituent securities representing at least 5% of the security's number of shares are generally implemented as of the close of the last trading day of the acquired entity if all necessary information is available prior to the completion of the event or if such information is not available prior to the completion of the event, as soon as practicable following the completion of the event. Changes representing less than 5% of the security's number of shares are implemented at the next regularly scheduled Index Review following the completion of the event.

If a security is deleted from an index, the security will not be reinstated immediately after its deletion even when the tender offer is subsequently declared unsuccessful and/or the free float of the security is not substantially reduced. It may be reconsidered for index inclusion at the following regularly scheduled index review.

### *Late Announcements of Completion of Mergers and Acquisitions*

When the completion of an event is announced too late to be reflected as of the close of the last trading day of the acquired or merging entities, implementation occurs as of the close of the following day or as soon as practicable thereafter. In these cases, MSCI uses a calculated price for the acquired or merging entities. The calculated price is determined using the terms of the transaction and the price of the acquiring or merged entity, or, if not appropriate, using the last trading day's market price of the acquired or merging entities.

### *Conversions of Share Classes*

Conversions of a share class into another share class resulting in the deletion and/or addition of one or more classes of shares are implemented as of the close of the last trading day of the share class to be converted.

### *Spin-Offs*

On the ex-date of a spin-off, a PAF is applied to the price of the security of the parent company. The PAF is calculated based on the terms of the transaction and the market price of the spun-off security. If the spun-off entity qualifies for inclusion, it is included as of the close of its first trading day. In cases of spin-offs of partially owned companies, the post-event free float of the spun-off entity is calculated using a weighted average of the existing shares and the spun-off shares, each at their corresponding free float. Any resulting changes to FIFs and/or DIFs are implemented as of the close of the ex-date.

In cases of spin-offs of partially-owned companies, the post-event free float of the spun-off entity is calculated using a weighted average of the existing shares and the spun-off shares, each at their corresponding free float. Any resulting changes to FIFs and/or DIFs are implemented as of the close of the ex-date.

When the spun-off security does not trade on the ex-date, a “detached” security is created to avoid a drop in the free float-adjusted market capitalization of the parent entity, regardless of whether the spun-off security is added or not. The detached security is included until the spun-off security begins trading, and is deleted thereafter. Generally, the value of the detached security is equal to the difference between the cum price and the ex-price of the parent security.

### *Corporate Actions*

Corporate actions such as splits, stock dividends and rights issues, which affect the price of a security, require a price adjustment. In general, the PAF is applied on the ex-date of the event to ensure that security prices are comparable between the ex-date and the cum date. To do so, MSCI adjusts for the value of the right and/or the value of the special assets that are distributed and the changes in number of shares and FIF, if any, are reflected as of the close of the ex-date. In general, corporate actions do not impact the free float of the securities because the distribution of new shares is carried out on a pro rata basis to all existing shareholders. Therefore, MSCI will generally not implement any pending number of shares and/or free float updates simultaneously with the event.

If a security does not trade for any reason on the ex-date of the corporate action, the event will be generally implemented on the day the security resumes trading.

### *Share Placements and Offerings*

Changes in number of shares and FIF resulting from primary equity offerings representing at least 5% of the security's number of shares are generally implemented as of the close of the first trading day of the new shares, if all necessary information is available at that time. Otherwise, the event is implemented as soon as practicable after the relevant information is made available. A primary equity offering involves the issuance of new shares by a company. Changes in number of shares and FIF resulting from primary equity offerings representing less than 5% of the security's number of shares are deferred to the next regularly scheduled index review following the completion of the event. For public secondary offerings of existing constituents representing at least 5% of the security's number of shares, where possible, MSCI will announce these changes and reflect them shortly after the results of the subscription are known. Secondary public offerings that, given lack of sufficient notice, were not reflected immediately will be reflected at the next regularly scheduled index review. Secondary offerings involve the distribution of existing shares of current shareholders' in a listed company and are usually pre-announced by a company or by a company's shareholders and open for public subscription during a pre-determined period.

### *Debt-to-Equity Swaps*

In general, large debt-to-equity swaps involve the conversion of debt into equity originally not convertible at the time of issue. In this case, changes in numbers of shares and subsequent FIF and/or DIF changes are implemented as of the close of the first trading day of the newly issued shares, or shortly thereafter if all necessary information is available at the time of the swap. In general, shares issued in debt-to-equity swaps are assumed to be issued to strategic investors. As such, the post event free float is calculated on a pro forma basis assuming that all these shares are non-free float. Changes in numbers of shares and subsequent FIF and/or DIF changes due to conversions of convertible bonds or other convertible instruments, including periodical conversions of preferred stocks and small debt-to-equity swaps are implemented at a following regularly scheduled index review.

### *Suspensions and Bankruptcies*

MSCI will remove from an index as soon as practicable companies that file for bankruptcy, companies that file for protection from their creditors. MSCI will delete from an index after 40 business days of suspension securities of companies facing financial difficulties (*e.g.*, liquidity issues, debt repayment issues, companies under legal investigation, etc.) with at least two business days advance notice. Subsequently, if and when these securities resume normal trading, they may be considered as a potential addition to an index at the next scheduled semi-annual index review. Securities of companies suspended due to pending corporate events (*e.g.*, merger, acquisition, etc.), will continue to be maintained in an index until they resume trading regardless of the duration of the suspension period. When the primary exchange price is not available, MSCI will delete securities at an over the counter or equivalent market price when such a price is available and deemed relevant. If no over the counter or equivalent price is available, the security will be deleted at the smallest price (unit or fraction of the currency) at which a security can trade on a given exchange. For securities that are suspended, MSCI will carry forward the market price prior to the suspension during the suspension period.

## BACKGROUND ON THE iSHARES® 20+ YEAR TREASURY BOND ETF

We have derived all information regarding the iShares® 20+ Year Treasury Bond ETF (the “**TLT Fund**”) contained in this underlying supplement from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, iShares®, Inc. (“**iShares®**”), iShares® Trust, BlackRock Institutional Trust Company, N.A. (“**BTC**”) and BlackRock Fund Advisors (“**BFA**”). The TLT Fund is an investment portfolio maintained and managed by iShares® Trust. BFA is currently the investment adviser to the TLT Fund. The TLT Fund is an exchange-traded fund (“**ETF**”) that trades on the NYSE Arca, Inc. (“**NYSE Arca**”) under the ticker symbol “**TLT**.”

On July 1, 2013, the name of the TLT Fund was changed from the iShares® Barclays 20+ Year Treasury Bond Fund to the current name.

iShares® Trust is a registered investment company that consists of numerous separate investment portfolios, including the TLT Fund. Information provided to or filed with the SEC by iShares® Trust pursuant to the Securities Act of 1933, as amended, and the Investment Company Act of 1940, as amended, can be located by reference to SEC file numbers 333-92935 and 811-09729, respectively, through the SEC’s website at <http://www.sec.gov>. For additional information regarding the TLT Fund, please see the TLT Fund’s prospectus. In addition, information about iShares® Trust and the TLT Fund may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the iShares® website at [www.ishares.com](http://www.ishares.com). We make no representation or warranty as to the accuracy or completeness of such information. Information contained in the iShares® website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

### Investment Objective and Strategy

The TLT Fund seeks to track the investment results of an index composed of U.S. Treasury bonds with remaining maturities greater than twenty years, which is currently the Barclays U.S. 20+ Year Treasury Bond Index (the “**20+ Treasury Index**”). The 20+ Treasury Index measures the performance of public obligations of the U.S. Treasury that have a remaining maturity of 20 or more years. See “— The Barclays U.S. 20+ Year Treasury Bond Index” below for more information about the 20+ Treasury Index.

The TLT Fund uses a representative sampling indexing strategy (as described below under “Representative Sampling”) to try to track the 20+ Treasury Index. The TLT Fund generally invests at least 90% of its assets in the bonds of the 20+ Treasury Index and at least 95% of its assets in U.S. government bonds. The TLT Fund may invest up to 10% of its assets in U.S. government bonds not included in the 20+ Treasury Index, but which BFA believes will help the TLT Fund track the 20+ Treasury Index. The TLT Fund also may invest up to 5% of its assets in repurchase agreements collateralized by U.S. government obligations and in cash and cash equivalents, including shares of money market funds advised by BFA or its affiliates. The TLT Fund seeks to track the investment results of the 20+ Treasury Index before the fees and expenses of the TLT Fund.

### Representative Sampling

BFA uses a “representative sampling” indexing strategy to manage the TLT Fund. “Representative sampling” is an indexing strategy that involves investing in a representative sample of securities that collectively has an investment profile similar to the 20+ Treasury Index. The securities selected are expected to have, in the aggregate, investment characteristics (based on factors such as market capitalization and industry weightings), fundamental characteristics (such as return variability, duration, maturity or credit ratings and yield) and liquidity measures similar to those of the 20+ Treasury Index. The TLT Fund may or may not hold all of the securities in the 20+ Treasury Index.

## Correlation

The 20+ Treasury Index is a theoretical financial calculation while the TLT Fund is an actual investment portfolio. The performance of the TLT Fund and the 20+ Treasury Index may vary due to transaction costs, non-U.S. currency valuations, asset valuations, corporate actions (such as mergers and spin-offs), timing variances and differences between the TLT Fund's portfolio and the 20+ Treasury Index resulting from legal restrictions (such as diversification requirements) that apply to the TLT Fund but not to the 20+ Treasury Index or to the use of representative sampling. "Tracking error" is the divergence of the performance (return) of a fund's portfolio from that of its underlying index. BFA expects that, over time, the TLT Fund's tracking error will not exceed 5%. Because the TLT Fund uses a representative sampling indexing strategy, it can be expected to have a larger tracking error than if it used a replication indexing strategy. "Replication" is an indexing strategy in which a fund invests in substantially all of the securities in its underlying index in approximately the same proportions as in the underlying index.

## Industry Concentration Policy

The TLT Fund will concentrate its investments (*i.e.*, hold 25% or more of its total assets) in a particular industry or group of industries to approximately the same extent that the 20+ Treasury Index is concentrated. For purposes of this limitation, securities of the U.S. government (including its agencies and instrumentalities), repurchase agreements collateralized by U.S. government securities, and securities of state or municipal governments and their political subdivisions are not considered to be issued by members of any industry.

## Holdings Information

The holding information for the TLT Fund is updated on a daily basis. As of July 24, 2013, 98.83% of the TLT Fund's holdings consisted of bonds, 0.00% consisted of cash and 1.17% was in other assets, including dividends booked but not yet received. The following tables summarize the top 10 holdings of the TLT Fund as of that date.

**Top 10 Holdings as of July 24, 2013**

<b>Security</b>	<b>Percentage of Total Holdings</b>
U.S. Treasury Bonds, 02/15/2043, 3.12%	10.25%
U.S. Treasury Bonds, 11/15/2040, 4.25%	8.18%
U.S. Treasury Bonds, 05/15/2040, 4.38%	8.02%
U.S. Treasury Bonds, 08/15/2040, 3.88%	7.79%
U.S. Treasury Bonds, 08/15/2041, 3.75%	7.65%
U.S. Treasury Bonds, 11/15/2039, 4.38%	7.53%
U.S. Treasury Bonds, 08/15/2042, 2.75%	7.36%
U.S. Treasury Bonds, 05/15/2042, 3.00%	6.72%
U.S. Treasury Bonds, 05/15/2041, 4.38%	5.91%
U.S. Treasury Bonds, 11/15/2041, 3.12%	5.41%

The information above was compiled from the iShares® website. Information contained in the iShares® website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

## **The Barclays U.S. 20+ Year Treasury Bond Index**

We have derived all information contained in this underlying supplement regarding the Barclays U.S. 20+ Year Treasury Bond Index, including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information. This information reflects the policies of, and is subject to change by, Barclays Capital Inc. ("**BCI**"). The Barclays U.S. 20+ Year Treasury Bond Index is calculated, maintained and published by BCI. BCI is under no obligation to continue to publish, and may discontinue publication of, the Barclays U.S. 20+ Year Treasury Bond Index.

The Barclays U.S. 20+ Year Treasury Bond Index is market capitalization weighted, includes all publicly issued U.S. Treasury securities that meet the criteria for inclusion and is rebalanced once a month on the last business day of each month. The U.S. Treasury securities included in the Barclays U.S. 20+ Year Treasury Bond Index must have a remaining maturity of greater than or equal to 20 years, are rated investment grade (at least Baa3 by Moody's Investors Service, Inc. or BBB- by Standard and Poor's Financial Services, LLC) and have \$250 million or more of outstanding face value. In addition, the securities must be denominated in U.S. dollars and must be fixed-rate and non-convertible. Excluded from the Barclays U.S. 20+ Year Treasury Bond Index are certain special issues such as targeted investor notes, state and local government series bonds and coupon issues that have been stripped from bonds.

## BACKGROUND ON THE iSHARES® iBOXX \$ INVESTMENT GRADE CORPORATE BOND ETF

We have derived all information regarding the iShares® iBoxx \$ Investment Grade Corporate Bond ETF (the “**LQD Fund**”) contained in this underlying supplement from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, iShares®, Inc. (“**iShares®**”), iShares® Trust, BlackRock Institutional Trust Company, N.A. (“**BTC**”) and BlackRock Fund Advisors (“**BFA**”). The LQD Fund is an investment portfolio maintained and managed by iShares® Trust. BFA is currently the investment adviser to the LQD Fund. The LQD Fund is an exchange-traded fund (“**ETF**”) that trades on the NYSE Arca, Inc. (“**NYSE Arca**”) under the ticker symbol “**LQD**.”

On July 1, 2013, the name of the LQD Fund was changed from the iShares® iBoxx \$ Investment Grade Corporate Bond Fund to the current name.

iShares® Trust is a registered investment company that consists of numerous separate investment portfolios, including the LQD Fund. Information provided to or filed with the SEC by iShares® Trust pursuant to the Securities Act of 1933, as amended, and the Investment Company Act of 1940, as amended, can be located by reference to SEC file numbers 333-92935 and 811-09729, respectively, through the SEC’s website at <http://www.sec.gov>. For additional information regarding iShares® Trust, BFA and the LQD Fund, please see the LQD Fund’s prospectus. In addition, information about iShares® Trust and the LQD Fund may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the iShares® website at [www.ishares.com](http://www.ishares.com). We make no representation or warranty as to the accuracy or completeness of such information. Information contained in the iShares® website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

### Investment Objective and Strategy

The LQD Fund seeks to track the investment results of an index composed of U.S. dollar-denominated, investment-grade corporate bonds, which is currently the iBoxx® \$ Liquid Investment Grade Index (the “**Investment Grade Bond Index**”). The Investment Grade Bond Index is a rules-based index consisting of liquid, U.S. dollar-denominated, investment-grade corporate bonds for sale in the United States, as determined by the index provider. See “— The iBoxx® \$ Liquid Investment Grade Index” below for more information about the Investment Grade Bond Index.

The LQD Fund uses a representative sampling indexing strategy (as described below under “Representative Sampling”) to try to track the Investment Grade Bond Index. The LQD Fund generally invests at least 90% of its assets in the securities of the Investment Grade Bond Index and at least 95% of its assets in investment-grade corporate bonds. The LQD Fund also may invest in bonds not included in the Investment Grade Bond Index, but which BFA believes will help the LQD Fund track the Investment Grade Bond Index. The LQD Fund may invest up to 5% of its assets in repurchase agreements collateralized by U.S. government obligations and in cash and cash equivalents, including shares of money market funds advised by BFA or its affiliates. The LQD Fund seeks to track the investment results of the Investment Grade Bond Index before the fees and expenses of the LQD Fund.

### Representative Sampling

BFA uses a “representative sampling” indexing strategy to manage the LQD Fund. “Representative sampling” is an indexing strategy that involves investing in a representative sample of securities that collectively has an investment profile similar to the Investment Grade Bond Index. The securities selected are expected to have, in the aggregate, investment characteristics (based on factors such as market capitalization and industry weightings), fundamental characteristics (such as return variability, duration, maturity or credit ratings and yield) and liquidity measures similar to those of the Investment Grade Bond Index. The LQD Fund may or may not hold all of the securities in the Investment Grade Bond Index.

## Correlation

The Investment Grade Bond Index is a theoretical financial calculation while the LQD Fund is an actual investment portfolio. The performance of the LQD Fund and the Investment Grade Bond Index may vary due to transaction costs, non-U.S. currency valuations, asset valuations, corporate actions (such as mergers and spin-offs), timing variances and differences between the LQD Fund's portfolio and the Investment Grade Bond Index resulting from legal restrictions (such as diversification requirements) that apply to the LQD Fund but not to the Investment Grade Bond Index or to the use of representative sampling. "Tracking error" is the divergence of the performance (return) of a fund's portfolio from that of its underlying index. BFA expects that, over time, the LQD Fund's tracking error will not exceed 5%. Because the LQD Fund uses a representative sampling indexing strategy, it can be expected to have a larger tracking error than if it used a replication indexing strategy. "Replication" is an indexing strategy in which a fund invests in substantially all of the securities in its underlying index in approximately the same proportions as in the underlying index.

## Industry Concentration Policy

The LQD Fund will concentrate its investments (*i.e.*, hold 25% or more of its total assets) in a particular industry or group of industries to approximately the same extent that the Investment Grade Bond Index is concentrated. For purposes of this limitation, securities of the U.S. government (including its agencies and instrumentalities), repurchase agreements collateralized by U.S. government securities, and securities of state or municipal governments and their political subdivisions are not considered to be issued by members of any industry.

## Holdings Information

The holding information for the LQD Fund is updated on a daily basis. As of July 24, 2013, 98.17% of the LQD Fund's holdings consisted of bonds, 0.76% consisted of cash and 1.07% was in other assets, including dividends booked but not yet received. The following tables summarize the top 10 holdings of the LQD Fund as of that date.

**Top 10 Holdings as of July 24, 2013**

Security	Percentage of Total Holdings
Blackrock Funds III, 0.12%	0.76%
Goldman Sachs Group, Inc., 10/01/2037, 6.75%	0.38%
Merrill Lynch & Co., Inc., 04/25/2018, 0.38%	0.38%
AT&T Inc., 09/01/2040, 5.35%	0.34%
UBS AG, 12/20/2017, 5.88%	0.31%
JPMorgan Chase & Co., 04/23/2019, 6.30%	0.31%
Goldman Sachs Group, Inc., 09/01/2017, 6.25%	0.30%
JPMorgan Chase & Co., 01/24/2022, 4.50%	0.30%
General Electric Capital Corporation, 01/10/2039, 6.88%	0.30%
General Electric Capital Corporation, 03/15/2032, 6.75%	0.30%

The information above was compiled from the iShares® website, without independent verification. Information contained in the iShares® website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.



## The iBoxx® \$ Liquid Investment Grade Index

We have derived all information contained in this underlying supplement regarding the IG Index, including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, Markit Group Limited ("**Markit**"). The IG Index is calculated, maintained and published by Markit. Markit has no obligation to continue to publish, and may discontinue publication of, the IG Index.

The IG Index is reported by Bloomberg L.P. under the ticker symbol "IBOXIG."

The IG Index is designed to reflect the performance of the U.S. dollar-denominated investment-trade corporate bond market. The IG Index is market-value weighted with an issuer cap of 3%.

The IG Index consists of investment grade U.S. dollar-denominated bonds issued by corporate issuers from developed countries and rated by at least one of three rating services: Fitch Ratings, Moody's Investors Service or Standard & Poor's Rating Services (each a "**Ratings Agency**" and collectively the "**Ratings Agencies**"). The IG Index composition is rebalanced once a month, after the close of business on the last business day of the rebalancing month (the "**rebalancing date**"). The new IG Index composition becomes effective on the first business day of the next month (the "**composition month**").

The bonds in the IG Index must meet all the criteria described below as of the close of business four business days prior to the rebalancing date, *provided* that the relevant bond data can be verified, at Markit's sole discretion, as of that date (the "**Bond Selection Cut-off Date**").

The IG Index uses multi-source prices, as described under "Pricing Methodology" below.

Additionally, Markit will seek the advice from the following committees:

- **Technical Committee:** composed of representatives of market makers and banks. The Technical Committee meets once a month in order to arbitrate monthly rebalancing, and to monitor market developments. It also provides assistance in the identification of eligible constituents, especially in the instance where the eligibility or the classification of a bond is unclear or contentious. Additionally, the Technical Committee discusses any market developments which may warrant index rule changes and provides recommendations on changes to the rules.
- **Oversight Committee:** composed of representatives from a broad range of asset managers. The purpose of the oversight Committee is to review the recommendations made by the Technical Committee and also to provide consultation on any market developments which may warrant rule changes.

### *Selection Criteria for the iBoxx® \$ Liquid Investment Grade Index*

The following selection criteria are applied to determine the constituents for the IG Index: bond type, credit rating, time to maturity, amount outstanding, classification, lockout period and minimum run.

**Bond Type.** Only fixed-rate bonds whose cash flow can be determined in advance are eligible for the IG Index. The IG Index is comprised solely of bonds. Treasury Bills and other money market instruments are not eligible. The IG Index includes only U.S. dollar-denominated bonds.

In particular, bonds with the following characteristics are included: fixed coupon bonds, step-up bonds with coupon schedules known at issuance (or as functions of the issuer's rating), sinking funds and amortizing bonds, medium-term notes, Rule 144A offerings with a registration right (only 144A

bonds where the Registration S version of the bond is eligible for the Markit iBoxx USD Benchmark Index are eligible), callable bonds and putable bonds.

The following instrument types are specifically excluded from the IG Index: preferred shares, optionally and mandatorily convertible bonds, subordinated bank or insurance debt with mandatory contingent conversion features or with any conversion options before the first call date, bonds with other equity features attached (e.g., options or warrants), private placements, perpetual bonds, fixed-to-floater bonds, floating rate notes, pay-in-kind bonds (during the pay-in-kind period), zero coupon bonds, zero step-ups (GAINS) and bonds with differences between accrual and coupon payment periods and monthly-paying bonds.

Any bond subject to a firm call or tender offer, with the exception of exchange offers, in the month immediately following the rebalancing date will be excluded from the IG Index, provided that Markit is aware of that tender offer or call as of the Bond Selection Cut-off Date.

*Credit Rating.* Bonds in the IG Index must have a Markit iBoxx Rating of investment grade, which is defined as BBB- or above by S&P or Fitch or Baa3 or above by Moody's. If a bond is rated by more than one of the foregoing ratings agencies, then the Markit iBoxx Rating is the average of the provided ratings. The rating is consolidated to the nearest rating grade in accordance with Appendix 4.3 to the Markit iBoxx Rules. Rating notches are not used. In case of an ID change or changes of a Rule 144A/Regulation S offering into a registered bond, the ratings from the Rule 144A/Regulation S offering also are used for the registered bond.

*Time to Maturity.* To qualify for entry in the IG Index, bonds must have at least three years and six months remaining time to maturity. Bonds in the IG Index must have maturities of at least three years at the rebalancing date.

*Amount Outstanding.* The outstanding face value of all bonds denominated in U.S. dollars from the issuer (excluding fixed-to-floater and perpetual bonds) must be greater than or equal to \$2 billion as of the Bond Selection Cut-off Date. The outstanding face value of a bond must be greater than or equal to \$750 million as of the Bond Selection Cut-off Date. Partial buybacks or increases will affect the outstanding face value of a prospective bond. Markit considers changes to the outstanding face value of a candidate bond as a result of partial or full buybacks or increases, *provided* that Markit is aware of such changes as of the Bond Selection Cut-off Date.

*Bond Classification.* The bond must be corporate credit, *i.e.*, debt instruments backed by corporate issuers that are not secured by specific assets. Debt issued by governments, sovereigns, quasi-sovereigns and government-backed or guaranteed entities is excluded.

Bonds must be denominated in U.S. dollars, publicly registered in the United States with the SEC and clear and settle through The Depository Trust Company. Eurobonds are excluded.

Bonds from countries classified as developed markets based on the "Markit Global Economic Development Classification" are eligible for the IG Index. As of August 2012, the issuer or, in the case of a finance subsidiary, the issuer's guarantor, must be domiciled and incorporated and the country of risk must be in Andorra, Australia, Austria, Belgium, Bermuda, Canada, Cayman Islands, Cyprus, Denmark, Faeroe Islands, Finland, France, Germany, Gibraltar, Greece, Hong Kong, Iceland, Ireland, Italy, Japan, Jersey, Liechtenstein, Luxembourg, Malta, Monaco, Netherlands, New Zealand, Norway, Portugal, San Marino, Singapore, Spain, Sweden, Switzerland, the U.S. or the United Kingdom in order to be eligible for inclusion in the IG Index. A new country is added to the IG Index if it is classified as a developed market based on the "Markit Global Economic Development Classification." A country is no longer eligible for the IG Index if it is classified as an emerging market based on the "Markit Global Economic Development Classification." The "Markit Global Economic Development Classification" is updated once per year. The results are published at the end of July. The inclusion or exclusion of a country becomes effective at the end of the October following that publication.

*Lockout Period.* A bond that drops out of the IG Index at the rebalancing day is excluded from re-entering the IG Index for a three-month period. The rule for the lockout period takes precedence over the other rules for the IG Index selection. A locked out bond will not be selected, even if it qualifies for the IG Index.

*Minimum Run.* Any bond that enters the IG Index must remain in the IG Index for a minimum of six months, *provided* it is not downgraded to sub-investment grade, defaulted or fully redeemed in that period.

#### *Annual Index Review*

The rules for the IG Index are reviewed once per year during the annual index review process to ensure that the IG Index provides a balanced representation of the U.S. dollar denominated liquid investment grade corporate debt market. The results of the annual index review become effective at the end of October.

#### *Index Rebalancing*

The IG Index is rebalanced every month, on the last business day of the month after the close of business, *i.e.*, the rebalancing date. Changes to amounts outstanding are taken into account only if they are publicly known four business days before the end of the month. Changes in ratings are taken into account only if they are publicly known three business days before the end of the month. New bonds issued are taken into account if they are publicly known to settle until the last calendar day of the month, inclusive, and if their rating has become known at least four business days before the end of the month.

Three business days before the end of each month, the rating information for the constituents is updated and the list is adjusted for all rating changes which are known to have taken place three trading days before the end of the month. Bonds that are known to have been upgraded to investment grade after the bond selection cut-off date are not included in the membership, but bonds which are known to have been downgraded to high yielded three trading days before the end of the month do get excluded from the membership.

In a first step, the selection criteria set out above are applied to the universe of U.S. dollar-denominated bonds. Bond ratings and amount outstanding are used as of the Bond Selection Cut-off Date. Maturity dates remain fixed for the life of the bond. Only bonds with a first settlement date on or before the rebalancing date are included in the selection process. Once the eligible bond universe has been defined, the weight for each bond is determined and if necessary capped, applying an issuer cap of 3%. The weights and capping factors are determined on the last business day of each month using the end-of-month market values.

#### *Pricing Methodology*

Index calculations are based on multi-sourced pricing that takes into account a variety of data inputs, including market quotes received from sell-side/buy-side market participants, end-of-day book of records prices, institutional size transaction data and, where observable prices are not available, a curve-based pricing model. The curve-based pricing model is based on the yield curve of the calculation day. Yield curves for determining the price must be entity specific, be currency specific, be seniority specific (including guarantees), be cash flow type specific, contain bonds of similar issue size, be single coupon frequency specific (each bucket will have constituents with a common coupon frequency), separate legacy issues within an entity (merger-related legacy issues generally require a separate curve) and trade consistently as fungible issues (*i.e.*, at same spread vs. reference bond consistently).

### *Calculation of the iBoxx® \$ Liquid Investment Grade Index*

Calculations are performed daily, using iBoxx bid prices at approximately 4:00 p.m. Eastern Time.

The total return of the IG Index is calculated using the price changes, accrued interest, interest payments and reinvestment income on cash flows received during the composition month.

### *Treatment of Special Intra-Month Events*

If a bond is fully redeemed intra-month, the bond effectively ceases to exist. In all calculations, the redeemed bond is treated as cash based on the last iBoxx price, the call price or the repurchase price, as applicable. A redemption factor and redemption price are used to treat these events in the IG Index and in calculations relating thereto. In addition, the clean price of the bond is set to the redemption price, and the interest accrued until the redemption date is treated as an irregular coupon payment.

If a bond is identified as trading flat of accrued, the accrued interest on the bond is set to zero in the total return index calculation and the bond is excluded from the calculation of all bond and index analytical values.

Some bonds have predefined coupon changes that lead to a change in the annual coupon over the life of the bond. In all instances, the coupon change must be a fixed amount on top of a fixed coupon, *i.e.* floating coupon bonds are not eligible for the IG Index. The two main categories of bonds with coupon changes of this nature are step-up bonds and event-driven bonds. Step-up bonds have a predefined coupon schedule that cannot change during the life of the bond. That coupon schedule is used in all bond calculations. Event-driven bonds' coupons may change upon the occurrence (or non-occurrence) of specified events, such as ratings changes, failure to register a bond or failure to complete a merger. In the calculation of the IG Index and the analytics, the coupon schedule as of the calculation date is used. Any events occurring after the calculation date are ignored in the determination of the applicable coupon schedule.

## BACKGROUND ON THE iSHARES® iBoxx \$ High Yield Corporate Bond ETF

We have derived all information regarding the iShares® iBoxx \$ High Yield Corporate Bond ETF (the “**HYG Fund**”) contained in this underlying supplement from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, iShares®, Inc. (“**iShares**”), iShares® Trust, BlackRock Institutional Trust Company, N.A. (“**BTC**”) and BlackRock Fund Advisors (“**BFA**”). The HYG Fund is an investment portfolio maintained and managed by iShares® Trust. BFA is currently the investment adviser to the HYG Fund. The HYG Fund is an exchange-traded fund (“**ETF**”) that trades on the NYSE Arca, Inc. (“**NYSE Arca**”) under the ticker symbol “**HYG**.”

On July 1, 2013, the name of the HYG Fund was changed from the iShares® iBoxx \$ High Yield Corporate Bond Fund to the current name.

iShares® Trust is a registered investment company that consists of numerous separate investment portfolios, including the HYG Fund. Information provided to or filed with the SEC by iShares® Trust pursuant to the Securities Act of 1933, as amended, and the Investment Company Act of 1940, as amended, can be located by reference to SEC file numbers 333-92935 and 811-09729, respectively, through the SEC’s website at <http://www.sec.gov>. For additional information regarding iShares® Trust, BFA and the HYG Fund, please see the HYG Fund’s prospectus. In addition, information about iShares® Trust and the HYG Fund may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the iShares® website at [www.ishares.com](http://www.ishares.com). We make no representation or warranty as to the accuracy or completeness of such information. Information contained in the iShares® website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

### Investment Objective and Strategy

The HYG Fund seeks to track the investment results of an index composed of U.S. dollar-denominated, high yield corporate bonds, which is currently the iBoxx® \$ Liquid HY Index (the “**HY Index**”). The HY Index is a rules-based index consisting of liquid, U.S. dollar-denominated, high yield corporate bonds for sale in the United States, as determined by the index provider. See “— The iBoxx® \$ Liquid Investment Grade Index” below for more information about the HY Index.

The HYG Fund uses a representative sampling indexing strategy (as described below under “Representative Sampling”) to try to track the HY Index. The HYG Fund generally invests at least 90% of its assets in the securities of the HY Index and in investments that provide substantially similar exposure to the securities in the HY Index. However, the HY Fund may at times invest up to 20% of its assets in certain futures, options and swap contracts, cash and cash equivalents, including money market funds advised by BFA or its affiliates, as well as in bonds not included in the HY Index, but which BFA believes will help the Fund track the HY Index. The HYG Fund seeks to track the investment results of the HY Index before the fees and expenses of the HYG Fund.

### Representative Sampling

BFA uses a “representative sampling” indexing strategy to manage the HYG Fund. “Representative sampling” is an indexing strategy that involves investing in a representative sample of securities that collectively has an investment profile similar to the HY Index. The securities selected are expected to have, in the aggregate, investment characteristics (based on factors such as market capitalization and industry weightings), fundamental characteristics (such as return variability, duration, maturity or credit ratings and yield) and liquidity measures similar to those of the HY Index. The HYG Fund may or may not hold all of the securities in the HY Index.

## Correlation

The HY Index is a theoretical financial calculation while the HYG Fund is an actual investment portfolio. The performance of the HYG Fund and the HY Index may vary due to transaction costs, non-U.S. currency valuations, asset valuations, corporate actions (such as mergers and spin-offs), timing variances and differences between the HYG Fund's portfolio and the HY Index resulting from legal restrictions (such as diversification requirements) that apply to the HYG Fund but not to the HY Index or to the use of representative sampling. "Tracking error" is the divergence of the performance (return) of a fund's portfolio from that of its underlying index. BFA expects that, over time, the HYG Fund's tracking error will not exceed 5%. Because the HYG Fund uses a representative sampling indexing strategy, it can be expected to have a larger tracking error than if it used a replication indexing strategy. "Replication" is an indexing strategy in which a fund invests in substantially all of the securities in its underlying index in approximately the same proportions as in the underlying index.

## Industry Concentration Policy

The HYG Fund will concentrate its investments (*i.e.*, hold 25% or more of its total assets) in a particular industry or group of industries to approximately the same extent that the HY Index is concentrated. For purposes of this limitation, securities of the U.S. government (including its agencies and instrumentalities), repurchase agreements collateralized by U.S. government securities, and securities of state or municipal governments and their political subdivisions are not considered to be issued by members of any industry.

## Holdings Information

The holding information for the HYG Fund is updated on a daily basis. As of July 24, 2013, 96.98% of the HYG Fund's holdings consisted of bonds, 1.30% consisted of cash and 1.72% was in other assets, including dividends booked but not yet received. The following tables summarize the top 10 holdings of the HYG Fund as of that date.

**Top 10 Holdings as of July 24, 2013**

Security	Percentage of Total Holdings
BlackRock Funds III, 0.12%	1.30%
HCA Holdings, Inc., 02/15/2020, 6.50%	0.49%
First Data Corporation, 01/15/2015, 12.62%	0.47%
Sprint Nextel Corporation, 11/15/2018, 9.00%	0.46%
Springleaf Finance Corporation, 12/15/2017, 6.90%	0.45%
Reynolds Group Issuer LLC, 10/15/2020, 5.75%	0.45%
Hawk Acquisition Sub, Inc., 10/15/2020, 4.25%	0.45%
Royal Bank of Scotland Group plc, 12/15/2022, 6.12%	0.39%
Reynolds Group Issuer LLC, 08/15/2019, 9.88%	0.37%
Samson Investment Company, 02/15/2020, 10.00%	0.35%

The information above was compiled from the iShares® website, without independent verification. Information contained in the iShares® website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

## The iBoxx® \$ Liquid High Yield Index

We have derived all information contained in this underlying supplement regarding the HY Index, including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, Markit Group Limited ("**Markit**"). The HY Index is calculated, maintained and published by Markit. Markit has no obligation to continue to publish, and may discontinue publication of, the HY Index.

The HY Index is reported by Bloomberg L.P. under the ticker symbol "IBXHY."

The HY Index is designed to reflect the performance of the U.S. dollar-denominated high yield corporate bond market. The HY Index is market-value weighted with an issuer cap of 3%.

The HY Index consists of sub-investment grade U.S. dollar-denominated bonds issued by corporate issuers from developed countries and rated by at least one of three rating services: Fitch Ratings, Moody's Investors Service or Standard & Poor's Rating Services (each a "**Ratings Agency**" and collectively the "**Ratings Agencies**"). The HY Index composition is rebalanced once a month, after the close of business on the last business day of the rebalancing month (the "**rebalancing date**"). The new HY Index composition becomes effective on the first business day of the next month (the "**composition month**").

The bonds in the HY Index must meet all the criteria described below as of the close of business three business days prior to the rebalancing date, *provided* that the relevant bond data can be verified, at Markit's sole discretion, as of that date (the "**Bond Selection Cut-off Date**").

The HY Index is priced based on multiple data inputs, as described under "Pricing Methodology" below. The data are subject to a quality control process which is intended to exclude stale or off-market prices.

Additionally, Markit will seek the advice from the following committees:

- **Technical Committee:** composed of representatives of market makers and banks. The Technical Committee meets once a month in order to arbitrate monthly rebalancing, and to monitor market developments. It also provides assistance in the identification of eligible constituents, especially in the instance where the eligibility or the classification of a bond is unclear or contentious. Additionally, the Technical Committee discusses any market developments which may warrant index rule changes and provides recommendations on changes to the rules.
- **Oversight Committee:** composed of representatives from a broad range of asset managers. The purpose of the oversight Committee is to review the recommendations made by the Technical Committee and also to provide consultation on any market developments which may warrant rule changes.

### *Selection Criteria for the iBoxx® \$ Liquid High Yield Index*

The following selection criteria are applied to determine the constituents for the HY Index: bond type, credit rating, time to maturity, amount outstanding, classification, lockout period and minimum run.

**Bond Type.** Only fixed-rate bonds whose cash flow can be determined in advance are eligible for the HY Index. The HY Index is comprised solely of bonds. Treasury Bills and other money market instruments are not eligible. The HY Index includes only U.S. dollar-denominated bonds.

In particular, bonds with the following characteristics are included: fixed coupon bonds, step-up bonds with coupon schedules known at issuance (or as functions of the issuer's rating), sinking funds and amortizing bonds, medium-term notes, Rule 144A offerings, callable bonds and putable bonds.

The following instrument types are specifically excluded from the HY Index: preferred shares, optionally and mandatorily convertible bonds, subordinated bank or insurance debt with mandatory contingent conversion features or with any conversion options before the first call date, bonds with other equity features attached (e.g., options or warrants), private placements, perpetual bonds, floating rate notes, pay-in-kind bonds (during the pay-in-kind period), zero coupon bonds, zero step-ups (GAINS), bonds with differences between accrual and coupon payment periods and monthly-paying bonds, and Regulation S offerings.

Any bond subject to a firm call or tender offer, with the exception of exchange offers, in the month immediately following the rebalancing date will be excluded from the HY Index, provided that Markit is aware of that tender offer or call as of the Bond Selection Cut-off Date.

*Credit Rating.* Bonds in the HY Index must have a Markit iBoxx Rating of sub-investment grade, which is defined as BB+ or lower by S&P or Fitch or Ba1 or lower by Moody's, but the bonds must not be in default. If a bond is rated by more than one of the foregoing ratings agencies, then the Markit iBoxx Rating is the average of the provided ratings. The rating is consolidated to the nearest rating grade in accordance with Appendix 4.3 to the Markit iBoxx Rules. Rating notches are not used. Issues rated D by Fitch or S&P, or that have been subject to a default press release by Moody's cannot enter the HY Index. Those issues in the HY Index that are subsequently downgraded to D by Fitch or S&P or subject to a default press release by Moody's (as of the Bond Selection Cut-off Date) will be taken out of the HY Index on the next rebalancing date. After a bond has migrated into high yield from investment grade status, it must retain that status for three months (the "stabilization period") before it can be included in the HY Index. In case of an ID change or changes of a 144A version into a registered bond, the ratings from the 144A bond also are used for the registered bond.

*Time to Maturity.* To qualify for entry in the HY Index, bonds must have at least one year and six months remaining time to maturity. Bonds in the HY Index must have maturities of at least one year at the rebalancing date. As of issuance, the time to maturity of the bonds should be fifteen years or less.

*Amount Outstanding.* The outstanding face value of all bonds denominated in U.S. dollars from the issuer must be greater than or equal to \$1 billion as of the Bond Selection Cut-off Date. The outstanding face value of a bond must be greater than or equal to \$400 million as of the Bond Selection Cut-off Date. Partial buybacks or increases will affect the outstanding face value of a prospective bond. Markit considers changes to the outstanding face value of a candidate bond as a result of partial or full buybacks or increases, *provided* that Markit is aware of such changes as of the Bond Selection Cut-off Date.

*Bond Classification.* The bond must be corporate credit, *i.e.*, debt instruments backed by corporate issuers that are not secured by specific assets. Debt issued by governments, sovereigns, quasi-sovereigns and government-backed or guaranteed entities is excluded.

Bonds must be denominated in U.S. dollars.

Bonds from countries classified as developed markets based on the "Markit Global Economic Development Classification" are eligible for the HY Index. As of August 2012, the issuer or, in the case of a finance subsidiary, the issuer's guarantor, must be domiciled and incorporated and the country of risk must be in Andorra, Australia, Austria, Belgium, Bermuda, Canada, Cayman Islands, Cyprus, Denmark, Faeroe Islands, Finland, France, Germany, Gibraltar, Greece, Hong Kong, Iceland, Ireland, Italy, Japan, Jersey, Liechtenstein, Luxembourg, Malta, Monaco, Netherlands, New Zealand, Norway, Portugal, San Marino, Singapore, Spain, Sweden, Switzerland, the U.S. or the United Kingdom in order to be eligible for inclusion in the HY Index. A new country is added to the HY Index if it is classified as



a developed market based on the “Markit Global Economic Development Classification.” A country is no longer eligible for the HY Index if it is classified as an emerging market based on the “Markit Global Economic Development Classification.” The “Markit Global Economic Development Classification” is updated once per year. The results are published at the end of July. The inclusion or exclusion of a country becomes effective at the end of the October following that publication.

*Lockout Period.* A bond that drops out of the HY Index at the rebalancing day is excluded from re-entering the HY Index for a three-month period. The rule for the lockout period takes precedence over the other rules for the HY Index selection. A locked out bond will not be selected, even if it qualifies for the HY Index.

*Minimum Run.* Any bond that enters the HY Index must remain in the HY Index for a minimum of six months, *provided* it is not upgraded to investment grade, defaulted or fully redeemed in that period.

#### *Annual Index Review*

The rules for the HY Index are reviewed once per year during the annual index review process to ensure that the HY Index provides a balanced representation of the U.S. dollar denominated liquid high yield corporate debt market. The results of the annual index review become effective at the end of October.

#### *Index Rebalancing*

The HY Index is rebalanced every month, on the last business day of the month after the close of business, *i.e.*, the rebalancing date. Changes to amounts outstanding are taken into account only if they are publicly known three business days before the end of the month. Changes in ratings are taken into account only if they are publicly known two business days before the end of the month. New bonds issued are taken into account if they are publicly known to settle until the last calendar day of the month, inclusive, and if their rating has become known at least three business days before the end of the month.

In a first step, the selection criteria set out above are applied to the universe of U.S. dollar-denominated bonds. Bond ratings and amount outstanding are used as of the Bond Selection Cut-off Date. Maturity dates remain fixed for the life of the bond. Only bonds with a first settlement date on or before the rebalancing date are included in the selection process. Once the eligible bond universe has been defined, the weight for each bond is determined and if necessary capped, applying an issuer cap of 3%. The weights and capping factors are determined on the last business day of each month using the end-of-month market values.

#### *Pricing Methodology*

Index calculations are based on multi-sourced pricing that takes into account a variety of data inputs, including market quotes received from sell-side/buy-side market participants, end-of-day book of records prices, institutional size transaction data and, where observable prices are not available, a curve-based pricing model. The curve-based pricing model is based on the yield curve of the calculation day. Yield curves for determining the price must be entity specific, be currency specific, be seniority specific (including guarantees), be cash flow type specific, contain bonds of similar issue size, be single coupon frequency specific (each bucket will have constituents with a common coupon frequency), separate legacy issues within an entity (merger-related legacy issues generally require a separate curve) and trade consistently as fungible issues (*i.e.*, at same spread vs. reference bond consistently).

### *Calculation of the iBoxx® \$ Liquid High Yield Index*

Calculations are performed daily, using iBoxx bid prices at approximately 4:00 p.m. Eastern Time.

The total return of the HY Index is calculated using the price changes, accrued interest, interest payments and reinvestment income on cash flows received during the composition month.

### *Treatment of Special Intra-Month Events*

If a bond is fully redeemed intra-month, the bond effectively ceases to exist. In all calculations, the redeemed bond is treated as cash based on the last iBoxx price, the call price or the repurchase price, as applicable. A redemption factor and redemption price are used to treat these events in the HY Index and in calculations relating thereto. In addition, the clean price of the bond is set to the redemption price, and the interest accrued until the redemption date is treated as an irregular coupon payment.

If a bond is identified as trading flat of accrued, the accrued interest on the bond is set to zero in the total return index calculation and the bond is excluded from the calculation of all bond and index analytical values.

Some bonds have predefined coupon changes that lead to a change in the annual coupon over the life of the bond. In all instances, the coupon change must be a fixed amount on top of a fixed coupon, *i.e.* floating coupon bonds are not eligible for the HY Index. The two main categories of bonds with coupon changes of this nature are step-up bonds and event-driven bonds. Step-up bonds have a predefined coupon schedule that cannot change during the life of the bond. That coupon schedule is used in all bond calculations. Event-driven bonds' coupons may change upon the occurrence (or non-occurrence) of specified events, such as ratings changes, failure to register a bond or failure to complete a merger. In the calculation of the HY Index and the analytics, the coupon schedule as of the calculation date is used. Any events occurring after the calculation date are ignored in the determination of the applicable coupon schedule.

## BACKGROUND ON THE iSHARES® MSCI EMERGING MARKETS ETF

We have derived all information contained in this underlying supplement regarding the iShares® MSCI Emerging Markets ETF (the “**EEM Fund**”) from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, iShares®, Inc., BlackRock Institutional Trust Company, N.A. (“**BTC**”) and BlackRock Fund Advisors (“**BFA**”). The EEM Fund is an investment portfolio maintained and managed by iShares®, Inc. BFA is currently the investment adviser to the EEM Fund. The EEM Fund is an exchange-traded fund (“**ETF**”) that trades on the NYSE Arca, Inc. (“**NYSE Arca**”) under the ticker symbol “EEM.”

On July 1, 2013, the name of the EEM Fund was changed from the iShares® MSCI Emerging Markets Index Fund to the current name.

iShares®, Inc. is a registered investment company that consists of numerous separate investment portfolios, including the EEM Fund. Information provided to or filed with the SEC by iShares®, Inc. pursuant to the Securities Act of 1933, as amended, and the Investment Company Act of 1940, as amended, can be located by reference to SEC file numbers 033-97598 and 811-09102, respectively, through the SEC’s website at <http://www.sec.gov>. For additional information regarding iShares®, Inc., BFA and the EEM Fund, please see the EEM Fund’s prospectus. In addition, information about iShares®, Inc. and the EEM Fund may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the iShares® website at [www.ishares.com](http://www.ishares.com). We make no representation or warranty as to the accuracy or completeness of such information. Information contained in the iShares® website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

### Investment Objective and Strategy

The EEM Fund seeks to provide investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI Emerging Markets Index. The MSCI Emerging Markets Index was developed by MSCI Inc. (“**MSCI**”) as an equity benchmark for international stock performance, and is designed to measure equity market performance in the global emerging markets. For more information about the MSCI Emerging Markets Index, please see “Background on the MSCI Indices” in this underlying supplement.

As of June 30, 2013, the EEM Fund holdings by country consisted of the following 23 countries: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hong Kong, Hungary, India, Indonesia, Luxembourg, Malaysia, Mexico, Morocco, Netherlands, Peru, Philippines, Poland, Russia, South Africa, South Korea, Taiwan, Thailand, Turkey and the United States. In addition, as July 24, 2013, the EEM Fund’s three largest holdings by country were China, South Korea and Brazil.

The EEM Fund uses a representative sampling indexing strategy (as described below under “Representative Sampling”) to try to track the MSCI Emerging Markets Index. The EEM Fund generally invests at least 90% of its assets in the securities of the MSCI Emerging Markets Index and in depositary receipts representing securities in the MSCI Emerging Markets Index. The EEM Fund may invest the remainder of its assets in other securities, including securities not in the MSCI Emerging Markets Index, but which BFA believes will help the EEM Fund track the MSCI Emerging Markets Index, and in other investments, including futures contracts, options on futures contracts, other types of options and swaps related to the MSCI Emerging Markets Index, as well as cash and cash equivalents, including shares of money market funds advised by BFA or its affiliates.

### Representative Sampling

BFA uses a “representative sampling” indexing strategy to manage the EEM Fund. “Representative sampling” is an indexing strategy that involves investing in a representative sample of securities that collectively has an investment profile similar to the MSCI Emerging Markets Index. The securities

selected are expected to have, in the aggregate, investment characteristics (based on factors such as market capitalization and industry weightings), fundamental characteristics (such as return variability and yield) and liquidity measures similar to those of the MSCI Emerging Markets Index. The EEM Fund may or may not hold all of the securities in the MSCI Emerging Markets Index.

### Correlation

The MSCI Emerging Markets Index is a theoretical financial calculation while the EEM Fund is an actual investment portfolio. The performance of the EEM Fund and the MSCI Emerging Markets Index may vary due to transaction costs, non-U.S. currency valuations, asset valuations, corporate actions (such as mergers and spin-offs), timing variances and differences between the EEM Fund's portfolio and the MSCI Emerging Markets Index resulting from legal restrictions (such as diversification requirements) that apply to the EEM Fund but not to the MSCI Emerging Markets Index or to the use of representative sampling. "Tracking error" is the divergence of the performance (return) of a fund's portfolio from that of its underlying index. BFA expects that, over time, the EEM Fund's tracking error will not exceed 5%. Because the EEM Fund uses a representative sampling indexing strategy, it can be expected to have a larger tracking error than if it used a replication indexing strategy. "Replication" is an indexing strategy in which a fund invests in substantially all of the securities in its underlying index in approximately the same proportions as in the underlying index.

### Industry Concentration Policy

The EEM Fund will concentrate its investments (*i.e.*, hold 25% or more of its total assets) in a particular industry or group of industries, which may include large-, mid- or small-capitalization companies, to approximately the same extent that the MSCI Emerging Markets Index is concentrated. For purposes of this limitation, securities of the U.S. government (including its agencies and instrumentalities) and repurchase agreements collateralized by U.S. government securities are not considered to be issued by members of any industry.

### Holdings Information

As of July 24, 2013, 99.02% of the EEM Fund's holdings consisted of equity securities, 0.28% consisted of cash and 0.69% was in other assets, including dividends booked but not yet received. The following tables summarize the EEM Fund's top holdings in individual securities and by sector as of that date.

**Top holdings in individual securities as of July 24, 2013**

<b>Company</b>	<b>Percentage of Total Holdings</b>
Samsung Electronics Co., Ltd.	3.59%
Taiwan Semiconduction Manufacturing Company Ltd.	2.32%
China Mobile Limited	1.79%
China Construction Bank Corporation - H	1.48%
Industrial and Commercial Bank of China Limited - H	1.32%
OAQ Gazprom	1.25%
Tencent Holdings Limited	1.22%
América Móvil SAB De C.V.	1.14%
CNOOC Ltd.	0.91%
Itaú Unibanco Holding S.A. - Preferred	0.90%

**Top holdings by sector as of July 24, 2013**

<b>Sector</b>	<b>Percentage of Total Holdings</b>
Financials	26.95%
Information Technology	14.10%
Energy	11.67%
Materials	9.81%
Consumer Staples	9.08%
Consumer Discretionary	8.31%
Telecommunication Services	7.82%
Industrials	6.44%
Utilities	3.39%
Health Care	1.43%
Other/Undefined	0.98%

The information above was compiled from the iShares® website, without independent verification. Information contained in the iShares® website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

## BACKGROUND ON THE iSHARES® J.P. MORGAN USD EMERGING MARKETS BOND ETF

We have derived all information contained in this underlying supplement regarding the iShares® J.P. Morgan USD Emerging Markets Bond ETF (the “**EMB Fund**”) from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, iShares® Trust, BlackRock Institutional Trust Company, N.A. (“**BTC**”) and BlackRock Fund Advisors (“**BFA**”). BFA is currently the investment adviser to the EMB Fund. The EMB Fund is an investment portfolio maintained and managed by iShares® Trust. The iShares® J.P. Morgan USD Emerging Markets Bond ETF is an exchange-traded fund (“**ETF**”) that trades on the NYSE Arca, Inc. (“**NYSE Arca**”) under the ticker symbol “EMB.”

On July 1, 2013, the name of the EMB Fund was changed from the iShares® J.P. Morgan USD Emerging Markets Bond Fund to the current name.

iShares® Trust is a registered investment company that consists of numerous separate investment portfolios, including the EMB Fund. Information provided to or filed with the SEC by iShares® Trust pursuant to the Securities Act of 1933, as amended, and the Investment Company Act of 1940, as amended, can be located by reference to SEC file numbers 333-92935 and 811-09729, respectively, through the SEC’s website at <http://www.sec.gov>. For additional information regarding iShares® Trust, BFA and the EMB Fund, please see the EMB Fund’s prospectus. In addition, information about iShares® Trust and the EMB Fund may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the iShares® website at [www.ishares.com](http://www.ishares.com). We make no representation or warranty as to the accuracy or completeness of such information. Information contained in the iShares® website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

### Investment Objective and Strategy

The EMB Fund seeks to provide investment results that correspond generally to the price and yield performance, before fees and expenses, of actively traded external debt instruments in emerging market countries, as measured by the JPMorgan EMBI Global Core Index (the “**EMBIG Core Index**”). The EMBIG Core Index was developed by J.P. Morgan Securities LLC as a liquid U.S.-dollar emerging markets debt benchmark, and it tracks total returns for actively traded external debt instruments in emerging markets. For more information about the EMBIG Core Index, please see “— The JPMorgan EMBI Global Core Index” below.

As of June 30, 2013, the EMB Fund holdings by country consisted of the following 41 countries: Argentina, Azerbaijan, Belarus, Brazil, Canada, Chile, China, Colombia, Costa Rica, Cote D'Ivoire (Ivory Coast), Croatia (Hrvatska), Dominican Republic, Egypt, El Salvador, Hungary, Indonesia, Iraq, Kazakhstan, Latvia, Lebanon, Lithuania, Malaysia, Mexico, Morocco, Netherlands, Panama, Peru, Philippines, Poland, Romania, Russia, Serbia, South Africa, Sri Lanka, Turkey, Ukraine, the United States, Unknown, Uruguay, Venezuela, Vietnam. In addition, as of July 24, 2013, the EMB Fund’s three largest holdings by country were Russia, Russia and Turkey.

The EMB Fund uses a representative sampling indexing strategy (as described below under “Representative Sampling”) to try to track the EMBIG Core Index. The EMB Fund generally invests at least 90% of its assets in the securities of the EMBIG Core Index. However, the EMB Fund may at times invest up to 20% of its assets in certain futures, options and swap contracts, cash and cash equivalents, including money market funds advised by BFA or its affiliates, as well as in securities not included in the EMBIG Core Index, but which BFA believes will help the EMB Fund track the EMBIG Core Index.

## **Representative Sampling**

BFA uses a “representative sampling” indexing strategy to manage the EMB Fund. “Representative sampling” is an indexing strategy that involves investing in a representative sample of securities that collectively has an investment profile similar to the EMBIG Core Index. The securities selected are expected to have, in the aggregate, investment characteristics (based on factors such as market capitalization and industry weightings), fundamental characteristics (such as return variability, duration, maturity or credit ratings and yield) and liquidity measures similar to those of the EMBIG Core Index. The EMB Fund may or may not hold all of the securities in the EMBIG Core Index.

## **Correlation**

The EMBIG Core Index is a theoretical financial calculation while the EMB Fund is an actual investment portfolio. The performance of the EMB Fund and the EMBIG Core Index may vary due to transaction costs, non-U.S. currency valuations, asset valuations, corporate actions (such as mergers and spin-offs), timing variances and differences between the EMB Fund’s portfolio and the EMBIG Core Index resulting from legal restrictions (such as diversification requirements) that apply to the EMB Fund but not to the EMBIG Core Index or to the use of representative sampling. “Tracking error” is the divergence of the performance (return) of a fund’s portfolio from that of its underlying index. BFA expects that, over time, the EMB Fund’s tracking error will not exceed 5%. Because the EMB Fund uses a representative sampling indexing strategy, it can be expected to have a larger tracking error than if it used a replication indexing strategy. “Replication” is an indexing strategy in which a fund invests in substantially all of the securities in its underlying index in approximately the same proportions as in the underlying index.

## **Industry Concentration Policy**

The EMB Fund will concentrate its investments (*i.e.*, hold 25% or more of its total assets) in a particular industry or group of industries to approximately the same extent that the EMBIG Core Index is concentrated. For purposes of this limitation, securities of the U.S. government (including its agencies and instrumentalities), repurchase agreements collateralized by U.S. government securities, and securities of state or municipal governments and their political subdivisions are not considered to be issued by members of any industry.

## **Holdings Information**

As of July 24, 2013, 98.07% of the EMB Fund’s holdings consisted of bonds, 0.66% consisted of cash and 1.27% was in other assets, including dividends booked but not yet received. The following tables summarize the EMB Fund’s top holdings as of that date.

### Top Holdings by Security as of July 24, 2013

Company	Percentage of Total Holdings
Philippines, 01/14/2031, 7.75%	2.57%
Russia, 03/31/2030, 7.50%	1.79%
Turkey, 06/05/2020, 7.00%	1.75%
Colombia, 01/18/2041, 6.12%	1.63%
Lithuania, 02/11/2020, 7.38%	1.55%
Indonesia, 01/17/2018, 6.88%	1.53%
Croatia, 07/14/2020, 6.62%	1.45%
Peru, 03/14/2037, 6.55%	1.44%
Poland, 03/23/2022, 5.00%	1.38%
Brazil, 01/17/2017, 6.00%	1.30%

### Top Holdings by Country as of July 24, 2013

Country	Percentage of Total Holdings
Russia	6.72%
Brazil	6.57%
Turkey	6.33%
Mexico	6.16%
Indonesia	6.08%
Phillipines	6.02%
Venezuela	4.70%
Colombia	4.24%
Kazakhstan	3.71%
Poland	3.67%
Other/Undefined	45.81%

The information above was compiled from the iShares® website, without independent verification. Information contained in the iShares® website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

### The JPMorgan EMBI Global Core Index

We have derived all information contained in this underlying supplement regarding the JPMorgan EMBI Global Core Index, including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, JPMorgan Securities LLC ("JPMS"). The JPMorgan EMBI Global Core Index is calculated, maintained and published by JPMS. JPMS is under no obligation to continue to publish, and may discontinue publication of, the JPMorgan EMBI Global Core Index.



The JPMorgan EMBI Global Core Index is a broad, diverse, market capitalization weighted index designed to measure the performance of U.S. dollar-denominated Brady bonds (*i.e.*, U.S. dollar-denominated bonds issued by emerging market countries and collateralized by U.S. Treasury zero-coupon bonds), Eurobonds (*i.e.*, bonds issued in a currency other than the currency of the country or market in which it is issued), traded loans and securities issued by sovereign and quasi-sovereign entities of emerging market countries. Quasi-sovereign entities are entities the securities of which are either 100% owned by their respective governments or subject to a 100% guarantee that does not rise to the level of constituting the full faith and credit by such governments. The methodology is designed to distribute the weights of each country within the JPMorgan EMBI Global Core Index by limiting the weights of countries with higher debt outstanding and reallocating this excess to countries with lower debt outstanding.

As of March 4, 2013, the JPMorgan EMBI Global Core Index consisted of the following 38 countries: Angola, Argentina, Belarus, Brazil, Chile, China, Colombia, Cote d'Ivoire, Costa Rica, Croatia, Dominican Republic, Egypt, El Salvador, Hungary, Indonesia, Iraq, Kazakhstan, Latvia, Lebanon, Lithuania, Malaysia, Mexico, Mongolia, Morocco, Panama, Peru, the Philippines, Poland, Romania, Russia, Serbia, South Africa, Sri Lanka, Turkey, Ukraine, Uruguay, Venezuela and Vietnam. As of March 4, 2013, the JPMorgan EMBI Global Core Index's five highest-weighted countries were Brazil, Russia, Turkey, Mexico and the Philippines.

In order for a bond to be considered eligible for inclusion in the JPMorgan EMBI Global Core Index, the bond must be issued by a country that is considered an emerging market. Two criteria determine whether a country is defined as an emerging market and therefore can be considered for inclusion in the JPMorgan EMBI Global Core Index. First, a country's GNI per capita must be below the Index Income Ceiling ("IIC") for three consecutive years. The IIC is defined as the income level that is adjusted every year by the growth rate of the World "GNI per capita" (which is provided annually by the World Bank). The base IIC level was established in 1987 at US\$6,000 GNI per capita. Second, regardless of their IIC, countries that either have restructured their external debt during the past ten years or currently have restructured external debt outstanding will also be considered for inclusion in the index.

Once the universe of emerging markets countries has been defined for the index, the eligible instruments from these countries must be selected. Instruments that satisfy all of the following defined criteria will be eligible for inclusion in the JPMorgan EMBI Global Core Index:

1. Instrument type;
2. Issuer type classification;
3. Currency denomination;
4. Current face amount outstanding;
5. Remaining time until maturity;
6. Legal jurisdiction;
7. Settlement method; and
8. Quantifiable source of cash flow return.

*Instrument Type.* The JPMorgan EMBI Global Core Index includes both fixed-rate and floating-rate instruments, as well as capitalizing/amortizing bonds or loans. Bonds or loans with embedded options and warrants are eligible for inclusion if (a) the options/warrants are attached to instruments that would otherwise be included in the index and (b) the quotation convention (as recommended by the Emerging Markets Traders Association) is for instrument prices to be quoted cum options or warrants. Convertible bonds are not eligible for inclusion into the index.

*Issuer Type Classification.* The JPMorgan EMBI Global Core Index contains only those bonds or loans issued by sovereign and quasi-sovereign entities from index-eligible countries. Quasi-sovereign entities are entities the securities of which are either 100% owned by their respective governments or subject to a 100% guarantee that does not rise to the level of constituting the full faith and credit by such governments.

Instruments will not be eligible for inclusion in the JPMorgan EMBI Global Core Index if their credit has been improved by (a) giving security over commercial receivables or (b) giving a guarantee from a guarantor that is not a subsidiary of the eventual obligor or the parent company/beneficiary of the issuer of the instrument. For the purposes of clarification, bonds that are secured in part by U.S. Treasuries (e.g., Brady bonds) are eligible for inclusion.

Where financing vehicles are used, bonds or loans may be included in the JPMorgan EMBI Global Core Index if either (a) the financing vehicle or bond is guaranteed by an index-eligible issuer or (b) the transaction is structured as a pass-through where the creditor of the financing vehicle has full recourse to the underlying loan or bond between the financing vehicle and the final obligor, which itself must be an index-eligible issuer. In order to avoid double-counting of index instruments, a bond or loan that is issued by a financing vehicle is only eligible for inclusion into the JPMorgan EMBI Global Core Index if the underlying loan or bond is not itself included in the index.

*Current Face Amount Outstanding.* Only issues with a current face amount outstanding of \$1 billion or more will be considered for inclusion. If an issue's current face outstanding falls below this requirement (due to either a debt retirement by the sovereign or the amortization of principal), the issue will be removed from the index at the next month-end rebalancing date. The reverse also holds true. Existing issues that, through reopenings, increase in size to satisfy the minimum current face outstanding requirement are then considered for inclusion in the index at the next month-end rebalancing date.

*Time Until Maturity.* Only those instruments with at least 2 1/2 years until maturity are considered for inclusion. Once added, an instrument may remain in the JPMorgan EMBI Global Core Index until 24 months before it matures. On the month-end preceding this anniversary, the instrument is removed from the index.

*Legal Jurisdiction.* Inclusion into the JPMorgan EMBI Global Core Index is limited to issues with legal jurisdiction that is domestic to a G-7 country. Local law instruments or bonds that do not fall under G-7 jurisdiction are not eligible for the JPMorgan EMBI Global Core Index.

*Settlement Criteria.* Instruments in the JPMorgan EMBI Global Core Index must be able to settle internationally (either through Euroclear or another institution domiciled outside the issuing country).

*Quantifiable Source of Cash Flow Return.* The final requirement is that an issue's bid and offer prices be available on a daily and timely basis (either from an inter-dealer broker or JPMorgan Chase & Co.). The lack of availability of such prices prevents the addition of a new issue to the JPMorgan EMBI Global Core Index. In the case of the current JPMorgan EMBI Global Core Index issues, if reliable prices for an issue become unavailable, it is removed from the index. Once an issue is removed, it will not be reconsidered for inclusion in the JPMorgan EMBI Global Core Index during the next 12 months.

The JPMorgan EMBI Global Core Index is generally rebalanced on a monthly basis. A new issue that meets the admission requirements is added to the JPMorgan EMBI Global Core Index on the first month-end business day after its issuance, provided its issue date falls before the 15th of the month. A new issue whose settlement date falls on or after the 15th of the month is added to the JPMorgan EMBI Global Core Index on the last business day of the next month.

There are two exceptions to this rule. The first exception applies to a new issue that is released as part of a debt exchange program. For example, if a country exchanges a portion of its outstanding

debt for a new issue after the 15th of the month, at the month-end rebalancing date immediately following this event the amount of debt retired in this exchange would be removed from the JPMorgan EMBI Global Core Index. The new issue would then be added to the JPMorgan EMBI Global Core Index (provided official exchange results are made available in a timely manner and the issue settles by month-end).

The second exception concerns Regulation S securities. An instrument that is issued solely in reliance on Regulation S of the Securities Act of 1933 and not pursuant to Rule 144A will be ineligible for inclusion in the JPMorgan EMBI Global Core Index until the expiration of the relevant Regulation S restricted period. The date at which the restriction is lifted will effectively be the new "issue" date, at which point the 15th of the month rule will apply.

In extreme cases, an intra-month rebalancing can occur when: (i) more than \$6 billion of the face amount of JPMorgan EMBI Global Core Index bonds are exchanged; (ii) more than 2/3 of the face amount of any one of the most liquid bonds are exchanged. If an announcement is made for a bond to be called, it is removed from the JPMorgan EMBI Global Core Index on the month-end prior to its call date on the basis of having less than 24 months remaining until maturity. However, if an announcement is not made in time for the bond to be removed from the JPMorgan EMBI Global Core Index on the prior month-end, it will be removed the first month-end following the announcement, unless the amount to be called triggers an intra-month rebalancing.

The weight of each security in the JPMorgan EMBI Global Core Index is determined by first starting with the face amount outstanding of all eligible securities and aggregating such securities by country. The highest-weighted countries are then constrained by capping the total weight within those countries. The result establishes new country weights that are then used to calculate the new eligible face amounts per security within those countries. To calculate the final weights of each security in the JPMorgan EMBI Global Core Index, the current day's price is multiplied by each security's adjusted face amount. The market capitalization for each security is then divided by the total market capitalization for all securities in the JPMorgan EMBI Global Core Index. The result represents the weight of the security expressed as a percentage of the JPMorgan EMBI Global Core Index.

The JPMorgan EMBI Global Core Index is priced at 3:00 p.m., Eastern Time every business day of the year as defined by the U.S. bond market calendar. Composite instruments are priced using the best market bid (highest) and the best market ask (lowest) indicated by the following emerging market broker screens: Eurobrokers, Garban, GFI, Tullet & Tokyo and Tradition. For instruments where there is not a valid price available at 3:00 p.m. Eastern Time, the last available price is obtained from the market. As a last resort, if there are no valid market prices for an instrument, JPMS traders are asked to provide a market bid and ask. For those securities where pricing is not available on a regular basis, such securities will be excluded from the JPMorgan EMBI Global Core Index.

## BACKGROUND ON THE iSHARES® U.S. REAL ESTATE ETF

We have derived all information contained in this underlying supplement regarding the iShares® U.S. Real Estate ETF (the “**IYR Fund**”) from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, iShares® Trust, BlackRock Institutional Trust Company, N.A. (“**BTC**”) and BlackRock Fund Advisors (“**BFA**”). The IYR Fund is an investment portfolio maintained and managed by iShares® Trust. BFA is currently the investment adviser to the IYR Fund. The IYR Fund is an exchange-traded fund that trades on the NYSE Arca, Inc. under the ticker symbol “IYR.”

On July 1, 2013, the name of the IYR Fund was changed from the iShares® Dow Jones U.S. Real Estate Index Fund to the current name.

iShares® Trust is a registered investment company that consists of numerous separate investment portfolios, including the IYR Fund. Information provided to or filed with the SEC by iShares® Trust pursuant to the Securities Act of 1933, as amended, and the Investment Company Act of 1940, as amended, can be located by reference to SEC file numbers 333-92935 and 811-09729, respectively, through the SEC’s website at <http://www.sec.gov>. For additional information regarding iShares® Trust, BFA and the IYR Fund, please see the IYR Fund’s prospectus. In addition, information about iShares® Trust and the IYR Fund may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the iShares® website at [www.ishares.com](http://www.ishares.com). We make no representation or warranty as to the accuracy or completeness of such information. Information contained in the iShares® website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

### Investment Objective and Strategy

The IYR Fund seeks to provide investment results that correspond generally to the price and yield performance, before fees and expenses, of the Dow Jones U.S. Real Estate Index (the “**Real Estate Index**”). For more information about the Real Estate Index, please see “— The Dow Jones U.S. Real Estate Index” below.

The IYR Fund uses a representative sampling indexing strategy (as described below under “Representative Sampling”) to try to track the Real Estate Index. The IYR Fund generally invests at least 90% of its assets in the securities of the Real Estate Index or in depositary receipts representing securities included in the Real Estate Index. The IYR Fund may invest the remainder of its assets in certain futures, options and swap contracts, cash and cash equivalents, including money market funds advised by BFA or its affiliates, as well as in securities not included in the Real Estate Index, but which BFA believes will help the IYR Fund track the Real Estate Index.

### Representative Sampling

BFA uses a “representative sampling” indexing strategy to manage the IYR Fund. “Representative sampling” is an indexing strategy that involves investing in a representative sample of securities that collectively has an investment profile similar to the Real Estate Index. The securities selected are expected to have, in the aggregate, investment characteristics (based on factors such as market capitalization and industry weightings), fundamental characteristics (such as return variability and yield) and liquidity measures similar to those of the Real Estate Index. The IYR Fund may or may not hold all of the securities in the Real Estate Index.

### Correlation

The Real Estate Index is a theoretical financial calculation while the IYR Fund is an actual investment portfolio. The performance of the IYR Fund and the Real Estate Index may vary due to transaction costs, non-U.S. currency valuations, asset valuations, corporate actions (such as mergers and

spin-offs), timing variances and differences between the IYR Fund's portfolio and the Real Estate Index resulting from legal restrictions (such as diversification requirements) that apply to the IYR Fund but not to the Real Estate Index or to the use of representative sampling. "Tracking error" is the divergence of the performance (return) of a fund's portfolio from that of its underlying index. BFA expects that, over time, the IYR Fund's tracking error will not exceed 5%. Because the IYR Fund uses a representative sampling indexing strategy, it can be expected to have a larger tracking error than if it used a replication indexing strategy. "Replication" is an indexing strategy in which a fund invests in substantially all of the securities in its underlying index in approximately the same proportions as in the underlying index.

### Industry Concentration Policy

The IYR Fund will concentrate its investments (*i.e.*, hold 25% or more of its total assets) in a particular industry or group of industries, which may include large-, mid- or small-capitalization companies, to approximately the same extent that the Real Estate Index is concentrated. For purposes of this limitation, securities of the U.S. government (including its agencies and instrumentalities) and repurchase agreements collateralized by U.S. government securities are not considered to be issued by members of any industry.

### Holdings Information

As of July 24, 2013, 99.88% of the IYR Fund's holdings consisted of equity securities, 0.87% consisted of cash and -0.74% was in other assets, including dividends booked but not yet received. The following tables summarize the IYR Fund's top holdings in individual securities and by sector as of that date.

**Top Holdings in Individual Securities as of July 24, 2013**

<b>Company</b>	<b>Percentage of Total Holdings</b>
Simon Property Group, Inc.	8.42%
American Tower Corporation	4.82%
Public Storage	3.79%
HCP, Inc.	3.37%
Ventas, Inc.	3.33%
Prologis, Inc.	3.27%
Health Care REIT, Inc.	3.08%
Equity Residential	3.03%
Avalonbay Communities, Inc.	2.77%
Weyerhaeuser Company	2.74%

### Top Holdings by Sector as of July 24, 2013

Sector	Percentage of Total Holdings
Specialty REITs	29.29%
Retail REITs	20.28%
Industrial and Office REITs	18.93%
Residential REITs	13.00%
Mortgage REITs	6.91%
Hotel & Lodging REITs	4.75%
Real Estate Services	2.82%
Real Estate Holding and Development	2.05%
Diversified REITs	1.64%
S-T Securities	0.04%

The information above was compiled from the iShares® website, without independent verification. Information contained in the iShares® website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

### The Dow Jones U.S. Real Estate Index

We have derived all information contained in this underlying supplement regarding the Dow Jones U.S. Real Estate Index, including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, Dow Jones & Company, Inc. ("**Dow Jones**"). The Dow Jones U.S. Real Estate Index is calculated, maintained and published by Dow Jones. Dow Jones is under no obligation to continue to publish, and may discontinue publication of, the Dow Jones U.S. Real Estate Index.

In July 2012, The McGraw-Hill Companies, Inc. ("**McGraw-Hill**"), the owner of the S&P Indices business, and CME Group Inc. ("**CME Group**"), the 90% owner of the CME Group and Dow Jones & Company, Inc. joint venture that owns the Dow Jones Indexes business, formed a new joint venture, S&P Dow Jones Indices, which owns the S&P Indices business and the Dow Jones Indexes business, including the Dow Jones U.S. Real Estate Index.

#### *Dow Jones U.S. Real Estate Index Composition and Maintenance*

The Dow Jones U.S. Real Estate Index measures the performance of the real estate sector of the United States equity market. Component companies include those that invest directly or indirectly in real estate through development, investment or ownership; companies that provide services to real estate companies but do not own the properties themselves (agencies, brokers, leasing companies, management companies and advisory services); and real estate investment trusts or corporations ("**REITs**") or listed property trusts ("**LPTs**") that invest in office, industrial, retail, residential, specialty (e.g., health care), hotel, lodging and other properties or that are directly involved in lending money to real estate owners and operators or indirectly through the purchase of mortgages or mortgage-backed securities. REITs are passive investment vehicles that invest primarily in income producing real estate or real estate-related loans and interests.

The Dow Jones U.S. Real Estate Index is one of the 19 supersector indices that make up the Dow Jones U.S. Index (formerly known as the Dow Jones U.S. Total Market Index). The Dow Jones U.S. Real Estate Index is a subset of the Dow Jones U.S. Financials Index, which in turn is a subset of the Dow Jones U.S. Index. The Dow Jones U.S. Index is part of the Dow Jones Global Index<sup>SM</sup> family, which is a

benchmark family that represents approximately 95% of the float-adjusted market capitalization of countries that are open to foreign investors. The Dow Jones Global Index<sup>SM</sup> family represents approximately 50 countries. The Dow Jones U.S. Real Estate Index is a market capitalization weighted index in which only the shares of each company that are readily available to investors — the “float” — are counted.

Index component candidates must be common shares or other securities that have the characteristics of common equities. All classes of common shares, both fully and partially paid, are eligible. Fixed dividend shares and securities such as convertible notes, warrants, rights, mutual funds, unit investment trusts, closed-end fund shares and shares in limited partnerships are not eligible. Temporary issues arising from corporate actions, such as “when-issued shares,” are considered on a case-by-case basis when necessary to maintain continuity in a company’s index membership. REITs, LPTs and similar real-property-owning pass-through structures taxed as REITs by their domiciles also are eligible. Multiple classes of shares are included if each issue, on its own merit, meets the other eligibility criteria. Securities that have had more than ten non-trading days during the past quarter are excluded. Stocks in the top 95% of the index universe by float-adjusted market capitalization are selected as components of the Dow Jones U.S. Index, excluding stocks that fall within the bottom 1% of the universe by float-adjusted market capitalization and within the bottom 0.01% of the universe by turnover. To be included in the Dow Jones U.S. Real Estate Index, the issuer of the component securities must be classified in the Real Estate Sector of industry classifications as maintained by the Industry Classification Benchmark (“ICB”).

The Dow Jones U.S. Real Estate Index is reviewed by Dow Jones on a quarterly basis. Shares outstanding totals for component stocks are updated during the quarterly review. However, if the number of float-adjusted shares outstanding for an index component changes by more than 10% due to a corporate action, the shares total will be adjusted immediately after the close of trading on the date of the event. Whenever possible, Dow Jones will announce the change at least two business days prior to its implementation. Changes in shares outstanding due to stock dividends, splits and other corporate actions also are adjusted immediately after the close of trading on the day they become effective. Quarterly reviews are implemented during March, June, September and December. Both component changes and share changes become effective at the opening on the first Monday after the third Friday of the review month. Changes to the Dow Jones U.S. Real Estate Index are implemented after the official closing values have been established. All adjustments are made before the start of the next trading day. Constituent changes that result from the periodic review will be announced on the second Friday of the third month of each quarter (*e.g.*, March, June, September and December).

In addition to the scheduled quarterly review, the Dow Jones U.S. Real Estate Index is reviewed on an ongoing basis. Changes in index composition and related weight adjustments are necessary whenever there are extraordinary events such as delistings, bankruptcies, mergers or takeovers involving index components. In these cases, each event will be taken into account as soon as it is effective. Whenever possible, the changes in the index components will be announced at least two business days prior to their implementation date. In the event that a component no longer meets the eligibility requirements, it will be removed from the Dow Jones U.S. Real Estate Index. You can find a list of the companies whose common stocks are currently included in the Dow Jones U.S. Real Estate Index on the Dow Jones website at <http://www.djindexes.com>. Information included in such website is not a part of this underlying supplement.

#### *Background on the ICB*

ICB, a joint classification system launched by FTSE Group and Dow Jones Indexes offers broad, global coverage of companies and securities and classifies them based on revenue, not earnings. ICB classifies the component stocks into groups of 10 industries, 19 supersectors, 41 sectors and 114 subsectors. The Real Estate Supersector is composed of two Sectors. The Real Estate Investment & Services Sector consists of companies that invest directly or indirectly in real estate through development, investment or ownership and companies that provide services to real estate companies but do not own the properties themselves. This Sector excludes REITs and similar entities. The Real Estate Investment Trusts Sector consists of REITs and similar entities.

## BACKGROUND ON THE iSHARES® S&P GSCI™ COMMODITY-INDEXED TRUST

We have derived all information contained in this underlying supplement regarding the iShares® S&P GSCI™ Commodity-Indexed Trust (the **"Commodity-Indexed Trust"**) from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, BlackRock Institutional Trust Company, N.A. (**"BTC"**), as trustee of the Commodity-Indexed Trust, and BlackRock Asset Management International Inc. (**"BAMI"**), as the sponsor and manager of the Commodity-Indexed Trust. The Commodity-Indexed Trust is a unit investment trust that issues units of beneficial interest, called **"Shares,"** representing fractional undivided beneficial interests in its net assets. Substantially all of the assets of the Commodity-Indexed Trust consist of interests in the iShares® S&P GSCI™ Commodity-Indexed Investing Pool LLC (the **"Investing Pool"**), which holds long positions in futures contracts on the S&P GSCI™ Excess Return Index. The Commodity-Indexed Trust is an exchange-traded fund (**"ETF"**) that trades on the NYSE Arca, Inc. (**"NYSE Arca"**) under the ticker symbol **"GSG."**

Each of the Commodity-Indexed Trust and the Investing Pool is a commodity pool as defined in the Commodity Exchange Act and the regulations of the Commodity Futures Trading Commission (the **"CFTC"**). BAMI is a commodity pool operator registered with the CFTC. Neither the Commodity-Indexed Trust nor the Investing Pool is an investment company registered under the Investment Company Act. Information provided to or filed with the SEC by BAMI pursuant to the Securities Act of 1933, as amended, and the Securities Exchange Act of 1934, as amended, can be located by reference to SEC file number 001-32947, through the SEC's website at <http://www.sec.gov>. For additional information regarding BTC, BAMI and the Commodity-Indexed Trust, please see the Commodity-Indexed Trust's prospectus. In addition, information about BTC, BAMI and the Commodity-Indexed Trust may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the iShares® website at [www.ishares.com](http://www.ishares.com). We make no representation or warranty as to the accuracy or completeness of such information. Information contained in the iShares® website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

### Structure of the Commodity-Indexed Trust and the Investing Pool

The Commodity-Indexed Trust was formed as a Delaware statutory trust on July 7, 2006. Each Share represents a unit of fractional undivided beneficial interest in the net assets of the Commodity-Indexed Trust. Substantially all of the assets of the Commodity-Indexed Trust consist of its holdings of the limited liability company interests in the Investing Pool (**"Investing Pool Interests"**).

The Investing Pool has issued Investing Pool Interests only to the Commodity-Indexed Trust and to BAMI, the manager of the Investing Pool. The Manager maintains a limited equity interest in the Investing Pool with the balance of the Investing Pool owned by the Commodity-Indexed Trust. The Investing Pool invests in long positions in **"Index Futures,"** which are exchange-traded index futures contracts, which may be of various expirations, on the S&P GSCI™ Excess Return Index. In order to support margin requirements applicable to its Index Future positions, the Investing Pool also holds **"Collateral Assets,"** which consist of cash, U.S. Treasury securities or other short-term securities and similar securities that are eligible as margin deposits for those Index Future positions. Together, the returns on the Index Futures and the Collateral Assets (before taking into account the expenses and liabilities of the Commodity-Indexed Trust and the Investing Pool) are expected to correspond generally to the performance of the S&P GSCI™ Total Return Index, which represents the return on a fully collateralized investment in the S&P GSCI™ Excess Return Index.

Each of the Commodity-Indexed Trust and the Investing Pool is a commodity pool as defined in the Commodity Exchange Act, and each entity is operated by BAMI, which is a commodity pool operator registered with the CFTC and is an indirect subsidiary of BlackRock, Inc. BlackRock Fund Advisors (**"BFA"**), which is an indirect subsidiary of BlackRock, Inc., serves as the commodity trading advisor of the Investing Pool and is registered with the CFTC.



## Investment Objective

The investment objective of the Commodity-Indexed Trust is to seek investment results through the Commodity-Indexed Trust's investment in the Investing Pool, that correspond generally, but are not necessarily identical, to the performance of the S&P GSCI™ Total Return Index, before the payment of expenses and liabilities of the Commodity-Indexed Trust and the Investing Pool. The S&P GSCI™ Total Return Index is intended to reflect the performance of a diversified group of commodities. For more information about the S&P GSCI™ Total Return Index, please see "— S&P GSCI™ Total Return Index" below.

The Investing Pool holds long positions in Index Futures whose settlement value at expiration is determined based on the value of the S&P GSCI™ Excess Return Index at that time. The Investing Pool also earns interest on its Collateral Assets. The Commodity-Indexed Trust, is a passive investor in Index Futures and the Collateral Assets used to satisfy applicable margin requirements on those Index Future positions. Neither the Commodity-Indexed Trust nor the Investing Pool will engage in any activities designed to obtain a profit from, or to ameliorate losses caused by, changes in the level of the S&P GSCI™ Total Return Index or the S&P GSCI™ Excess Return Index or the value of the Investing Pool's short-term securities. Neither the Commodity-Indexed Trust nor the Investing Pool engages in any activities designed to obtain a profit from, or to ameliorate losses caused by, changes in the level of the Index or the S&P GSCI™ Excess Return Index or the value of the Collateral Assets.

### The S&P GSCI™ Total Return Index

We have derived all information contained in this underlying supplement regarding the S&P GSCI™ Total Return Index, including, without limitation, their make-up, method of calculation and changes in their components, from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, Standard & Poor's Financial Services LLC ("S&P"), the publisher of the S&P GSCI™ Total Return Index. The S&P GSCI™ Total Return Index is determined, composed and calculated by S&P, without regard to the notes. S&P acquired the rights to the S&P GSCI™ and its related indices, including the S&P GSCI™ Total Return Index, from Goldman, Sachs & Co. in 2007. Goldman, Sachs & Co. established and began calculating the S&P GSCI™ in May 1991. The former name of the S&P GSCI™ was the Goldman Sachs Commodity Index, or GSCI®. S&P has no obligation to continue to publish, and may discontinue publication of, the S&P GSCI™ Total Return Index.

In July 2012, The McGraw-Hill Companies, Inc. ("McGraw-Hill"), the owner of the S&P Indices business, and CME Group Inc. ("CME Group"), the 90% owner of the CME Group and Dow Jones & Company, Inc. joint venture that owns the Dow Jones Indexes business, formed a new joint venture, S&P Dow Jones Indices LLC, which owns the S&P Indices business and the Dow Jones Indexes business, including the S&P GSCI™ Total Return Index.

S&P publishes excess return and total return versions of the S&P GSCI™. The excess return version of the S&P GSCI™ is based on price levels of the futures contracts included in the S&P GSCI™ as well as the discount or premium obtained by "rolling" hypothetical positions in such contracts forward as they approach delivery. The total return version of the S&P GSCI™ incorporates the returns of the excess return version, except that the total return version also reflects interest earned on hypothetical, fully collateralized contract positions on the included commodities.

The S&P GSCI™ is an index on a world production-weighted basket of principal non-financial commodities (*i.e.*, physical commodities) that satisfy specified criteria. The S&P GSCI™ is designed to be a measure of the performance over time of the markets for these commodities. The only commodities represented in the S&P GSCI™ are those physical commodities on which active and liquid contracts are traded on trading facilities in major industrialized countries. The commodities included in the S&P GSCI™ are weighted, on a production basis, to reflect the relative significance (in the view of S&P, as described below) of such commodities to the world economy. The fluctuations in the value of the S&P

GSCI™ are intended generally to correlate with changes in the prices of such physical commodities in global markets. The S&P GSCI™ has been normalized such that its hypothetical level on January 2, 1970 was 100. Futures contracts on the S&P GSCI™, and options on such futures contracts, are currently listed for trading on the Chicago Mercantile Exchange.

The S&P GSCI™ Total Return Index reflects the value of an investment in the S&P GSCI Excess Return Index together with a Treasury bill return. Because the S&P GSCI™ Total Return Index is a total return version of the S&P GSCI™, the methodology for compiling the S&P GSCI™ relates as well to the methodology of compiling the S&P GSCI™ Total Return.

Set forth below is a summary of the methodology used to calculate the S&P GSCI™ and, accordingly, the S&P GSCI™ Total Return Index. Since the S&P GSCI™ is the base index for the S&P GSCI™ Total Return Index, the methodology for compiling the S&P GSCI™ relates as well to the methodology of compiling the S&P GSCI™ Total Return Index. S&P makes the official calculations of the S&P GSCI™ and the S&P GSCI™ Total Return Index.

#### *The Index Committee and the Index Advisory Panel*

S&P has established an index committee (the “**Index Committee**”) to oversee the daily management and operations of the S&P GSCI™, and is responsible for all analytical methods and calculation of the S&P GSCI™ and its related indices. The Index Committee consists of full-time professional members of S&P’s staff. At each meeting, the Index Committee reviews any issues that may affect index constituents, statistics comparing the composition of the indices to the market, commodities that are being considered as candidates for an addition to an index, and any significant market events. In addition, the Index Committee may revise index policy covering rules for selecting commodities or other matters.

S&P considers information about changes to its indices and related matters to be potentially market- moving and material. Therefore, all Index Committee discussions are confidential.

S&P has established an index advisory panel (the “**Advisory Panel**”) to assist it in connection with the operation of the S&P GSCI™. The Advisory Panel meets on an annual basis and at other times at the request of the Index Committee. The principal purpose of the Advisory Panel is to advise S&P with respect to, among other things, the calculation of the S&P GSCI™, the effectiveness of the S&P GSCI™ as a measure of commodity futures market performance and the need for changes in the composition or in the methodology of the S&P GSCI™. The Advisory Panel acts solely in an advisory and consultative capacity; the Index Committee makes all decisions with respect to the composition, calculation and operation of the S&P GSCI™.

#### *Composition of the S&P GSCI™*

In order to be included in the S&P GSCI™, a contract must satisfy the following eligibility criteria:

- the contract must be in respect of a physical commodity and not a financial commodity;
- the contract must have a specified expiration or term or provide in some other manner for delivery or settlement at a specified time, or within a specified period, in the future;
- the contract must, at any given point in time, be available for trading at least five months prior to its expiration or such other date or time period specified for delivery or settlement;
- the contract must be traded on an exchange, facility or other platform (referred to as a “trading facility”) that allows market participants to execute spread transactions, through a single order entry, between the pairs of contract expirations included in the S&P GSCI™ that, at any given point in time, will be involved in the rolls to be effected in the next three roll periods (defined below);

- the contract must be denominated in U.S. dollars; and
- the contract must be traded on or through a trading facility that has its principal place of business or operations in a country that is a member of the Organization for Economic Cooperation and Development and that:
  - makes price quotations generally available to its members or participants (and to S&P) in a manner and with a frequency that is sufficient to provide reasonably reliable indications of the level of the relevant market at any given point in time;
  - makes reliable trading volume information available to S&P with at least the frequency required by S&P to make the monthly determinations;
  - accepts bids and offers from multiple participants or price providers; and
  - is accessible by a sufficiently broad range of participants.

The price of the relevant contract that is used as a reference or benchmark by market participants (referred to as the “**daily contract reference price**”) generally must have been available on a continuous basis for at least two years prior to the proposed date of inclusion in the S&P GSCI™. In appropriate circumstances, S&P may determine that a shorter time period is sufficient or that historical daily contract reference prices for such contract may be derived from daily contract reference prices for a similar or related contract. The daily contract reference price may be (but is not required to be) the settlement price or other similar price published by the relevant trading facility for purposes of margining transactions or for other purposes.

At and after the time a contract is included in the S&P GSCI™, the daily contract reference price for such contract must be published between 10:00 a.m. and 4:00 p.m., New York City time, on each business day relating to such contract by the trading facility on or through which it is traded and must generally be available to all members of, or participants in, such facility (and to S&P) on the same day from the trading facility or through a recognized third-party data vendor. Such publication must include, at all times, daily contract reference prices for at least one expiration or settlement date that is five months or more from the date the determination is made, as well as for all expiration or settlement dates during such five-month period.

For a contract to be eligible for inclusion in the S&P GSCI™, volume data with respect to such contract must be available for at least the three months immediately preceding the date on which the determination is made. The following eligibility criteria apply:

- In order to be added to the S&P GSCI™, a contract that is not included in the S&P GSCI™ at the time of determination and that is based on a commodity that is not represented in the S&P GSCI™ at such time must have an annualized total dollar value traded over the relevant period of at least U.S. \$15 billion. The total dollar value traded is the dollar value of the total quantity of the commodity underlying transactions in the relevant contract over the period for which the calculation is made, based on the average of the daily contract reference prices on the last day of each month during the period.
- In order to continue to be included in the S&P GSCI™, a contract that is already included in the S&P GSCI™ at the time of determination and that is the only contract on the relevant commodity included in the S&P GSCI™ must have an annualized total dollar value traded of at least U.S. \$5 billion over the relevant period and of at least U.S. \$10 billion during at least one of the three most recent annual periods used in making the determination.

- In order to be added to the S&P GSCI™, a contract that is not included in the S&P GSCI™ at the time of determination and that is based on a commodity on which there are one or more contracts already included in the S&P GSCI™ at such time must have an annualized total dollar value traded over the relevant period of at least U.S. \$30 billion.
- In order to continue to be included in the S&P GSCI™, a contract that is already included in the S&P GSCI™ at the time of determination and that is based on a commodity on which there are one or more contracts already included in the S&P GSCI™ at such time must have an annualized total dollar value traded, over the relevant period of at least U.S. \$10 billion over the relevant period and of at least U.S. \$20 billion during at least one of the three most recent annual periods used in making the determination.

In addition to the volume requirements described above, a contract must have a minimum reference percentage dollar weight:

- In order to continue to be included in the S&P GSCI™, a contract that is already included in the S&P GSCI™ at the time of determination must have a reference percentage dollar weight of at least 0.10%. The reference percentage dollar weight of a contract is determined by multiplying the CPW (defined below) of a contract by the average of its daily contract reference prices on the last day of each month during the relevant period. These amounts are summed for all contracts included in the S&P GSCI™ and each contract's percentage of the total is then determined.
- In order to be added to the S&P GSCI™, a contract that is not included in the S&P GSCI™ at the time of determination must have a reference percentage dollar weight of at least 1.00% at the time of determination.

In the event that two or more contracts on the same commodity satisfy the eligibility criteria, such contracts are included in the S&P GSCI™ in the order of their respective total quantity traded during the relevant period (determined as the total quantity of the commodity underlying transactions in the relevant contract), with the contract having the highest total quantity traded being included first. No further contracts are included if such inclusion results in the portion of the S&P GSCI™ attributable to such commodity exceeding a particular level.

If under the procedure set forth in the preceding paragraph, additional contracts could be included with respect to several commodities at the same time, the procedure is first applied to the commodity that has the smallest portion of the S&P GSCI™ attributable to it at the time of determination. Subject to the other eligibility criteria, the contract with the highest total quantity traded on such commodity is included. Before any additional contracts on any commodity are included, the portion of the S&P GSCI™ attributable to all commodities is recalculated. The selection procedure described above is then repeated with respect to the contracts on the commodity that then has the smallest portion of the S&P GSCI™ attributable to it.

The contracts currently included in the S&P GSCI™ are all futures contracts traded on the New York Mercantile Exchange, Inc. ("**NYMEX**"), ICE Futures Europe ("**ICE-Europe**"), ICE Futures U.S. ("**ICE-US**"), the Chicago Mercantile Exchange ("**CME**"), the Chicago Board of Trade ("**CBOT**"), the Kansas City Board of Trade ("**KBT**"), the Commodities Exchange Inc. ("**CMX**") and the London Metal Exchange ("**LME**").

The quantity of each of the contracts included in the S&P GSCI™ is determined on the basis of a five-year average (referred to as the "**world production average**") of the production quantity of the underlying commodity from sources determined by S&P to be reasonably accurate and reliable, such as the United Nations Industrial Commodity Statistics Yearbook. However, if a commodity is primarily a

regional commodity, based on its production, use, pricing, transportation or other factors, S&P may calculate the weight of such commodity based on regional, rather than world, production data. At present, natural gas is the only commodity the weight of which is calculated on the basis of regional production data, with the relevant region being North America.

The five-year moving average is updated annually for each commodity included in the S&P GSCI™, based on the most recent five-year period (ending approximately two years prior to the date of calculation and moving backwards) for which complete data for all commodities is available. The contract production weights (the “CPWs”) used in calculating the S&P GSCI™ are derived from world or regional production averages, as applicable, of the relevant commodities, and are calculated based on the total quantity traded for the relevant contract and the world or regional production average, as applicable, of the underlying commodity. However, if the volume of trading in the relevant contract, as a multiple of the production levels of the commodity, is below specified thresholds, the CPW of the contract is reduced until the threshold is satisfied. This is designed to ensure that trading in each such contract is sufficiently liquid relative to the production of the commodity.

In addition, S&P performs this calculation on a monthly basis and, if the multiple of any contract is below the prescribed threshold, the composition of the S&P GSCI™ is reevaluated, based on the criteria and weighting procedure described above. This procedure is undertaken to allow the S&P GSCI™ to shift from contracts that have lost substantial liquidity into more liquid contracts, during the course of a given year. As a result, it is possible that the composition or weighting of the S&P GSCI™ will change on one or more of these monthly evaluation dates. In addition, regardless of whether any changes have occurred during the year, S&P reevaluates the composition of the S&P GSCI™ at the conclusion of each year, based on the above criteria. Other commodities that satisfy such criteria, if any, will be added to the S&P GSCI™. Commodities included in the S&P GSCI™ that no longer satisfy such criteria, if any, will be deleted.

S&P also determines whether modifications in the selection criteria or the methodology for determining the composition and weights of and for calculating the S&P GSCI™ are necessary or appropriate in order to assure that the S&P GSCI™ represents a measure of commodity market performance. S&P has the discretion to make any such modifications.

### *Contract Expirations*

Because the S&P GSCI™ comprises actively traded contracts with scheduled expirations, it can only be calculated by reference to the prices of contracts for specified expiration, delivery or settlement periods, referred to as “**contract expirations**.” The contract expirations included in the S&P GSCI™ for each commodity during a given year are designated by S&P, provided that each such contract must be an “**active contract**.” An “active contract” for this purpose is a liquid, actively traded contract expiration, as defined or identified by the relevant trading facility or, if no such definition or identification is provided by the relevant trading facility, as defined by standard custom and practice in the industry.

If a trading facility deletes one or more contract expirations, the S&P GSCI™ will be calculated during the remainder of the year in which such deletion occurs based on the remaining contract expirations designated by S&P. If a trading facility ceases trading in all contract expirations relating to a particular contract, S&P may designate an eligible replacement contract on the commodity. To the extent practicable, the replacement will be in effect during the next monthly review of the composition of the S&P GSCI™. If that timing is not practicable, S&P will determine the date of the replacement and will consider a number of factors, including the differences between the existing contract and the replacement contract specifications and contract expirations.

### *Value of the S&P GSCI™*

The value of the S&P GSCI™ on any given day is equal to the total dollar weight of the S&P GSCI™ divided by a normalizing constant that assures the continuity of the S&P GSCI™ over time. The total dollar weight of the S&P GSCI™ is the sum of the dollar weight of each of the underlying commodities.

The dollar weight of each such commodity on any given day is equal to:

- the “daily contract reference price” (discussed below),
- multiplied by the appropriate CPWs, and
- during a roll period, the appropriate “roll weights” (discussed below).

The daily contract reference price used in calculating the dollar weight of each commodity on any given day is the most recent daily contract reference price made available by the relevant trading facility, except that the daily contract reference price for the most recent prior day will be used if the exchange is closed or otherwise fails to publish a daily contract reference price on that day. In addition, if the trading facility fails to make a daily contract reference price available or publishes a daily contract reference price that, in the reasonable judgment of S&P, reflects manifest error, the relevant calculation will be delayed until the price is made available or corrected; provided that, if the price is not made available or corrected by 4:00 p.m., New York City time, S&P may, if it deems such action to be appropriate under the circumstances, determine the appropriate daily contract reference price for the applicable futures contract in its reasonable judgment for purposes of the relevant S&P GSCI™ calculation.

The “roll weight” of each commodity reflects the fact that the positions in contracts must be liquidated or rolled forward into more distant contract expirations as they approach expiration. If actual positions in the relevant markets were rolled forward, the roll would likely need to take place over a period of days. Since the S&P GSCI™ is designed to replicate the performance of actual investments in the underlying contracts, the rolling process incorporated in the S&P GSCI™ also takes place over a period of days at the beginning of each month (referred to as the “roll period”). On each day of the roll period, the “roll weights” of the first nearby contract expiration on a particular commodity and the more distant contract expiration into which it is rolled are adjusted, so that the hypothetical position in the contract on the commodity that is included in the S&P GSCI™ is gradually shifted from the first nearby contract expiration to the more distant contract expiration.

If on any day during a roll period any of the following conditions exists, the portion of the roll that would have taken place on that day is deferred until the next day on which such conditions do not exist:

- no daily contract reference price is available for a given contract expiration;
- any such price represents the maximum or minimum price for such contract month, based on exchange price limits (referred to as a “**Limit Price**”);
- the daily contract reference price published by the relevant trading facility reflects manifest error, or such price is not published by 4:00 p.m., New York City time. In that event, S&P may, but is not required to, determine a daily contract reference price and complete the relevant portion of the roll based on such price; *provided, that*, if the trading facility publishes a price before the opening of trading on the next day, S&P will revise the portion of the roll accordingly; or
- trading in the relevant contract terminates prior to its scheduled closing time.

If any of these conditions exist throughout the roll period, the roll with respect to the affected contract will be effected in its entirety on the next day on which such conditions no longer exist.

### *Contract Daily Return*

The contract daily return on any given day is equal to the sum, for each of the commodities included in the S&P GSCI™, of the applicable daily contract reference price on the relevant contract multiplied by the appropriate CPW and the appropriate “roll weight,” divided by the total dollar weight of the S&P GSCI™ on the preceding day, minus one.

### *Calculation of the S&P GSCI™ Total Return Index*

The value of the S&P GSCI™ Total Return Index on any S&P GSCI™ Business Day reflects the value of an investment in the S&P GSCI™ together with a Treasury bill return and is equal to the product of:

- the value of the S&P GSCI™ Total Return Index on the immediately preceding S&P GSCI™ Business Day;
- one plus the sum of the contract daily return and the Treasury Bill return on the S&P GSCI™ Business Day on which the calculation is made; and
- one plus the Treasury Bill return for each non-S&P GSCI™ Business Day since the immediately preceding S&P GSCI™ Business Day. The Treasury Bill return is the return on a hypothetical investment in the S&P GSCI™ Total Return Index at a rate equal to the interest rate on a specified U.S. Treasury Bill.

The initial value of the S&P GSCI™ Total Return Index was normalized such that its hypothetical level on January 2, 1970 was 100.

### *Information*

All information contained herein relating to the S&P GSCI™ and the S&P GSCI™ Total Return Index, including their make-up, method of calculation, changes in their components and historical performance, has been derived from publicly available information. The information contained herein with respect to the S&P GSCI™ and the S&P GSCI™ Total Return Index reflects the policies of, and is subject to change by, S&P.

Current information regarding the market values of the S&P GSCI™ and of the S&P GSCI™ Total Return Index are available from S&P and from numerous public information sources.

### *The Commodity Futures Markets*

Contracts on physical commodities are traded on regulated futures exchanges, in the over-the-counter market and on various types of physical and electronic trading facilities and markets. As of the date of this underlying supplement, all of the contracts included in the S&P GSCI™ Total Return Index are exchange-traded futures contracts. An exchange-traded futures contract is a bilateral agreement providing for the purchase and sale of a specified type and quantity of a commodity or financial instrument during a stated delivery month for a fixed price. A futures contract on an index of commodities typically provides for the payment and receipt of a cash settlement based on the value of such commodities. A futures contract provides for a specified settlement month in which the commodity or financial instrument is to be delivered by the seller (whose position is described as “short”) and acquired by the purchaser (whose position is described as “long”) or in which the cash settlement amount is to be made.

There is no purchase price paid or received on the purchase or sale of a futures contract. Instead, an amount of cash or cash equivalents must be deposited with the broker as “initial margin.” This amount varies based on the requirements imposed by the exchange clearing houses, but may be as low as 5% or less of the value of the contract. This margin deposit provides collateral for the obligations of the parties to the futures contract.

By depositing margin in the most advantageous form (which may vary depending on the exchange, clearing house or broker involved), a market participant may be able to earn interest on its margin funds, thereby increasing the potential total return that may be realized from an investment in futures contracts. The market participant normally makes to, and receives from, the broker subsequent payments on a daily basis as the price of the futures contract fluctuates. These payments are called "variation margin" and make the existing positions in the futures contract more or less valuable, a process known as "marking to market."

Futures contracts are traded on organized exchanges, known as "contract markets" in the United States, through the facilities of a centralized clearing house and a brokerage firm which is a member of the clearing house. The clearing house guarantees the performance of each clearing member which is a party to the futures contract by, in effect, taking the opposite side of the transaction. At any time prior to the expiration of a futures contract, subject to the availability of a liquid secondary market, a trader may elect to close out its position by taking an opposite position on the exchange on which the trader obtained the position. This operates to terminate the position and fix the trader's profit or loss.

U.S. contract markets, as well as brokers and market participants, are subject to regulation by the Commodity Futures Trading Commission. Futures markets outside the United States are generally subject to regulation by comparable regulatory authorities. However, the structure and nature of trading on non-U.S. exchanges may differ from the foregoing description. From its inception to the present, the S&P GSCI™ Total Return Index has been composed exclusively of futures contracts traded on regulated exchanges.



## BACKGROUND ON THE SPDR® GOLD TRUST

We have derived all information contained in this underlying supplement regarding the SPDR® Gold Trust (the "**Gold Trust**") from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, the Gold Trust and World Gold Trust Services, LLC, the sponsor of the Gold Trust. BNY Mellon Asset Servicing, a division of The Bank of New York Mellon, is the trustee of the Gold Trust, and HSBC Bank USA, N.A. is the custodian of the Gold Trust. The Gold Trust is an investment trust, formed on November 12, 2004. The Gold Trust trades under the ticker symbol "GLD" on the NYSE Arca, Inc. ("**NYSE Arca**").

Information provided to or filed with the Securities and Exchange Commission (the "**SEC**") by the Gold Trust pursuant to the Securities Act of 1933, as amended, and the Securities Exchange Act of 1934, as amended, can be located by reference to SEC file numbers 333-153150 and 001-32356, respectively, through the SEC's website at <http://www.sec.gov>. For additional information regarding the Gold Trust, please see the Gold Trust's prospectus. In addition, information about the Gold Trust may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the public website of the Gold Trust maintained by the sponsor at <http://www.spdrgoldshares.com>. We make no representation or warranty as to the accuracy or completeness of such information. Information contained in the SPDR® Gold Trust website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

### Investment Objective and Overview

The investment objective of the Gold Trust is to reflect the performance of the price of gold bullion, less the expenses of the Gold Trust's operations. The Gold Trust holds gold bars. The shares of the Gold Trust ("**Shares**") are intended to offer investors an opportunity to participate in the gold market through an investment in securities. The ownership of the Shares is intended to overcome certain barriers to entry in the gold market, such as the logistics of buying, storing and insuring gold.

The Shares represent units of fractional undivided beneficial interest in and ownership of the Gold Trust. The Gold Trust is not managed like a corporation or an active investment vehicle. The gold held by the Gold Trust will be sold only: (1) on an as-needed basis to pay the Gold Trust's expenses, (2) in the event the Gold Trust terminates and liquidates its assets, or (3) as otherwise required by law or regulation.

The Gold Trust's assets only consist of allocated gold bullion, gold receivable when recorded (representing gold covered by contractually binding orders for the creation of Shares where the gold has not yet been transferred to the Gold Trust's account) and, from time to time, cash, which will be used to pay expenses.

### Creation and Redemption

The Gold Trust creates and redeems the Shares from time to time, but only in one or more baskets (a "**Basket**" equals a block of 100,000 Shares). The creation and redemption of Baskets requires the delivery to the Gold Trust or the distribution by the Gold Trust of the amount of gold and any cash represented by the Baskets being created or redeemed, the amount of which is based on the combined net asset value of the number of Shares included in the Baskets being created or redeemed. The initial amount of gold required for deposit with the Gold Trust to create Shares for the period from the formation of the Gold Trust to the first day of trading of the Shares on the NYSE was 10,000 ounces per Basket. The number of ounces of gold required to create a Basket or to be delivered upon the redemption of a Basket gradually decreases over time, due to the accrual of the Gold Trust's expenses and the sale of the Gold Trust's gold to pay the Gold Trust's expenses. Baskets may be created or redeemed only by authorized participants, who pay a transaction fee for each order to create or redeem Baskets and may sell the Shares included in the Baskets they create to other investors.

### *Valuation of Gold; Computation of Net Asset Value*

The Net Asset Value (“NAV”) of the Gold Trust is the aggregate value of the Gold Trust’s assets less its liabilities (which include estimated accrued but unpaid fees and expenses). In determining the NAV of the Gold Trust, the trustee values the gold held by the Gold Trust on the basis of the price of an ounce of gold as set by the afternoon session of the twice daily fix of the price of an ounce of gold which starts at 3:00 PM London, England time and is performed by the five members of the London gold fix. The trustee determines the NAV of the Gold Trust on each day the NYSE Arca is open for regular trading, at the earlier of the London PM Fix for the day or 12:00 PM New York time. If no London PM Fix is made on a particular evaluation day or if the London PM Fix has not been announced by 12:00 PM New York time on a particular evaluation day, the next most recent London gold price fix (AM or PM) is used in the determination of the NAV of the Gold Trust, unless the trustee, in consultation with the sponsor, determines that such price is inappropriate to use as the basis for such determination. The trustee also determines the NAV per Share, which equals the NAV of the Gold Trust, divided by the number of outstanding Shares.

### **Termination of the SPDR® Gold Trust**

The sponsor may, and it is anticipated that the sponsor will, direct the trustee to terminate and liquidate the Gold Trust at any time after the first anniversary of the Gold Trust’s formation when the NAV of the Gold Trust is less than \$350 million (as adjusted for inflation). The sponsor may also direct the trustee to terminate the Gold Trust if the Commodity Futures Trading Commission, or the CFTC, determines that the Gold Trust is a commodity pool under the Commodity Exchange Act of 1936, as amended, or the CEA. The trustee may also terminate the Gold Trust upon the agreement of shareholders owning at least 66 $\frac{2}{3}$ % of the outstanding Shares.

The trustee will terminate and liquidate the Gold Trust if any of the following events occur:

- the Depository Trust Company, the securities depository for the Shares, is unwilling or unable to perform its functions under the Gold Trust indenture and no suitable replacement is available;
- the Shares are de-listed from the NYSE Arca and are not listed for trading on another U.S. national securities exchange or through the NASDAQ Stock Market within five business days from the date the Shares are de-listed;
- the NAV of the Gold Trust remains less than \$50 million for a period of 50 consecutive business days;
- the sponsor resigns or is unable to perform its duties or becomes bankrupt or insolvent and the trustee has not appointed a successor and has not itself agreed to act as sponsor;
- the trustee resigns or is removed and no successor trustee is appointed within 60 days;
- the custodian resigns and no successor custodian is appointed within 60 days;
- the sale of all of the Gold Trust’s assets;
- the Gold Trust fails to qualify for treatment, or ceases to be treated, for US federal income tax purposes, as a grantor trust; or
- the maximum period for which the Gold Trust is allowed to exist under New York law ends.

Upon the termination of the Gold Trust, the trustee will, within a reasonable time after the termination of the Gold Trust, sell the Gold Trust's gold bars and, after paying or making provision for the Gold Trust's liabilities, distribute the proceeds to the shareholders.

## **Gold**

The price of gold is primarily affected by the global demand for and supply of gold. The market for gold bullion is global, and gold prices are subject to volatile price movements over short periods of time and are affected by numerous factors, including macroeconomic factors such as the structure of and confidence in the global monetary system, expectations regarding the future rate of inflation, the relative strength of, and confidence in, the U.S. dollar (the currency in which the price of gold is usually quoted), interest rates, gold borrowing and lending rates and global or regional economic, financial, political, regulatory, judicial or other events. Gold prices may be affected by industry factors such as industrial and jewelry demand as well as lending, sales and purchases of gold by the official sector, including central banks and other governmental agencies and multilateral institutions that hold gold. Additionally, gold prices may be affected by levels of gold production, production costs and short-term changes in supply and demand due to trading activities in the gold market.

## BACKGROUND ON THE iSHARES® TIPS BOND ETF

We have derived all information contained in this underlying supplement regarding the iShares® TIPS Bond ETF (the “**TIP Fund**”) from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, iShares®, Inc. (“**iShares®**”), iShares® Trust, BlackRock Institutional Trust Company, N.A. (“**BTC**”) and BlackRock Fund Advisors (“**BFA**”). The TIP Fund is an investment portfolio maintained and managed by iShares® Trust. BFA is currently the investment adviser to the TIP Fund. The TIP Fund is an exchange-traded fund (“**ETF**”) that trades on the NYSE Arca, Inc. (“**NYSE Arca**”) under the ticker symbol “**TIP**.”

On July 1, 2013, the name of the TIP Fund was changed from the iShares® Barclays TIPS Bond Fund to the current name.

iShares® Trust is a registered investment company that consists of numerous separate investment portfolios, including the TIP Fund. Information provided to or filed with the SEC by iShares® Trust pursuant to the Securities Act of 1933, as amended, and the Investment Company Act of 1940, as amended, can be located by reference to SEC file numbers 333-92935 and 811-09729, respectively, through the SEC’s website at <http://www.sec.gov>. For additional information regarding iShares® Trust, BFA and the TIP Fund, please see the TIP Fund’s prospectus. In addition, information about iShares® Trust and the TIP Fund may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the iShares® website at [www.ishares.com](http://www.ishares.com). We make no representation or warranty as to the accuracy or completeness of such information. Information contained in the iShares® website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

### Investment Objective and Strategy

The TIP Fund seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the Barclays U.S. Treasury Inflation Protected Securities (TIPS) Index (Series-L) (the “**Barclays TIPS Index**”). Inflation-protected public obligations of the U.S. Treasury, commonly known as “**TIPS**,” are securities issued by the U.S. Treasury that are designed to provide inflation protection to investors. TIPS are income-generating instruments the interest and principal payments of which are adjusted for inflation — a sustained increase in prices that erodes the purchasing power of money. The inflation adjustment, which is typically applied monthly to the principal of the bond, follows a designated inflation index, such as the consumer price index. A fixed coupon rate is applied to the inflation-adjusted principal so that as inflation rises, both the principal value and the interest payments increase. This can provide investors with a hedge against inflation, as it helps preserve the purchasing power of an investment. Because of this inflation adjustment feature, inflation-protected bonds typically have lower yields than conventional fixed-rate bonds. See “— The Barclays U.S. Treasury Inflation Protected Securities (TIPS) Index (Series-L)” below for more information about the Barclays TIPS Index.

The TIP Fund uses a representative sampling indexing strategy (as described below under “Representative Sampling”) to try to track the Barclays TIPS Index. The TIP Fund generally invests at least 90% of its assets in the bonds of the Barclays TIPS Index and at least 95% of its assets in U.S. government bonds. The TIP Fund may invest up to 10% of its assets in U.S. government bonds not included in the Barclays TIPS Index, but which BFA believes will help the TIP Fund track the Barclays TIPS Index. The TIP Fund also may invest up to 5% of its assets in repurchase agreements collateralized by U.S. government obligations and in cash and cash equivalents, including shares of money market funds advised by BFA or its affiliates.

## **Representative Sampling**

BFA uses a “representative sampling” indexing strategy to manage the TIP Fund. “Representative sampling” is an indexing strategy that involves investing in a representative sample of securities that collectively has an investment profile similar to the Barclays TIPS Index. The securities selected are expected to have, in the aggregate, investment characteristics (based on factors such as market capitalization and industry weightings), fundamental characteristics (such as return variability, duration, maturity or credit ratings and yield) and liquidity measures similar to those of the Barclays TIPS Index. The TIP Fund may or may not hold all of the securities in the Barclays TIPS Index.

## **Correlation**

The Barclays TIPS Index is a theoretical financial calculation while the TIP Fund is an actual investment portfolio. The performance of the TIP Fund and the Barclays TIPS Index may vary due to transaction costs, non-U.S. currency valuations, asset valuations, corporate actions (such as mergers and spin-offs), timing variances and differences between the TIP Fund’s portfolio and the Barclays TIPS Index resulting from legal restrictions (such as diversification requirements) that apply to the TIP Fund but not to the Barclays TIPS Index or to the use of representative sampling. “Tracking error” is the divergence of the performance (return) of a fund’s portfolio from that of its underlying index. BFA expects that, over time, the TIP Fund’s tracking error will not exceed 5%. Because the TIP Fund uses a representative sampling indexing strategy, it can be expected to have a larger tracking error than if it used a replication indexing strategy. “Replication” is an indexing strategy in which a fund invests in substantially all of the securities in its underlying index in approximately the same proportions as in the underlying index.

## **Industry Concentration Policy**

The TIP Fund will concentrate its investments (*i.e.*, hold 25% or more of its total assets) in a particular industry or group of industries to approximately the same extent that the Barclays TIPS Index is concentrated. For purposes of this limitation, securities of the U.S. government (including its agencies and instrumentalities), repurchase agreements collateralized by U.S. government securities and securities of state or municipal governments and their political subdivisions are not considered to be issued by members of any industry.

## **Holdings Information**

As of July 24, 2013, 99.02% of the TIPS Fund’s holdings consisted of bonds, 1.51% consisted of cash and -0.53% was in other assets, including dividends booked but not yet received. The following tables summarize the top 10 holdings of the TIPS Fund as of that date.

### Top 10 Holdings as of July 24, 2013

Security	Percentage of Total Holdings
U.S. Treasury (CPI) Note, 01/15/2021, 1.12%	7.30%
U.S. Treasury (CPI) Note, 04/15/2017, 0.12%	6.83%
U.S. Treasury (CPI) Note, 07/15/2021, 0.62%	5.60%
U.S. Treasury (CPI) Note, 01/15/2023, 0.12%	5.19%
U.S. Treasury (CPI) Note, 01/15/2016, 2.00%	4.11%
U.S. Treasury (CPI) Note, 01/15/2025, 2.38%	3.97%
U.S. Treasury (CPI) Note, 04/15/2018, 0.12%	3.90%
U.S. Treasury (CPI) Note, 07/15/2022, 0.12%	3.26%
U.S. Treasury (CPI) Note, 07/15/2020, 1.25%	3.22%
U.S. Treasury (CPI) Note, 04/15/2029, 3.88%	3.18%

The information above was compiled from the iShares® website, without independent verification. Information contained in the iShares® website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

### The Barclays U.S. Treasury Inflation Protected Securities (TIPS) Index (Series-L)

We have derived all information contained in this underlying supplement regarding the Barclays TIPS Index, including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, Barclays Capital Inc. ("BCI"). The Barclays TIPS Index is a bond index calculated, published and disseminated by BCI. BCI is under no obligation to continue to publish, and may discontinue publication of, the Barclays TIPS Index.

The Barclays U.S. Treasury Inflation Protected Securities (TIPS) Index (Series-L) measures the performance of inflation-protected securities issued by the U.S. Treasury known as "TIPS." The Barclays U.S. Treasury Inflation Protected Securities (TIPS) Index (Series-L) is market capitalization weighted, includes all publicly issued U.S. inflation-protected securities that meet the criteria for inclusion and is rebalanced once a month on the last calendar day of the month. TIPS are indexed to the non-seasonally adjusted Consumer Price Index for All Urban Consumers, or the CPI-U.

#### *Eligibility Criteria*

In order to be eligible for inclusion in the Barclays U.S. Treasury Inflation Protected Securities (TIPS) Index (Series-L), securities must have \$250 million or more of outstanding face value. U.S. Treasuries held in the Federal Reserve SOMA account (both purchases at issuance and net secondary market transactions) are deducted from the total amount outstanding. Any issuance bought at auction by the Federal Reserve does not enter the Barclays U.S. Treasury Inflation Protected Securities (TIPS) Index (Series-L). Net secondary market purchases and sales are adjusted at each month-end with a one-month lag.

The U.S. inflation-protected securities included in the Barclays U.S. Treasury Inflation Protected Securities (TIPS) Index (Series-L) must be rated investment grade (Baa3/BBB-/BBB-) or higher using the middle rating of Moody's, S&P and Fitch after dropping the highest and lowest available ratings. When a rating from only two agencies is available, the lower is used. When a rating from only one agency is available, that is used to determine index eligibility.

Securities must have a remaining maturity of at least one year, regardless of optionality. Securities with a coupon that converts from fixed to floating rate must have at least one year until the conversion date.

Principal and coupons must be denominated in U.S. dollars. Coupons must be fixed rate, step-up coupons or coupons that change according to a predetermined schedule.

The securities must be SEC-registered securities, bonds exempt from registration at the time of issuance or Rule 144A securities with registration rights. Public obligations of the U.S. Treasury and inflation-protected securities are eligible for inclusion in the Barclays U.S. Treasury Inflation Protected Securities (TIPS) Index (Series-L). State and local government series bonds, STRIPS, T-bills and bellwethers are excluded from the Barclays U.S. Treasury Inflation Protected Securities (TIPS) Index (Series-L).

### *Rebalancing*

The compositions of the “**returns universe**” is rebalanced at each month-end and represents the fixed set of bonds on which index returns are calculated for the ensuing month. The “**statistics universe**” is a forward-looking version that changes daily to reflect issues dropping out and entering the index, but is not used for return calculation. On the last business day of the month (the “**rebalancing date**”), the composition of the latest statistics universe becomes the returns universe for the following month.

During the month, indicative changes to securities (*e.g.*, credit rating changes, sector reclassification, amount outstanding changes, corporate actions, ticker changes) are reflected in both the statistic universe and returns universe of the index on a daily basis. These changes may cause bonds to enter or fall out of the statistics universe of the index on a daily basis, but will affect the composition of the returns universe only at month-end, when the index is rebalanced.

Intra-month cash flows from interest and principal payments contribute to monthly index returns, but are not reinvested at any short-term reinvestment rate in between rebalance dates to earn an incremental return. However, after the rebalancing, cash is effectively reinvested into the returns universe for the following month, so that index results over two or more months reflect monthly compounding.

Eligible securities issued, but not necessarily settled, on or before the month-end rebalancing date qualify for inclusion in the following month’s index if required security reference information and pricing are readily available.

### *Index Calculation*

The Barclays U.S. Treasury Inflation Protected Securities (TIPS) Index (Series-L) is priced by Barclays Capital market makers on a daily basis on 3:00 p.m. New York time. Bonds in the index are priced on the mid side. The primary price for each security is analyzed and compared with other third-party pricing sources through statistical routines and scrutiny by the research staff. Significant discrepancies are researched and corrected, as necessary.

The amount outstanding reported for TIPS is equal to the notional par value of each TIP security available for purchase by the public as reported by the U.S. Treasury in the Quarterly Treasury Bulletin. This number is then adjusted (divided) by the compounded rate of inflation since the date of issue. The number is updated quarterly, at the end of a month that the Quarterly Treasury Bulletin is released.

When a new TIPS is issued or an existing issue is reopened, the full uninflated par amount outstanding enters the index for returns purposes on the first day of the following month. Only when the next published Quarterly Treasury Bulletin includes the new issuance or reopening will this amount be adjusted to reflect the amount outstanding net of holds by the U.S. Treasury.

## BACKGROUND ON THE JPMORGAN CASH INDEX USD 3 MONTH

We have derived all information contained in this underlying supplement regarding the JPMorgan Cash Index USD 3 Month (“**JPMorgan Cash Index**”), including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information and information supplied by J.P. Morgan Securities LLC (“**JPMS**”). This information reflects the policies of, and is subject to change by, JPMS. The JPMorgan Cash Index was developed by JPMS and is calculated, maintained and published by JPMS. JPMS has no obligation to continue to publish, and may discontinue the publication of, the JPMorgan Cash Index.

The JPMorgan Cash Index is reported by Bloomberg L.P. under the ticker symbol “JPCAUS3M.”

The JPMorgan Cash Index measures the total return performance of constant maturity euro-currency deposits from rolling over a euro-currency deposit every business day. The JPMorgan Cash Index is calculated daily for three-month deposits for the United States. The JPMorgan Cash Index has been constructed from December 31, 1985 using daily data. From September 1, 1990 forward, the JPMorgan Cash Index has used quotes for the LIBOR rates for the United States from the British Bankers Association (see Reuters page LIBOR01). To calculate 3-month LIBOR, the BBA collects U.S. Dollar offered rates for deposits in the London interbank market with maturities of 3 months at 11:00 a.m., London time on each London business day from 16 designated banks. The top quartile and bottom quartile market quotes are disregarded and the middle two quartiles are averaged: the resulting “spot fixing” is the BBA 3-month LIBOR rate for that business day.

The returns to euro-currency deposits are highly correlated with the returns to domestic money market instruments because the two markets are well arbitrated. Therefore, the euro-currency indices are representative of the domestic money markets returns.

JPMS only includes deposits with standard maturities because other quotes are typically a linear interpolation between two standard maturity deposits. Therefore, adding deposits with non-standard maturities offers no additional information.

The JPMorgan Cash Index has a relatively constant maturity. The JPMorgan Cash Index assumes JPMS rolls over the corresponding deposit every business day. The maturity or duration of the JPMorgan Cash Index is always equal to the term of the deposit; the actual number of days to maturity can vary due to settlement rules (*e.g.*, a one-month index can vary from 28 to 33 days). The more common approach is to buy, for example, a three-month deposit, hold it for one month, and then roll it over into the new three-month deposit. The maturity of this index would be three months at the beginning of the month and two months at the end. It is more useful to attribute daily cash returns to particular maturities rather than confuse the measurement of returns by varying the maturity.



# ANNEX A

## **The J.P. Morgan ETF Efficiente DS Index Series Index Rules**



July 26, 2013

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## PART A

### THE J.P. MORGAN ETF EFFICIENTE DS INDEX SERIES INDEX RULES

#### 1. Introduction

This document comprises the rules of the J.P. Morgan ETF Efficiente DS Index Series, a family of notional rules-based proprietary indices. The rules are divided into Part A (which includes Schedule 1 and applies to every index comprised in the J.P. Morgan ETF Efficiente DS Index Series) and Part B.

Table A in Schedule 1 sets out each index in the J.P. Morgan ETF Efficiente DS Index Series (each, an “**ETF Efficiente Index**” and together the “**ETF Efficiente Indices**”). The relevant parameters for each ETF Efficiente Index (Name, Start Date, Target Volatility, Fee, Maximum Exposure, Monthly Re-weighting Selection Date, Monthly Re-weighting Date, Index Level on the Start Date, and Weighting Constraints) are provided in the applicable module in Part B for such ETF Efficiente Index.

The Rules may be supplemented, amended or restated from time to time at the discretion of J.P. Morgan Securities plc (“**JPMS plc**”) in its capacity as Index Calculation Agent. The Rules will be re-published no later than one calendar month following supplementation or amendment to reflect any such changes. Copies of the current Rules are available from JPMS plc upon request.

This document is published by JPMS plc in its capacity as Index Calculation Agent.

**ALL PERSONS READING THIS DOCUMENT SHOULD REFER TO THE RISK FACTORS AND NOTICES, DISCLAIMERS AND CONFLICTS OF INTEREST SECTIONS BELOW AND CONSIDER THE INFORMATION CONTAINED IN THIS DOCUMENT IN LIGHT OF SUCH RISK FACTORS, NOTICES, DISCLAIMERS AND CONFLICTS OF INTEREST.**

**NOTHING IN THESE RULES CONSTITUTES AN OFFER TO BUY OR SELL ANY SECURITIES, PARTICIPATE IN ANY TRANSACTION OR ADOPT ANY INVESTMENT STRATEGY OR LEGAL, TAX, REGULATORY OR ACCOUNTING ADVICE.**

#### 2. General Notes on the ETF Efficiente Indices

Each ETF Efficiente Index is a notional dynamic basket that tracks the excess return of a basket consisting of twelve exchange-traded funds (each, an “**ETF Constituent**”), with dividends reinvested, and the JPMorgan Cash Index 3 Month (the “**Cash Constituent**”), over the return of the Cash Constituent, while targeting a specific volatility on a daily basis. The ETF Constituents and the Cash Constituent will be referred to together as the “**Basket Constituents**”; *provided that* the Basket Constituents are subject to the provisions of Section 10 (*Extraordinary Events*) below. The ETF Constituents represent a diverse range of asset classes and geographic regions.

The exposure of each ETF Efficiente Index to the Basket Constituents is determined by means of a two-step process. The first step is a monthly selection process that selects every month a Monthly Reference Portfolio composed of the Basket Constituents. Unless a Market Disruption Event on a Monthly Re-weighting Date has occurred or is continuing (as provided for in Section 9.2 (*Market Disruption on a Monthly Re-weighting Date*)), the exposure to the relevant Monthly Reference Portfolio will be adjusted on a monthly basis on each Monthly Re-weighting Date specified in the applicable module in Part B for such ETF Efficiente Index (such day, a “**Monthly Re-weighting Date**”) (as described in Section 7 (*ETF Efficiente Index Monthly Rebalancing*) below).

The weight assigned to each Basket Constituent in the Monthly Reference Portfolio with respect to a Monthly Re-weighting Date will be determined on the Monthly Re-weighting Selection Date specified in the applicable module in Part B for such ETF Efficiente Index (such day the “**Monthly Re-weighting Selection Date**”) immediately preceding such Monthly Re-weighting Date in accordance with the methodology in Section 6 (*Determining the Monthly Basket Constituent Weights for the Basket Constituents in the Monthly Reference Portfolio*) by reference to the returns and volatilities of multiple hypothetical portfolios composed of the Basket Constituents measured over the immediately preceding Performance Observation Period.

The re-weighting methodology (as described in more detail below) selects the Monthly Reference Portfolio by seeking to identify a weight for each of the Basket Constituents that would have resulted in the hypothetical

portfolio with the highest return over the relevant Performance Observation Period, subject to an annualized volatility over the same period equal to or less than a specified volatility (the “**Target Volatility**”). The Target Volatility for each ETF Efficient Index is specified in the applicable module in Part B.

In the second step, during the course of the month, each ETF Efficient Index targets its Target Volatility on a daily basis by dynamically adjusting its Exposure (as defined and more fully described in Section 8.4 (*Exposure Calculation*)) to the Monthly Reference Portfolio on a daily basis, pursuant to these Rules, based on the historical volatility of the Monthly Reference Portfolio (the Underlying Portfolio Volatility, as defined in and as more fully described in Section 8.3 (*Determining the Underlying Portfolio Volatility*)).

The Underlying Portfolio Volatility will be determined as of each Trading Day pursuant to Section 8.3 (*Determining the Underlying Portfolio Volatility*) by reference to a daily rolling Volatility Measurement Period. It should be noted that, as each Basket Constituent changes in value after the Effective Monthly Re-weighting Date, the effective weight of each Basket Constituent in the relevant Monthly Reference Portfolio will change; however, for the purpose of calculating the Underlying Portfolio Volatility over the Volatility Measurement Period, the Monthly Basket Constituent Weights of the Basket Constituents in each Monthly Reference Portfolio will not change from those determined on the relevant Monthly Re-weighting Selection Date.

The Exposure of an ETF Efficient Index on any Trading Day to the relevant Monthly Reference Portfolio is determined in the second step by dividing the Target Volatility by the Underlying Portfolio Volatility for the relevant Volatility Measurement Period, subject to a minimum exposure of zero and a maximum exposure equal to the Maximum Exposure. As the Underlying Portfolio Volatility increases, the Exposure to the Monthly Reference Portfolio decreases; as the Underlying Portfolio Volatility decreases, the Exposure to the Monthly Reference Portfolio increases. If the Maximum Exposure for an ETF Efficient Index is greater than 1.0, the ETF Efficient Index may employ leverage, which will occur when the Underlying Portfolio Volatility is lower than the Target Volatility.

**No assurance can be given that the investment strategy used to construct any ETF Efficient Index will be successful or that any ETF Efficient Index will outperform any alternative basket or strategy that might be constructed from the Basket Constituents. Furthermore, no assurance can be given that any ETF Efficient Index will achieve its Target Volatility. The actual realized volatility of each ETF Efficient Index may be greater or less than its Target Volatility.**

Subject to the occurrence of a Market Disruption Event, the level of each ETF Efficient Index (the “**Index Level**”) will be calculated by the Index Calculation Agent on each Trading Day and published to an accuracy of two decimal places. The Index Level is calculated in USD in accordance with the methodology set out in Section 8 (*ETF Efficient Index Level*) below.

**Each ETF Efficient Index is described as a notional basket of assets because there is no actual portfolio of assets to which any person is entitled or in which any person has any ownership interest. Each ETF Efficient Index merely references certain assets, the performance of which will be used as a reference point for calculating the Index Level.**

### **3. Index Calculation Agent**

JPMS plc or any affiliate or subsidiary designated by it will act as calculation agent (the “**Index Calculation Agent**”) for each ETF Efficient Index. The Index Calculation Agent’s determinations in respect of each ETF Efficient Index and interpretations of these Rules are final. Further information is contained in the statement of Responsibility set out in Section 12 (*Responsibility*) below.

### **4. The Basket Constituents**

Each ETF Efficient Index is a notional dynamic basket that tracks the excess return of thirteen Basket Constituents, over the return of the Cash Constituent. Each Basket Constituent is set out in Table 1 below. Table 1 also contains the Bloomberg ticker for each Basket Constituent for ease of identification, and the primary exchange and Related Exchange for each ETF Constituent.

Table 1				
<i>i</i>	Basket Constituent Name	Bloomberg Ticker	Primary Exchange for ETF	Related Exchange
1	SPDR <sup>®</sup> S&P 500 <sup>®</sup> ETF Trust	SPY	NYSE Arca	All Exchanges
2	iShares <sup>®</sup> Russell 2000 Index Fund	IWM	NYSE Arca	All Exchanges
3	iShares <sup>®</sup> MSCI EAFE Index Fund	EFA	NYSE Arca	All Exchanges
4	iShares <sup>®</sup> Barclays 20+ Year Treasury Bond Fund	TLT	NYSE Arca	All Exchanges
5	iShares <sup>®</sup> iBoxx \$ Investment Grade Corporate Bond Fund	LQD	NYSE Arca	All Exchanges
6	iShares <sup>®</sup> iBoxx \$ High Yield Corporate Bond Fund	HYG	NYSE Arca	All Exchanges
7	iShares <sup>®</sup> MSCI Emerging Markets Index Fund	EEM	NYSE Arca	All Exchanges
8	iShares <sup>®</sup> JPMorgan USD Emerging Markets Bond Fund	EMB	NYSE Arca	All Exchanges
9	iShares <sup>®</sup> Dow Jones Real Estate Index Fund	IYR	NYSE Arca	All Exchanges
10	iShares <sup>®</sup> S&P GSCI <sup>™</sup> Commodity-Indexed Trust	GSG	NYSE Arca	All Exchanges
11	SPDR <sup>®</sup> Gold Trust	GLD	NYSE Arca	All Exchanges
12	iShares <sup>®</sup> Barclays TIPS Bond Fund	TIP	NYSE Arca	All Exchanges
13	JPMorgan Cash Index USD 3 Month	JPCAUS3M	N/A	N/A

## 5. Initial Composition of the ETF Efficient Indexes

On the applicable Start Date for the relevant ETF Efficient Index, such ETF Efficient Index will be composed of notional holdings in the Monthly Reference Portfolio determined as of the Monthly Re-weighting Selection Date immediately preceding the Start Date (the “**Starting Selection Date**”). References in these Rules to (i) the “Monthly Re-weighting Dates” shall be deemed to include references to the Monthly Re-weighting Date with respect to the Monthly Reference Portfolio determined as of the Starting Selection Date (the “**Initial Re-weighting Date**”) and (ii) the “Monthly Re-weighting Selection Date” shall be deemed to include references to the Starting Selection Date. The composition of each ETF Efficient Index will be adjusted in accordance with the methodology described in these Rules.

The Index Level on the Start Date for each ETF Efficient Index is provided in the applicable module for that ETF Efficient Index in Part B. The Index Level for each ETF Efficient Index was USD 100 on December 1, 1999 (the “**Base Date**”).

## 6. Determining the Monthly Basket Constituent Weights for the Basket Constituents in the Monthly Reference Portfolio

On the Starting Selection Date and thereafter on a monthly basis on each subsequent Monthly Re-weighting Selection Date, the Index Calculation Agent will determine the weight (the “**Monthly Basket Constituent Weight**”) to be assigned to each Basket Constituent, whether zero or a positive number, for the relevant Monthly Reference Portfolio determined as of such Monthly Re-weighting Selection Date in accordance with the methodology described in this Section 6.

The actual weight of each of the Basket Constituents within a Monthly Reference Portfolio determined on the relevant Monthly Re-weighting Selection Date may fluctuate after the relevant Monthly Re-weighting Date due to movements in the levels of the Basket Constituents.

#### 6.1 Identifying the Performance Observation Periods

On each Monthly Re-weighting Selection Date k, the Index Calculation Agent will identify the applicable Performance Observation Period k (being the period of 126 Weekdays prior to and including the Monthly Re-weighting Selection Date k) (the “**Performance Observation Period**”).

#### 6.2 Identifying the Unique Portfolio for Each Performance Observation Period

With respect to the applicable Performance Observation Period identified by the Index Calculation Agent with respect to a Monthly Re-weighting Selection Date, the Index Calculation Agent will:

- (a) Calculate the Closing TR Level of each ETF Constituent and obtain the Closing Level of each Basket Constituent that is an index, including the Cash Constituent, for each Weekday during the relevant Performance Observation Period. If any such Weekday is not a Dealing Day with respect to a Basket Constituent or if the Index Calculation Agent cannot obtain relevant reliable information from third party sources, the Closing TR Level or Closing Level, as the case may be, for that Basket Constituent in respect of such Weekday shall be deemed to be the Closing TR Level or the Closing Level, as the case may be, for that Basket Constituent as of the immediately preceding Dealing Day for that Basket Constituent for which the Index Calculation Agent can obtain relevant reliable information from third party sources.

Closing TR Level means, subject to the provisions of Section 9 (*Market Disruption Events*), with respect to an ETF Constituent and a Dealing Day t, the Closing Level of the ETF Constituent with dividends re-invested, which will be determined as follows:

$$\text{ClosingTRLevel}_t = \text{ClosingTRLevel}_{t-1} \times \left( \frac{\text{ClosingLevel}_t + d_t}{\text{ClosingLevel}_{t-1}} \right)$$

where:

$\text{ClosingTRLevel}_{t-1}$  means the Closing TR Level of the relevant ETF Constituent as of the Dealing Day immediately preceding Dealing Day t;

$\text{ClosingLevel}_t$  means the Closing Level of the relevant ETF Constituent as of Dealing Day t;

$\text{ClosingLevel}_{t-1}$  means the Closing Level of the relevant ETF Constituent as of the Dealing Day immediately preceding Dealing Day t;

$d_t$  means, in respect of an ETF Constituent and a Dealing Day t,

- (a) if such Dealing Day t is an Ex-Dividend Date for the relevant ETF Constituent, the Gross Dividend Amount in respect of such ETF Constituent for such Ex-Dividend Date; or
- (b) otherwise, 0.

For purposes of determining the Closing TR Level for any such ETF Constituent for any Dealing Day, if the immediately preceding Dealing Day (the “**Prior Dealing Day**”) for such ETF Constituent was a Disrupted Day then, in the formula for determining the Closing TR Level for such Dealing Day, (i) the Closing TR Level for that Prior Dealing Day shall be replaced with the Closing TR Level for the Dealing Day immediately preceding such Prior Dealing Day that was not a Disrupted Day (the “**Prior Non-Disrupted Dealing Day**”) for such ETF Constituent, (ii) the Closing Level for that Prior Dealing Day shall be replaced with the Closing Level for such Prior Non-Disrupted Dealing Day for such ETF Constituent, and (iii) the Gross Dividend Amount of such ETF Constituent in respect of such Dealing Day shall be replaced with the sum of each of the Gross Dividend Amounts for the ETF Constituent in respect of each day from but excluding the Prior Non-Disrupted Dealing Day to and including such Dealing Day.

- (b) Identify all possible Eligible Portfolios in accordance with Section 6.4 (*Eligible Portfolios & Weighting Constraints*) below.

- (c) Calculate the Performance of each such Eligible Portfolio over Performance Observation Period k in accordance with the following formula:

$$P_k^j = \left( \sum_{i=1}^{13} \frac{S_k^i}{S_{k,0}^i} \times \lambda_j^i \right) - 1$$

where:

$P_k^j$  means the Performance of Eligible Portfolio j as of Monthly Re-weighting Selection Date k;

$S_k^i$  means (i) the Closing TR Level of Basket Constituent i as of Monthly Re-weighting Selection Date k if such Basket Constituent is an ETF Constituent or (ii) the Closing Level of Basket Constituent i as of Monthly Re-weighting Selection Date k if such Basket Constituent is an index;

$S_{k,0}^i$  means (i) the Closing TR Level of Basket Constituent i as of the first Weekday of Performance Observation Period k if such Basket Constituent is an ETF Constituent or (ii) the Closing Level of Basket Constituent i as of the first Weekday of Performance Observation Period k if such Basket Constituent is an index ;

$\lambda_j^i$  means the weighting of Basket Constituent i within Eligible Portfolio j.

- (d) Calculate the Realized Volatility of each such Eligible Portfolio over Performance Observation Period k in accordance with the following formula:

$$\sigma_k^j = \sqrt{\frac{L \times \sum_{n=1}^L (R_{k,n}^j)^2 - \left( \sum_{n=1}^L (R_{k,n}^j) \right)^2}{L^2}} \times 260$$

where:

$\sigma_k^j$  means the Realized Volatility of Eligible Portfolio j as of Monthly Re-weighting Selection Date k;

$L$  means 125, the number of Weekday returns during Performance Observation Period k;

$R_{k,n}^j$  means the weighted sum of the natural logarithms of daily returns of each Basket Constituent from Weekday n-1 to Weekday n in Performance Observation Period k, calculated in accordance with the following formula:

$$R_{k,n}^j = \sum_{i=1}^{13} \lambda_j^i \times \ln \left( \frac{S_{k,n}^i}{S_{k,n-1}^i} \right)$$

where:

$S_{k,n}^i$  means (i) the Closing TR Level of Basket Constituent i as of Weekday n in Performance Observation Period k if such Basket Constituent is an ETF Constituent or (ii) the Closing Level of Basket Constituent i as of Weekday n in Performance Observation Period k if such Basket Constituent is an index;

$S_{k,n-1}^i$  means (i) the Closing TR Level of Basket Constituent i as of Weekday n-1 in Performance Observation Period k if such Basket Constituent is an ETF Constituent or (ii) the Closing Level of Basket Constituent i as of Weekday n-1 in Performance Observation Period k if such Basket Constituent is an index;

$\lambda_j^i$  means the weighting of Basket Constituent i within Eligible Portfolio j.

- (e) Select the Eligible Portfolio with the highest Performance over the relevant Performance Observation Period that has an annualized Realized Volatility equal to or less than the Target Volatility. The Eligible Portfolio that satisfies these criteria is known as the “**Unique Portfolio**” for that Performance Observation Period.
  - (f) If none of the Eligible Portfolios has an annualized Realized Volatility equal to or less than the Target Volatility, the Index Calculation Agent shall increase the Target Volatility by one percent (1%) and repeat step 6.2(e) above until a Unique Portfolio is selected. These steps, including an increase to the Target Volatility, may be repeated further until a Unique Portfolio is selected.
- 6.3 *Determining the Monthly Basket Constituent Weight to be assigned to each Basket Constituent with respect to the relevant Monthly Re-weighting Date*

The Monthly Basket Constituent Weight to be assigned to each Basket Constituent within the Monthly Reference Portfolio with respect to any Monthly Re-weighting Date will be determined by the Index Calculation Agent as the weight assigned to such Basket Constituent within the Unique Portfolio identified with respect to the immediately preceding Monthly Re-weighting Selection Date in accordance with Section 6.2 above.

The actual weight of each of the Basket Constituents within a Monthly Reference Portfolio determined on the relevant Monthly Re-weighting Selection Date may fluctuate after the relevant Monthly Re-weighting Date due to movements in the levels of the Basket Constituents.

#### 6.4 *Eligible Portfolios & Weighting Constraints*

For each ETF Efficient Index, an “**Eligible Portfolio**” is any hypothetical portfolio of Basket Constituents that is composed of all thirteen (13) of the Basket Constituents and that satisfies the “**Weighting Constraints**” detailed in the applicable module in Part B for such ETF Efficient Index.

### 7. **ETF Efficient Index Monthly Rebalancing**

Unless a Market Disruption Event has occurred and is continuing, on a monthly basis, an ETF Efficient Index will be rebalanced on the relevant Monthly Re-weighting Date.

### 8. **ETF Efficient Index Level**

#### 8.1 *The Monthly Reference Portfolios*

Each Monthly Re-weighting Selection Date  $k$  will be associated with a reference portfolio composed of the Basket Constituents with weights set equal to the Monthly Basket Constituent Weights determined as of such Monthly Re-weighting Selection Date  $k$  (the “**Monthly Reference Portfolio**”). On each Effective Monthly Re-weighting Date  $k$ , the relevant ETF Efficient Index is rebalanced from the Monthly Reference Portfolio associated with the previous Monthly Re-weighting Selection Date (*i.e.*, Monthly Re-weighting Selection Date  $k-1$ ) and into the Monthly Reference Portfolio associated with Monthly Re-weighting Selection Date  $k$ .

The actual weight of each of the Basket Constituents within a Monthly Reference Portfolio determined on the relevant Monthly Re-weighting Selection Date may fluctuate after the Monthly Re-weighting Date due to movements in the levels of the Basket Constituents.

#### 8.2 *The Levels of the Monthly Reference Portfolios*

On an Effective Monthly Re-weighting Date  $k$ , the level of the Monthly Reference Portfolio determined as of Monthly Re-weighting Selection Date  $k$  with respect to such Effective Monthly Re-weighting Date  $k$  is equal to 1.0. On each Index Business Day  $t$  from but excluding such Effective Monthly Re-weighting Date  $k$  to and including Effective Monthly Re-weighting Date  $k+1$ , the level of the Monthly Reference Portfolio determined as of Monthly Re-weighting Selection Date  $k$  is determined as follows:

$$RP_{k,t} = RP_k \times \left[ 100\% + \left( \sum_{i=1}^{13} \frac{S_t^i}{S_k^i} \times W_k^i \right) - \frac{S_t^{13}}{S_k^{13}} \right]$$

where:

t means an Index Business Day from but excluding Effective Monthly Re-weighting Date k to and including Effective Monthly Re-weighting Date k+1;

RP<sub>k,t</sub> means the level of the Monthly Reference Portfolio associated with Monthly Re-weighting Selection Date k as of Index Business Day t;

RP<sub>k</sub> means the level of the Monthly Reference Portfolio associated with Monthly Re-weighting Selection Date k as of Effective Monthly Re-weighting Date k, which equals 1.0;

S<sub>t</sub><sup>i</sup> means, for i=1 through 12, the Closing TR Level of Basket Constituent i as of Index Business Day t if such Basket Constituent is an ETF Constituent or the Closing Level of Basket Constituent i as of Index Business Day t if such Basket Constituent is an index;

S<sub>k</sub><sup>i</sup> means, for i=1 through 12, the Closing TR Level of Basket Constituent i as of Effective Monthly Re-weighting Date k if such Basket Constituent is an ETF Constituent or the Closing Level of Basket Constituent i as of Effective Monthly Re-weighting Date k if such Basket Constituent is an index;

W<sub>k</sub><sup>i</sup> means the Monthly Basket Constituent Weight set for Basket Constituent i in the Monthly Reference Portfolio associated with Monthly Re-weighting Selection Date k;

S<sub>t</sub><sup>13</sup> means the Closing Level of the Cash Constituent as of Index Business Day t; and

S<sub>k</sub><sup>13</sup> means the Closing Level of the Cash Constituent as of Effective Monthly Re-weighting Date k;

where i for each Basket Constituent is the number (1 through 13) assigned to that Basket Constituent in Table 1 in Section 4 (*The Basket Constituents*) above.

### 8.3 Determining the Underlying Portfolio Volatility

Each ETF Efficient Index targets its Target Volatility on a daily basis by dynamically adjusting its Exposure to the relevant Monthly Reference Portfolio, pursuant to these Rules, based on the historical volatility (the “**Underlying Portfolio Volatility**”) of the relevant Monthly Reference Portfolio underlying such ETF Efficient Index. Specifically, the Underlying Portfolio Volatility on any Trading Day will be the volatility of a portfolio whose weights are set equal to the Monthly Basket Constituent Weights for the Monthly Reference Portfolio associated with the most recent Effective Monthly Re-weighting Date. For the avoidance of doubt if a Trading Day is an Effective Monthly Re-weighting Date, the Underlying Portfolio Volatility on such Trading Day will be the volatility of a portfolio whose weights are set equal to the Monthly Basket Constituent Weights for the Monthly Reference Portfolio associated with such Effective Monthly Re-weighting Date.

#### (a) Identifying the Volatility Measurement Period

In respect of each Trading Day t, the Index Calculation Agent will identify the applicable Volatility Measurement Period for such Trading Day t as the period of 21 Trading Days prior to and ending with the Trading Day that is 2 Trading Days immediately preceding such Trading Day t (the “**Volatility Measurement Period**”). Accordingly, the first Trading Day of each Volatility Measurement Period in respect of a Trading Day t (the “**Volatility Measurement Start Date**”) is the Trading Day that is 22 Trading Days immediately preceding such Trading Day t. The last Trading Day of each Volatility Measurement Period in respect of a Trading Day t is the Trading Day that is 2 Trading Days immediately preceding such Trading Day t. For the Volatility Measurement Period in respect of a Trading Day, the Index Calculation Agent will determine for each Basket Constituent (including any Basket Constituent whose Monthly Basket Constituent Weight in the Monthly Reference Portfolio is zero) (i) the Closing TR Level for each Trading Day in the Volatility Measurement Period for each ETF Constituent and (ii) the Closing Level for each Trading Day in the Volatility Measurement Period for each Basket Constituent that is an index.

If the Index Calculation Agent has made a good faith estimate (or correction thereof) pursuant to Section 9.3 (*Exposure Determination and Calculation of Index Levels in Connection with Market Disruption*) of a Closing TR Level for an ETF Constituent or a Closing Level for a Basket Constituent that is an index for a



Trading Day that falls in the Volatility Measurement Period, the Index Calculation Agent shall use such good faith estimate (or correction thereof) for purposes of this Section 8.3.

For any Trading Day in the Volatility Measurement Period, if the Index Calculation Agent cannot obtain relevant reliable information from third party sources for a Basket Constituent, for purposes of this Section 8.3, the Closing TR Level or the Closing Level, as the case may be, for that Basket Constituent in respect of such Trading Day shall be deemed to be the Closing TR Level or the Closing Level, as the case may be, for that Basket Constituent as of the immediately preceding Dealing Day for that Basket Constituent for which the Index Calculation Agent can obtain relevant reliable information from third party sources; *provided that* if the Index Calculation Agent has made a good faith estimate (or correction thereof) pursuant to Section 9.3 (*Exposure Determination and Calculation of Index Levels in Connection with Market Disruption*) of such Closing TR Level or such Closing Level, as the case may be, the Index Calculation Agent shall instead use such good faith estimate (or correction thereof) for purposes of this Section 8.3.

(b) Volatility Calculation

$Volatility_{t,t-2}$  means the Underlying Portfolio Volatility in respect of a Trading Day t, with such volatility determined as of the Trading Day that is 2 Trading Days immediately preceding Trading Day t (such prior Trading Day being Trading Day t-2).  $Volatility_{t,t-2}$  is determined in accordance with the following formula:

$$Volatility_{t,t-2} = \sqrt{\frac{L \times \sum_{n=1}^L (R_{t,n})^2 - \left( \sum_{n=1}^L (R_{t,n}) \right)^2}{L(L-1)}} \times 252$$

where:

- $L$  means 20, which is the number of daily returns in the Volatility Measurement Period in respect of Trading Day t, each being a daily return from Trading Day n-1 to Trading Day n;
- $n$  is an integer ranging from 1 to 20;
- $R_{t,n}$  means the weighted sum of the natural logarithms of the daily returns of each of the Basket Constituents in respect of Trading Day t (including any Basket Constituent whose Monthly Basket Constituent Weight in the Monthly Reference Portfolio currently underlying the applicable ETF Efficient Index is zero), from the Trading Day that is n-1 Trading Days immediately following the Volatility Measurement Start Date for the Volatility Measurement Period in respect of Trading Day t, to the Trading Day that is n Trading Days immediately following the Volatility Measurement Start Date for the Volatility Measurement Period in respect of Trading Day t, calculated in accordance with the following formula:

$$R_{t,n} = \sum_{i=1}^{13} \lambda_{t,i} \times \ln \left( \frac{S_{t,n}^i}{S_{t,n-1}^i} \right)$$

where:

$S_{t,n}^i$  means (a) for each Basket Constituent i that is an ETF, the Closing TR Level of such Basket Constituent i as of the Trading Day that is n Trading Days immediately following the Volatility Measurement Start Date for the Volatility Measurement Period in respect of Trading Day t, and (b) for each Basket Constituent i that is an index, the Closing Level of such Basket Constituent i as of the Trading Day that is n Trading Days immediately following the Volatility Measurement Start Date for the Volatility Measurement Period in respect of Trading Day t;

$S_{t,n-1}^i$  means (a) for each Basket Constituent i that is an ETF, the Closing TR Level of such Basket Constituent i as of the Trading Day that is n-1 Trading Days immediately following the Volatility Measurement Start Date for the Volatility Measurement Period in respect of Trading Day t, and (b) for each Basket Constituent i that is an index, the Closing Level of such Basket Constituent i as of the Trading Day that is n-1 Trading Days immediately following the Volatility Measurement Start Date for the Volatility Measurement Period in respect of Trading Day t;

For the avoidance of doubt, if n-1 equals 0, the Trading Day that is n-1 Trading Days immediately following the Volatility Measurement Start Date is the Volatility Measurement Start Date.

$\lambda_{t,i}$  means, for each Basket Constituent i, the Monthly Basket Constituent Weight for such Basket Constituent i in the Monthly Reference Portfolio associated with the most recent Effective Monthly Re-weighting Date.

#### 8.4 Exposure Calculation

The Exposure on the Start Date for each ETF Efficient Index is provided in the applicable module in Part B for such ETF Efficient Index.

Subject to Section 9.3 (*Exposure Determination and Calculation of Index Levels in Connection with Market Disruption*), the exposure of an ETF Efficient Index to the Monthly Reference Portfolio (the “**Exposure**”) as of any Trading Day t, which is effective as of the end of such Trading Day, will be a non-negative number equal to  $Exp_t$  that is calculated as follows:

$$Exp_t = MIN \left( Exp_{MAX}, \frac{Volatility_{Target}}{Volatility_{t,t-2}} \right)$$

where:

$t$	denotes the relevant Trading Day t;
$t - 2$	denotes the Trading Day that is 2 Trading Days immediately preceding Trading Day t;
$Exp_t$	means the exposure that the relevant ETF Efficient Index has to the Monthly Reference Portfolio as of Trading Day t, which is effective as of the end of such Trading Day;
$Volatility_{t,t-2}$	has the meaning given to such term in Section 8.3 ( <i>Determining the Underlying Portfolio Volatility</i> );
$Exp_{MAX}$	means the Maximum Exposure as specified in the applicable module in Part B for such ETF Efficient Index;
$Volatility_{Target}$	means the Target Volatility as specified in the applicable module in Part B for such ETF Efficient Index.

#### 8.5 Calculating the ETF Efficient Index Level

On the relevant Base Date, the Index Level was 100 for each ETF Efficient Index. Thereafter, subject to the provisions of Section 9.3 (*Exposure Determination and Calculation of Index Levels in Connection with Market Disruption*), the Index Level of each ETF Efficient Index will be calculated by the Index Calculation Agent for each Trading Day as follows.

On each Trading Day t from but excluding the Effective Monthly Re-weighting Date associated with Monthly Re-weighting Selection Date k to and including the Effective Monthly Re-weighting Date associated with Monthly Re-weighting Selection Date k+1, the level of the ETF Efficient Index will be calculated in accordance with the following formula:

$$Index_t = Index_{t-1} \times \left[ 1 + Exp_{t-1} \times \left( \frac{RP_{k,t}}{RP_{k,t-1}} - 1 \right) - Fee \times \frac{Days_{t-1,t}}{360} \right]$$

where:

$t$  denotes the relevant Trading Day  $t$ ;

$t-1$  denotes the Trading Day that immediately precedes Trading Day  $t$ ;

$\text{Index}_t$  means the Index Level of the applicable ETF Efficient Index as of Trading Day  $t$ ;

$\text{Index}_{t-1}$  means the Index Level of the applicable ETF Efficient Index as of Trading Day  $t-1$ ;

$\text{RP}_{k,t}$  means the level of the Monthly Reference Portfolio with respect to Monthly Re-weighting Selection Date  $k$  as of Trading Day  $t$ ;

$\text{RP}_{k,t-1}$  means the level of the Monthly Reference Portfolio with respect to Monthly Re-weighting Selection Date  $k$  as of Trading Day  $t-1$ ;

$\text{Fee}$  means the Fee specified in the applicable module in Part B for the applicable ETF Efficient Index.

$\text{Days}_{t-1,t}$  means the number of calendar days from but excluding Trading Day  $t-1$  to and including Trading Day  $t$ ;

$\text{Exp}_{t-1}$  means the exposure of an ETF Efficient Index to the relevant Monthly Reference Portfolio as of Trading Day  $t-1$ , which is effective as of the end of such Trading Day, that is determined pursuant to Section 8.4 (*Exposure Calculation*).

## 9. Market Disruption

### 9.1 Market Disruption on a Monthly Re-weighting Selection Date

If a Monthly Re-weighting Selection Date is a Disrupted Day in respect of any Basket Constituent (for these purposes, each such Basket Constituent shall be an “**Affected Basket Constituent**”), then the relevant Monthly Re-weighting Selection Date shall remain the originally scheduled Monthly Re-weighting Selection Date and the Closing TR Level or Closing Level, as the case may be, for each Affected Basket Constituent shall be deemed to be the Closing TR Level or the Closing Level, as the case may be, for such Affected Basket Constituent as of the immediately preceding day that was both (x) a Dealing Day for such Affected Basket Constituent and (y) not a Disrupted Day for such Affected Basket Constituent.

### 9.2 Market Disruption on a Monthly Re-weighting Date

If an originally scheduled Monthly Re-weighting Date is a Disrupted Day in respect of any Basket Constituent, then such Monthly Re-weighting Date (an “**Affected Monthly Re-weighting Date**”) shall be postponed to the first of the following days to occur (which day shall be a “**Postponed Monthly Re-weighting Date**”):

- (i) the first following Index Business Day that is not a Disrupted Day for any Basket Constituent; and
- (ii) the fifth Index Business Day following the date on which such Monthly Re-weighting Date was originally scheduled to occur.

### 9.3 Exposure Determination and Calculation of Index Levels in Connection with Market Disruption

For an ETF Efficient Index, (i) if a Postponed Monthly Re-weighting Date is a Disrupted Day for any Basket Constituent, then such Postponed Monthly Re-weighting Date shall be a “**Re-weighting Disruption Determination Date**” and (ii) if a Portfolio Disruption Day immediately follows five consecutive Portfolio Disruption Days, then such Portfolio Disruption Day shall be a “**Portfolio Disruption Determination Date**.” “**Final Disruption Determination Date**” means a day that is either a Re-weighting Disruption Determination Date or a Portfolio Disruption Determination Date.

On each Final Disruption Determination Date, the Index Calculation Agent will calculate its good faith estimate of the Exposure of that ETF Efficient Index (that is otherwise determined pursuant to Section 8.4 (*Exposure Calculation*)) and the Index Level as of such Final Disruption Determination Date (notwithstanding the fact that such Final Disruption Determination Date is a Disrupted Day for at least one Basket Constituent) using its good faith estimate of (i) the Closing TR Level for any ETF Constituent, if such Final Disruption Determination Date is a

Disrupted Day for such ETF Constituent, (ii) the Closing Level for any Basket Constituent that is an index, if such Final Disruption Determination Date is a Disrupted Day for such Basket Constituent and (iii) the level of any Monthly Reference Portfolio that affects the calculation of the Index Level. Any such estimated levels may be subject to correction on any of (x) the first succeeding Index Business Day that is not a Final Disruption Determination Date for such ETF Efficient Index, (y) the first succeeding Index Business Day that is not a Disrupted Day in respect of any Basket Constituent and (z) the first succeeding Index Business Day that is not a Disrupted Day for a Basket Constituent with respect to which such an estimated level was determined pursuant to this Section 9.3. Such Final Disruption Determination Date shall be a Trading Day for the purposes of these Rules, notwithstanding the fact that it is a Disrupted Day for at least one Basket Constituent.

For the avoidance of doubt, on each Re-weighting Disruption Determination Date, the Index Calculation Agent will re-weight the ETF Efficient Index on such day using its good faith estimates determined pursuant to this Section 9.3.

For purposes of determining the Closing TR Level for any ETF Constituent for any Dealing Day, if the Prior Dealing Day for such ETF Constituent was a Disrupted Day then, in the formula for determining the Closing TR Level for such Dealing Day, (i) the Closing TR Level for that Prior Dealing Day shall be replaced with the Closing TR Level on the Prior Non-Disrupted Dealing Day for such ETF Constituent, (ii) the Closing Level for that Prior Dealing Day shall be replaced with the Closing Level on such Prior Non-Disrupted Dealing Day for such ETF Constituent, and (iii) the Gross Dividend Amount of the ETF Constituent in respect of such Dealing Day shall be replaced with the sum of each of the Gross Dividend Amounts for the ETF Constituents in respect of each day from but excluding the Prior Non-Disrupted Dealing Day to and including such Dealing Day.

#### 9.4 *Definitions Related to Market Disruption*

- (a) **“Disrupted Day”** means, in respect of a Basket Constituent, a Dealing Day on which a Market Disruption Event occurs or is continuing in respect of such Basket Constituent.
- (b) **“Portfolio Disruption Day”** means, in respect of an ETF Efficient Index, an Index Business Day that (i) is not an Effective Monthly Re-weighting Date and (ii) is a Disrupted Day for any Basket Constituent that has a non-zero Monthly Basket Constituent Weight in the Monthly Reference Portfolio determined as of the Monthly Re-weighting Selection Date associated with the most recent Effective Monthly Re-weighting Date.
- (c) A **“Market Disruption Event”** occurs if the Index Calculation Agent determines in its sole discretion that on any Dealing Day there has been:
  - (i) in respect of any Basket Constituent that is an index or any Reference Index of any ETF Constituent, a failure by the relevant sponsor to calculate and publish the Closing Level for such index on such Dealing Day, or any event that, in the determination of the Index Calculation Agent, disrupts or impairs the ability of market participants generally to effect transactions in or obtain market values for any securities or components that compose the relevant index, any options on instruments related to such securities or components, or relevant futures related to such securities or components, if such disruption or impairment relates to securities or components and related options or futures on the same or additional securities or components which securities and components in the aggregate compose 20 percent or more of the level of the relevant index; or
  - (ii) in respect of a Basket Constituent that is an equity index (including, for the avoidance of doubt, an index composed of interests in REITS) or any Reference Index of any ETF Constituent that is an equity index (including, for the avoidance of doubt, an index composed of interests in REITS), an Equity Index Disruption Event; or
  - (iii) in respect of a Basket Constituent that is a commodity index, any Reference Index of any ETF Constituent that is a commodity index or any Reference Commodities of any ETF Constituent, a Commodity Disruption Event; or
  - (iv) in respect of an ETF Constituent, an ETF Disruption Event; and

the Index Calculation Agent determines in its sole discretion that the applicable event described above could materially interfere with the ability of market participants to transact in positions with respect to the relevant ETF Efficient Index, any Basket Constituent or the Reference Index of any ETF Constituent.

For the purpose of determining whether a Market Disruption Event with respect to an index and a Dealing Day exists at any time, if trading in a security or component included in the applicable index is materially suspended or materially limited at that time, then the relevant percentage contribution of that security to the level of the applicable index will be based on a comparison of (x) the portion of the level of the applicable index attributable to that security relative to (y) the overall level of the applicable index, in each case immediately before that suspension or limitation.

(d) **“Equity Index Disruption Event”** means, in each case as determined by the Index Calculation Agent in its sole discretion, subject to the provisions of Section 9.4(h):

(i) the occurrence or existence of a suspension, absence or material limitation of trading of securities then constituting 20% or more of the level of the equity index (including, for the avoidance of doubt, an index composed of interests in REITS) on the relevant primary exchanges for such securities for more than two hours of trading during, or during the last one-half hour period preceding the close of, the principal trading session on such relevant primary exchanges; or

(ii) if applicable, the occurrence or existence of a suspension, absence or material limitation of trading on the primary exchange or market for trading in futures or options contracts related to the equity index (including, for the avoidance of doubt, an index composed of interests in REITS) for more than two hours of trading during, or during the last one-half hour period preceding the close of, the principal trading session on such applicable exchange or market.

(e) **“Commodity Disruption Event”** means, in each case as determined by the Index Calculation Agent in its sole discretion:

(i) a material limitation, suspension, discontinuation or disruption of trading in one or more of the relevant Reference Commodities;

(ii) a material limitation, suspension, discontinuation or disruption of trading in one or more options or futures contracts on (x) a relevant commodity or commodities related to the relevant commodity index or (y) the relevant Reference Commodities, which results in a failure by the relevant exchange on which any such option(s) and/or futures contract(s) is/are traded to report an official settlement price for such option(s) and/or futures contract(s) on the day on which such event occurs or any succeeding day on which it continues;

(iii) a limitation, suspension or disruption of trading in one or more options or futures contracts on (x) a relevant commodity or commodities related to the relevant commodity index or (y) the relevant Reference Commodities, by reason of movements exceeding “limit up” or “limit down” levels permitted by the relevant exchange and which the Index Calculation Agent determines is material to trading volume and market conditions in such option(s) or futures contract(s) on such Dealing Day;

(iv) publication by the relevant exchange of a “limit price” as the official settlement price for any futures contract on (x) the relevant commodity or commodities related to the relevant commodity index or (y) the relevant Reference Commodities (by reason of movements exceeding “limit up” or “limit down” levels permitted by the relevant exchange);

(v) the occurrence of a Non-Publication Event;

(vi) the relevant exchange for any futures contracts on (x) the relevant commodity or commodities related to the relevant commodity index or (y) the relevant Reference Commodities is not open for trading during its regular trading session as scheduled for the relevant day; or

(vii) the relevant market for any Reference Commodity is not open for trading during its regular trading session as scheduled for the relevant day.

(f) **“Non-Publication Event”** means, the failure by the relevant exchange, index sponsor of the relevant commodity index or other price source to announce publicly or publish the following (or the information necessary for determining the following): (a) the official settlement price for any relevant futures contract on (x) the relevant commodity or commodities related to the relevant commodity index or (y) the relevant Reference Commodities; or (b) the closing level of the relevant commodity index, in either case by noon (London time) on the immediately following Dealing Day, provided, however that the occurrence of such an event shall not constitute a “Non-Publication Event” in the case of clause (b) hereof if the Index Calculation Agent determines in its sole discretion by noon (London time) on such immediately following Dealing Day that the information necessary for determining the closing level of the relevant commodity index has been announced publicly or published by the relevant exchange, index sponsor of the relevant commodity index or other price source in which case the Index Calculation Agent shall determine the closing level of such

commodity index (the closing level so determined being a “**Proxy Calculated Level**”) in good faith and in a commercially reasonable manner.

(g) “**ETF Disruption Event**” means, in each case as determined by the Index Calculation Agent in its sole discretion, subject to the provisions of Section 9.4(h):

- (i) the occurrence or existence of a suspension, absence or material limitation of trading of the shares of an ETF Constituent on the relevant primary exchange for such shares for more than two hours of trading during, or during the last one-half hour period preceding the close of, the principal trading session on such relevant primary exchange;
- (ii) a breakdown or failure in the price and trade reporting systems of the relevant primary exchange for the shares of an ETF Constituent as a result of which the reported trading prices for such shares are materially inaccurate for more than two hours of trading during, or during the last one-half hour period preceding the close of, the principal trading session on such relevant primary exchange;
- (iii) if applicable, the occurrence or existence of a suspension, absence or material limitation of trading on the primary exchange or market for trading in futures or options contracts related to the shares of an ETF Constituent or on any Related Exchange for such ETF Constituent for more than two hours of trading during, or during the last one-half hour period preceding the close of, the principal trading session on the applicable exchange or market;
- (iv) the net asset value of an ETF Constituent is not calculated or is not announced by the Basket Constituent Sponsor; or
- (v) the relevant sponsor of an ETF Constituent suspends creations or redemptions of shares of such ETF Constituent.

(h) For the purpose of determining whether an Equity Index Disruption Event or an ETF Disruption Event has occurred:

- (1) a limitation on the hours or number of days of trading will not constitute an Equity Index Disruption Event or an ETF Disruption Event if it results from an announced change in the regular business hours of the relevant primary exchange or the primary exchange or market for trading in futures or options contracts related to the relevant shares;
- (2) limitations pursuant to the rules of any relevant primary exchange similar to New York Stock Exchange Rule 80B (or any applicable rule or regulation enacted or promulgated by any other self-regulatory organization or any government agency of scope similar to New York Stock Exchange Rule 80B as determined by the Index Calculation Agent) on trading during significant market fluctuations will constitute a suspension, absence or material limitation of trading;
- (3) a suspension of trading in futures or options contracts on the applicable equity index (including, for the avoidance of doubt, an index composed of interests in REITS) or shares of an ETF Constituent by the primary exchange or market for trading in such contracts or shares by reason of (a) a price change exceeding limits set by such exchange or market, (b) an imbalance of orders relating to such contracts or shares or (c) a disparity in bid and ask quotes relating to such contracts or shares, will constitute a suspension, absence or material limitation of trading in futures or options contracts related to such equity index or the shares of such ETF Constituent; and
- (4) a suspension, absence or material limitation of trading on any relevant primary exchange or, if applicable, on the primary exchange or market on which futures or options contracts related to the applicable equity index (including, for the avoidance of doubt, an index composed of interests in REITS) or the shares of an ETF Constituent are traded will not include any time when such exchange or market is itself closed for trading under ordinary circumstances.

## 10. Extraordinary Events

### 10.1 *Extraordinary Events for each Basket Constituent*

- (i) For any Basket Constituent,

(a) if its level or net asset value is not calculated and is not announced by the Basket Constituent Sponsor for the relevant Basket Constituent, but is calculated and announced by a successor sponsor acceptable to the Index Calculation Agent, or

(b) in the case of an index, if it is replaced by a successor index using, in the determination of the Index Calculation Agent, the same or a substantially similar formula for and method of calculation as used in the calculation of that Basket Constituent, or

(c) in the case of an ETF Constituent, if it is replaced by a successor ETF whose Reference Commodities are the same as that of the replaced ETF Constituent or whose Reference Index is either the same as that of the replaced ETF Constituent or is an index using, in the determination of the Index Calculation Agent, the same or a substantially similar formula for and method of calculation as used in the calculation of the replaced ETF Constituent's Reference Index,

and, in any case, whose sponsor is acceptable to the Index Calculation Agent, then in the case of clause (a), (b) or (c) above, that Basket Constituent will thereafter be deemed to be the successor index or ETF so calculated and announced by that successor sponsor described in clause (a) above or that successor index or ETF described in clause (b) or (c) above, as the case may be, with effect from a date determined by the Index Calculation Agent who may make such adjustments to the Rules of the relevant ETF Efficient Index as it determines in good faith are appropriate to account for such change.

For the avoidance of doubt, the Index Calculation Agent shall not accept a particular successor ETF or successor index if the Index Calculation Agent determines, in its discretion, that doing so would immediately result in the occurrence of an Extraordinary Event. Upon the acceptance of a successor ETF or successor index, such successor shall take the place of the relevant Basket Constituent. For the avoidance of doubt, the prior performance of such successor shall be used in the identification of the Unique Portfolio for future Performance Observation Periods and for determining Exposure pursuant to Section 8.4 (*Exposure Calculation*).

- (ii) If an Extraordinary Event occurs in respect of a Basket Constituent, the Index Calculation Agent, acting in good faith and a commercially reasonable manner, shall select as a substitute for such Basket Constituent

(x) an exchange-traded fund or

(y) an index,

that, in either case, the Index Calculation Agent determines, in its discretion, possesses substantially similar characteristics or provides a substantially similar exposure (as considered prior to the occurrence of such Extraordinary Event, with the understanding that an exchange-traded fund can be substantially similar to an index and vice versa) as compared to the Basket Constituent that is being replaced (such substitute exchange-traded fund or index being referred to herein as a "substitute ETF" or "substitute index", respectively);

In such a case, the Index Calculation Agent shall, in good faith, make such adjustments that it determines to be appropriate to any variable, calculation methodology, valuation terms or any other rule in relation to the relevant ETF Efficient Index to account for such substitution;

*provided that* the Index Calculation Agent shall not select a substitute ETF for the Cash Constituent, but may select a substitute index for the Cash Constituent;

*provided further that*, for any Basket Constituent other than the Cash Constituent, if the Index Calculation Agent determines, in its discretion, that no such substitute ETF and no such substitute index is available, then the Index Calculation Agent will, in its discretion, (x) determine its good faith estimate of the closing price of such Basket Constituent as of a date on or prior to the occurrence of such Extraordinary Event and use such estimate of the closing price (without modification over time) in respect of such Basket Constituent in subsequent calculations of the Index Level of the relevant ETF Efficient Index until the immediately following Effective Monthly Re-weighting, (y) replace such Basket Constituent with the Cash Constituent as its substitute and (z) in good faith, make such adjustments that it determines to be appropriate to any variable, calculation methodology, valuation terms or any other rule in relation to the relevant ETF Efficient Index to account for such substitution (for the avoidance of doubt, as a result of such a replacement of any Basket Constituent with the Cash Constituent, the aggregate weight of the Cash Constituent would be allowed to exceed the Weighting

Constraints specific to the Cash Constituent, because a portion of such aggregate weight would be subject to the Weighting Constraints specific to the replaced Basket Constituent and not the Weighting Constraints specific to the Cash Constituent);

*provided further that* for the Cash Constituent, if the Index Calculation Agent determines, in its discretion, that no such substitute index is available, then the Index Calculation Agent will, in its discretion, calculate the level of the Cash Constituent using, in lieu of a published level for the Cash Constituent, the level for the Cash Constituent as of any future Index Business Day as determined by the Index Calculation Agent in accordance with the formula for and method of calculating the Cash Constituent last in effect prior to the occurrence of such Extraordinary Event, but using only the types of components that composed the Cash Constituent immediately prior to such Extraordinary Event (and in the case of components with an expiration or maturity, any components required to roll any expiring positions in accordance with the formula for and method of calculating the Cash Constituent shall be permitted).

For the avoidance of doubt, the Index Calculation Agent shall not select a particular substitute ETF or substitute index if the Index Calculation Agent determines, in its discretion, that doing so would immediately result in the occurrence of an Extraordinary Event. Upon the selection of a substitute ETF or substitute index, such substitute shall take the place of the relevant Basket Constituent. For the avoidance of doubt, the prior performance of such substitute shall be used in the identification of the Unique Portfolio for future Performance Observation Periods and for determining Exposure pursuant to Section 8.4 (*Exposure Calculation*).

**“Extraordinary Event”** in respect of a Basket Constituent means:

- (1) for any Basket Constituent that is an index (including, for the avoidance of doubt, the Cash Constituent), the Basket Constituent Sponsor makes a material change in the formula for or the method of calculating that index or in any other way materially modifies that index (other than a modification prescribed in that formula or method to maintain that index in routine circumstances);
- (2) for any ETF Constituent that has a Reference Index, the sponsor of the relevant Reference Index of the ETF makes a material change in the formula for or the method of calculating that Reference Index of the ETF or in any other way materially modifies that Reference Index of the ETF (other than a modification prescribed in that formula or method to maintain that Reference Index of the ETF in routine circumstances);
- (3) for any ETF Constituent, the Basket Constituent Sponsor replaces the Reference Commodities or replaces the Reference Index of the ETF with a successor index that does not, in the determination of the Index Calculation Agent, use the same or a substantially similar formula for and method of calculation as used in the calculation of the replaced Reference Index of the ETF;
- (4) for any ETF Constituent for which the shares of the relevant exchange-traded fund are issued by a trust (such issuer trust, the **“Trust Issuer”**), the trust agreement or any similar governing document of the Trust Issuer is terminated, or the Trust Issuer becomes, for any reason, subject to termination, liquidation, dissolution or winding-up or any other analogous proceeding;
- (5) for any Basket Constituent, the Basket Constituent Sponsor permanently cancels the Basket Constituent, and no successor exists, or the Basket Constituent’s level or net asset value is not calculated and is not announced by the Basket Constituent Sponsor for the relevant Basket Constituent, and is not calculated and announced by a successor sponsor acceptable to the Index Calculation Agent;
- (6) in respect of any Basket Constituent that is an index, a failure by the relevant sponsor to calculate and publish the Closing Level for such index for 5 consecutive Dealing Days;
- (7) an ETF Constituent is de-listed from the relevant primary exchange for such ETF Constituent, liquidated, or otherwise terminated;
- (8) a Lock-In Event occurs in respect of an ETF Constituent;
- (9) in respect of a Basket Constituent, at any time, the licence granted (if required) by a non-affiliate of the Index Calculation Agent to the Index Calculation Agent (or its affiliates) to use such Basket Constituent for the purposes of the relevant ETF Efficient Index terminates, or the Index Calculation Agent’s rights to use the Basket Constituent for the purpose of the relevant ETF Efficient Index is otherwise disputed by a non-affiliate of the Index Calculation Agent, impaired or ceases (for any reason); or
- (10) the occurrence or continuation of a Change in Law.

A **“Lock-In Event”** occurs when one or more of the following events occurs or continues, and the Index Calculation Agent determines in its sole discretion that such event or combination of events is material



(although, for the avoidance of doubt, the Index Calculation Agent has no obligation to monitor actively whether or not any of the following events has occurred):

- (a) there is an amendment, variation or modification to the offering documents of any ETF Constituent, that, in the reasonable determination of the Index Calculation Agent, would materially adversely affect the ability of market participants to trade in shares of the ETF Constituent;
- (b) the Average Daily Trading Volume of any ETF Constituent other than those specified in clause (c) of this definition of Lock-In Event declines or remains below \$50 million;
- (c) the Average Daily Trading Volume of any ETF Constituent numbered 8 (EMB) or 10 (GSG) in Table 1 (in Section 4 (*The Basket Constituents*)) or any successor to or substitute for any of those ETF Constituents declines or remains below \$7.5 million;
- (d) the Market Capitalization of any ETF Constituent declines or remains below \$500 million;
- (e) the net asset value of any ETF Constituent is not calculated or is not announced by the relevant Basket Constituent Sponsor for 5 consecutive Dealing Days for such ETF Constituent;
- (f) the relevant sponsor of the Reference Index of any ETF Constituent fails to calculate and publish the Closing Level for such index for 5 consecutive Dealing Days; or
- (g) the relevant sponsor of any ETF Constituent suspends creations or redemptions of shares of such ETF Constituent for 5 consecutive Dealing Days or announces a suspension of unlimited duration of such creations or redemptions.

A “**Change in Law**” occurs when, due to either:

- (a) the adoption of, or any change in, any applicable law, regulation or rule (including, without limitation, (x) any tax law or (y) adoption or promulgation of new regulations authorized or mandated by existing statute); or
- (b) the promulgation of, or any change in, the announcement or statement of a formal or informal interpretation by any court, tribunal or regulatory authority with competent jurisdiction of any applicable law, rule, regulation or order (including, without limitation, as implemented by the U.S. Commodity Futures Trading Commission, the U.S. Securities and Exchange Commission or any exchange or trading facility), and

the Index Calculation Agent determines in good faith that (x) it is contrary to such law, rule, regulation or order for any market participants that are brokers or financial intermediaries (individually or collectively) to hold, acquire or dispose of (in whole or in part) any Basket Constituent, any transaction referencing any Basket Constituent or any component of any Basket Constituent or of any Reference Index of any ETF Constituent, or (y) holding a position in any Basket Constituent, any transaction referencing any Basket Constituent or any component of any Basket Constituent or of any Reference Index of any ETF Constituent is (or, but for the consequent disposal or termination thereof, would otherwise be) in excess of any allowable position limit(s) applicable to any market participants that are brokers or financial intermediaries (individually or collectively) under any such law, rule or regulation in relation to such Basket Constituent, transaction referencing the Basket Constituent or component of the Basket Constituent or of the Reference Index of the ETF Constituent, including in any case traded on any exchange(s) or other trading facility (including, without limitation, any relevant exchange).

## 10.2 *Anti-Dilution Adjustments*

With respect to each ETF Constituent (or the relevant successor or substitute ETF), the Index Calculation Agent will make anti-dilution adjustments to the Closing Level of such ETF Constituent only (a) if the shares of such ETF Constituent are subject to a share split or reverse share split, once such split has become effective, and (b) if such ETF Constituent is subject to (i) an issuance of additional shares of such ETF Constituent that is given ratably to all or substantially all holders of shares of such ETF Constituent or (ii) a distribution of shares of such ETF Constituent as a result of the triggering of any provision of the corporate charter of such ETF Constituent, once the dividend or distribution has become effective and the shares of such ETF Constituent are trading ex-dividend. The Index Calculation Agent will be solely responsible for the determination and calculation of any such anti-dilution adjustments and any related determinations and calculations, and its determinations and calculations with respect thereto will be conclusive in the absence of manifest error.

## **11. Corrections**

If (i) the Closing Level of any Basket Constituent as of any date which is published or otherwise made available in respect of the relevant Basket Constituent is subsequently corrected and such correction is published or otherwise made available in respect of such Basket Constituent; or (ii) the Index Calculation Agent identifies an error or omission in any of its calculations or determinations in respect of an ETF Efficiente Index, then the Index Calculation Agent may, if practicable and if the Index Calculation Agent determines in good faith that such correction, error or omission (as the case may be) is material, adjust or correct the relevant calculation or determination and/or the Index Level as of any Index Business Day to take into account such correction.

## **12. Responsibility**

The Index Calculation Agent shall act in good faith and in a commercially reasonable manner with respect to the performance of its obligations and the exercise of its discretion pursuant to these Rules.

Although these Rules are intended to be comprehensive, ambiguities may arise. In such circumstances, the Index Calculation Agent will resolve such ambiguities in a reasonable manner and, if necessary, amend these Rules to reflect such resolution.

Neither the Index Calculation Agent nor any of its affiliates or subsidiaries or any of their respective directors, officers, employees, representatives, delegates or agents (each a “**Relevant Person**”) shall have any responsibility to any person (whether as a result of negligence or otherwise) for any determinations made or anything done (or omitted to be determined or done) in respect of any ETF Efficiente Index or any use to which any person may put any ETF Efficiente Index or their Index Levels. All determinations of the Index Calculation Agent in respect of each ETF Efficiente Index shall be final, conclusive and binding and no person shall be entitled to make any claim against any of the Relevant Persons in respect thereof. Once a determination or calculation is made or action taken by the Index Calculation Agent in respect of an ETF Efficiente Index, neither the Index Calculation Agent nor any other Relevant Person shall be under any obligation to revise any determination or calculation made or action taken for any reason.

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## Definitions

Terms not otherwise defined herein, shall have the following meanings:

“Affected Basket Constituent”	has the meaning given to such term in Sections 9.1.
“Affected Monthly Re-weighting Date”	has the meaning given to such term in Section 9.2.
“Average Daily Trading Volume”	means, with respect to an ETF Constituent and an Index Business Day, the product of (a) the average volume of trading in the shares of such ETF Constituent on all exchanges over the preceding 6 month period, as reported by Bloomberg using the function ETF Ticker US HP and selecting a 6 month range or another information provider selected by the Index Calculation Agent, and (b) the Closing Level of such ETF Constituent on such Index Business Day. The Average Daily Trading Volume for each ETF Constituent on September 21, 2012 is provided in Schedule 2 to this Part A.
“Base Date”	means December 1, 1999, as specified in Section 5 ( <i>Initial Composition of the ETF Efficiente Indices</i> ).
“Basket Constituent”	has the meaning given to such term in Section 4 ( <i>The Basket Constituents</i> ), subject to the provisions of Section 10 ( <i>Extraordinary Events</i> ).
“Basket Constituent Sponsor”	means, in respect of a Basket Constituent, the sponsor or successor sponsor of such Basket Constituent.
“Business Day”	means a day (other than a Saturday or a Sunday) on which commercial banks are open for business (including dealings in foreign exchange and foreign currency deposits) in New York, New York.
“Cash Constituent”	means the JPMorgan Cash Index 3 Month or any successor or substitute determined pursuant to Section 10 ( <i>Extraordinary Events</i> ).
“Cash Constituent Sponsor”	means the sponsor or successor sponsor of the Cash Constituent.
“Change in Law”	has the meaning given to such term in Section 10 ( <i>Extraordinary Events</i> ).
“Closing Level”	means, subject to the provisions of Section 9 ( <i>Market Disruption</i> ) and Section 10 ( <i>Extraordinary Events</i> ), (a) in respect of a Basket Constituent that is an index, including the Cash Constituent, and a Dealing Day, (i) the official closing level of the applicable Basket Constituent published by the Basket Constituent Sponsor for such Dealing Day; <i>provided, however</i> that if the Index Calculation Agent determines that such official closing level reflects manifest error on the part of the relevant Basket Constituent Sponsor, the Index Calculation Agent shall determine the closing level of the applicable Basket Constituent in good faith and in a commercially reasonable manner or (ii) in such circumstances as set out in the definition of Non-Publication Event relating to the calculation of a Proxy Calculated Level, the Proxy Calculated Level, and (b) in respect of an ETF Constituent, and a Dealing Day, the official closing price of the regular trading session on such Dealing Day on the principal U.S. securities exchange registered under the Securities Exchange Act of 1934, as amended, on which such ETF Constituent is listed or admitted to trading.
“Closing TR Level”	means, in respect of an ETF Constituent and a Dealing Day, as defined in Section 6.2 ( <i>Identifying the Unique Portfolio for Each Performance Observation Period</i> ).

<b>“Commodity Disruption Event”</b>	has the meaning given to such term in Section 9.4 ( <i>Definitions Related to Market Disruption</i> ).
<b>“Dealing Day”</b>	means either: (a) in respect of any Basket Constituent that is an index, including the Cash Constituent, a day on which the Closing Level for that Basket Constituent is (or, but for the occurrence of a Market Disruption Event, would have been) scheduled to be calculated and published by the relevant Basket Constituent Sponsor; or (b) in respect of an ETF Constituent, each day on which the primary exchange in the United States for such ETF Constituent is scheduled to be open for trading for its regular trading session.
<b>“Disrupted Day”</b>	has the meaning given to such term in Section 9.4 ( <i>Definitions Related to Market Disruption</i> ).
<b>“Effective Monthly Re-weighting Date”</b>	means, (i) a scheduled Monthly Re-weighting Date that occurs as originally scheduled (and is not postponed pursuant to Section 9.2) or (ii) a Postponed Monthly Re-weighting Date.
<b>“ETF Constituent”</b>	means a Basket Constituent that is an exchange-traded fund.
<b>“ETF Disruption Event”</b>	has the meaning given to such term in Section 9.4 ( <i>Definitions Related to Market Disruption</i> ).
<b>“ETF Efficiente Index”</b>	means each index comprised in the J.P. Morgan ETF Efficiente DS Index Series.
<b>“Eligible Portfolio”</b>	has the meaning given to such term in Section 6.4 ( <i>Eligible Portfolios &amp; Weighting Constraints</i> ).
<b>“Equity Index Disruption Event”</b>	has the meaning given to such term in Section 9.4 ( <i>Definitions Related to Market Disruption</i> ).
<b>“Ex-Dividend Date”</b>	means, with respect to a dividend or other distribution for an ETF Constituent, the first trading day on which transactions in the shares of such ETF Constituent trade on the relevant primary exchange without the right to receive that dividend or other distribution.
<b>“Exposure”</b>	has the meaning given to such term in Section 8.4 ( <i>Exposure Calculation</i> ).
<b>“Extraordinary Event”</b>	has the meaning given to such term in Section 10 ( <i>Extraordinary Events</i> ).
<b>“Fee”</b>	means the Fee specified in the applicable module in Part B for the applicable ETF Efficiente Index.
<b>“Final Disruption Determination Date”</b>	has the meaning given to such term in Section 9.3 ( <i>Exposure Determination and Calculation of Index Levels in Connection with Market Disruption</i> ).
<b>“Gross Dividend Amount”</b>	means, in respect of an ETF Constituent and an Ex-Dividend Date for such ETF Constituent, 100% of the amount of any dividend or other distribution per share of the ETF Constituent that a shareholder in that ETF Constituent on that Ex-Dividend Date would no longer have the right to receive due to the occurrence of such Ex-Dividend Date, as determined by the Index Calculation Agent in its discretion as the sum of (x) the amount of any cash dividend paid or other cash distribution made and (y) the fair market value of any distribution of shares of capital stock,

	evidences of indebtedness or other assets or property of such ETF Constituent (other than share dividends or distributions referred to in Section 10.2(b) ( <i>Anti-Dilution Adjustments: Share Dividends or Distributions</i> )). If a portion of such distribution consists of property traded on the Ex-Dividend Date on a U.S. national securities exchange, the fair market value of such portion will equal the closing price of such distributed property on such Ex-Dividend Date.
<b>“Index Business Day”</b>	means a day (i) on which the New York Stock Exchange is scheduled to open for trading for its regular trading session and (ii) that is a Dealing Day for all of the Basket Constituents.
<b>“Index Calculation Agent”</b>	has the meaning given to such term in Section 3 ( <i>Index Calculation Agent</i> ).
<b>“Index Level”</b>	has the meaning given to such term in Section 2 ( <i>General Notes on the ETF Efficiente Indices</i> ).
<b>“Initial Re-weighting Date”</b>	has the meaning given to such term in Section 5 ( <i>Initial Composition of the ETF Efficiente Indices</i> ).
<b>“JPMS plc”</b>	means J.P. Morgan Securities plc
<b>“Lock-In Event”</b>	has the meaning given to such term in Section 10 ( <i>Extraordinary Events</i> ).
<b>“Market Capitalization”</b>	means, with respect to an ETF Constituent and an Index Business Day, the market capitalization of the ETF Constituent as provided by Bloomberg on the “DES” page or by another information provider selected by the Index Calculation Agent for such ETF Constituent on such Index Business Day. The Market Capitalization for each ETF Constituent on September 21, 2012 is provided in Schedule 2 to this Part A.
<b>“Market Disruption Event”</b>	has the meaning given to such term in Section 9.4 ( <i>Definitions Related to Market Disruption</i> ).
<b>“Maximum Exposure”</b>	means the Maximum Exposure as specified in the applicable module in Part B for such ETF Efficiente Index.
<b>“Monthly Basket Constituent Weights”</b>	has the meaning given to such term in Section 6 ( <i>Determining the Monthly Basket Constituent Weights for the Basket Constituents in the Monthly Reference Portfolio</i> ).
<b>“Monthly Reference Portfolio”</b>	has the meaning given to such term in Section 8.1 ( <i>The Monthly Reference Portfolios</i> ).
<b>“Monthly Re-weighting Date”</b>	has the meaning given to such term in Section 2 ( <i>General Notes on the ETF Efficiente Indices</i> ) and is subject to the provisions of Section 9.2.
<b>“Monthly Re-weighting Period”</b>	means, for a given calendar month, the period of Index Business Days from and including the first scheduled Monthly Re-weighting Date for such calendar month to and including the final Effective Monthly Re-weighting Date for such calendar month.
<b>“Monthly Re-weighting Selection Date”</b>	has the meaning given to such term in Section 2 ( <i>General Notes on the ETF Efficiente Indices</i> ).
<b>“Non-Publication Event”</b>	has the meaning given to such term in Section 9.4 ( <i>Definitions Related to Market Disruption</i> ).

<b>“Performance”</b>	means, in respect of an Eligible Portfolio and a Performance Observation Period, the performance of such Eligible Portfolio over such Performance Observation Period, as determined by the Index Calculation Agent using the algorithm(s) set out in Section 6 ( <i>Determining the Monthly Basket Constituent Weights for the Basket Constituents in the Monthly Reference Portfolio</i> ).
<b>“Performance Observation Period”</b>	has the meaning given to such term in Section 6.1 ( <i>Identifying the Performance Observation Periods</i> ).
<b>“Portfolio Disruption Day”</b>	has the meaning given to such term in Section 9.4 ( <i>Definitions Related to Market Disruption</i> ).
<b>“Portfolio Disruption Determination Date”</b>	has the meaning given to such term in Section 9.4 ( <i>Definitions Related to Market Disruption</i> ).
<b>“Postponed Monthly Re-weighting Date”</b>	has the meaning given to such term in Section 9.2 ( <i>Market Disruption on a Monthly Re-weighting Date</i> ).
<b>“Prior Dealing Day”</b>	has the meaning given to such term in Section 6.2 ( <i>Identifying the Unique Portfolio for each Performance Observation Period</i> ).
<b>“Prior Non-Disrupted Dealing Day”</b>	has the meaning given to such term in Section 6.2 ( <i>Identifying the Unique Portfolio for each Performance Observation Period</i> ).
<b>“Proxy Calculated Level”</b>	has the meaning given to such term in Section 9.4 ( <i>Definitions Related to Market Disruption</i> ).
<b>“Realized Volatility”</b>	means, in respect of an Eligible Portfolio and a Performance Observation Period, the annualized realized volatility of such Eligible Portfolio over such Performance Observation Period, as determined by the Index Calculation Agent pursuant to Section 6.2 ( <i>Identifying the Unique Portfolio for each Performance Observation Period</i> ).
<b>“Reference Commodity”</b>	means with respect to an ETF Constituent, each commodity underlying such ETF Constituent.
<b>“Reference Index”</b>	means with respect to an ETF Constituent, the index underlying such ETF Constituent.
<b>“Related Exchange”</b>	means, in respect of any ETF Constituent, each exchange or quotation system, if any, specified as such in Table 1 (above in Section 4 ( <i>The Basket Constituents</i> )), any successor to such exchange or quotation system or any substitute exchange or quotation system to which trading in futures or options contracts relating to the ETF Constituent has temporarily relocated (provided that the Index Calculation Agent has determined that there is comparable liquidity relative to the futures or options contracts relating to the ETF Constituent on such temporary substitute exchange or quotation system as on the original Related Exchange), provided, however, that where “All Exchanges” is specified as the Related Exchange, “Related Exchange” shall mean each exchange or quotation system (as determined by the Index Calculation Agent) where trading has a material effect (as determined by the Index Calculation Agent) on the overall market for futures or options contracts relating to the ETF Constituent.

<b>“Re-weighting Disruption Determination Date”</b>	has the meaning given to such term in Section 9.2 ( <i>Market Disruption on a Monthly Re-weighting Date</i> ).
<b>“Rules”</b>	means the rules of the J.P. Morgan ETF Efficiente DS Index Series as set out in this document, as the same may be supplemented, amended or restated from time to time.
<b>“Start Date”</b>	for each ETF Efficiente Index, has the meaning given to such term in the applicable module in Part B.
<b>“Starting Selection Date”</b>	has the meaning given to such term in Section 5 ( <i>Initial Composition of the ETF Efficiente Indices</i> ).
<b>“Target Volatility”</b>	has the meaning given to such term in Section 2 ( <i>General Notes on the ETF Efficiente Indices</i> ) and is specified in the applicable module in Part B, subject to adjustment in accordance with Section 6.2(f).
<b>“Trading Day”</b>	for any ETF Efficiente Index, means a day that is: <ul style="list-style-type: none"> <li>(i) an Index Business Day that (x) is not an Effective Monthly Re-weighting Date and (y) is not a Portfolio Disruption Day,</li> <li>(ii) an Index Business Day that is an Effective Monthly Re-weighting Date, or</li> <li>(iii) an Index Business Day that is a Portfolio Disruption Determination Date.</li> </ul>
<b>“Underlying Portfolio Volatility”</b>	has the meaning given to such term in Section 8.3 ( <i>Determining the Underlying Portfolio Volatility</i> ).
<b>“Unique Portfolio”</b>	has the meaning given to such term in Section 6.2 ( <i>Identifying the Unique Portfolio for Each Performance Observation Period</i> ).
<b>“Volatility Measurement Period”</b>	has the meaning given to such term in Section 8.3 ( <i>Determining the Underlying Portfolio Volatility</i> ).
<b>“Volatility Measurement Start Date”</b>	has the meaning given to such term in Section 8.3 ( <i>Determining the Underlying Portfolio Volatility</i> ).
<b>“Weekday”</b>	means any day other than a Saturday or a Sunday.
<b>“Weighting Constraints”</b>	has the meaning given to such term in Section 6.4 ( <i>Eligible Portfolios &amp; Weighting Constraints</i> ) and are detailed in the applicable module in Part B.

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**Schedule 1:****The indices composing the J.P. Morgan ETF Efficiente DS Index Series:**

Table A below of this Schedule 1 sets out the name of each index in the J.P. Morgan ETF Efficiente DS Index Series. The relevant parameters for each ETF Efficiente Index are provided in the applicable module in Part B.

Table A

<b>Name</b>
J.P. Morgan ETF Efficiente DS 5 Index

This table may be amended from time to time to add additional ETF Efficiente Indices.



**Schedule 2:****Appendix: Average Daily Trading Volume and Market Capitalization on September 21, 2012****Table A.**

	ETF Constituent Name	Bloomberg Ticker	Average Daily Trading Volume on the Start Date (\$MM*)	Market Capitalization on the Start Date (\$MM*)
1	SPDR <sup>®</sup> S&P 500 <sup>®</sup> ETF Trust	SPY	21,235	116,059
2	iShares <sup>®</sup> Russell 2000 Index Fund	IWM	4,080	17,496
3	iShares <sup>®</sup> MSCI EAFE Index Fund	EFA	1,070	37,057
4	iShares <sup>®</sup> Barclays 20+ Year Treasury Bond Fund	TLT	965	2,905
5	iShares <sup>®</sup> iBoxx \$ Investment Grade Corporate Bond Fund	LQD	235	24,350
6	iShares <sup>®</sup> iBoxx \$ High Yield Corporate Bond Fund	HYG	305	17,402
7	iShares <sup>®</sup> MSCI Emerging Markets Index Fund	EEM	2,032	37,204
8	iShares <sup>®</sup> JPMorgan USD Emerging Markets Bond Fund	EMB	84	5,730
9	iShares <sup>®</sup> Dow Jones Real Estate Index Fund	IYR	426	4,630
10	iShares <sup>®</sup> S&P GSCI <sup>™</sup> Commodity-Indexed Trust	GSG	8	1,305
11	SPDR <sup>®</sup> Gold Trust	GLD	1,732	74,753
12	iShares <sup>®</sup> Barclays TIPS Bond Fund	TIP	117	23,194

\* Numbers have been rounded to the nearest \$1 MM

Part B

PARAMETERS FOR EACH OF THE ETF EFFICIENTE INDICES IN THE J.P. MORGAN ETF  
EFFICIENTE DS INDEX SERIES

MODULE B1: J.P. MORGAN ETF EFFICIENTE DS 5 INDEX

<b>Name</b>	<b>J.P. Morgan ETF Efficiente DS 5 Index</b>
<b>Bloomberg Ticker</b>	EEJPDS5E
<b>Start Date</b>	September 25, 2012
<b>Index Level on the Start Date</b>	212.72
<b>Exposure on the Start Date</b>	138.13%
<b>Target Volatility</b>	5.00%
<b>Fee</b>	1.0% per annum
<b>Monthly Re-weighting Selection Date</b>	For any scheduled Monthly Re-weighting Date, the day that is two Index Business Days immediately preceding such scheduled Monthly Re-weighting Date.
<b>Monthly Re-weighting Dates</b>	The first Index Business Day of each calendar month
<b>Maximum Exposure</b>	150%
<b>Weighting Constraints</b>	<p>(i) The minimum possible Monthly Basket Constituent Weight assigned to any Basket Constituent is zero percent (0%);</p> <p>(ii) The Monthly Basket Constituent Weight assigned to each Basket Constituent is an integral multiple of five percent (5%);</p> <p>(iii) The maximum possible Monthly Basket Constituent Weight assigned to (x) either of the JPMorgan Cash Index USD 3 Month or the iShares® Barclays TIPS Bond Fund is fifty percent (50%), (y) the iShares® Russell 2000 Index Fund, the iShares® S&amp;P GSCI™ Commodity-Indexed Trust or the SPDR® Gold Trust is ten percent (10%), and (z) any other Basket Constituent is twenty percent (20%);</p> <p>(iv) The sum of the Monthly Basket Constituent Weights assigned to the Basket Constituents numbered 1 through 3 in Table 1 (in Section 4 (<i>The Basket Constituents</i>) of Part A) shall not be greater than fifty percent (50%). For the avoidance of doubt, the sum of the Monthly Basket Constituent Weights assigned to the SPDR® S&amp;P 500® ETF Trust, iShares® Russell 2000 Index Fund and iShares® MSCI EAFE Index Fund shall not be greater than fifty percent (50%);</p> <p>(v) The sum of the Monthly Basket Constituent Weights assigned to the Basket Constituents numbered 4 through 6 in Table 1 (in Section 4 (<i>The Basket Constituents</i>) of Part A) shall not be greater than fifty percent (50%). For the avoidance of doubt, the sum of the Monthly Basket Constituent Weights assigned to the iShares® Barclays 20+ Year Treasury Bond Fund, the iShares® iBoxx \$ Investment Grade Corporate Bond Fund, and the iShares® iBoxx \$ High Yield Corporate Bond Fund shall not be greater than fifty percent (50%);</p> <p>(vi) The sum of the Monthly Basket Constituent Weights assigned to the Basket Constituents numbered 7 and 8 in Table 1 (in Section 4 (<i>The Basket Constituents</i>) of Part A) shall not be greater than twenty-five percent (25%). For the avoidance of doubt, the sum of the Monthly Basket Constituent Weights assigned to the iShares® MSCI Emerging Markets Index Fund and the iShares® Emerging Markets Bond Fund shall not be greater than twenty-five percent (25%);</p>

	<p>(vii) The sum of the Monthly Basket Constituent Weights assigned to the Basket Constituents numbered 9 through 11 in Table 1 (in Section 4 (<i>The Basket Constituents</i>) of Part A) shall not be greater than twenty-five percent (25%). For the avoidance of doubt, the sum of the Monthly Basket Constituent Weights assigned to the iShares<sup>®</sup> Dow Jones Real Estate Index Fund, the iShares<sup>®</sup> S&amp;P GSCI<sup>™</sup> Commodity-Indexed Trust and the SPDR<sup>®</sup> Gold Trust shall not be greater than twenty-five percent (25%);</p> <p>(viii) The sum of the Monthly Basket Constituent Weights assigned to the Basket Constituents numbered 12 and 13 in Table 1 (in Section 4 (<i>The Basket Constituents</i>) of Part A) shall not be greater than fifty percent (50%). For the avoidance of doubt, the sum of the Monthly Basket Constituent Weights assigned to the iShares<sup>®</sup> Barclays TIPS Bond Fund and the JPMorgan Cash Index USD 3 Month shall not be greater than fifty percent (50%); and</p> <p>(ix) The sum of the Monthly Basket Constituent Weights assigned to all the Basket Constituents shall be equal to one hundred percent (100%).</p> <p>Consequently, as long as Weighting Constraints (iv) through (ix) above are satisfied, (a) the Monthly Basket Constituent Weight assigned to each Basket Constituent numbered 1, 3, 4, 5, 6, 7, 8 or 9 in Table 1 (in Section 4 (<i>The Basket Constituents</i>) of Part A) in an Eligible Portfolio may be any of 0%, 5%, 10%, 15%, or 20%; (b) the Monthly Basket Constituent Weight assigned to each Basket Constituent numbered 2, 10 or 11 in Table 1 (in Section 4 (<i>The Basket Constituents</i>) of Part A) may be any of 0%, 5%, or 10%; and (c) the Monthly Basket Constituent Weight assigned to either of the Basket Constituents numbered 12 or 13 in Table 1 (in Section 4 (<i>The Basket Constituents</i>) of Part A) may be any of 0%, 5%, 10%, 15%, 20%, 25%, 30%, 35%, 40%, 45% or 50%.</p>
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## **Risk Factors**

**The following list of risk factors does not purport to be a complete enumeration or explanation of all the risks associated with an ETF Efficiente Index.**

### **(a) Proprietary and Rules-Based Trading Index**

An ETF Efficiente Index follows a notional rules-based proprietary trading strategy that operates on the basis of pre-determined rules. Accordingly, potential investors in financial products that are linked to the performance of an ETF Efficiente Index should determine whether those rules as described in the Rules of that ETF Efficiente Index are appropriate in light of their individual circumstances and investment objectives.

**No assurance can be given that the investment strategy on which an ETF Efficiente Index is based will be successful or that such ETF Efficiente Index will outperform any alternative strategy that might be employed in respect of the Basket Constituents.**

### **(b) Notional Exposures**

An ETF Efficiente Index comprises notional assets and liabilities. The exposures to the Basket Constituents are purely notional and will exist solely in the records maintained by or on behalf of the Index Calculation Agent. Consequently, investors in financial products that are linked to the performance of an ETF Efficiente Index will not have any claim against any of the reference assets composing that ETF Efficiente Index. The strategy tracks the excess returns of a notional dynamic basket of assets over a cash investment and as such any allocation in the strategy to the Cash Constituent will result in this portion of the portfolio not being invested.

### **(c) Lack of Operating History**

Each ETF Efficiente Index is only recently established and therefore has no history to evaluate its likely performance. Any back-testing or similar analysis performed by any person in respect of any ETF Efficiente Index must be considered illustrative only and may be based on estimates or assumptions not used by the Index Calculation Agent when determining the Index Level of that ETF Efficiente Index.

Past performance should not be considered indicative of future performance.

### **(d) Market Risks**

The performance of an ETF Efficiente Index is dependent on the performance of the 13 Basket Constituents (which are the 12 ETF Constituents and the Cash Constituent). As a consequence, investors in financial products with returns linked to an ETF Efficiente Index should appreciate that their investment is exposed to the performance of the 13 Basket Constituents (which are the 12 ETF Constituents and the Cash Constituent).

### **(e) Momentum Investment Strategy**

Each ETF Efficiente Index is constructed using what is generally known as a momentum investment strategy. Momentum investing generally seeks to capitalize on positive trends in the price of assets. Even when the Closing Levels of the Basket Constituents are trending downwards, the ETF Efficiente Index will continue to be composed of the 13 Basket Constituents (which are the 12 ETF Constituents and the Cash Constituent). Due to the “long-only” construction of each ETF Efficiente Index in respect of all Basket Constituents, the weight of each such Basket Constituent will not be set below zero even if the

relevant Basket Constituent displayed a negative performance over the relevant Performance Observation Periods.

Furthermore, the results that may be obtained from investing in any security or other investment or transaction linked to an ETF Efficiente Index may be significantly different from the results that could theoretically be obtained from investing in the Basket Constituents. Such differences may arise for a number of reasons including, but not limited to, the fees deducted from the Index Level.

**(f) Extraordinary Events**

Following the occurrence of certain extraordinary events as described in Section 10 of the Rules, with respect to a Basket Constituent, the affected Basket Constituent may be replaced by a substitute Basket Constituent.

**(g) Index Calculation Agent Discretion**

The Rules of each ETF Efficiente Index confer on the Index Calculation Agent discretion in making certain determinations and calculations from time to time. The exercise of such discretion in the making of calculations and determinations may adversely affect the performance of an ETF Efficiente Index. Without limitation to the generality of the foregoing, the Index Calculation Agent has discretion in relation to the calculation of the Index Level in the event of a Market Disruption Event.

**(h) Potential Conflicts of Interest**

Potential conflicts of interest may exist in the structure and operation of each ETF Efficiente Index and in the course of the normal business activities of JPMorgan or any of its affiliates or subsidiaries or their respective directors, officers, employees, representatives, delegates or agents. Further information is set out in the disclaimer below.

**The foregoing list of risk factors is not intended to be exhaustive. All persons should seek such advice as they consider necessary from their professional advisors, legal, tax or otherwise, without reliance on the Index Calculation Agent or any of its affiliates or subsidiaries or any of their respective directors, officers, employees, representatives, delegates or agents.**

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These Rules have been prepared solely for informational purposes and nothing in these Rules constitutes (i) an offer to buy or sell any securities, participate in any transaction or adopt any investment linked to an ETF Efficient Index or (ii) legal, tax, regulatory, financial or accounting advice. These Rules may change at any time without prior notice.

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The Index Calculation Agent is under no obligation to continue the calculation, publication and dissemination of any ETF Efficient Index or the Index Level.

During the course of their normal business, the Index Calculation Agent or any of the other Relevant Persons may (i) enter into or promote, offer or sell transactions or investments (structured or otherwise) linked to any ETF Efficient Index and/or any of the Basket Constituents and/or (ii) act as an investment manager, investment advisor, administrator, custodian, prime broker or other service provider to any of the Basket Constituents. In addition, any Relevant Person may have, or may have had, interests or positions, or may buy, sell or otherwise trade positions in or relating to any ETF Efficient Index or any of the Basket Constituents, or may invest or engage in transactions with other persons, or on behalf of such persons relating to any of these items. Such activity may or may not have an impact on the Index Level but all persons reading this document should be aware that a conflict of interest could arise where anyone is acting in more than one capacity, and such conflict may have an impact, positive or negative, on the Index Level. Neither the Index Calculation Agent nor any other Relevant Person has any duty to consider the circumstances of any person when participating in such transactions or to conduct themselves in a manner that is favorable to anyone with exposure to any ETF Efficient Index.

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As mentioned above, each ETF Efficient Index is described as a notional basket because there is no actual portfolio of assets to which any person is entitled or in which any person has any ownership interest. Each ETF Efficient Index merely identifies certain reference assets, the performance of which will be used as a reference point for calculating the Index Level.

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The Rules shall be governed by and construed in accordance with the laws of New York.

## Index Disclaimers

### JPMorgan Indices

The JPMorgan Cash Index USD 3 Month (the “**Cash Constituent**”) is a widely used benchmark in the international capital markets and is determined, composed and calculated by J.P. Morgan Securities LLC (“**JPMS**”) without regard to the ETF Efficiente Index.

JPMS has no obligation to take into account the interests of prospective investors in instruments linked to the ETF Efficiente Index when determining, composing or calculating the Cash Constituent and can at any time and in its sole discretion, modify or change the method of calculating such index or cease its calculation, publication or dissemination. Accordingly, actions and omissions of JPMS may affect the value of the Cash Constituent and, consequently, the value of any instruments linked to the ETF Efficiente Index.

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