



**INTERNATIONAL BANK FOR RECONSTRUCTION AND  
DEVELOPMENT**

**Global Debt Issuance Facility**

**No. 4596**

**USD 12,000,000 Notes linked to UYU/USD FX and the Republica  
AFAP Dynamic Index (Third Series) due 2026**

**JPMorgan**

**The date of these Final Terms is 7 July 2016**

This document sets out the Final Terms (the “**Final Terms**”) of the International Bank for Reconstruction and Development (“**Issuer**” or “**IBRD**”) USD 12,000,000 Notes linked to UYU/USD FX and the Republica AFAP Dynamic Index (Third Series) due 2026 (the “**Notes**”) and the Schedules to the Final Terms. Prospective investors should read the Final Terms and the Schedules to the Final Terms together with the Issuer’s Prospectus dated May 28, 2008 (the “**Prospectus**”), in order to obtain a full understanding of the specific terms and conditions of the Notes.

The Final Terms of the Notes are set out on pages 28 to 43. Capitalized terms used herein are defined in the Final Terms, the Prospectus or the Schedules to the Final Terms.

**Investing in the Notes involves risks. See “Additional Risk Factors” beginning on page 7 of the Final Terms, and “Risk Factors” beginning on page 14 of the Prospectus.**

**The return on, and the value of, the Notes is based on the performance of the Index and on the exchange rate of Uruguayan Peso (“UYU”) to United States Dollars (“USD”). The performance of the Index, in turn, will be based primarily on the Index Allocation Agent’s periodic selections of the Component Underlyings comprising the Index. Subject to the limitations contained in the Index Rules, the Index Allocation Agent will have complete discretion as to the timing and frequency of Index rebalancings and as to the constituents chosen and weights allocated to those constituents. Therefore, the Notes are intended to be purchased and held by the Index Allocation Agent and by discretionary accounts managed by the Index Allocation Agent.**

**Investors should note that the Final Terms of the Notes are separate from, and do not incorporate by reference, the Index Rules or any descriptions of such Index Rules that are set out in the Schedules to the Final Terms of the Notes. The Index Rules can be modified from time to time without requiring an amendment of the Final Terms of the Notes. In the event of the occurrence of any Mandatory Amendment Event relating to the Index, the fall-back provisions set out in the Final Terms of the Notes, not the Index Rules, will determine the relevant action to be taken. The Index Rules and the descriptions of such Index Rules that are set out in the Schedules to the Final Terms of the Notes are attached for informational purposes only and should not be relied upon by the Noteholder or any prospective investor in the Notes. The Issuer has derived all information contained in the Final Terms regarding the Index from the Index Rules, and the Issuer has not participated in the preparation of, or verified, such Index Rules. Neither IBRD nor the Global Agent will have any responsibility for the contents of the Index Rules and the Index Allocation Agreement, and none of IBRD and the Global Agent shall have any responsibility or liability for the choices and allocations made by the Index Allocation Agent thereunder with respect to the Index.**

**Although the return on the Notes is based on the performance of the Index, a Note will not represent a claim against the Index Allocation Agent, the Index Sponsor or the Index Calculation Agent, and a Noteholder will not have recourse under the terms of the Notes to any asset comprising the Index. The exposure to the Index is notional and an investment in the Notes is not an investment in the Index or any asset comprising the Index from time to time.**

*In Uruguay the Notes are being placed relying on a private placement exemption (“oferta privada”) pursuant to Section 2 of Law N° 18,627. The Notes are not and will not be registered with the*

*Financial Services Superintendence of the Central Bank of Uruguay to be publicly offered in Uruguay.*

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## EXECUTIVE SUMMARY

*The following is an executive summary of the provisions of the Notes only and is qualified in its entirety by reference to the more detailed information contained elsewhere in the Final Terms and the Prospectus. Capitalized terms used in this summary have the meanings set forth elsewhere in the Final Terms or the Schedules to the Final Terms.*

<b>Issuer:</b>	International Bank for Reconstruction and Development
<b>Securities:</b>	USD 12,000,000 Notes linked to UYU/USD FX and the Republica AFAP Dynamic Index (Third Series) (the “Notes”). Issued under the Issuer’s Global Debt Issuance Facility.
<b>Credit Rating:</b>	The Notes are expected to be rated AAA by Standard and Poor’s, a division of the McGraw-Hill Companies, Inc., upon issuance.
<b>Aggregate Nominal Amount:</b>	USD 12,000,000
<b>Issue Price:</b>	100% (USD 12,000,000)
<b>Denomination:</b>	USD 1,000,000 and integral multiples of USD 10,000 in excess thereof
<b>Issue Date:</b>	12 July 2016
<b>Trade Date:</b>	28 June 2016
<b>Scheduled Maturity Date:</b>	13 July 2026
<b>Maturity Date:</b>	The Scheduled Maturity Date, subject to postponement if either the UYU Valuation Date is postponed pursuant to Term 18 of the Final Terms and/or the Final Index Determination Date is postponed pursuant to Term 19 of the Final Terms.
<b>Interest Basis:</b>	Zero Coupon
<b>Business Day:</b>	New York and Montevideo
<b>Calculation Amount:</b>	USD 10,000
<b>Participation Rate:</b>	502%
<b>Final Redemption Amount:</b>	<p>If no Mandatory Amendment Event has occurred prior to the Maturity Date, the Final Redemption Amount, calculated per Calculation Amount, payable on the Maturity Date will be an amount in USD equal to the sum of (i) the UYU Linked Principal and (ii) the Supplemental Payment Amount, if any, as set forth under Term 17 of the Final Terms (“Final Redemption Amount of each Note (Condition 6)”).</p> <p>If a Mandatory Amendment Event has occurred prior to the Maturity Date, the Final Redemption Amount, calculated per Calculation Amount, payable on the Maturity Date will be an amount in USD equal to the UYU Linked Principal.</p>
<b>UYU Linked Principal:</b>	An amount in USD equal to the UYU Amount divided by the UYU Rate.
<b>Supplemental Payment Amount:</b>	An amount in USD, calculated per Calculation Amount, equal to the greater

	of (i) the product of the Calculation Amount, the Index Return and the Participation Rate, and (ii) zero.
<b>Mandatory Amendment Event:</b>	<p>In the event of the occurrence of the events described in Term 22 of the Final Terms (“Mandatory Amendment Event”), the Calculation Agent or the Issuer, as the case may be, will give notice to investors of the occurrence of the Mandatory Amendment Event and the Issuer will be required to make a payment in respect of each Calculation Amount (which may be zero) as soon as practicable after the Mandatory Amendment Date. Such amount shall be referred to as the Early Contingent Payment Amount (as defined in Term 22 of the Final Terms (“Mandatory Amendment Event”)) and such Early Contingent Payment Amount shall be calculated as of the Accelerated Final Index Determination Date.</p> <p>For the avoidance of doubt, the occurrence of a Mandatory Amendment Event shall not affect the Issuer’s obligation to pay the UYU Linked Principal per Calculation Amount on the Maturity Date.</p> <p>A Mandatory Amendment Event includes an Index Allocation Agreement Termination or a termination of the Associated Swap Transaction (including as a result of an Additional Disruption Event), each as described in Term 22 of the Final Terms (“Mandatory Amendment Event”).</p>
<b>UYU Rate:</b>	The UYU/USD exchange rate, expressed as the amount of UYU per one USD as determined on the UYU Valuation Date.
<b>UYU Amount:</b>	UYU 369,840,000 (equivalent to USD 12,000,000 at the UYU/USD exchange rate on the Trade Date of 30.82)
<b>Index Return:</b>	<p>The performance of the Index from the Initial Index Level to the Final Index Level expressed as a percentage and calculated as follows:</p> $\frac{(\text{Final Index Level} - \text{Initial Index Level})}{\text{Initial Index Level}}$
<b>Index:</b>	<p>The Republica AFAP Dynamic Index (Third Series) (Bloomberg Ticker Symbol: JPZMUYU5&lt;Index&gt;).</p> <p>The Index will track, with certain adjustments described herein, a basket of reference components chosen and rebalanced periodically by the Index Allocation Agent. As a result, the return on the Index will be dependent in large part on the allocation selections made by the Index Allocation Agent.</p>
<b>Index Allocation Agent:</b>	Republica AFAP, S.A.
<b>Index Sponsor:</b>	J.P. Morgan Securities plc
<b>Index Calculation Agent:</b>	Solactive A.G.
<b>UYU Valuation Date:</b>	26 June 2026 (the “ <b>Scheduled UYU Valuation Date</b> ”), subject to postponement in accordance with the provision set forth under Term 18 of the Final Terms (“UYU Related Disruption Events and Fallbacks”).
<b>Initial Index Level:</b>	100 (namely, the Index’s published Closing Level on the Initial Index Determination Date).

<b>Initial Index Determination Date:</b>	28 June 2016 (the “ <b>Trade Date</b> ”)
<b>Final Index Level:</b>	<p>Index’s Closing Level on the Final Index Determination Date, as determined by the Calculation Agent.</p> <p>In the event that the Index’s Closing Level on the Final Index Determination Date is corrected by the Index Calculation Agent within three New York Business Days of the Final Index Determination Date, such corrected value will be the Final Index Level.</p>
<b>Final Index Determination Date:</b>	26 June 2026 (the “ <b>Scheduled Final Index Determination Date</b> ”), subject to postponement pursuant to the provisions set forth under Term 19 of the Final Terms (“ <b>Index Disruption Events</b> ”) and Term 21 of the Final Terms (“ <b>Additional Definitions with regard to the Index</b> ”).
<b>Index Disruption Event:</b>	If on the scheduled Final Index Determination Date, the Calculation Agent is prevented from observing the Closing Level for the Index because either the Index is not published by the Index Calculation Agent or the Index Sponsor, or such date is not a Scheduled Index Determination Date, an Index Disruption Event will be deemed to have occurred on such date and the Calculation Agent will delay calculating the Index Return as set forth in Term 19 of the Final Term (“ <b>Index Disruption Events</b> ”).
<b>Dealer:</b>	J.P. Morgan Securities plc
<b>Calculation Agent:</b>	JPMorgan Chase Bank, N.A.
<b>Clearing Systems:</b>	Euroclear/Clearstream
<b>Rank:</b>	The Notes constitute direct, unsecured obligations of the Issuer ranking <i>pari passu</i> , without any preference among themselves, with all their other obligations that are unsecured and unsubordinated. The Notes are not obligations of any government.
<b>Applicable law:</b>	English law
<b>Notes intended to be held by Index Allocation Agent or accounts managed by Index Allocation Agent; Purchaser Acknowledgement:</b>	<p>The amount of the Supplemental Payment Amount, if any, or the Early Contingent Payment Amount, if any, to be payable in respect of the Notes will be based on the performance of the Index. The performance of the Index, in turn, will be based on the periodic selections of the Index Allocation Agent made under the terms of the Index Allocation Agreement (as defined in the Final Terms). Therefore, the Notes are intended to be purchased and held by the Index Allocation Agent and by discretionary accounts managed by the Index Allocation Agent. Each purchaser and holder of the Notes from time to time, through its acquisition of the Notes, will be deemed to have acknowledged that the Notes are intended to be instruments held only by the Index Allocation Agent and by discretionary accounts managed by the Index Allocation Agent.</p> <p>Neither IBRD nor the Global Agent will have any responsibility for the contents of the Index Rules and the Index Allocation Agreement, and none of IBRD and the Global Agent shall have any responsibility or liability for the</p>

	choices and allocations made by the Index Allocation Agent thereunder.
<b>Risk factors:</b>	Noteholders should consider carefully the factors set out under “Additional Risk Factors” in this document and under “Risk Factors” in the Prospectus before reaching a decision to buy the Notes.



## ADDITIONAL RISK FACTORS

An investment in the Notes is subject to the risks described below, as well as the risks described under “Risk Factors” in the Prospectus. The Notes are a riskier investment than ordinary fixed rate notes or floating rate notes. Prospective investors should carefully consider whether the Notes are suited to their particular circumstances. Accordingly, prospective investors should consult their financial and legal advisers as to the risks entailed by an investment in the Notes and the suitability of the Notes in light of their particular circumstances.

*The performance of the Index is based on the periodic selections of the Index Allocation Agent made under the terms of the Index Allocation Agreement. Therefore, the Notes are intended to be purchased and held by the Index Allocation Agent and by discretionary accounts managed by the Index Allocation Agent. Neither IBRD nor the Global Agent will have any responsibility for the contents of the Index Allocation Agreement, and none of IBRD and the Global Agent shall have any responsibility or liability for the choices and allocations made by the Index Allocation Agent thereunder.*

Terms used in this section and not otherwise defined shall have the meanings set forth elsewhere in the Final Terms or the Schedules to the Final Terms.

The following list of risk factors does not purport to be a complete enumeration or explanation of all the risks associated with the Notes, the Index and/or the Component Underlyings of the Index.

### ***No tax gross-up on payments.***

Repayment of all or any part of the Notes and payment at maturity of any additional amount due under the terms of the Notes will be made subject to applicable withholding taxes (if any). Consequently, the Issuer will not be required to pay any further amounts in respect of the Notes in the event that any taxes are levied on such repayment or payment.

### ***Non-U.S. Holders - Additional Tax Consideration.***

For purposes of the Notes, the following discussion supersedes in its entirety the discussion in the Prospectus under "Tax Matters."

The Notes are only being offered to, and only intended to be held by, the Index Allocation Agent and accounts managed by the Index Allocation Agent, the discussion does not address the consequences of direct or indirect investment by U.S. persons and persons subject to net income taxation in the United States.

Payments on a security that are characterised as "Dividend Equivalent Payments" under section 871(m) of the U.S. Internal Revenue Code of 1986 ("section 871(m)") will be treated as U.S. source dividends subject to U.S. federal income tax withholding at a rate of 30 per cent. (or lower treaty rate). Although the Issuer does not expect any payment made on the Notes to be treated as a Dividend Equivalent Payment, there can be no assurance that the U.S. Internal Revenue Service (or any intermediary in the chain of payment) will not take a contrary position.

Under regulations relating to section 871(m) (the "871(m) regulations"), a security (an "871(m) Security") that has an expected economic return substantially similar to that of an underlying U.S. equity or index, as determined on the security's issue date based on tests set forth in the regulations,

will be subject to withholding (subject to any treaty benefits) when the rules become effective. In addition, the acquisition or disposition of a security that alone is not an 871(m) Security may cause an investor to be subject to section 871(m) if the investor has engaged, or engages, in other transactions in respect of a U.S. equity or index that relates to the security. The regulations provide certain exceptions to the withholding requirements, in particular for instruments linked to certain broad-based indices (the "broad-based index exception").

The section 871(m) regulations generally apply to Dividend Equivalent Payments on securities issued beginning in 2017. However, because the Notes are expected to be considered redeemed and re-issued for U.S. tax purposes each time there is a change in the Index (each occurrence, a "deemed reissuance"), the Notes are expected to be treated as issued on or after January 1, 2017 if there is a change in the Index occurring on or after January 1, 2017.

Withholding in respect of Dividend Equivalent Payments generally will be required when payments are made on an 871(m) Security or upon maturity, lapse, deemed reissuance or other disposition by the Non-U.S. Holder of the security. If an underlying U.S. equity is expected to pay dividends during the term of the 871(m) Security, withholding generally will still be required even if the security does not provide for payments explicitly linked to dividends. Neither the Issuer nor any other person will be required to pay any additional amounts in respect of amounts withheld under section 871(m). In addition, there may be other, ancillary consequences to holders and beneficial owners of Notes, if a payment on a Note is treated as a U.S. source dividend or a Note is treated as of a type that could produce U.S. source dividends.

***UYU Related Disruption Events and Index Disruption Events may postpone Maturity Date.***

In the event that the UYU Valuation Date or the Final Index Determination Date is postponed as set forth in the Final Terms, the Maturity Date of the Notes will be postponed by one Business Day for each Business Day that the UYU Valuation Date or Final Index Determination Date is postponed, and therefore may be postponed up to 30 calendar days (UYU related disruption) or five Business Days (Index related disruption). No interest or other payment will be payable because of any such postponement of the Maturity Date.

***Possible Mandatory Early Amendment.***

As set out in Term 22 of the Final Terms ("Mandatory Amendment Event"), in the event of the occurrence of the events described in Term 22, the Issuer will be required to make a payment (which may be zero) as soon as practicable after the Mandatory Amendment Date. In respect of each Calculation Amount, such payment will be equal to the Early Contingent Payment Amount as of the Accelerated Final Index Determination Date, and no Supplemental Payment Amount will be payable on the Maturity Date. As a result, the Noteholders will not benefit from any appreciation in the Index after the Accelerated Final Index Determination Date.

A Mandatory Amendment Event includes an Index Allocation Agreement Termination or a termination of the Associated Swap Transaction by the Swap Counterparty (including as a result of an Additional Disruption Event) or the Issuer. An Index Allocation Agreement Termination may occur due to a broad range of events beyond the control of the Issuer, including by a decision of the Index Sponsor and/or the Index Allocation Agent. A Change in Law could occur in response to the enactment of new laws or regulations, changes in laws or regulations or changes in the interpretation of laws or

regulations, (including, without limitation, laws and regulations relating to taxation and financial market and financial institution regulation, including, without limitation, the "Volcker Rule"). A Hedging Disruption could occur if the Swap Counterparty was unable, after using commercially reasonable efforts, to (i) acquire, establish, re-establish, substitute, maintain, unwind or dispose of any transactions or assets that it deems necessary to hedge the price risk of entering into and performing its obligations with respect to the Associated Swap Transaction or (ii) realise, recover or remit the proceeds of any such transactions or assets. An Increased Cost of Hedging could occur if the Swap Counterparty would incur a materially increased amount of taxes or costs in dealing in any transactions it deems necessary to hedge the price risk of performing its obligations under the Associated Swap Transaction. These could occur due to changes in legal or tax regimes.

***Payment subject to Uruguayan peso exchange risk.***

The amount of any payment of principal in USD under the Notes will be affected by the exchange rate of UYU to USD, since the amounts payable in USD in respect of the principal of the Notes will be linked to or dependent on, the change of the UYU/USD exchange rate between the Trade Date and the UYU Valuation Date. The exchange rate between UYU and USD will fluctuate during the term of the Notes. In recent years, the rate of exchange between UYU and USD has been volatile and such volatility may occur in the future and could significantly affect the returns of Noteholders. In addition, for investors whose investment currency is USD, the movement of the currency exchange rate could result in any amount due under the Notes being less than the initial USD amount paid for the Notes. As a result, a Noteholder could lose a substantial portion of its investment in the Notes, in USD terms.

***The Notes are not principal protected in USD.***

The UYU Amount used to determine the UYU Linked Principal is fixed on the Trade Date. However, the purchase price of the Notes is payable in USD and amounts received upon maturity will be payable in USD, and therefore amounts payable in USD on the Notes may be less than the amount initially invested if the value of UYU were to decline in USD terms between the Trade Date and the UYU Valuation Date.

***Payment at Maturity Depends on Interplay of the UYU/USD exchange rate and the performance of the Index.***

The payment that the Noteholder will receive at maturity will depend on both the change in the rate of exchange between UYU and USD and the Index Return. The interplay of these two factors means that the Notes are a more complex investment than an instrument linked to a single underlying factor. It is not possible to predict how the two factors to which the Note's performance payout is tied may perform. A relatively positive Index Return may be offset by a decline in the value of UYU in USD terms. UYU may appreciate relative to USD without any appreciation in the Index. There can be no assurance that either factor's performance will correlate with the other's performance.

***The Notes are subject to market risks.***

The price at which Noteholders will be able to sell their Notes prior to maturity may be at a substantial discount from the nominal amount of the Notes, even in cases where the level of the Index has increased since the Trade Date. Embedded costs, including expected profit and costs of hedging, in the original Issue Price will likely be reflected in any repurchase price of the Notes being lower than

their original Issue Price. Assuming no change in market conditions or any other relevant factors, that price will likely be lower than the original Issue Price, because the original Issue Price included the estimated cost of hedging the Swap Counterparty's obligations, which includes an estimated profit component. IBRD's Swap Counterparty is JPMorgan, an affiliate of the Dealer. Noteholders should not expect the price at which the Issuer or the Dealer is willing to repurchase the Notes to vary predictably in any particular proportion to changes in the level of the Index. Noteholders will not have any claim to any amounts that the Swap Counterparty may pay to IBRD due to changes in the level of the Index.

Prior to maturity, the value of the Notes will be affected by a number of economic and market factors that may either offset or magnify each other. It is expected that, generally, the level of the Index on any day will affect the value of the Notes more than any other single factor. Other relevant factors include: the expected volatility of the Index; the time to maturity of the Notes; the dividend or distribution rates on the exchange-traded funds held in the synthetic portfolio tracked by the Index from time to time; the interest and yield rates in the market; the economic, financial, political, regulatory or judicial events that may affect the various components represented by the Index from time to time or that may affect stock, commodity, bond and futures markets generally and in any case that may affect the Closing Level for the Index on the Final Index Determination Date; and the creditworthiness of the Issuer. The UYU/USD exchange rate as well as the illiquidity of the instruments used to hedge the Issuer into USD will also have an effect on secondary market valuations.

The Notes are intended to be a hold-to-maturity instrument. Noteholders will receive at least 100% of the nominal amount of the Notes (expressed in UYU only) if they hold their Notes to maturity. If Noteholders sell their Notes prior to maturity, however, they will not receive principal protection or any minimum total return on the portion of their Notes sold. Noteholders should be willing to hold their Notes until maturity.

The future performance of the Index cannot be predicted based on the historical performance of the Index. Past performance is not an indication of future results.

***The Notes are not liquid instruments.***

The Notes will not be actively traded in any financial market and there may exist at times only a very limited, if any, market for the Notes, resulting in low or non-existent volumes of trading in the Notes. Therefore an investment in the Notes will be characterized by a lack of liquidity and price volatility. Although the Issuer or the Dealer, at its respective sole discretion, may provide a repurchase bid price for the Notes if requested, neither the Issuer nor the Dealer is under any obligation to do so and, in any event, as a result of market conditions may be unwilling or unable to provide a repurchase bid price if requested. Because liquidity in the Notes may be effectively limited to Issuer repurchase, an investment in the Notes is intended for Noteholders that intend to hold the Notes to maturity.

***The Index Calculation Agent and the Index Sponsor may adjust the Index in a way that affects its level, and the Index Calculation Agent and the Index Sponsor have no obligation to consider the interests of the holders of the Notes when doing so.***

As of the date of the Final Terms, the Index Sponsor has appointed Solactive A.G. as the Index Calculation Agent, which will be responsible for calculating the Index and making certain

determinations regarding the Index. The Index Sponsor will have authority over the guidelines and policies governing the Index. It is entitled to exercise discretion in relation to the published level of the Index, including but not limited to circumstances in which the calculation of the Index's Closing Level is disrupted due to the occurrence of market disruption events (as described more fully in Schedule 1 to the Final Terms). Changes in the published Closing Level of the Index will affect the Final Index Level for purposes of the Notes, and, in turn, the Supplemental Payment Amount, if any, (or the Early Contingent Payment Amount, if any) payable on the Notes. Policies and judgments for which the Index Calculation Agent is responsible could have an impact, positive or negative, on the Closing Level of the Index and thus the Final Index Level and thus, the return (if any) on, and value of, the Notes. The Index Sponsor may also amend the rules governing the Index (the "Index Rules") in its discretion.

Although judgments, policies and determinations concerning the Index are made by the Index Sponsor and the Index Calculation Agent, these entities have no obligation to consider the interests of the Noteholders in taking any actions that might affect the return on, and value of, the Notes. Furthermore, the inclusion of the Component Underlyings (as defined in the Index Rules and described more fully in Schedule 1 to the Final Terms) in the Index is not an investment recommendation by any person of any of: those Component Underlyings; any index, commodity or security referenced, or tracked by a Component Underlying; any securities owned by or contained in a Component Underlying; or, any futures contract underlying a Component Underlying, or any futures contract tracking any index, commodity or security referenced, or tracked by a Component Underlying.

***The selections of the Index Allocation Agent will be the most important factor influencing the return on the Index.***

The initial selection among the Component Underlyings to be included in the Index, and their relative weightings, will be made by the Index Allocation Agent (as defined above in the Final Terms) on a discretionary basis, and the Index Allocation Agent will be responsible for revising these selections and weights on a discretionary basis on rebalancing dates chosen on a discretionary basis by the Index Allocation Agent. The Index Allocation Agent will have total discretion over its selections and weightings, and the timing thereof, subject to the limitations set forth in the Index Rules. Selections that run counter to market trends will result in the Index level declining or not increasing in line with the market or market benchmarks. The Index allows the Index Allocation Agent to select components for the synthetic portfolio tracked by the Index from an extensive and diverse set of Component Underlyings. The Index allows the Index Allocation Agent to select the timing of the selections and weightings, within certain constraints. The Index Allocation Agent may select a bullish position on a few market sectors and concentrate synthetic investments in those sectors. Such concentrations may run counter to market trends and result in losses.

The Index Rules permit extensive periodic rebalancings, but do not require any minimum number of rebalancings. A strategy that involves multiple rebalancings could incur synthetic trading costs against the performance of the synthetic portfolio that act as a drag on performance, without accruing gains related to tracking market trends. A strategy that involves few rebalancings could fail to react to or capitalize on market trends and lead to underperformance.

As a result, the success of the Index will depend largely upon the abilities of the Index Allocation Agent and certain key individuals employed by the Index Allocation Agent. There can be no

assurance that the Index Allocation Agent will be successful in the rebalancing of the Index and the loss of one or more such key individuals may have a material adverse impact on the performance of the Index. The Notes are therefore intended to be held only by the Index Allocation Agent and by discretionary accounts managed by the Index Allocation Agent.

***The Index Allocation Agent will have no duties under the Notes to any third parties.***

The Index Allocation Agent does not have any obligations or duties to the investors in the Notes under the terms of the Notes. The Notes are therefore intended to be held only by the Index Allocation Agent and by discretionary accounts managed by the Index Allocation Agent, to whom the Index Allocation Agent may have duties under law or contract. It is also not expected that any instrument, other than the Notes, will reference the performance of the Index. The Index is intended to be personal to the selections and expertise of the Index Allocation Agent.

***The termination of Republica AFAP, S.A. as Index Allocation Agent could adversely affect the Notes.***

Upon the termination of Republica AFAP, S.A. as Index Allocation Agent in accordance with the provisions of the Index Allocation Agreement, no successor Index Allocation Agent will be appointed and the Index shall cease to exist. This may have an adverse effect on anyone who has taken economic exposure to the Index by investing in any product that references it. In addition, in the event the Index ceases to exist, a Mandatory Amendment Event shall be deemed to exist, with the risks set forth above under “Possible Mandatory Early Amendment”.

The Index Allocation Agent would cease to serve as such in the event of the termination of the Index Allocation Agreement. A termination could occur for a variety of reasons, including by discretionary choice of the Index Allocation Agent or the Index Sponsor, as well as due to events that could bear negatively on the reputation of either party, due to non-performance by either party or due to a change in business on the part of the Index Allocation Agent. See “Schedule 1 – Index Summary Description - Republica AFAP Dynamic Index (Third Series)” attached to the Final Terms.

***The Index may not achieve its target volatility, which could adversely affect the performance of the Index.***

Although the Index is calculated based on a formula that potentially reduces exposure to the selected synthetic portfolio of Component Underlyings in order to conform to a retrospectively-based 10% target volatility observation constraint, there can be no assurance that the Index’s actual volatility will not exceed the target level. The Index’s volatility constraint mechanism is based on an analysis of backward-looking data over a finite period, and such data may understate or overstate current or future volatility and will likely be unable to avoid exposure to severe volatility in the event of brief, pronounced market swings. Higher than expected volatility exposes the Index to potentially large losses and lower than expected volatility could limit gains by limiting the Index’s exposure to the synthetic portfolio during periods of market upswings.

***The Index is subject to two key volatility control mechanisms, either or both of which could reduce the Index’s exposure to the selected synthetic portfolio of Component Underlyings.***

The Index’s calculation formula employs an exposure limitation formula containing two key volatility control mechanisms: one that reviews the simulated historical volatility of the synthetic portfolio

tracked by the Index, and one that reviews the actual observed volatility of the Index itself. These mechanisms could have the effect of substantially limiting, or even eliminating the Index's exposure to the synthetic portfolio, including for an extended period of time, possibly for the remaining duration of the Notes.

The Index's calculation formula employs a two stage volatility constraint mechanism in the form of an "exposure" variable, which is calculated as the product of two factors, corresponding to the two stages in the mechanism.

The first factor – corresponding to the first stage in the volatility control mechanism - modulates daily the Index's exposure to the synthetic portfolio of Component Underlyings selected by the Index Allocation Agent based on simulated historical volatility of the synthetic portfolio tracked by the Index. This first stage factor could range from 0 to 150% based on the Index formula's review of simulated volatility experienced by the weighted components of the synthetic portfolio, relative to the 10% volatility target.

The Index calculation formula also contains a second factor – corresponding to the second stage volatility control mechanism - which daily monitors the realized volatility of the Index itself (i.e., without regard to the simulated observed volatility of the particular synthetic portfolio then tracked by the Index) over the period since the Index Base Date (i.e., the date of the initial launch of the Index on or about the original issuance date of the Notes) to such day. This mechanism works by comparing the rate at which the Index is realizing volatility to the rate at which it would be expected to realize volatility were it delivering the exact target volatility of 10%. This second stage adjustment term is called the 'volatility adjustment factor' and is capped at 100%.

This second stage volatility control function could limit the Index's exposure to the synthetic portfolio slightly or substantially. For example, if the Index experienced severe and consistent volatility above the target rate early in its life, the second stage limitation would reduce the exposure of the Index to the synthetic portfolio for an extended time, potentially even for the remaining term of the Notes. Note that this second mechanism (unlike the first) will not serve to increase volatility if the realized volatility of the Index is lower than the target volatility, it can serve only to reduce the Index's exposure to the synthetic portfolio. However whether or not this second factor does in fact modulate the volatility of the Index will depend on the realized volatility of the Index over the entire period since the Index Base Date, there may be periods in which the realized volatility of the Index substantially exceeds its target without the second stage factor triggering an exposure reduction. For example, if the Index experienced volatility consistently below the target rate early in its life, the second stage limitation would not serve to reduce the exposure of the Index to the synthetic portfolio later in the term of the Notes, even if the Index was then realizing an interval of volatility above its target, so long as the longitudinal experienced volatility of the Index did not exceed the 10% target over its full term.

Due to the exposure constraints describe above, the selections of the Index Allocation Agent may not be fully reflected by the Index's performance. Substantial or complete allocation to the cash component could occur for an extended period and/or for multiple intervals. Volatility implies substantial market movements. Such movements can be positive or negative. The volatility control mechanisms described above could prevent gains as well as losses in the level of the Index (the "Index Level"). If and to the extent that the Index's exposure to the synthetic portfolio is reduced or eliminated, holders of the Notes will effectively receive less or none of the potential benefit of the

Index Allocation Agent's investment strategy and the return on the Notes will be limited, potentially to the return of principal in USD terms at maturity without the potential for a market-based premium.

***Even if the market value of the Component Underlyings changes, the market value of the Index or the Notes may not change in the same manner.***

Owning the Notes is not the same as owning each of the Component Underlyings composing the Index. Accordingly, changes in the market value of the Component Underlyings may not result in a comparable change in the market value of the Index or the Notes.

***Index Rules Allow for Short Positions against Government Bond Trackers***

The Index Rules permit the Index Allocation Agent to allocate negative (*i.e.*, "short") weights to each Component Underlying that is in the Weight Category "Government Bond Tracker." Short allocations to a single Government Bond Tracker may be equal up to -75% and short allocations to Government Bond Trackers, collectively, can be up to -100%. Short positions are intended to perform inversely to asset values, meaning that an increase in the value of a reference asset will lead to a loss in a short position, and vice versa. Because there is no theoretical limit to the value of a given asset, potential losses on a short position are theoretically infinite. Losses in short positions can occur rapidly, and any such losses could reduce the level of the Index and thus the return on and value of the Notes.

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

The exposures to the Component Underlyings are purely notional and will exist solely in the records maintained by 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, a Noteholder will not have any claim against any of the reference assets which comprise the Index. The strategy tracks the return of a notional dynamic basket of assets. The basket return is calculated on an "excess return" basis by subtracting the performance of a cash investment from the performance of deemed 'funded' Component Underlyings (generally exchange traded funds). As a result, any portion of the synthetic portfolio of Component Underlyings allocated to the J.P. Morgan Three-Month USD Cash Index under the terms of the Index Rules will result in that portion of the portfolio effectively not being invested for purposes of performance calculations.

***The Index is new and will perform based on the selections of the Index Allocation Agent, and thus its performance cannot be anticipated.***

The Index has no performance history, and thus there is no historical record available to evaluate its past performance. Moreover, the Index will be weighted and rebalanced based on the Index Allocation Agent's discretionary choices over time. No assurance can be given that the selection methodologies employed by the Index Allocation Agent in relation to selecting the Weights to the Component Underlyings will result in the Index matching or outperforming any market benchmark, and the Index could lag such benchmarks, including by experiencing long-term declines.

***The Index level will be reduced due to subtractions in respect of embedded cost factors and partial recognition of distributions received from exchange-traded funds.***

The formula for the calculation of the daily Index level includes subtractions that will reduce the calculated level of the Index. These subtractions represent charges and deemed synthetic costs



associated with the carrying and rebalancing a notional portfolio of the Component Underlyings, on an excess return basis, and include synthetic carry costs, synthetic transaction costs and a deduction from distributions deemed received on exchange traded fund Component Underlyings corresponding to an assumed withholding tax rate.

The carry cost is a daily deduction assessed at a per annum rate of 0.75% with respect to exchange traded fund Component Underlyings, 0.35% with respect to government bond or currency futures tracker Component Underlyings and 0.25% with respect to the Cash Component. The magnitude of the carry cost will be a function of the change in exposure to the Component Underlyings included in the synthetic portfolio tracked by the Index on the relevant Index Calculation Day (as defined in the Index Rules). In a very low interest rate environment, the carry cost could overwhelm the return of the Cash Component and lead to a negative return on that portion of the synthetic portfolio that is deemed un-invested or invested in cash, thus reducing the level of the Index to the extent of that negative return. The strategy of the Index Allocation Agent and/or the effect of the volatility control mechanisms described below could result in the Index being deemed invested substantially or largely in cash for extended periods.

The Index Rules calculation formula also deducts a deemed Transaction Cost of 0.02% for synthetic purchases and sales of each Component Underlying (other than the Cash Component) in the synthetic portfolio tracked by the Index in connection with each rebalancing. The magnitude of the transaction costs will be a function of (i) the change in exposure to the Component Underlyings included in the synthetic portfolio tracked by the Index on the relevant Index Calculation Day (as defined in the Index Rules) and (ii) the Specified Weight (as defined in the Index Rules) assigned to each such Component Underlying within the selected synthetic portfolio of Component Underlyings tracked by the Index.

The Index Return will be further reduced because the Index calculation formula takes into account for a deduction of 30% of the value of distributions, if any, made by exchange-traded funds held in the synthetic portfolio tracked by the Index, which simulates the application of an assumed withholding tax.

These subtractions described above will reduce the performance of the Index, relative to that which would have been realized if they had not been made. The subtractions that correspond to assumed costs are set by the Index calculation formula and will not be reduced if actual observed costs are less than the assumed costs incorporate in to the Index calculation formula. The aggregate amount of the reductions cannot be predicted in advance but will depend on the selections made by the Index Allocation Agent because, among other factors, carry costs vary by Component Underlying category, greater cumulative transaction costs will be incurred if rebalancings occur frequently, and because selections of Component Underlyings that are exchange traded funds that make distributions will be subject to larger potential reductions through the Index calculation formula's deduction of simulated withholding taxes at the assumed rate.

***The Notes linked to the Index incur risks associated with leveraged investments.***

The Index level calculation formula includes an "exposure" factor that modulates exposure to the synthetic portfolio tracked by the Index. The exposure cap is 150%, implying a maximum leveraged exposure to the synthetic portfolio of 1.5. If and when the exposure factor is set at a level greater than 100%, the Index can be considered as having leveraged exposure to the synthetic portfolio. Leveraged exposure will magnify the effect of gains and losses on the synthetic portfolio on the Index level, particularly during periods of sharply increased losses incurred during periods of sharply increased

volatility.

The exposure factor will be adjusted daily based on observed volatility relative to the 10% volatility target. At any given time, exposure to the synthetic portfolio could be substantially less than 100%.

The Notes themselves provide leveraged exposure to the Index through the Participation Rate of 502% (or 5.02-to-1). Such leveraged exposure through the Participation Rate will magnify the effect of the Index's performance on the Notes' return. Such leveraged exposure will also generally imply a lower initial secondary market value for the Notes relative to a similar instrument without such leveraged exposure.

***The Index Allocation Agent may add and substitute the Component Underlyings comprising the Index, and Component Underlyings may be removed or replaced in the event of the occurrence of certain extraordinary events.***

The Index Allocation Agent, subject to the restrictions contained in the Index Rules may add or substitute the Component Underlyings of the Index. The Index Allocation Agent will have complete discretion regarding the timing and nature of any such additions and substitutions, subject to constraints set forth in the Index Rules. It is likely to be the case that the Index Allocation Agent would make an addition or substitution with a view to allocating a portion of the synthetic portfolio tracked by the Index to the new Component Underlying. Therefore, the performance of the Index will likely be affected materially by any such additions and substitutions.

Following the occurrence of certain extraordinary events with respect to a Component Underlying as provided in the Rules, the affected Component Underlying may be either replaced by a substitute or removed from the Index. A replacement Component Underlying would be chosen by the Index Sponsor, exercising discretion. If no replacement is deemed available, the Index may continue without the removed Component Underlying or any replacement.

The addition or removal of a Component Underlying may affect the performance of the Index, and therefore, the return on the Notes, as the replacement Component Underlying may perform significantly better or worse than the affected Component Underlying. Circumstances in which such a replacement may occur include the replacement by a Component Underlying by a successor, a failure by the relevant sponsor of the Component Underlying to calculate its value for an extended period, the cancellation of a Component Underlying, a material change in the composition or calculation of a Component Underlying or a change in law. See “Schedule 1 – Index Summary Description - Republica AFAP Dynamic Index (Third Series)” attached to the Final Terms. No assurance can be provided that such an event will not occur to one or more of the initial Component Underlyings.

***Limitations on rebalancings may prevent the Index Allocation Agent from fully implementing its strategy.***

The Index Rules place limits on the ability of the Index Allocation Agent to rebalance the synthetic portfolio tracked by the Index. Rebalancings are limited to 35 in each 12-month period commencing on the Index Base Date and each anniversary thereof. Rebalancings also may not occur on consecutive Index Calculation Days. These limits could prevent the Index Allocation Agent from rebalancing the synthetic portfolio tracked by the Index in response to changes in market conditions or to changes in its investment outlook. The limitations on rebalancings may also incentivize the Index Allocation Agent to alter its selections relative to those it would make if rebalancings were not subject to limits and it could make

selections in view of a shorter time horizon between rebalancings. These limitations could adversely affect the performance of the Index, and thus the return on the Notes.

***The Index formula's "rebalance lag" may prevent the selections of the Index Allocation Agent from becoming effective immediately or concurrently, and could introduce exposure risk.***

Rebalancing selections made by the Index Allocation Agent to rebalance the synthetic portfolio among the Component Underlyings will become effective (i.e., implemented as part of the synthetic portfolio through deemed purchase or sale) on a timing basis set under the Index Rules. For certain of the Component Underlyings which are traded in jurisdictions other than the U.S., the relevant market for such Component Underlying may be closed during the regular trading day in the U.S and thus such Component Underlying cannot be rebalanced in the Index on the current date in the United States on which the Index Allocation Agent submits its rebalance selections. Consequently the closing prices at which the various Component Underlyings are rebalanced may be derived from different market times and on different calendar days.

For example, if the Index Allocation Agent were to submit a timely and valid rebalance request on a day eligible for a rebalancing under the Index Rules, the Component Underlyings that are listed on United States exchanges would be deemed to be purchased or sold (as applicable) at the Closing Prices for such Component Underlyings on that day. However any Component Underlyings deemed purchased or sold, as applicable, that trade primarily outside the United States would be deemed rebalanced at the close of the relevant primary trading market on the next good trading day, which could be the next following New York trading day, and could be significantly later (due to the occurrence of weekends, market holidays or disrupted days in the relevant non-U.S. market). The Index formula contains a 'Rebalance Lag Adjustment' to account for market moves between the calendar day on which a rebalancing commences and that on which it is completed. The market price of Component Underlyings trading outside the United States could drop substantially during a "lag" period, and the risk of market drops would be exacerbated if a lag period is of extended duration or coincides with a period of market volatility. Note that the "lag" period could be a period during which the synthetic portfolio effectively has weightings above (and perhaps substantially above) the various weight maximums, pending synthetic sales of Component Underlyings subject to lag.

The timing lag and related adjustments could adversely affect the performance of the Index, and thus the return on the Notes, through delays in the implementation of the Index Allocation Agent's strategy and exposure to market risks during lag periods.

***The Index's exposure to exchange traded funds will be subject to liquidity, market capitalization and volatility constraints which may reduce the ability of the Index Allocation Agent to fully-implement its strategy.***

The Index Allocation Agent's ability to allocate the synthetic portfolio tracked by the Index to exchange traded funds may be limited by liquidity criteria that could limit or eliminate the potential to notionally allocate the synthetic portfolio, in connection with rebalancings, to exchange traded funds that have low average daily trading volumes. All exchange traded funds proposed to be included in the synthetic portfolio upon a rebalancing will be tested against liquidity-based criteria (using average daily trading volume as a liquidity proxy). Exchange traded fund weightings will be limited, potentially to zero, if sufficient liquidity is not observed. The liquidity-based criteria will be applied to all exchange traded funds proposed to be included in the synthetic portfolio upon a rebalancing,

without exception for those exchange traded funds already included in the synthetic portfolio, which could effectively require that any rebalancing involve an allocation away from relatively illiquid exchange traded funds incumbent to the synthetic portfolio.

In addition, an exchange traded fund may be removed from the synthetic portfolio tracked by the Index and eliminated as a potential Component Underlying for future selection, if certain liquidity, market capitalization or volatility limits are triggered. Such circumstances could reduce the ability of the Index Allocation Agent to gain exposure to particular equity or bond markets through the Index, with this risk potentially highest in smaller markets and emerging markets. To the extent such markets experience appreciation, the inability to gain the full level of desired exposure to them could harm the performance of the Index and thus reduce the return on the Notes.

***Correlation of performances among the Component Underlyings may reduce the performance of the Notes.***

Performances amongst the Component Underlyings 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 selected synthetic portfolio of Component Underlyings tracked by the Index and which has a higher weighting in the Index relative to any of the other sectors or asset types, as determined by the Index Allocation Agent's selection. High correlation during periods of negative returns among Component Underlyings representing any one sector or asset type which have a substantial percentage weighting in the Index could limit any return on the Notes.

***The Index is an excess return index that tracks the return of the synthetic portfolio of Component Underlyings over the return from a short-term cash investment.***

The Index is an "excess return" index that tracks the return of the synthetic portfolio of Component Underlyings on an excess return basis. This means that, with respect to Component Underlyings in the synthetic portfolio that are deemed 'funded' (generally exchange traded funds), the performance of an investment in the Cash Component (the JPMorgan Cash Index USD 3 Month) is subtracted from the performance of such Component Underlyings. As a result, any portion of the synthetic portfolio of Component Underlyings allocated to the J.P. Morgan Three-Month USD Cash Index under the terms of the Index Rules will result in that portion of the portfolio effectively not being invested for purposes of performance calculations. Accordingly, the Index will underperform another index that tracks the return of the same synthetic portfolio but does not deduct the return of a short-term cash investment from any component returns.

The excess return subtraction described above will not apply to Component Underlyings that are deemed "unfunded", generally consisting of foreign exchange futures trackers and bond futures trackers.

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

Most of the equity and bond exchange traded funds that are initial Component Underlyings are intended to track equity or debt securities that trade or are denominated in non-U.S. currencies. The exchange traded funds that track these securities, however, trade in USD, and changes in the relative value of currencies will likely affect the USD trading price of the relevant exchange traded funds.

Nine of the initial Component Underlyings are foreign exchange or foreign exchange futures trackers that are intended to track the relative value of currencies. These Component Underlyings are directly exposed to currency exchange rate risk.

An investor's net exposure to non-U.S. currencies will depend on the relative weight of the component securities in the relevant Component Underlyings that are denominated in or exposed to each such currency or to changes in the relative value of each such currency. If, taking into account such weighting, the USD strengthens against such currencies, the value of the relevant Component Underlyings will be adversely affected and the Supplemental Payment Amount, if any, due under the Notes may be reduced. Conversely, the Index Allocation Agent may select Component Underlyings as part of a strategy to capitalize on positive movements in the USD against non-U.S. currencies, which would expose the Index to losses should the USD decline in value against selected non-U.S. currencies.

***Higher future prices of the futures contracts that are a direct or indirect reference asset of a Component Underlying (the "Futures Based Component Underlyings") relative to their current prices may decrease the amount payable at maturity.***

The Futures Based Component Underlyings directly or indirectly reference futures contracts on various underlyings such as government bonds. Unlike equities, which typically entitle the holder to a continuing stake in a corporation, futures contracts normally specify a certain date for delivery of the referenced underlying asset. As the exchange traded futures contracts that compose the Futures Based Component Underlyings approach expiration, they are replaced pursuant to the methodology of the Futures Based Component Underlying by futures contracts that have a later expiration. Thus, for example, a futures contract purchased and held in August may specify a September expiration. As time passes, the contract expiring in September is replaced by a contract with a December expiration. This process is referred to as "rolling." If the market for these contracts is (putting aside other considerations) in "backwardation," that is where the prices are lower in the distant delivery months than in the nearer delivery months, the sale of the September contract would take place at a price that is higher than the price of the December contract, thereby creating a "roll yield." While some futures contracts have historically exhibited consistent periods of backwardation, backwardation will most likely not exist at all times. Moreover, certain futures, including bond futures, have historically traded in "contango" markets. Contango markets are those in which the prices of contracts are higher in the distant delivery months than in the nearer delivery months. The presence of contango could result in negative "roll yields," which could adversely affect the level of the bond futures Component Underlyings and, therefore, the level of the Index and the return on, and value of, the Notes.

***The Futures Based Component Underlyings may underperform a cash purchase of the Reference Underlyings, potentially by a significant amount.***

Because the Futures Based Component Underlyings are made up of futures contracts, there will be a cost to "rolling" the contracts forward as the index sells the current contracts and then adds the next quarter's contracts. As some futures contracts tend to have positively sloping forward curves, commonly known as "contango," the Futures Based Component Underlyings' returns experience a negative drag when they sell cheaper contracts and purchases more expensive contracts. As a result, it is likely that the Futures Based Component Underlyings will underperform a direct investment in a similarly weighted basket of Reference Underlyings over the life of the Notes.

***Index sponsors, such as the sponsor of the Cash Component and the sponsors of the indices tracked by exchange traded funds may adjust sponsored indices in ways that adversely affects their levels, and such index sponsors have no obligation to consider the interests of the holders of the Notes in taking such actions.***

Index sponsors are responsible for calculating and maintaining their sponsored indices. Index sponsors can add, remove or substitute the securities underlying their sponsored indices or make other methodological changes that could change the level or performance of their sponsored indices. The Component Underlyings generally track reference indices, or are themselves indices. Noteholders should realize that changes made to these indices may affect the performance of the related Component Underlyings. An index sponsor could also alter, discontinue or suspend calculation or dissemination of its sponsored index. Any of these actions could adversely affect the return on, and value of, the Notes. Index sponsors have no obligation to consider the interests of Noteholders in calculating or revising their sponsored indices.

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

Twelve of the initial Component Underlyings are underlyings that attempt to track the performance of indices composed of fixed income securities or are indices that track the performance of futures on fixed income securities (the “DM Bond Component Underlyings”). These Component Underlyings are identified as being within the “DM Bond” Weight Category in the table listing the initial Component Underlyings included in Schedule 1 attached to the Final Terms.

Investing in the Notes linked indirectly to these DM Bond Component Underlyings differs significantly from investing directly in bonds to be held to maturity as the values of the DM Bond Component Underlyings change, at times significantly, during each trading day based upon the current market prices of the relevant 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 prices of the DM Bond Component Underlyings may be significantly influenced by the creditworthiness of the issuers of the bonds included or referenced in such indices. The bonds underlying the DM Bond Components Underlyings 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. 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 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.

***The Notes are subject to significant risks associated with investments in currency exchange markets.***

The Index's Component Underlyings include nine categorized as FX G10 Trackers, as so identified under the "Weight Category" column in the table listing the initial Component Underlyings included in Schedule 1 attached to the Final Terms. The levels of these Component Underlyings will fluctuate based on market movements in currency foreign exchange markets. Such markets can experience pronounced volatility which could lead to losses in the associated Component Underlyings resulting in a decline in the level of the Index.

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

The value of the SPDR® Gold Shares US (which is one of the Component Underlyings available for selection within the Index) 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 the return on 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, USD (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.

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

The value of the iShares Silver Trust exchange traded fund (which is one of the Component Underlyings available for selection within the Index) is closely related to the price of silver. A decrease in the price of silver may have a material adverse effect on the value of the Notes and the return on investment in the Notes. Silver is subject to the effect of numerous factors. The following describes some of the factors affecting silver.

The price of silver is primarily affected by global demand for and supply of silver. Silver prices can fluctuate widely and may be affected by numerous factors. These include general economic trends, technical developments, substitution issues and regulation, as well as specific factors including industrial and jewelry demand, expectations with respect to the rate of inflation, the relative strength of USD (the currency in which the price of silver is generally quoted) and other currencies, interest rates, central bank sales, forward sales by producers, global or regional political or economic events, and production costs and disruptions in major silver producing countries such as the United Mexican

States, the Republic of Peru and China. The demand for and supply of silver affect silver prices, but not necessarily in the same manner as supply and demand affect the prices of other commodities. The supply of silver consists of a combination of new mine production and existing stocks of bullion and fabricated silver held by governments, public and private financial institutions, industrial organizations and private individuals. In addition, the price of silver has on occasion been subject to very rapid short-term changes due to speculative activities. From time-to-time, above-ground inventories of silver may also influence the market. The major end uses for silver include industrial applications, photography and jewelry and silverware. It is not possible to predict the aggregate effect of all or any combination of these factors.

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

Several of the Reference Indices in respect of the ETF Components are comprised of non-U.S. stocks, including emerging markets stocks. 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. 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.

Many of the Reference Indices in respect of ETF Components are indices that focus on a single developed or emerging market, which also associates the Reference Index to single country risk. Several of the Reference Indices in respect of ETF Components are indices that focus on single countries that have experienced pronounced economic and political instability. The equity markets of such countries can be subject to substantial volatility and losses in value.

The prices of equity securities 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.



Certain of the “developed market” equity markets represented by the Component Underlyings, including Italy and Spain, also carry risks relating to the European Union’s current monetary and economic instability, which could adversely affect the values of the represented equities.

Some or all of these factors may influence the value of the relevant Component Underlyings, and therefore, the 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. The future performance of such Component Underlyings cannot be predicted based on their historical performance. The value of any such Component Underlying may decrease, resulting in a decrease in the level of the Index, which may adversely affect the value of the Notes.

***An investment in the Notes is subject to risks associated with sovereign bonds.***

Several of the Component Underlyings reference the value of sovereign bonds. Investments in such securities involve risks associated with the securities markets in government bonds, including risks of volatility, credit downgrades, negative interest rates, inflation, restructuring and default.

The prices of such securities 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..

Some or all of these factors may influence the value of the relevant Component Underlyings, and therefore, the 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. The future performance of such Component Underlyings cannot be predicted based on their historical performance. The value of any such Component Underlying may decrease, resulting in a decrease in the level of the Index, which may adversely affect the value of the Notes.

***Risks Relating to Component Underlyings that are Exchange Traded Funds***

The Component Underlyings consist primarily of exchange-traded funds (or “ETFs”). The policies of the investment advisor of each ETF concerning the calculation of the applicable ETF’s net asset value, additions, deletions or substitutions of securities in the applicable ETF and manner in which changes affecting the applicable index tracked by the applicable ETF are reflected in such ETF could affect the trading price of the ETF’s shares, and therefore, the level of the Index. The share prices of for an ETF could also be affected if the ETF’s investment advisor were to change its policies, for example, by changing the manner in which it calculates net asset value, or by discontinuing or suspending calculation or publication of net asset value

The investment objective of an ETF may be to provide investment results that, before expenses, correspond generally to the price and yield performance of a target index. However, an ETF will not generally achieve perfect correlation to index returns because, for example, an ETF may hold assets other than the securities comprising the applicable index and because the share price of an ETF reflects the reduction of fund assets resulting from the accrual of fees and expenses and the payment of distributions, if any. Furthermore, there is the risk that the investment strategy of any of an ETF’s investment advisor, the implementation of which is subject to a number of constraints, may not produce the intended results.

### ***Potential conflicts of interest***

There is a potential for conflicts of interest in the structure and operation of the Index and by virtue of the normal business activities of the Index Sponsor, Index Calculation Agent, the Index Allocation Agent and any of their affiliates or any of its or its affiliates' respective directors, officers, employees or agents.

The Index Allocation Agent, the Index Calculation Agent, Index Sponsor and their respective affiliates are acting or may act in a number of capacities in connection with the Index. The Index Allocation Agent, the Index Calculation Agent and the Index Sponsor (and, as applicable, their respective affiliates) acting in such capacities each shall have only the duties and responsibilities expressly set out in the Index Rules in respect of the relevant capacity and shall not, by virtue of its or any of its respective affiliates acting in any other capacity, be deemed to have other duties or responsibilities or be deemed to hold a standard of care other than as expressly provided with respect to each such capacity.

Various potential and actual conflicts of interest may arise from the overall investment activity of the Index Allocation Agent, the Index Calculation Agent, the Index Sponsor and their respective affiliates. The Index Allocation Agent, the Index Calculation Agent, the Index Sponsor and their respective affiliates and/or their directors, officers and employees may each have, or may each have had, interests or positions, or may buy, sell or otherwise trade positions, in or relating to the Index and/or Component Underlyings, or may have invested, or may engage in transactions relating to any Component Underlyings, either for its own account or the account of others, may publish research reports or otherwise express views with respect to such transactions or regarding expected movements in price or volatility of the Component Underlyings (which may or may not be consistent with any decision by the Index Allocation Agent to include a particular Component Underlying in the Index). The Index Allocation Agent, the Index Calculation Agent, Index Sponsor and their respective affiliates may act with respect to such transactions in the same manner as if the Index did not exist and without regard to whether any such action might have an adverse effect on the Index. Such transactions may or may not be different from the transactions referenced by the Index and may involve events or circumstances which result in a need for the Index Calculation Agent or Index Sponsor to exercise its discretion under the Index Rules, for example, in relation to Extraordinary Events. Such activity may, or may not, affect the value of the Component Underlyings, but those considering taking any economic exposure by reference to the Index should be aware that a conflict may arise.

The Index has been developed with the possibility of any entity affiliated with the Index Sponsor issuing, entering into, promoting, offering or selling transactions or investments (structured or otherwise) linked, in whole or in part, to the Index and hedging such transactions or investments in any manner that they see fit. Accordingly it should be assumed that the Index Rules will be analysed from this point of view.

Additionally, the Index Allocation Agent, the Index Calculation Agent, Index Sponsor and their respective affiliates may serve as agent or underwriter for other issuances of potential Component Underlyings and are or may be engaged in trading, brokerage and financing activities, as well as providing investment banking and financial advisory services.

Affiliates of the Index Sponsor and the Dealer serve as the sponsor and calculate the level of the initial cash component of the Index and several of the foreign exchange and bond futures Component Underlyings. Such affiliates will have no obligation to take into account the interests of the holders of the Notes in making decisions that affect the value of such Component Underlyings (and thus, potentially, the level of the Index), and their interests may be adverse to those of the holders of the Notes because an affiliate of the Index Sponsor and Dealer will enter into a swap transaction with the Issuer which will generally require such affiliate to pay to the Issuer an amount calculated by reference to the performance of the Index to hedge the Issuer's payment obligations under the Notes.

## Final Terms dated 7 July 2016

### International Bank for Reconstruction and Development Issue of USD 12,000,000 Notes linked to UYU/USD FX and the Republica AFAP Dynamic Index (Third Series) due 2026 under the Global Debt Issuance Facility

Terms used herein shall be deemed to be defined as such for the purposes of the terms and conditions (the “**Conditions**”) set forth in the Prospectus dated May 28, 2008. This document constitutes the Final Terms of the Notes described herein and must be read in conjunction with such Prospectus. Certain additional investment considerations are set forth under “Additional Risk Factors” above.

#### SUMMARY OF THE NOTES

1. Issuer: International Bank for Reconstruction and Development (“**IBRD**”)
2. (i) Series Number: 4596  
(ii) Tranche Number: 1
3. Specified Currency or Currencies (Condition 1(d)): United States Dollars (“**USD**”)
4. Aggregate Nominal Amount:  
(i) Series: USD 12,000,000  
(ii) Tranche: USD 12,000,000
5. Issue Price: 100 per cent. of the Aggregate Nominal Amount (USD 12,000,000)
6. (i) Specified Denominations (Condition 1(b)): USD 1,000,000 and integral multiples of USD 10,000 in excess thereof  
(ii) Calculation Amount (Condition 5(j)): USD 10,000
7. Issue Date: 12 July 2016
8. Maturity Date (Condition 6(a)): 13 July 2026 (the “**Scheduled Maturity Date**”), unless either the UYU Valuation Date is postponed pursuant to Term 18 and/or the Final Index Determination Date is postponed pursuant to Term 19, in which case the Maturity Date shall be the date falling ten Business Days after the later to occur of the Postponed UYU Valuation Date and the Postponed Final Index Determination Date.
9. Interest Basis (Condition 5): Zero Coupon (further particulars specified below)
10. Redemption/Payment Basis (Condition 6): Currency-linked Redemption and Index-linked Redemption as set out in Term 17
11. Change of Interest or Redemption/Payment Basis: As set out in Term 22 upon the occurrence of a Mandatory Amendment Event

- |   |                              |
|---|------------------------------|
| 12. Call/Put Options<br>(Condition 6):    | Not Applicable               |
| 13. Status of the Notes<br>(Condition 3): | Unsecured and unsubordinated |
| 14. Listing:                              | Luxembourg Stock Exchange    |
| 15. Method of distribution:               | Non-syndicated               |

**PROVISIONS RELATING TO INTEREST (IF ANY) PAYABLE**

- |   |   |
|---|---|
| 16. Zero Coupon Note<br>Provisions (Condition<br>5(c)):               | Applicable for the purpose of Condition 5(c) only, provided that the Early Redemption Amount of the Notes shall be calculated as set out in Term 23                     |
| (i) Amortization Yield<br>(Condition 6(c)(ii)):                       | Solely for the purposes of calculating the Rate of Interest for any overdue principal under Condition 5(c), the Amortization Yield shall equal 7.5% per cent per annum. |
| (ii) Day Count Fraction<br>(Condition 5(l)):                          | Solely for the purposes of calculating the Rate of Interest for any overdue principal under Condition 5(c), the Day Count Fraction shall be 30/360.                     |
| (iii) Any other<br>formula/basis of<br>determining amount<br>payable: | Not Applicable  |

**PROVISIONS RELATING TO REDEMPTION**

- |  |   |
|--|---|
| 17. Final Redemption Amount<br>of each Note (Condition 6): | If no Mandatory Amendment Event has occurred prior to the Maturity Date, the Final Redemption Amount, calculated per Calculation Amount, payable on the Maturity Date shall be an amount in USD calculated by the Calculation Agent in accordance with the following: |
|--|---|

***UYU Linked Principal + Supplemental Payment Amount***

If a Mandatory Amendment Event has occurred prior to the Maturity Date, the Final Redemption Amount per Calculation Amount payable on the Maturity Date will be an amount in USD equal to the UYU Linked Principal.

Whereby,

“**Mandatory Amendment Event**” has the meaning given to it in Term 22;

“**UYU Linked Principal**” means an amount in USD, calculated per Calculation Amount, equal to the UYU Amount divided by the UYU Rate for the relevant UYU Valuation Date;

“**Supplemental Payment Amount**” means an amount in USD equal to the greater of (i) the product of the Calculation Amount, the Index Return and the Participation Rate, and, (ii) zero;

“**Index**” means the Republica AFAP Dynamic Index (Third Series) (Bloomberg Ticker Symbol: JPZMUYU5<Index>);

“**Index Return**” means the performance of the Underlying Index from the Initial Index Level to the Final Index Level expressed as a percentage and calculated as follows:

$$(\text{Final Index Level} - \text{Initial Index Level}) / \text{Initial Index Level};$$

“**Participation Rate**” means 502%; and

“**UYU**” means Uruguayan Peso.

(See Terms 20 and 21 for additional definitions)

18. UYU Related Disruption Events and Fallbacks:

In the event of the occurrence of an Unscheduled Holiday or a Disruption Event on a day which but for such occurrence would have been the UYU Valuation Date, the Calculation Agent shall apply each of the following paragraphs (each a “**Disruption Fallback**”) for the determination of the UYU Rate, in the order set forth below, until the UYU Rate can be determined in accordance with this Term 18.

- (1) *Valuation Postponement*: the UYU Rate will be determined on the first Business Day that is not an Unscheduled Holiday, or on the Business Day first following the day on which the Disruption Event ceases to exist, as applicable, unless the UYU Valuation Date has not occurred on or before the 30<sup>th</sup> consecutive calendar day after the Scheduled UYU Valuation Date (any such period being a “**Deferral Period**”). In such event, the UYU Rate will be determined in accordance with the next applicable Disruption Fallback on the next day after the Deferral Period that would have been a Business Day but for the occurrence of an Unscheduled Holiday, or on the next day after the Deferral Period that is a Business Day in the event of a continuing Disruption Event (the “**Postponed UYU Valuation Date**”).
- (2) *Fallback Reference Price*: the UYU Rate will be determined by the Calculation Agent on the relevant Postponed UYU Valuation Date pursuant to the Dealer Poll. If the UYU Rate cannot be determined pursuant to the Dealer Poll then the UYU Rate will be determined in accordance with the next applicable Disruption Fallback.
- (3) *Calculation Agent Determination*: the UYU Rate (or a method for determining the UYU Rate) will be determined by the Calculation Agent on the Postponed UYU Valuation Date in its sole and absolute discretion.

In the event the Scheduled UYU Valuation Date becomes subject to a Disruption Fallback as set forth above, then the Maturity Date shall be postponed by one Business Day for each day that the Scheduled UYU Valuation Date is postponed as set forth above, provided that any such postponement will be concurrent with any postponement of the Maturity Date caused by operation of Condition 19 below.

For the avoidance of doubt, no additional amounts shall be payable by IBRD in the event that the Maturity Date is postponed due to postponement of the UYU Valuation Date due to the operation of this Term 18.

The Calculation Agent shall notify the Issuer as soon as reasonably practicable that the UYU Rate is to be so determined.

19. Index Disruption Events /  
Index Cancellation / Index  
Modification:

(1) **Index Disruption Events.** If the Final Index Determination Date occurs on a day on which the Calculation Agent has determined that an Index Disruption Event (as defined below in Term 21) has occurred or is continuing, then the Final Index Determination Date will be postponed until the next succeeding Scheduled Index Determination Date on which the Calculation Agent determines that an Index Disruption Event has neither occurred nor is continuing; provided that if the Final Index Determination Date has not occurred on or before the fifth Business Day following the Scheduled Final Index Determination Date, (“the **Valuation Cut-off Date**”), the Final Index Level will be determined by the Calculation Agent in its sole and absolute discretion on the next Scheduled Index Determination Date after the Valuation Cut-off Date (such Scheduled Index Determination Date being the “**Postponed Final Index Determination Date**”).

In the event the Scheduled Final Index Determination Date becomes subject to postponement as set forth above, then the Maturity Date shall be postponed by one Business Day for each day that the Scheduled Final Index Determination Date is postponed as set forth above.

For the avoidance of doubt, no additional amounts shall be payable by IBRD in the event that the Maturity Date is postponed due to postponement of the Final Index Determination Date by operation of this Term 19.

(2) **Index Cancellation / Index Modification.** If an Index Cancellation or Index Modification occurs, then the Calculation Agent will for the purpose of calculating the Early Redemption Amount compute a substitute level for the Index in accordance with the procedures last used to calculate the level of the Index before any discontinuation but using only those securities that comprised the Index prior to such discontinuation.

An Index Cancellation may occur due to a broad range of events beyond the control of the Issuer, including by decision of the Index Calculation Agent or the Index Sponsor. See “Schedule 1 – Index Summary Description - Republica AFAP Dynamic Index (Third

Series)”).

20. Additional Definitions - **“Business Day”** means a day (other than a Saturday or a Sunday) on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealings in foreign exchange and foreign currency deposits) in New York and Montevideo.

General:

**“Calculation Agent”** means JPMorgan Chase Bank, N.A. (**“JPMorgan”**). For the avoidance of doubt, the Calculation Agent shall make determinations in respect of the Notes in good faith.

**“Dealer Poll”** means that the UYU Rate in respect of a certain date will be the UYU/USD exchange rate for USD, expressed as the amount of UYU per one USD, for settlement on the same day, as determined by the Calculation Agent on the basis of quotations provided by Reference Dealers on such date. The Calculation Agent will request each Reference Dealer to provide a firm quotation of the specified rate as of 4:00 p.m., Montevideo time. If four (4) quotations are provided, the UYU Rate for such UYU Valuation Date will be the arithmetic mean of the specified rates without regard to the specified rates having the highest and lowest value. For this purpose, if more than one quotation has the same highest and lowest value, then the specified rate of only one of such quotations shall be disregarded. If two (2) or three (3) quotations are provided, the UYU Rate for such date will be the arithmetic mean of the specified rates provided. If fewer than two (2) quotations are provided, it will be deemed that the UYU Rate for such date cannot be determined pursuant to the Dealer Poll.

**“Deferral Period”** has the meaning as set forth in Term 18 above.

**“Disruption Event”** means in the sole and absolute determination of the Calculation Agent any action, event or circumstance whatsoever which from a legal or practical perspective makes it impossible for the Calculation Agent to obtain the UYU Rate on a UYU Valuation Date.

**“Montevideo Business Day”** means a day (other than a Saturday or a Sunday) on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealings in foreign exchange and foreign currency deposits) in Montevideo.

**“New York Business Day”** means a day (other than a Saturday or a Sunday) on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealings in foreign exchange and foreign currency deposits) in New York.

**“Postponed UYU Valuation Date”** has the meaning as set forth in Term 18 above.

**“Reference Dealers”** means the Montevideo office of each of HSBC, Citibank, Banco Itau and Banco Santander. In the event that any of the



Reference Dealers shall cease to operate in Uruguay, such Reference Dealer shall be substituted by the Calculation Agent (acting in its sole and absolute discretion) for purposes of completing the Dealer Poll.

“**Supplemental Payment Amount**” has the meaning set forth in Term 17.

“**Unscheduled Holiday**” means a day that is not a Business Day and the market was not aware of such fact (by means of a public announcement or by reference to other publicly available information) until a time later than 9:00 a.m. Montevideo time two Montevideo Business Days prior to the Scheduled UYU Valuation Date.

“**UYU Amount**” means UYU 369,840,000 (equivalent to USD 12,000,000 at the UYU/USD exchange rate on the Trade Date of 28 June 2016).

“**UYU Linked Principal**” has the meaning set forth in Term 17.

“**UYU Rate**” means the UYU/USD exchange rate, expressed as the amount of UYU per one USD, for settlement on the same day, as published by the Uruguayan Central Bank on Bloomberg page URINUSCA <Crncy> (or such other page as may replace that page for the purpose of displaying such exchange rate) on the relevant UYU Valuation Date. If the Bloomberg page URINUSCA no longer reports such rate or such rate is no longer available and has not been replaced by any other page or service, the Calculation Agent shall be entitled to obtain such rate as reported by the Uruguayan Central Bank from any other screen or information source that it deems appropriate in its sole and absolute discretion. If the UYU Rate cannot be obtained in the manner referenced in the prior paragraphs in respect of the relevant UYU Valuation Date because of a Disruption Event, then the UYU Rate in respect of the relevant UYU Valuation Date shall be determined by the Calculation Agent in accordance with the provisions set forth above under Term 18 “UYU Related Disruption Events and Fallbacks.”

“**UYU Valuation Date**” means, in respect of the Maturity Date, 26 June 2026 (the “**Scheduled UYU Valuation Date**”), provided however, that, in the event of an Unscheduled Holiday or there has occurred or is subsisting on such date a Disruption Event, the UYU Valuation Date shall be determined by the Calculation Agent in accordance with the provision set forth under Term 18 “UYU Related Disruption Events and Fallbacks”.

21. Additional Definitions with regard to the Index:

“**Closing Level**” on any Scheduled Index Determination Date will equal the official closing level of the Index published by the Index Sponsor at the regular weekday close of trading on that Scheduled Index Determination Date.

“**Final Index Level**” means the Index’s Closing Level observed for the

Final Index Determination Date, as determined by the Calculation Agent.

In the event that the Index's Closing Level for the Final Index Determination Date is corrected by the Index Calculation Agent within three New York Business Days of the Final Index Determination Date, such corrected value will be the Final Index Level.

**"Final Index Determination Date"** means, in respect of the Maturity Date, 26 June 2026 (the **"Scheduled Final Index Determination Date"**), subject to postponement pursuant to the provisions set forth under Term 19 "Index Disruption Events".

**"Index Calculation Agent"** means Solactive A.G., or any successor thereto designated as such pursuant to the Index Rules.

**"Index Cancellation"** means the Index Sponsor discontinues publication of the Index because the Index is terminated, including, without limitation, due to the termination of the Index Allocation Agreement between the Index Allocation Agent and the Index Sponsor.

**"Index Disruption Event"** as determined by the Calculation Agent in its sole and absolute discretion, means with respect to the Final Index Determination Date, either that the Closing Level for the Index for such day was not published by the Index Calculation Agent or the Index Sponsor or such date is not a Scheduled Index Determination Date.

**"Index Modification"** means a material change is made to the formula for or the method of calculating the Index or any other material modification is made to the Index, other than a modification prescribed in the Index Rules for the purpose of maintaining the Index in the event of changes in constituent Component Underlyings (as defined in the Index Rules) and other routine events.

**"Index Rules"** means the Republica AFAP Dynamic Index (Third Series) Rules, as in effect from time to time. A copy of the Index Rules as currently constituted is attached hereto as Schedule 2.

**"Index Sponsor"** means J.P. Morgan Securities plc or any successor corporation or other entity that (a) is responsible, as Index Sponsor under the Index, for setting and reviewing the rules and procedures and the methods of calculation and adjustments, if any, related to the Index and (b) announces (directly or through an agent, including the Index Calculation Agent) the level of the Index on a regular basis for each Scheduled Index Determination Date.

**"Initial Index Level"** means 100 (namely, the Index's Closing Level on the Initial Index Determination Date).

**“Initial Index Determination Date”** means 28 June 2016.

**“Scheduled Index Determination Date”** means each day on which each of the following exchanges are scheduled to open for trading in their regular trading session: (i) the London Stock Exchange, (ii) the New York Stock Exchange, (iii) the Eurex Exchange and (iv) the Tokyo Stock Exchange.

**“Trade Date”** 28 June 2016.

22. Mandatory Amendment Event:

In the event of the occurrence of a Mandatory Amendment Event, the Issuer shall be required to pay an amount (which may be zero) as soon as practicable after the Mandatory Amendment Date, calculated per Calculation Amount, equal to the Early Contingent Payment Amount calculated as of the Accelerated Final Index Determination Date. For the avoidance of doubt, the occurrence of a Mandatory Amendment Event shall not alter the Issuer’s obligation to pay the UYU Linked Principal Amount per Calculation Amount on the Maturity Date.

The term **“Mandatory Amendment Event”** means the occurrence of any of the following events:

- (i) an Index Allocation Agreement Termination;
- (ii) the Associated Swap Transaction is terminated under the terms of the ISDA Master Agreement pursuant to which such Associated Swap Transaction was entered into as the result of the occurrence of an “Event of Default” or “Credit Event Upon Merger” or “Additional Termination Event” thereunder with respect to which the Swap Counterparty is the sole “Defaulting Party” or “Affected Party”, as applicable;
- (iii) the Associated Swap Transaction is terminated by the Swap Counterparty as a result of an Additional Disruption Event; or
- (iv) the Associated Swap Transaction is terminated under the terms of the ISDA Master Agreement pursuant to which such Associated Swap Transaction was entered into, other than under the circumstances set forth in paragraphs (ii) or (iii) above.

Upon the occurrence of a Mandatory Amendment Event:

- (i) in the event that the relevant Mandatory Amendment Event is an event described in paragraphs (i), (iii) or (iv) thereof, the Calculation Agent; or
- (ii) in the event that the Mandatory Amendment Event is an event described in paragraph (ii) thereof, the Issuer,

shall forthwith give a notice (the **“Mandatory Amendment Notice”**) to the Issuer (where applicable), the Global Agent and the Noteholders of the occurrence of a Mandatory Amendment Event and the Early Contingent Payment Amount shall be determined as set out below.

The **“Early Contingent Payment Amount”** per Calculation Amount

shall be an amount in USD, equal to the greater of (i) the value of the equity option embedded in each Note (the “**Equity Component**”) per Calculated Amount of the Notes expressed in USD, as determined by the Determining Person, and (ii) zero. For the calculation of the value of the Equity Component, the Determining Person: (i) will take into account (a) the observed Index Level as of the Accelerated Final Index Determination Date or the most recent Index Business Day preceding such date, (b) the Initial Index Level, and (c) an implied volatility equal to the Volatility Component, an implied dividend yield of 0.25% and interest rates of 0% and (ii) may take into account prevailing market prices and/or proprietary pricing models (including the cost to the Issuer of unwinding any hedging arrangements related to such embedded equity option, as determined by the Determining Person in its sole and absolute discretion) as of the Accelerated Final Index Determination Date, or where these pricing models may not yield a commercially reasonable result, such estimates as at which it may arrive in a commercially reasonable manner and the Associated Costs as of the Accelerated Final Index Determination Date

The Determining Person will make the determinations set forth in the previous paragraphs in good faith and in a commercially reasonable manner.

Where "Volatility Component" means the product of (x) 10% and (y) the Volatility Adjustment Factor (as defined in the Index Rules) as of the Accelerated Final Index Determination Date or, if such date is not an Index Business Day, the most recent Index Business Day.

In addition, the following terms shall have the following meanings:

“**Additional Disruption Event**” means each of a Change in Law, a Hedging Disruption or an Increased Cost of Hedging.

“**Accelerated Final Index Determination Date**” means in the event that the relevant Mandatory Amendment Event consists of an event set forth in:

(A) paragraph (i) of the definition of Mandatory Amendment Event, the date on which such Mandatory Amendment Event occurred, as determined by the Determining Person;

(B) paragraphs (iii) and (iv) of the definition of Mandatory Amendment Event, the date on which such Mandatory Amendment Event is effective; and

(C) paragraph (ii) of the definition of Mandatory Amendment Event, the last Business Day of the month that precedes the month in which such Mandatory Amendment Event occurs.

“**Associated Cost**” means an amount determined by the Calculation Agent in its reasonable discretion equal to the sum of (without duplication) all costs (including, without limitation, cost of funding), losses, expenses, tax and duties incurred by the Issuer in connection

with the termination and liquidation of any hedging arrangements related to the Equity Component.

**“Associated Swap Transaction”** means the swap transaction entered into in connection with the issue of the Notes between the Issuer and the Swap Counterparty and documented under the ISDA Master Agreement dated as of March 10, 2010 (as amended from time to time) between the Swap Counterparty and the Issuer (the **“ISDA Master Agreement”**).

**“Change in Law”** means that, the Calculation Agent determines in good faith that on or after the Trade Date (A) due to the adoption of or any change in any applicable law, regulation or rule (including, without limitation, any tax law), or (B) due to the promulgation of or any change in the interpretation by any court, tribunal or regulatory authority with competent jurisdiction of any applicable law, regulation, rule or order (including, without limitation, as implemented by the U.S. Commodity Futures Trading Commission or exchange or any exchange or trading facility or any action taken by a taxing authority), it is (or will be prior to the Maturity Date) contrary to such law, rule, regulation or order for the Swap Counterparty or any affiliate thereof (individually or collectively, and including their respective successors) to hold, acquire or dispose of any relevant asset it deems necessary to hedge the price risk associated with the Associated Swap Transaction (in whole or in part).

The term **“Determining Person”** means (x) in respect of a Mandatory Amendment Event that consists of a termination of the Associated Swap Transaction set forth in paragraph (ii) of the definition of Mandatory Amendment Event, the Issuer, and (y) in respect of any other Mandatory Amendment Event, the Calculation Agent.

**“Hedging Disruption”** means that the Calculation Agent determines that the Swap Counterparty or any affiliate thereof is unable, after using commercially reasonable efforts, to (A) acquire, establish, re-establish, substitute, maintain, unwind or dispose of any transaction(s) or asset(s) that it deems necessary to hedge the price risk of entering into and performing its obligations with respect to the Associated Swap Transaction, or (B) realize, recover or remit the proceeds of any such transaction(s) or asset(s).

**“Index Allocation Agent”** means the entity designated as such under the Index Allocation Agreement, initially Republica AFAP, S.A.

**“Index Allocation Agreement”**, means the agreement between the Republica AFAP, S.A. and J.P. Morgan Securities plc. relating to the Index dated as of 28 June 2016 under the terms of which the Index Allocation Agent independently provides certain selections in accordance with the terms of the Index Rules in connection with the Index Allocation Agent’s investment management activities and

strategy for itself or for certain accounts managed by it.

**“Index Allocation Agreement Termination”** means the Index Allocation Agreement is terminated for any reason.

**“Increased Cost of Hedging”** means that the Calculation Agent determines that the Swap Counterparty or any affiliate thereof would incur a materially increased (as compared with circumstances existing on the Trade Date) amount of tax, duty, expense or fee (other than brokerage commissions) to (A) acquire, establish, re-establish, substitute, maintain, unwind or dispose of any transaction(s) or asset(s) it deems necessary to hedge the price risk of entering into and performing its obligations with respect to the Associated Swap Transaction, or (B) realize, recover or remit the proceeds of any such transaction(s) or asset(s), provided that any such materially increased amount that is incurred solely due to the deterioration of the creditworthiness of the Swap Counterparty or such affiliate shall not be deemed an Increased Cost of Hedging.

**“Mandatory Amendment Date”** means either:

- (i) if the Mandatory Amendment Event consists of a termination of the Associated Swap Transaction set forth in paragraph (ii) of the definition of Mandatory Amendment Event, the 5<sup>th</sup> Business Day after the date upon which the Mandatory Amendment Event is effective; or
- (ii) if the Mandatory Amendment Event consists of any other Mandatory Amendment Event, the 10<sup>th</sup> Business Day after the date on which the Mandatory Amendment Notice (as defined above) is received or deemed received by the Issuer and Global Agent (whichever date is later).

**“Swap Counterparty”** means JPMorgan Chase Bank, National Association.

23. Early Redemption Amount  
(Condition 6(c)):

The Early Redemption Amount payable in respect of each Note, upon it becoming due and payable as provided in Condition 9, shall be determined by the Calculation Agent taking into account the value of the zero coupon portion thereof and the value of the Equity Component thereof (except where the Notes become due and payable, as provided in Condition 9 after the occurrence of a Mandatory Amendment Event). The value of the zero-coupon component of the Notes will be priced by taking into account prevailing interest rates or amortization yields of zero coupon securities denominated in UYU having a similar term to that of the Notes (but disregarding for such purposes the Supplemental Payment Amount component of the Notes) as well as the prevailing UYU/USD exchange rate. The value of the Equity Component of the Notes will be determined based on the methodology specified under the definition of “Early Contingent Payment Amount” in Term 22, except that the residual value of the Equity Component shall be based on relevant prevailing rates as of the last Business Day of the month that

precedes the month in which the relevant default occurs.

## **GENERAL PROVISIONS APPLICABLE TO THE NOTES**

24. Form of Notes (Condition 1(a)): Registered Notes:  
Global Registered Certificate available on Issue Date
25. New Global Note: No
26. Financial Centre(s) or other special provisions relating to payment dates (Condition 7(h)): London, New York and Montevideo
27. Governing law (Condition 14): English
28. Other final terms: Disclaimer of Liabilities and Representations by Prospective Investors of the Notes:
- (i) A description of the Index is attached to these Final Terms as Schedule 1. A full copy of the Index Rules is attached to these Final Terms as Schedule 2. A description of the Component Underlyings of the Index is set forth in Schedule 3. All information contained in these Final Terms as well as all information set forth in Schedules 1, 2 and 3, regarding the Index, its make-up, method of calculation and changes in its components, is derived from, and based solely upon, information provided by the Index Sponsor and is for informational purposes only and should not be relied upon by the Noteholder or any prospective investor. As such, neither the Issuer nor the Global Agent assumes any responsibility for the accuracy or completeness of such information, or for such information being up to date. In addition, neither Issuer nor the Global Agent accepts responsibility for the calculation or other maintenance of, or any adjustments to, the Index. Neither IBRD nor the Global Agent will have any responsibility for errors or omissions in calculating or disseminating information regarding the Index or as to modifications, adjustments or calculations by the Index Sponsor, Index Calculation Agent or Index Allocation Agent in order to arrive at the value of the Index. The most recent version of the Index Rules will be available upon request from the Index Sponsor.
  - (ii) Neither IBRD nor the Global Agent will have any responsibility for the contents of the Index Allocation Agreement or for the choices and allocations made by the Index Allocation Agent thereunder.
  - (iii) By investing in the Notes each investor of the Notes represents that:
    - (a) it has made its own independent decision to invest in the Notes based upon its own judgment and upon advice from such advisers as it has deemed necessary. It is not relying on any communication (written or oral) of the Issuer, the Index Sponsor, the Calculation Agent, or the Dealer as investment

advice or as a recommendation to invest in the Notes, it being understood that information and explanations related to the terms and conditions of the Notes shall not be considered to be investment advice or a recommendation to invest in the Notes. No communication (written or oral) received from the Issuer, the Calculation Agent, the Index Sponsor or the Dealer shall be deemed to be an assurance or guarantee as to the expected results of the investment in the Notes;

- (b) it is capable of assessing the merits of and understanding (on its own behalf or through independent professional advice), and understands and accepts the terms and conditions and the risks of the investment in the Notes, including but not limited to the risks set out in “Additional Risk Factors” above (which are not, and do not intend to be, exhaustive). It is also capable of assuming, and assumes, the risks of the investment in the Notes;
- (c) it has fully considered the market risk associated with an investment linked to the Index. Each Noteholder understands that none of the Issuer, the Calculation Agent, the Dealer, the Index Sponsor or the Index Calculation Agent purports to be a source of information on market risks with respect to the Index. Each Noteholder confirms that it has read and understood the information relating to the Index contained in the Schedules to these Final Terms, which have been provided for information purposes only and are not to be used or reproduced for any other purpose or used or considered as any advice or recommendation with respect to such Index;
- (d) it understands and acknowledges that the performance of the Index is based on the periodic selections of the Index Allocation Agent and hence the Notes are intended to be purchased and held by the Index Allocation Agent and by discretionary accounts managed by the Index Allocation Agent only; and
- (e) it understands that the information relating to the Index contained in the Schedules to these Final Terms are only up to date as of the date of these Final Terms, and that such information in the Index Rules may be amended from time to time.

**DISTRIBUTION**

- 29. (i) If syndicated, names of Managers and underwriting commitments: Not Applicable
- (ii) Stabilizing Manager(s) (if any): Not Applicable
- 30. If non-syndicated, name of Dealer: J.P. Morgan Securities plc



## **OPERATIONAL INFORMATION**

- |   |                               |
|---|-------------------------------|
| 31. ISIN Code:  | XS1441225858                  |
| 32. Common Code:  | 144122585                     |
| 33. Any clearing system(s) other than Euroclear Bank S.A./N.V., Clearstream Banking, <i>société anonyme</i> and The Depository Trust Company and the relevant identification number(s): | Not Applicable                |
| 34. Delivery:   | Delivery against payment      |
| 35. Registrar and Transfer Agent (if any):  | Citibank, N.A., London Branch |
| 36. Additional Paying Agent(s) (if any):  | Not Applicable                |
| 37. Intended to be held in a manner which would allow Eurosystem eligibility:   | No                            |

## **GENERAL INFORMATION**

IBRD's most recent Information Statement was issued on September 17, 2015.

## **CONFLICT OF INTEREST**

J.P. Morgan Securities plc will serve as the Index Sponsor of the Index. As a result, the determinations made by J.P. Morgan Securities plc in its discretion as Index Sponsor may affect the level of the Index and, in turn, amounts payable under the Notes. J.P. Morgan Securities plc and certain of its affiliates are also the sponsors or calculation agents under certain indices included as potential components of the basket referenced by the Index. In all such cases, neither J.P. Morgan plc nor any of its affiliates has any obligation to consider the Noteholders' interests in taking any action or making any determination that might adversely affect the level of the Index or the Notes.

JPMorgan Chase Bank, N.A., ("**JPMorgan**"), the parent company of J.P. Morgan Securities plc, will be Calculation Agent under the Notes and will also be IBRD's counterparty in a related swap transaction entered into by IBRD in order to hedge its obligations under the Notes. The existence of such multiple roles and responsibilities for JPMorgan creates possible conflicts of interest. For example, the amounts payable by JPMorgan to IBRD under the related swap transaction are expected, as of the Issue Date, to be calculated on the same basis as the amounts payable by IBRD under the Notes. As a result, the determinations made by JPMorgan in its discretion as Calculation Agent for the Notes may affect the amounts payable by JPMorgan under the related swap transaction, and, in making such determinations, JPMorgan may have economic interests adverse to those of the Noteholders. The Noteholder understands that although IBRD will enter into the related swap transaction with JPMorgan as swap counterparty in order to hedge its obligations under the Notes,

IBRD's rights and obligations under the related swap transaction will be independent of its rights and obligations under the Notes, and Noteholders will have no interest in the related swap transaction or any payment to which IBRD may be entitled thereunder.

***LISTING APPLICATION***

These Final Terms comprise the final terms required for the admission to the Official List of the Luxembourg Stock Exchange and to trading on the Luxembourg Stock Exchange's regulated market of the Notes described herein issued pursuant to the Global Debt Issuance Facility of International Bank for Reconstruction and Development.

***RESPONSIBILITY***

IBRD accepts responsibility for the information contained in these Final Terms.

Signed on behalf of IBRD:

By:

.....

Name:

Title:

Duly authorized

## SCHEDULE 1

### INDEX SUMMARY DESCRIPTION - REPUBLICA AFAP DYNAMIC INDEX (THIRD SERIES)

*Set out below is a summary description of Republica AFAP Dynamic Index (Third Series) (the “Index”). This summary description is by its nature limited and an overview for informational purposes only and should not be relied upon by the Noteholder or any prospective investor in the Notes. This summary description is qualified in all respects by reference to the full text of The Republica AFAP Dynamic Index (Third Series) Rules which are published by the Index Sponsor and available from the Index Sponsor upon request (the “Index Rules”) for informational purposes only. The Index Rules, as published by the Index Sponsor from time to time, and not this summary description, will govern the operation and calculation of the Index. Potential purchasers of the Notes are urged to read carefully the Index Rules in their entirety. All disclosure contained in this document or referred to in this document, regarding the Index, including, without limitation, the Index Rules, its make-up, method of calculation and changes in its components, is derived from, and based solely upon, information provided by the Index Sponsor. As such, the Issuer does not assume any responsibility for the accuracy or completeness of such information or any duty to update such information. In addition, the Issuer accepts no responsibility for the calculation or other maintenance of, or any adjustments to, the Index.*

*Capitalised terms used and not defined in this Schedule 1 or in the Final Terms have the meanings given to them in the Index Rules.*

#### **The Index; Constitution and Governance**

The Republica AFAP Dynamic Index (Third Series) (the “**Index**”) was developed by J.P. Morgan Securities plc, which acts as Index Sponsor for the Index (in such capacity the “**Index Sponsor**”). The Index is rules-based, meaning that the operation and calculation of the Index is governed by the terms of the Index Rules. Under the Index Rules, various responsibilities are accorded to the Index Sponsor, the Index Calculation Agent and the Index Allocation Agent.

The Index is the intellectual property of J.P. Morgan Securities plc (the “**Index Sponsor**”), and J.P. Morgan Securities plc reserves all rights with respect to its ownership of the Index. The Issuer has been granted a license for the use of the Index for the purposes of the Notes.

The Index Sponsor has certain key responsibilities and rights with respect to the Index. These responsibilities and rights include:

- documentation of the Index Rules,
- certain rights to make determinations regarding the occurrence and continuation of Market Disruption Events (as defined below) with respect to Component Underlyings potentially included in the synthetic portfolio tracked by the Index and Component Underlying Adjustment Events;
- determination of whether rebalancing requests, including Proposed Synthetic Allocations, are timely submitted and comply with the Allocation Restrictions, and

may thus be implemented in connection with requested Index component rebalancings;

- determination of whether proposed additional Component Underlyings and proposed Component Underlying substitutions comply with the Index Rules as they relate to Component Underlying additions and substitutions, respectively;
- the right to terminate and replace the Index Calculation Agent;
- the right to amend the Index Rules in accordance with the amendment provisions of the Index Rules; and
- the right to remove (and the ability to replace) Component Underlyings in the event of the occurrence of a Component Continuing Disruption Event, material change or change in law affecting a Component Underlying.

The Index Sponsor is obliged to act in good faith and in a commercially reasonable manner in making determinations under the Index Rules.

Solactive A.G. will be the initial calculation agent for the Index (the “**Index Calculation Agent**”). The Rules require the Index Calculation Agent to calculate the Index Level in respect of each Index Calculation Day, as well as to determine (subject to prior agreement with the Index Sponsor) if a Market Disruption Event or a Disrupted Day has occurred or is continuing, and the related consequences and adjustments in accordance with the Rules. The Index Sponsor may terminate and replace the Index Calculation Agent.

The Index Calculation Agent is obliged to act in good faith and in a commercially reasonable manner in making determinations under the Index Rules.

Republica AFAP, S.A. shall act as the Index Allocation Agent (in such capacity, the “**Index Allocation Agent**”). The Index Allocation Agent will act under an agreement with the Index Sponsor pursuant to which the Index Allocation Agent has the right and obligation to make choices with respect to the composition of the Index.

### **The Index is Notional; Excess Return-Based; and Exposure Modulated**

*Notional Concept.* The Index is a notional, dynamic basket that tracks the performance, on an "excess return" basis, of a synthetic portfolio consisting, initially, of 59 exchange traded funds (“**ETFs**”) and futures trackers, as well as a cash index (each, a “**Component Underlying**” and, collectively, the “**Component Underlyings**”). The Component Underlyings together span a diverse range of asset classes and geographic region exposures. Each of the Component Underlyings as of the date hereof is identified in Schedule 3.

The universe of Component Underlyings is subject to additions, substitutions and removals as described below.

The Index is described as “notional” and as tracking a “synthetic” portfolio because no actual shares, positions or other assets are held for the benefit of the Noteholder in respect of the Index. Rather, calculations are made based on a hypothetical investment in the relevant Component Underlyings.

*Excess Return-Based.* The Index employs an “excess return” mechanism within its calculation formula for each Component Underlying that represents a hypothetical “funded investment”. For each such “funded” Component Underlying -- generally exchange traded funds -- this mechanism acts to subtract an assumed cash return from the Component Underlying’s return to derive a cash-excess figure. To the extent that a Component Underlying is not a foreign currency or bond futures tracker, it is associated with an assumed cash component (the JPMorgan Cash Index USD 3 Month, or the “**Cash Component**”), which will be used as the basis for the subtraction. Component Underlyings that are futures trackers are not subject to a subtraction to arrive at an excess return figure.

*Exposure Modulation.* The Index is subject to a “volatility review” feature. This feature has the effect of increasing or reducing the Index’s day-to-day exposure to the synthetic portfolio. On each Index Calculation Day, the Index Calculation Agent will determine the Index’s “Exposure” to the synthetic portfolio. The Exposure will range from 0% to 150%, modulated to align the formula-recognized volatility of the selected synthetic portfolio with the target volatility for the Index of 10%. This volatility review mechanism is implemented by means of a formula based on the assumption that the recent realized volatility is a good indicator of current and future volatility, however, future volatility could always diverge from observed historical volatility, and thus the Index's volatility could exceed 10%, even when the Exposure function has the effect of reducing the extent to which the Index tracks the synthetic portfolio.

The Index’s calculation formula employs an exposure limitation formula containing two key volatility control mechanisms: one that reviews the simulated historical volatility of the synthetic portfolio tracked by the Index, and one that reviews the actual observed volatility of the Index itself.

The first factor – corresponding to the first stage in the volatility control mechanism - modulates daily the Index’s exposure to the synthetic portfolio of Component Underlyings selected by the Index Allocation Agent based on simulated historical volatility of the synthetic portfolio tracked by the Index. This first stage factor could range from 0 to 150% based on the Index formula's review of simulated volatility experienced by the weighted components of the synthetic portfolio, relative to the 10% volatility target.

The Index calculation formula also contains a second factor – corresponding to the second stage volatility control mechanism - which daily monitors the realized volatility of the Index itself (i.e., without regard to the simulated observed volatility of the particular synthetic portfolio then tracked by the Index) over the period since the Index Base Date to such day. This mechanism works by comparing the rate at which the Index is realizing volatility to the rate at which it would be expected to realize volatility were it delivering the exact target volatility of 10%. This second stage adjustment term is called the ‘volatility adjustment factor’ and is capped at 100%.

This second stage volatility control function could limit the Index's exposure to the synthetic portfolio slightly or substantially. For example, if the Index experienced severe and consistent volatility above the target rate early in its life, the second stage limitation would reduce the exposure of the Index to the synthetic portfolio for an extended time, potentially even for the remaining term of the Notes. Note that this second mechanism (unlike the first) will not serve to increase volatility if the realized volatility of the Index is lower than the target volatility, it can serve only to reduce the Index's exposure to the synthetic portfolio. However whether or not this second factor does in fact modulate the volatility of the Index will depend on the realized volatility of the Index over the entire period since the Index Base Date, there may be periods in which the realized volatility of the Index

substantially exceeds its target without the second stage factor triggering an exposure reduction. For example, if the Index experienced volatility consistently below the target rate early in its life, the second stage limitation would not serve to reduce the exposure of the Index to the synthetic portfolio later in the term of the Notes, even if the Index was then realizing an interval of volatility above its target, so long as the longitudinal experienced volatility of the Index did not exceed the 10% target over its full term.

Due to the exposure constraints describe above, the selections of the Index Allocation Agent may not be fully reflected by the Index's performance. Substantial or complete allocation to the cash component could occur for an extended period and/or for multiple intervals.

The level of the Index (the "**Index Level**") will be calculated by the Calculation Agent on each Index Calculation Day, based on the weighted excess returns of the Component Underlyings contained in the synthetic portfolio, multiplied by the Exposure fraction, and reduced by the Adjustment (as described below).

### **Deductions to the Index Level through Adjustment Costs and Subtractions from Exchange-Traded Fund Distributions**

The Index Level will be reduced each day by application of an "Adjustment Cost" subtraction included in the calculation formula. This Adjustment Cost will be based on (i) the change in exposure to the Component Underlyings included in the synthetic portfolio tracked by the Index on the relevant Index Calculation Day; (ii) the Weight assigned to each such Component Underlying within the synthetic portfolio; (iii) the Carry Cost and Transaction Cost associated with that Component Underlying; and (iv) the Index Level. The Adjustment will be calculated and deducted on a daily basis from the Index Level. The Index Rules impose a Carry Cost on each Component Underlying of either 0.75% (for ETFs) or 0.35% (for government bond or currency futures trackers). The Index Rules also deduct a 0.02% Transaction Cost for the removal or inclusion of each Component Underlying (other than amounts deemed allocated to cash). The Index Return will be further reduced because the Index calculation formula takes into account for synthetic reinvestment 70%, rather than 100%, of the value of distributions made by exchange-traded funds held in the synthetic portfolio tracked by the Index.

### **The Index Allocation Agent and Rebalancings**

The Index Allocation Agent will select from time to time, from the list of Component Underlyings, such Component Underlyings as it wishes to comprise the synthetic basket tracked by the Index, as well as the relative weights ("**Weights**") within the synthetic basket of the selected Component Underlyings. The Index Allocation Agent will select the initial Component Underlyings. The Index Allocation Agent will from time to time add and remove Component Underlyings from the list of potential selections. The Index Allocation Agent will from time to time adjust proposed weights on a Rebalancing Date. As a result, the Index Allocation Agent's selections will be the most important variable in determining the performance of the Index. The Index Allocation Agent will act with complete discretion, subject to the Allocation Restrictions contained in the Index Rules. The Notes are intended to be held only by the Index Allocation Agent and by discretionary accounts managed by the Index Allocation Agent, and by no other person.

Subject to the restrictions described below, the timing and number of rebalancings will be in the sole discretion of the Index Allocation Agent, subject to constraints on the timing and number of rebalancings set forth in the Index Rules. The Index Allocation Agent may, on any NYSE Business Day, trigger a rebalancing by providing its Proposed Synthetic Allocations (i.e., the composition and relative weights of Component Underlyings to comprise the entire newly reformulated synthetic portfolio) to the Index Sponsor and Index Calculation Agent. Proposed Synthetic Allocations received prior to 2 p.m., New York time, on a NYSE Business Day will be deemed to be provided on that NYSE Business Day, and Proposed Synthetic Allocations received at or after 2 p.m. on a NYSE Business Day will be deemed to be received on the next following NYSE Business Day. The day that Proposed Synthetic Allocations are deemed received by the Index Sponsor and Index Calculation Agent is referred to as the "**Rebalancing Notification Date**".

If the Index Sponsor determines that the Proposed Synthetic Allocations satisfy the Allocation Restrictions, then the synthetic portfolio will be rebalanced as on the associated Rebalancing Date. If the Rebalancing Notification Date is a Rebalance Eligible Day, the Rebalancing Notification Date will be the "Rebalancing Date". If the Rebalancing Notification Date is not a Rebalance Eligible Day, the Rebalance Eligible Day immediately following such Rebalancing Notification Date will be the "Rebalancing Date".

The term "**Rebalance Eligible Day**" means a day that is both (x) an Index Calculation Day and (y) a Component Valuation Day (as defined in the Index Rules) for each Component Underlying with a non-zero weight in the Proposed Synthetic Allocations. In other words, a Rebalance Eligible Day must be a "Component Valuation Day" (i.e., a non-disrupted, or "good" trading day) for any Component Underlying having a non-zero weight in the then-current synthetic portfolio or in the synthetic portfolio as proposed per the rebalancing request. A Component Valuation Day generally means a day on which it is possible to trade a given Component Underlying at the closing price of the primary market for such Component Underlying.

So long as the Proposed Synthetic Allocations adhere to the Allocation Restrictions (described below), as confirmed by the Index Sponsor, the Index shall be rebalanced in a process that could take one or multiple days, commencing on the relevant Rebalancing Date, with each Component Underlying being deemed purchased or sold, as applicable, in accordance with the rebalancing request, as of the next good closing price for that Component Underlying in its relevant primary market after the time at which valid Proposed Synthetic Allocations are received.

### **The Allocation Restrictions**

The following restrictions (the "**Allocation Restrictions**") will apply to the Weight that the Index Allocation Agent may allocate to each Component Underlying on a Rebalancing Date:

- Each Component Underlying, other than an ETF Component, may have a Weight no greater than the maximum specified in the chart set forth under "The Component Underlyings of the Index" below (the "**Component Underlyings Table**");
- Each Component Underlying that is an ETF Component, may have a Weight that does not exceed the *lesser* of (x) the maximum specified in the Component Underlyings Table, and (y) the ADTV Weight Limit applicable to that Component (See "-- ADTV Weight Limits", below);



- The Weight of each Component Underlying, other than an FX G10 Tracker or Government Bond Tracker may not be less than zero;
- Each Component Underlying that is an FX G10 Tracker, may have (x) a Same Way Directional Linkage (as defined in the Index Rules) and a Weight equal to or greater than zero percent (that is, 0%) or (y) an Opposite Way Directional Linkage (as defined in the Index Rules) and a Weight equal to or greater than minus fifty percent (-50%) and less than zero percent (that is, 0%);
- each Component Underlying that is in the Weight Category “Government Bond Tracker” may have (x) a Same Way Directional Linkage and a Specified Weight equal to or greater than zero percent (that is, 0%) or (y) an Opposite Way Directional Linkage and a Specified Weight equal to or greater than minus seventy-five percent (-75%) and less than zero percent (that is, 0%);
- the sum of the Specified Weights of all Component Underlyings in a single Weight Category shall be no greater than the “Maximum Weight” indicated for such Weight Category in the Weight Category Restrictions Table below;
- The sum of the absolute value of the Weights of each of the Component Underlyings in a given Weight Category shall be no greater than the Gross Maximum Weight indicated for such Weight Category under "Weight Category Limits", below;
- the sum of the Specified Weights of all Component Underlyings in a single Weight Category (other than the “FX G10 Tracker” and “Government Bond Tracker” Weight Categories) shall be equal to or greater than zero percent (that is, 0%);
- the sum of the Specified Weights of all Component Underlyings within the Weight Category "FX G10 Tracker", and the sum of the Specified Weights in the Weight Category “Government Bond Tracker” shall be equal to or greater than minus one hundred percent (that is, -100%) and less than one hundred percent (that is, +100%); and
- In respect of all the Component Underlyings, the sum of all the absolute values of the weights of all the Component Underlyings shall be equal to 100%.

### **ADTV Weight Limits**

The Allocation Restrictions limit exposure upon a rebalancing to the Component Underlyings that are ETFs based on observed Average Daily Trading Volume (ADTV). Average Daily Trading Volume for an ETF will be determined as of the most recent Index Calculation Day, by taking the product of (a) the average volume of trading in the shares of such Exchange Traded Fund on all U.S. exchanges over the preceding three-month period prior to that on that Index Calculation Day and (b) the closing share price of the ETF on that Index Calculation Day.

The relevant ADTV-based weight limits applicable to Component Underlyings that are ETFs are set forth in the table below.

<b>Average Daily Trading Volume (ADTV)</b>	<b>Weight Limit</b>
Less than USD 5 million	0%
Greater than USD 5 million and less than USD 15 million	25%

Greater than USD 15 million and less than USD 50 million	50%
Greater than USD 50 million and less than USD 100 million	75%
Equal to or greater than USD 100 million	100%

### Weight Category Limits

The Allocation Restrictions limit concentration exposure upon a rebalancing to Component Underlyings included in the same Weight Category. The Weight Category concentration limits are set forth in the table below.

Weight Category	Maximum Weight	Gross Maximum Weight*
DM Equity	100%	100%
EM Equity	100%	100%
DM Bond	100%	100%
Commodity	50%	50%
FX G10 Tracker	50%	100%
Government Bond Tracker	100%	100%

\* *i.e.*, the sum of the absolute value of the weight of each Component Underlying within the specified Weight Category.

The number and timing of rebalancings will be driven by the discretionary decisions of the Index Allocation Agent, subject to the restrictions on the number and timing of rebalancings set forth in the Index Rules.

Note that the Index's exposure to the synthetic portfolio will be reduced or increased relative to 100%, potentially, by the Exposure mechanisms described above, as the Exposure mechanism is applied on a day-to-day basis, even though a selected portfolio complies with the Allocation Restrictions.

### Component Underlyings Other than Government Bond Trackers: Economically "Long" Positions

The Allocations Restrictions effectively limit the Index Allocation Agent to selections of economically "long" positions in the Index's Component Underlyings, other than the Component Underlyings classified in the weight category of "Government Bond Tracker". The synthetic portfolio may not contain a short position against an exchange traded fund. The synthetic portfolio may maintain a negative weight of up to -50% with respect to a foreign exchange tracker index. However, the foreign exchange tracker indices included as potential Component Underlyings can be viewed as positions in the potential appreciation of specified non-USD currencies against the U.S. dollar. A "negative" weight in such tracker indices can be viewed as a position in the specified currency's depreciation in USD terms.

### Index Rules Allow for Short Positions against Government Bond Trackers

The Allocations Restrictions permit the Index Allocation Agent to allocate negative (*i.e.*, "short") weights to each Component Underlying that is in the Weight Category "Government Bond Tracker." Short allocations to a single Government Bond Tracker may be equal up to -75% and short allocations to Government Bond Trackers, collectively, can be up to -100%. Short positions are intended to perform inversely to asset values, meaning that an increase in the value of a reference asset will lead to a loss in a short position, and vice versa. Because there is no theoretical limit to the value of a given asset, potential losses on a short position are theoretically infinite.

### **Limitations on Number and Timing of Rebalancings**

The Index Allocation Agent will be able to trigger synthetic portfolio rebalancings a maximum of 35 times during each annual period (as measured from the Index Base Date of 28 June 2016 to the anniversary thereof, and each subsequent annual period). In addition the Index Allocation Agent may not trigger a synthetic portfolio rebalancing prior to the second Index Calculation Day immediately following the most recent Rebalancing Date.

### **The Component Underlyings of the Index**

The initial Component Underlyings of the Index are set out in the Table below. The Table also contains the Bloomberg ticker for each Component Underlying for ease of identification, and identifies the Component Sponsor and Weight Category of each initial Component Underlying. The initial Component Underlyings Table, attached as Annex 1 to the Index Rules has further details with respect to each Component Underlying.

As described below, the Index Allocation Agent will have the right to add and to substitute Component Underlyings, subject to the restrictions set forth in the Index Rules. The composition of the universe of Component Underlyings will also be subject to the occurrence of certain extraordinary events the occurrence of which permit the Index Sponsor to remove and replace Component Underlyings.

### **Initial Component Underlyings**

	<b>Component Underlying</b>	<b>Component Sponsor</b>	<b>Bloomberg Code</b>	<b>Weight Category</b>
1	SPDR S&P500 ETF Trust	State Street Bank & Trust Company	SPY	DM Equity
2	iShares Russell 2000 ETF	BlackRock Fund Advisors	IWM	DM Equity
3	PowerShares QQQ Trust Series 1	Invesco Powershares	QQQ	DM Equity
4	SPDR EURO STOXX 50 ETF	State Street Bank & Trust Company	FEZ	DM Equity
5	iShares MSCI Japan ETF	BlackRock Fund Advisors	EWJ	DM Equity
6	iShares MSCI United Kingdom ETF	BlackRock Fund Advisors	EWU	DM Equity

7	iShares MSCI Germany ETF	BlackRock Fund Advisors	EWG	DM Equity
8	iShares MSCI France ETF	BlackRock Fund Advisors	EWQ	DM Equity
9	iShares MSCI Switzerland Capped ETF	BlackRock Fund Advisors	EWL	DM Equity
10	iShares MSCI Spain Capped ETF	BlackRock Fund Advisors	EWP	DM Equity
11	iShares MSCI Italy Capped ETF	BlackRock Fund Advisors	EWI	DM Equity
12	iShares MSCI Sweden ETF	BlackRock Fund Advisors	EWD	DM Equity
13	iShares MSCI Turkey ETF	BlackRock Fund Advisors	TUR	EM Equity
14	iShares MSCI Canada ETF	BlackRock Fund Advisors	EWC	DM Equity
15	iShares MSCI Australia ETF	BlackRock Fund Advisors	EWA	DM Equity
16	iShares MSCI India ETF	BlackRock Fund Advisors	INDA	EM Equity
17	VanEck Vectors Russia ETF	Van Eck Associates Corporation	RSX	EM Equity
18	iShares China Large-Cap ETF	BlackRock Fund Advisors	FXI	EM Equity
19	iShares MSCI South Africa ETF	BlackRock Fund Advisors	EZA	EM Equity
20	iShares MSCI South Korea Capped ETF	BlackRock Fund Advisors	EWY	EM Equity
21	iShares MSCI Malaysia ETF	BlackRock Fund Advisors	EWM	EM Equity
22	iShares MSCI Thailand Capped ETF	BlackRock Fund Advisors	THD	EM Equity
23	iShares MSCI Singapore ETF	BlackRock Fund Advisors	EWS	EM Equity
24	iShares MSCI Taiwan ETF	BlackRock Fund Advisors	EWT	EM Equity
25	iShares MSCI Mexico Capped ETF	BlackRock Fund Advisors	EWW	EM Equity
26	iShares MSCI Brazil Capped ETF	BlackRock Fund Advisors	EWZ	EM Equity
27	iShares MSCI Chile Capped ETF	BlackRock Fund Advisors	ECH	EM Equity
28	iShares MSCI All Peru Capped ETF	BlackRock Fund Advisors	EPU	EM Equity
29	WisdomTree Europe Hedged Equity Fund	WisdomTree Asset Management, Inc.	HEDJ	DM Equity
30	WisdomTree Japan Hedged	WisdomTree Asset	DXJ	DM Equity

	Equity Fund	Management, Inc.		
31	iShares Currency Hedged MSCI Eurozone ETF	BlackRock Fund Advisors	HEZU	DM Equity
32	iShares Currency Hedged MSCI Germany ETF	BlackRock Fund Advisors	HEWG	DM Equity
33	iShares 1-3 Year Treasury Bond ETF	BlackRock Fund Advisors	SHY	DM Bond
34	iShares 7-10 Year Treasury Bond ETF	BlackRock Fund Advisors	IEF	DM Bond
35	iShares 20+ Year Treasury Bond ETF	BlackRock Fund Advisors	TLT	DM Bond
36	iShares TIPS Bond ETF	BlackRock Fund Advisors	TIP	DM Bond
37	iShares iBoxx \$ Investment Grade Corporate Bond ETF	BlackRock Fund Advisors	LQD	DM Bond
38	iShares iBoxx \$ High Yield Corporate Bond ETF	BlackRock Fund Advisors	HYG	DM Bond
39	SPDR Barclays International Treasury Bond ETF	State Street Bank & Trust Company	BWX	DM Bond
40	SPDR Barclays Short Term International Treasury Bond ETF	State Street Bank & Trust Company	BWZ	DM Bond
41	J.P. Morgan German Long Bond Futures Tracker Index (USD)	J.P. Morgan	JFBERXUS	Government Bond Tracker
42	J.P. Morgan German Short Bond Futures Tracker Index (USD)	J.P. Morgan	JFBEDUUS	Government Bond Tracker
43	J.P. Morgan Japanese Long Bond Futures Tracker Index (USD)	J.P. Morgan	J10EUSJP	Government Bond Tracker
44	J.P. Morgan U.K. Long Bond Futures Tracker Index (USD)	J.P. Morgan	JFBG10US	Government Bond Tracker
45	The J.P. Morgan US Treasury Note Futures Tracker	J.P. Morgan	RFJPUSBE	Government Bond Tracker
46	The J.P. Morgan 2-Year US Treasury notes Futures Tracker	J.P. Morgan	FTJPUS2E	Government Bond Tracker
47	J.P. Morgan 30-Year US Treasury bond Futures Tracker	J.P. Morgan	FTJ MUTBE	Government Bond

	(net)			Tracker
48	iShares Gold Trust	BlackRock Fund Advisors	IAU	Commodity
49	iShares Silver Trust	BlackRock Fund Advisors	SLV	Commodity
50	J.P. Morgan AUD FX Tracker Index	J.P. Morgan	JPFCTAUD	FX G10 Tracker
51	J.P. Morgan NZD FX Tracker Index	J.P. Morgan	JPFCTNZD	FX G10 Tracker
52	J.P. Morgan EUR FX Tracker Index	J.P. Morgan	JPFCTEUR	FX G10 Tracker
53	J.P. Morgan GBP FX Tracker Index	J.P. Morgan	JPFCTGBP	FX G10 Tracker
54	J.P. Morgan JPY FX Tracker Index	J.P. Morgan	JPFCTJPY	FX G10 Tracker
55	J.P. Morgan CAD FX Tracker Index	J.P. Morgan	JPFCTCAD	FX G10 Tracker
56	J.P. Morgan CHF FX Tracker Index	J.P. Morgan	JPFCTCHF	FX G10 Tracker
57	J.P. Morgan NOK FX Tracker Index	J.P. Morgan	JPFCTNOK	FX G10 Tracker
58	J.P. Morgan SEK FX Tracker Index	J.P. Morgan	JPFCTSEK	FX G10 Tracker
59	J.P. MORGAN CASH INDEX USD 3 MONTH	J.P. Morgan	JPCAUS3M	Cash

### **Additions and Substitutions to the Universe of Component Underlyings**

Under the circumstances and subject to the restrictions described below, the Index Allocation Agent may make additions and substitutions with respect to the universe of Component Underlyings that may be included in the basket tracked by the Index. The Index Sponsor will maintain and revise the official list of Component Underlyings and distribute the same to the Index Allocation Agent and Index Calculation Agent.

### **Index Allocation Agent May Add Additional ETFs as Component Underlyings**

The Index Allocation Agent may, in its discretion, on any NYSE Business Day (as defined in the Index Rules) following the Index Base Date, deliver an Addition Request to the Index Sponsor and the Index Calculation Agent to propose that an additional ETF be added to the universe of Component Underlyings (a “**Proposed Component Underlying**”). An Addition Request received by the Index Allocation Agent prior to 2:00 p.m., New York time, on a NYSE Business Day, shall be deemed received on such NYSE Business Day. An Addition Request received by the Index Allocation Agent

at or after 2:00 p.m., New York time, on a NYSE Business Day (or at any time on any date that is not a NYSE Business Day), shall be deemed received by the Index Allocation Agent on the next NYSE Business Day. The NYSE Business Day on which the Addition Request is deemed to be received is referred to as the "**Addition Request Date**".

The Index Sponsor shall review each Addition Request to determine whether the Proposed Component Underlying is a Qualified Additional ETF. On or before the fifth NYSE Business Day following the Addition Request Date (the "**Proposed Addition Determination Date**"), the Index Sponsor shall notify the Index Allocation Agent and the Index Calculation Agent of its determination regarding whether the Proposed Component Underlying is a Qualified Additional ETF. If the Index Sponsor determines that the Proposed Component Underlying is a Qualified Additional ETF, then the Proposed Component Underlying shall be a Component Underlying with effect as of the Index Calculation Day that is ten (10) NYSE Business Days after the Addition Request Date.

An ETF will be a Qualified Additional ETF if the ETF:

- (i) meets the definition of "Exchange Traded Fund" included in the Index Rules;
- (ii) is an Index Tracker ETF;
- (iii) the Reference Index with respect to such Exchange Traded Fund is a Single Country Market Cap Index;
- (iv) the investment adviser of such Exchange Traded Fund is a Designated ETF Sponsor;
- (v) has an ETF Initial Listing Date (as defined in the Index Rules) that falls at least two calendar years prior to such Proposed Addition Determination Date;
- (vi) meets all of the Qualified Additional ETF Trading Criteria; and
- (vii) no ETF Extraordinary Event has occurred or is continuing in respect of such Exchange Traded Fund in the 24-month period ending on the Addition Request Date or Substitution Request Date, as applicable.

Where:

"**Designated ETF Sponsor**" means each of the following (including their respective successors in interest and affiliates under common control): State Street Bank & Trust Company; BlackRock Fund Advisors; WisdomTree Asset Management, Inc.; Invesco PowerShares Capital Management LLC; and The Vanguard Group, Inc.

"**Index Tracker ETF**" means an Exchange Traded Fund, the publicly announced investment strategy of which is to generally track the performance of an unleveraged long investment in the Reference Index with respect to such Exchange Traded Fund by means of a passive sampling or passive replication investment strategy.

"**Reference Index**" means with respect to an Exchange Traded Fund, the index tracked by such Exchange Traded Fund, as announced by such Exchange Traded Fund.

"**Single Country Market Cap Index**" means an index (i) that is intended to track the performance of common equities focused in a single country (the "**Reference Country**"), (ii) the name of which includes the name of the Reference Country; (iii) the Reference Country of which is not named in the Component Underlyings Table, as amended from time to time, under

the column titled "Country Focus"; (iv) is calculated on a market capitalization basis (i.e., not on a price-weighted or equal-weighted basis, but which may employ generally accepted variations on market capitalization measures, including, without limitation, limiting recognized market capitalization by free float or concentration caps); (v) contains not less than 20 issuers. For the avoidance of doubt, the term "performance of common equities" in clause of (i) of the preceding sentence means the performance of an unleveraged "long" investment in such equities.

And where:

**"Qualified Additional ETF Trading Criteria"** means, with respect to any Exchange Traded Fund:

- (i) an Average Daily Trading Volume (as defined in the Index Rules) of not less than USD 10,000,000;
- (ii) a Market Capitalization (as defined in the Index Rules) of not less than USD250,000,000; and
- (iii) an Observed Volatility (as defined in the Index Rules) equal to or less than 40%.

#### **Index Allocation Agent May Substitute Component Underlyings**

The Index Allocation Agent may, on any NYSE Business Day following the Index Base Date, deliver a Substitution Request to the Index Sponsor and Index Calculation Agent to request that a current ETF Component (the **"Proposed Removed Component"**) be replaced with a substitute ETF (the **"Proposed Substitute"**) and such proposed removal and replacement, the **"Proposed Substitution"**).

A Substitution Request received by the Index Allocation Agent prior to 2:00 p.m., New York time, on a NYSE Business Day, shall be deemed received on such NYSE Business Day. A Substitution Request received by the Index Allocation Agent at or after 2:00 p.m., New York time, on a NYSE Business Day (or at any time on any date that is not a NYSE Business Day), shall be deemed received by the Index Allocation Agent on the next NYSE Business Day. The NYSE Business Day on which the Substitution Request is deemed to be received in accordance with this paragraph is referred to as the **"Substitution Request Date"**.

The Index Sponsor shall review each Substitution Request to determine whether the Proposed Substitution is a Qualifying Substitution, as of the Substitution Request Date. On or before the fifth NYSE Business Day following the Substitution Request Date (the **"Proposed Substitution Determination Date"**), the Index Sponsor shall notify in writing (by electronic mail or such other method as selected by the Index Sponsor) the Index Allocation Agent and the Index Calculation Agent of its determination regarding whether the Proposed Substitution is a Qualifying Substitution.

If the Index Sponsor determines that the Proposed Substitution is a Qualifying Substitution, then the Proposed Removed Component Underlying shall immediately be removed from the Component Underlyings Table and may not be selected as a Component Underlying in any Rebalancing Notice, and the Proposed Substitute shall be a Component Underlying with effect as of the Index Calculation Day that is ten (10) NYSE Business Days after the Substitution Request Date.



A Proposed Substitution will be a "**Qualifying Substitution**" if (i) the Proposed Substitute is a Qualified Substitute ETF; (ii) the Proposed Removed Component is an ETF that tracks a developed market bond index; and (iii) the Proposed Removed Component is not be then included in the synthetic portfolio tracked by the Index.

Where:

"**Qualified Substitute ETF**" means an investment fund meeting all of the following criteria as of the date of the Proposed Substitution Determination Date:

- (i) must be an Exchange Traded Fund (as defined in the Index Rules);
- (ii) the investment adviser of such Exchange Traded Fund must be a Designated ETF Sponsor;
- (iii) the Reference Index (as defined above) with respect to such Proposed Substitute must be the same Reference Index as the Reference Index for the Proposed Removed Component;
- (iv) must have an ETF Initial Listing Date (as defined in the Index Rules) that falls at least two calendar years prior to such Proposed Substitution Determination Date;
- (v) must meet all of the Qualified Additional ETF Trading Criteria (as described above); and
- (vi) no ETF Extraordinary Event shall have occurred or be continuing in respect of such Exchange Traded Fund.

### **Publication of Index Levels**

Subject to the occurrence of a Market Disruption Event, Disrupted Day, Component Underlying Adjustment Event, or Currency Extraordinary Event; the Index Calculation Agent will calculate and publish the Index Level in respect of each Index Calculation Day at or before approximately 10:00 a.m., New York time, on the NYSE Business Day following such Index Calculation Day on Bloomberg page JPZMUYU5<Index>, or any successor page or another recognized financial information provider should the need arise. All Index Levels that are published shall be rounded to two decimal places, although the Index Calculation Agent shall retain a higher precision for the purposes of ongoing calculation. The Index Calculation Agent may publish the Index Level on any alternative or successor publication source if the Bloomberg page becomes unavailable from time to time for any reason.

The term "Index Calculation Day" means each calendar day that is:

- (i) a Weekday on which each of the following exchanges is scheduled to be open for trading and does in fact open for its regular trading session for such Weekday: (i) the New York Stock Exchange, (ii) Nasdaq, (iii) the Eurex Exchange, and (iv) the Tokyo Stock Exchange;
- (ii) a Weekday that is a Component Valuation Day (as defined in the Index Rules) for each Component Underlying then contained in the synthetic portfolio tracked by the Index; and
- (iii) a Weekday that is not a Component Disrupted Day (as defined in the Index Rules) for the Cash Component.

### **Component Underlying Adjustment Events; Index Sponsor May Remove or Replace Component Underlyings under Certain Circumstances**

In the event of the occurrence of a Component Underlying Adjustment Event, the Index Sponsor may remove and/or replace the affected Component Underlying.

#### Successor Component Underlyings; and Component Continuing Disruption Events

If any Component Underlying or the Cash Component is either:

- not calculated and is not announced by the applicable Component Sponsor (as defined in the Index Rules) but is calculated and announced by a successor sponsor acceptable to the Index Sponsor; or
- replaced by a successor of the same Component Type using, in the determination of the Index Sponsor, the same or substantially similar formula, for and method of calculation as used in the calculation of, that Component Underlying or Cash Component,

then that successor will be the successor Component Underlying or Cash Component. However, if the second bullet above applies, and a Component Continuing Disruption Event (as defined in the Index Rules) has occurred, the Index Sponsor may, acting in good faith and in a commercially reasonable manner, select a replacement Component Underlying of the same Component Type (as set forth in the Component Underlyings Table) or Cash Component that possesses similar characteristics to the Component Underlying or Cash Component being replaced, in its discretion. If the Index Sponsor does not or is unable to make any such substitution, then the Index Sponsor shall allocate the amount synthetically allocated to such Component Underlying or Cash Component to a non-interest bearing synthetic cash balance and make such adjustment that the Index Sponsor determines to be appropriate to any variable, calculation methodology, valuation or other terms of the Index to account for such event.

#### Material Changes

If a Component Sponsor makes a material change in the formula for or the method of calculating a Component Underlying or the Cash Component or in any other way materially modifies that Component Underlying or Cash Component (other than a modification prescribed in that formula or method to maintain that Component Underlying or Cash Component in the event of routine events), then the Index Sponsor shall either:

- select a replacement Component Underlying of the same Component Type or Cash Component, acting in good faith and in a commercially reasonable manner, that possesses similar characteristics to the Component Underlying or Cash Component being replaced, in its discretion; or
- in the case of Component Underlyings other than the Cash Component, select the Cash Component to replace such Component Underlying.

### Component Underlying Cancellation

If:

- a Component Sponsor permanently cancels such Component Underlying or the Cash Component and no successor index exists; or
- the license granted (if required) to the Index Sponsor or the Index Calculation Agent (or any of their affiliates) to use a Component Underlying for the purposes of the Index terminates, or the Index Sponsor's or the Index Calculation Agent's rights (or any of their affiliates' rights) to use the Component Underlying for the purpose of the Index is otherwise disputed, impaired or ceases (for any reason),

the Index Sponsor may, in good faith, make such adjustment(s) that the Index Sponsor determines to be appropriate to any variable, calculation methodology, valuation terms or any other rule in relation to the relevant Component Underlying or the Cash Component to account for such Component Underlying Cancellation which may include, without limitation, selecting a replacement Component Underlying or Cash Component.

### ETF Extraordinary Events

If an ETF Extraordinary Event occurs in respect of any ETF that is a Component Underlying, the Index Sponsor may, acting in good faith and in a commercially reasonable manner, select a substitute Exchange Traded Fund that the Index Sponsor determines, in its discretion, possesses substantially similar characteristics or provides a substantially similar exposure (as considered prior to the occurrence of such Extraordinary Event) as compared to the ETF Component that is being replaced. In such a case, the Index Sponsor shall, 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 Index. If the Index Sponsor determines that no suitable Exchange Traded Fund is available as a replacement for such affected ETF Component, such affected ETF Component shall be removed from the Index, and the Index Sponsor shall 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 Index to account for such removal.

An "**ETF Extraordinary Event**" will have occurred with respect to an ETF Component if, after the Component Base Date with respect to such ETF Component:

- (i) the sponsor of the relevant Reference Index of the ETF Component makes a material change in the formula for or the method of calculating that Reference Index of the ETF Component or in any other way materially modifies that Reference Index of the ETF Component (other than a modification prescribed in that formula or method to maintain that Reference Index of the ETF Component in routine circumstances);

- (ii) the Component Underlying Sponsor replaces the Reference Index of the ETF Component with a successor index that does not, in the determination of the Index Sponsor, 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 Component;
- (iii) the ETF Component is delisted from the primary exchange in the United States on which such ETF Component is listed or is liquidated or otherwise terminated; or
- (iv) a Lock-In Event occurs in respect of such ETF Component.

The term “**Lock-In Event**” means, with respect to any ETF Component, if any of the following occur:

- there is, subsequent to the Component Base Date with respect to such ETF Component, an amendment, variation or modification to the constitutive or offering documents of an ETF, that, in the reasonable determination of the Index Sponsor, would materially adversely affect the ability of market participants to trade in shares of the ETF;
- the Average Daily Trading Volume of the ETF Component is less than USD 2 million;
- the Average Daily Trading Value of the ETF Component is less than 25% of the Average Daily Trading Value of such ETF as of its Component Base Date;
- the Market Capitalization (as defined in the Index Rules) of the ETF Component is below USD 125 million;
- the Market Capitalization of the ETF Component is less than 25% of its Market Capitalization as of its Component Base Date;
- the net asset value of an ETF Component is not calculated or is not announced by the relevant Component Sponsor for five consecutive Scheduled Trading Days for such ETF Component;
- The relevant sponsor of the Reference Index of any ETF Component fails to calculate and publish its net asset value for such index for five consecutive Component Scheduled Trading Days;
- The relevant sponsor of the Reference Index of any ETF Component fails to calculate and publish its closing level for such index for five consecutive Component Scheduled Trading Days; or
- The relevant sponsor of the ETF suspends creations or redemptions of shares of such ETF Component for five consecutive Component Scheduled Trading Days, or announces a suspension of unlimited duration of such creations or redemptions,

and the Index Sponsor determines in its discretion that such event or combination of events is material. The Index Sponsor has no obligation to monitor actively whether or not any of such events has occurred.

Where: "**Component Base Date**" means for an ETF Component, the Index Base Date if the ETF Component was included as a potential Component Underlying on the Index Base Date,

or, if the ETF Component was included as a potential Component Underlying after the Index Base Date, the date on which the ETF Component was so included.

### **Component Underlying Removal due to Change in Law**

If a Change in Law occurs in respect of any Component Underlying, the Index Sponsor acting in good faith and in a commercially reasonable manner, may select a substitute for such Component Underlying. Such substitute shall be, (i) in the case of an ETF Component, an Exchange Traded Fund and (ii) in the case of an index, that, in either case, the Index Sponsor determines, in its discretion, possesses substantially similar characteristics or provides a substantially similar exposure (as considered prior to the occurrence of such Change In Law) as compared to the Component Underlying that is being replaced (such substitute being referred to herein as the "substitute"); in such a case, the Index Sponsor shall, 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 Index. If the Index Sponsor determines that no suitable replacement for such affected Component Underlying exists, such affected Component Underlying shall be removed from the Index without replacement. The Index Sponsor shall, 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 Index to account for such removal or substitution, and promptly provide a revised Component Underlyings Table reflecting such removal and any substitution to the Index Allocation Agent and Index Calculation Agent.

A "**Change in Law**" occurs when, on or after the Component Base Date with respect to any Component Underlying, due to either:

- (a) the adoption of, or any change in, any applicable law, regulation or rule (including, without limitation, any tax law); or
- (b) the promulgation of, or any change in, the 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 or any exchange or trading facility),

the Index Sponsor 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 Component Underlying, any transaction referencing any Component Underlying or any component of any Component Underlying or of any Reference Index of any ETF Component or (y) holding a position in any Component Underlying, any transaction referencing any Component Underlying or any component of any Component Underlying or of any Reference Index of any ETF Component 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 Component Underlying, transaction referencing the Component Underlying or component of the Component Underlying or of the Reference Index of the ETF Component, including in any case traded on any exchange(s) or

other trading facility (including, without limitation, any relevant exchange).

### **Corrections**

If the Index Calculation Agent determines that:

- (i) the level, value or price of any Component Underlying or the Cash Component, or any other variable, input or other matter that is used for any calculation relevant to the Index Level of any Index Calculation Day is subsequently found to have been incorrect or otherwise has grounds for adjustment or a correction or adjustment is published by the relevant Component Sponsor or any other relevant information source; or
- (ii) the Index Calculation Agent identifies an error or omission in any of its calculations or determinations including, without limitation in respect of the determination of the Index Level in respect of any Index Calculation Day,

then, the Index Calculation Agent, if practicable and if it considers such correction material, may correct the Index Level for such Index Calculation Day, and/or each other relevant subsequent Index Calculation Day, and, in all cases, publish (in such manner determined by the Index Calculation Agent) such corrected Index Level(s) as soon as reasonably practicable.

### **Amendments to the Index Rules**

The Index Sponsor may, acting reasonably and in good faith, amend the Index Rules where it considers such amendment necessary (i) to comply with applicable law or regulation, including any changes in applicable law or regulation or in the interpretation thereof, and/or (ii) to correct any errors, omissions or ambiguities identified by the Index Calculation Agent or Index Sponsor as the case may be. To the extent permitted by applicable law, rules and regulations and internal policies, the Index Sponsor shall use commercially reasonable efforts to provide notice to the Index Allocation Agent fifteen calendar days immediately preceding such a proposed amendment and shall consider input, if any, from the Index Allocation Agent in good faith and in a commercially reasonable manner, but shall not be obligated to alter such proposed amendment. The Index Sponsor may also vary the Component Underlyings in accordance with the Index Rules in the event of the occurrence of certain Component Underlying Adjustment Events.

Changes made to the Index Rules annex that lists the Component Underlyings to account for additions, substitutions or removals in accordance with the Index Rules will not constitute amendments to the Index Rules to the extent made in accordance with the provisions of the Index Rules but not pursuant to Section 1.3 of the Index Rules (Amendments).

### **Termination of the Index**

The Index will be terminated in the event that the Index Allocation Agreement under which the Index Allocation Agent serves as such is terminated. A termination can occur under the following circumstances:

- Upon 60 days' notice of either the Index Allocation Agent or the Index Sponsor;

- Upon the occurrence of certain bankruptcy-related events with respect to either the Index Allocation Agent or the Index Sponsor;
- Either the Index Allocation Agent or the Index Sponsor determines that the other is involved in regulatory or legal proceedings that materially affect its ability to perform its obligations under the Index Allocation Agreement, or such regulatory or legal proceedings would result in the continued performance of the terminating party's obligations under the Index Allocation Agreement being materially adverse to the reputation of the terminating party;
- The Index Sponsor may terminate the Index Allocation Agreement if at any time the Index Allocation Agent no longer holds all necessary licences, approvals, registrations, authorizations and permissions required to fulfill its obligations under the Index Allocation Agreement or to hold the Notes, or if the ability of the Index Allocation Agent to fulfill its obligations under the Agreement is substantially curtailed by any competent legal or regulatory authority;
- The Index Allocation Agreement may be terminated by the Index Allocation Agent or the Index Sponsor with immediate effect should the other party fail to comply with any material obligation under the Index Allocation Agreement; provided that such other party has not remedied such breach within 15 calendar days after receiving notice from such terminating party requiring the breach to be remedied; and
- The Index Allocation Agreement would terminate immediately if the Index Allocation Agent announces that it intends to cease to be engaged in the business of investment management services.

### **Provisions Relating to Market Disruptions**

Calculation of the level of the Index and implementation of synthetic portfolio rebalancings will be suspended in the event of the occurrence of a Market Disruption Event.

A “**Market Disruption Event**” will have occurred with respect to a relevant Component Underlying, if the Index Calculation Agent determines in its sole discretion that on any Component Scheduled Trading Day (as defined in the Index Rules):

- in respect of a Component Underlying that is an index or in respect of an ETF Component's Reference Index, a failure by the relevant sponsor or its agent to calculate and publish the Closing Level for such index on such Component Scheduled Trading Day, or any event that, in the determination of the Index Calculation Agent, disrupts or impairs the ability of market participants to effect transactions in or obtain levels or market values for (a) the relevant index, (b) any securities or components that in the aggregate comprise 20 percent or more of the level of the relevant index, (c) any futures or options contracts or other financial contracts relating to the relevant index, or (d) any futures or options contracts or other financial contracts relating to securities or components that in the aggregate comprise 20 percent or more of the level of the relevant index; or
- in respect of a Component Underlying that is an ETF Component whose Reference Index is an equity index, an Equity Index Disruption Event; or
- in respect of a Component Underlying that is an ETF Component whose Component Underlying is a commodity, a Commodity Disruption Event; or
- in respect of an Exchange-Traded Fund, an Exchange-Traded Product 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 (including, without limitation, positions with respect to any Component Underlying or the Reference Index or any Reference Commodity of any Exchange-Traded Fund).

For the purpose of determining whether a Market Disruption Event with respect to an index and a Component Scheduled 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 or component 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 or component relative to (y) the overall level of the applicable index, in each case immediately before that suspension or limitation.

Where:

**“Equity Index Disruption Event”** means, in each case as determined by the Index Calculation Agent in its sole discretion (subject to the final paragraph of this “Provisions Relating to Market Disruptions” section):

- 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 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
- 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 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.

**“Commodity Disruption Event”** means, in each case as determined by the Index Calculation Agent in its sole discretion:

- A material limitation, suspension, discontinuation or disruption of trading in one or more of the relevant Reference Commodities;
- A material limitation, suspension, discontinuation or disruption of trading in one or more options or futures contracts on any of 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 such event occurs or any succeeding day on which it continues;
- a limitation, suspension or disruption of trading in one or more options or futures contracts on any of 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 or market conditions in such option(s) and/or futures contract(s) for the relevant day;
- publication by the relevant exchange of a “limit price” as the official settlement price for one or more futures contracts on any of the relevant Reference Commodities, by reason of movements exceeding “limit up” or “limit down” levels permitted by the relevant exchange;



- the occurrence of a Commodity Non-Publication Event (as defined in the Index Rules);
- the relevant exchange for any options or futures contracts on any of the relevant Reference Commodities, is not open for trading during its regular trading session as scheduled for the relevant day; or
- the relevant market for any of the relevant Reference Commodities is not open for trading during its regular trading session as scheduled for the relevant day.

**“Exchange-Traded Product Disruption Event”** means, in each case as determined by the Index Calculation Agent in its sole discretion (subject to the final paragraph of this “Provisions Relating to Market Disruptions” section):

- the occurrence or existence of a suspension, absence or material limitation of trading of the securities of an Exchange-Traded Fund on the relevant primary exchange 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 exchange;
- a breakdown or failure in the price and trade reporting systems of the relevant primary exchange for the securities of an Exchange-Traded Fund as a result of which the reported trading prices for such securities 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;
- 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 securities of an Exchange-Traded Fund or on any exchange for futures or options in respect of such Exchange-Traded Fund 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;
- as applicable, if any of the following is calculated or announced in the ordinary course, but is not calculated or is not announced by or on behalf of the relevant sponsor or issuer of the Exchange-Traded Fund or the relevant calculation agent or information provider that the relevant sponsor or issuer of the Exchange-Traded Fund designates: the intraday net asset value or the intraday indicative value of an Exchange-Traded Fund, the intraday indicative value of a Reference Commodity of an Exchange-Traded Fund, or any intraday value or level that indicates or affects the approximate intrinsic economic value of an Exchange-Traded Fund or the amount of any payment in respect of an Exchange-Traded Fund;
- as applicable, if any of the following is calculated or announced in the ordinary course, but is not calculated or is not announced by or on behalf of the relevant sponsor or issuer of the Exchange-Traded Fund or the relevant calculation agent or information provider that the relevant sponsor or issuer of the Exchange-Traded Fund designates: the closing net asset value or the closing indicative value of an Exchange-Traded Fund, the closing indicative value of a Reference Commodity of an Exchange-Traded Fund, or any closing value or level or other value or level that indicates or affects the approximate intrinsic economic value of an Exchange-Traded Fund or the amount of any payment in respect of an Exchange-Traded Fund; or
- as applicable, the relevant sponsor or issuer of an Exchange-Traded Fund suspends creations, issuances or redemptions of securities of such Exchange-Traded Fund.

For the purpose of determining whether an Equity Index Disruption Event or an Exchange-Traded Product Disruption Event has occurred:

- a limitation on the hours or number of days of trading will not constitute an Equity Index Disruption Event or an Exchange-Traded Product 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 securities;
- 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;
- a suspension of trading in futures or options contracts on the applicable equity index or securities of an Exchange-Traded Fund by the primary exchange or market for trading in such contracts or securities of such Exchange-Traded Fund 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 securities of such Exchange-Traded Fund or (c) a disparity in bid and ask quotes relating to such contracts or securities of such Exchange-Traded Fund, will constitute a suspension, absence or material limitation of trading in futures or options contracts related to such equity index or the securities of such Exchange-Traded Fund; and
- 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 or the securities of an Exchange-Traded Fund are traded will not include any time when such exchange or market is itself closed for trading under ordinary circumstances.

#### **Disclosures Concerning Certain Factors Affecting the Index**

No assurance can be given that the investment strategy used to construct the Index will be successful or that the Index will outperform any alternative basket or strategy that might be constructed from the Component Underlyings.

The rebalancing of the Component Underlyings of the Index will be made under the direction of the Index Allocation Agent at times chosen by the Index Allocation Agent. The Index Allocation Agent may also add or substitute Component Underlyings and thereby materially alter the universe of Component Underlyings potentially comprising the synthetic portfolio tracked by the Index. As a result, both the composition and success of the Index will depend largely upon the decisions and abilities of the Index Allocation Agent and certain key individuals employed by the Index Allocation Agent. There can be no assurance that the Index Allocation Agent will be successful in the rebalancing of the Index and the loss of one or more such key individuals may have a material adverse impact on the performance of the Index.

Furthermore, no assurance can be given that the Index will achieve its volatility target of 10%. The actual realized volatility of the Index may be greater or less than 10%.

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.



**Schedule 2**  
**The Republica AFAP Dynamic Index (Third Series) Rules**

# The Republica AFAP Dynamic Index (Third Series)

## Index Rules

**J.P.Morgan**

June 28, 2016

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**PART A**  
**General Rules**

**1. This Document**

**1.1 Introduction**

This document comprises the rules (the "**Index Rules**") of the Republica AFAP Dynamic Index (Third Series) (the "**Index**") a notional, rules-based proprietary index.

**1.2 Publication and availability of the Index Rules**

The Index Rules are published by J.P. Morgan Securities plc in its capacity as Index Sponsor of the Index.

Copies of the Index Rules may be obtained by the Index Allocation Agent and by holders of investments linked to the Index free of charge on request to the Index Sponsor.

**1.3 Amendments**

The Index Sponsor may, acting reasonably and in good faith, at any time and from time to time amend the Index Rules where it considers such amendment necessary (i) to comply with applicable law or regulation, including any changes in applicable law or regulation or in the interpretation thereof, and/or (ii) to correct any errors, omissions or ambiguities identified by the Index Calculation Agent or Index Sponsor as the case may be. To the extent permitted by applicable law, rules and regulations and internal policies, the Index Sponsor shall use commercially reasonable efforts to provide notice to the Index Allocation Agent fifteen calendar days immediately preceding such a proposed amendment and shall consider input, if any, from the Index Allocation Agent in good faith and in a commercially reasonable manner, but shall not be obligated to alter such proposed amendment.

Changes made to the Component Underlyings Table from time to time in accordance with the terms of the Index Rules shall not constitute amendments to the Index Rules to the extent made in accordance with the provisions of the Index Rules but not pursuant to this Section 1.3.

**1.4 No offer of securities**

The Index Rules do not constitute (i) an offer to sell securities (ii) a solicitation of offers to purchase or sell securities or (iii) an offer to enter into any transaction, nor specific advice of whatever form (including, without limitation, tax, legal, accounting or regulatory) in respect of any investment strategy or investment that may be linked to the Index.

**2. Index is synthetic**

The Index is constructed on notional or synthetic exposure to the Component Underlyings referenced in the Index because there is neither an actual portfolio of Component Underlyings, nor any assets, to which any person is entitled or in which any person has any ownership interest. The Index merely identifies certain Component Underlyings, the performances of which are used as reference points for the purposes of calculating the level of the Index.

**3. Index Sponsor, Index Calculation Agent and Index Allocation Agent**

**3.1 Identity**

J.P. Morgan Securities plc is the sponsor of the Index (the "**Index Sponsor**"). The Index Allocation Agent is Republica AFAP, S.A.

The Index Sponsor may appoint any of its affiliates or subsidiaries or an unaffiliated third party as the Index Calculation Agent (the "**Index Calculation Agent**"). As of the date hereof, the Index Sponsor has appointed Solactive AG as the Index Calculation Agent.

The Index Sponsor may at any time or for any reason terminate the appointment of the Index Calculation Agent and appoint an alternative entity as the replacement Index Calculation Agent.

The Index Calculation Agent is responsible for:

- (i) calculating the Index Level in respect of each Index Calculation Day in accordance with the Index Rules; and
- (ii) determining (subject to the prior agreement of the Index Sponsor) if a Market Disruption Event or a Disrupted Day (or other similar event) has occurred or is continuing, and the related consequences and adjustments in accordance with the Index Rules.

If the Index Sponsor determines that a Market Disruption Event or a Component Underlying Adjustment Event has occurred in respect of an Index Calculation Day, or that there needs to be a correction in respect of the Index, and, if the Index Calculation Agent fails to make that determination, then the Index Sponsor may instruct the Index Calculation Agent that such an event has occurred and instruct the Index Calculation Agent as to the consequences or adjustments that should be made to take account of such event. To the extent that the Index Calculation Agent and the Index Sponsor disagree about a particular determination, calculation or adjustment, then the determination, calculation or adjustment of the Index Sponsor shall prevail.

### **3.2 Index Sponsor and Index Calculation Agent standards**

The Index Sponsor and the Index Calculation Agent shall each act in good faith and in a commercially reasonable manner in respect of determinations made by it pursuant to the Index Rules.

### **3.3 Index Sponsor and Index Calculation Agent determinations**

All calculations, determinations and interpretations of the Index Sponsor and of the Index Calculation Agent (subject to the prior agreement of the Index Sponsor) pursuant to the Index Rules shall be final, conclusive and binding and no person shall be entitled to make any claim against the Index Sponsor, the Index Calculation Agent or any of the Relevant Persons in respect thereof. None of the Index Sponsor, the Index Calculation Agent or any Relevant Person shall:

- (i) be under any obligation to reconsider or revise any determination, interpretation or calculation made or action taken for any reason in connection with the Index or the Index Rules; or
- (ii) 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, the Index Rules or in respect of the publication of any Index Level (or failure to publish such level) or any use to which any person may put the Index or the Index Levels.

## **4. Calculation of Index Levels**

### **4.1 Index Base Level and Index Base Date**

The level of the Index shall be 100 (the "**Index Base Level**") at the commencement of the Index on June 28, 2016 (the "**Index Base Date**").

### **4.2 Publication of Index Levels**

The Index Calculation Agent shall calculate and publish the Index Level in respect of each Index Calculation Day at or before approximately 10.00 a.m., New York time, on the first NYSE Business Day following such Index Calculation Day on Bloomberg page JPZMUYU5 <Index>, or any successor page or another recognized financial information provider should the need arise. All Index Levels that are published shall be rounded to 2 decimal places, although the Index Calculation Agent shall retain a higher precision for the purposes of ongoing calculation. The Index Calculation Agent may publish the Index Level on any alternative or successor publication source if the Bloomberg page becomes unavailable from time to time for any reason.

## **5. Corrections in respect of the Index**

If, in respect of a Component Underlying or the Cash Component, the Index Sponsor or the

Index Calculation Agent (subject to the prior agreement of the Index Sponsor) determines that:

- (i) the level, value or price of any Component Underlying or the Cash Component, or any other variable, input or other matter which is used for any calculation relevant to the Index Level for any Index Calculation Day is subsequently found to have been incorrect or otherwise has grounds for adjustment or a correction or adjustment is published by the relevant Component Sponsor or any other relevant information source; or
- (ii) the Index Sponsor or the Index Calculation Agent (subject to the prior agreement of the Index Sponsor) identifies an error or omission in any of its calculations or determinations including, without limitation in respect of the determination of the Index Level in respect of any Index Calculation Day,

then, the Index Calculation Agent, if practicable and if the Index Sponsor or the Index Calculation Agent (subject to the prior agreement of the Index Sponsor) considers such correction material, may correct the Index Level for such Index Calculation Day, and/or each other relevant subsequent Index Calculation Day, and, in all cases, publish (in such manner determined by the Index Calculation Agent (subject to the prior agreement of the Index Sponsor)) such corrected Index Level(s) as soon as reasonably practicable.

## 6. Definitions Related to Market Disruption

- (a) A “**Market Disruption Event**” occurs, for the relevant Component Underlying, if the Index Sponsor or the Index Calculation Agent (subject to the prior agreement of the Index Sponsor) determines in its sole discretion that on any Component Scheduled Trading Day

- (i) in respect of a Component Underlying that is an index or in respect of an ETF Component’s Reference Index, a failure by the relevant sponsor or its agent to calculate and publish the Closing Level for such index for such Component Scheduled Trading Day, or any event that, in the determination of the Index Sponsor or the Index Calculation Agent (subject to the prior agreement of the Index Sponsor), disrupts or impairs the ability of market participants to effect transactions in or obtain levels or market values for (a) the relevant index, (b) any securities or components that in the aggregate comprise 20 percent or more of the level of the relevant index, (c) any futures or options contracts or other financial contracts relating to the relevant index, or (d) any futures or options contracts or other financial contracts relating to securities or components that in the aggregate comprise 20 percent or more of the level of the relevant index; or

- (ii) in respect of a Component Underlying that is an ETF Component whose Reference Index is an equity index, an Equity Index Disruption Event; or

- (iii) in respect of a Component Underlying that is an ETF Component whose Component Underlying is a commodity, a Commodity Disruption Event; or

- (iv) in respect of an Exchange-Traded Fund, an Exchange-Traded Product Disruption Event; and

the the Index Sponsor or the Index Calculation Agent (subject to the prior agreement of the Index Sponsor) 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 (including, without limitation, positions with respect to any Component Underlying or the Reference Index or any Reference Commodity of any Exchange-Traded Fund).

For the purpose of determining whether a Market Disruption Event with respect to an index and a Component Scheduled 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 or component 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 or component 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 the Index Sponsor or the Index Calculation Agent (subject to the prior agreement of the Index Sponsor) in its sole discretion, subject to the provisions of Section 6(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 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 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 a relevant Reference Commodity;
  - (ii) A material limitation, suspension, discontinuation or disruption of trading in one or more options or futures contracts on any relevant Reference Commodity, 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 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 any relevant Reference Commodity, by reason of movements exceeding “limit up” or “limit down” levels permitted by the relevant exchange and which the Index Sponsor or the Index Calculation Agent (subject to the prior agreement of the Index Sponsor) determines is material to trading volume or market conditions in such option(s) and/or futures contract(s) for the relevant day;
  - (iv) publication by the relevant exchange of a “limit price” as the official settlement price for one or more futures contracts on any relevant Reference Commodity, by reason of movements exceeding “limit up” or “limit down” levels permitted by the relevant exchange;
  - (v) the occurrence of a Commodity Non-Publication Event;
  - (vi) the relevant exchange for any options or futures contracts on any relevant Reference Commodity, is not open for trading during its regular trading session as scheduled for the relevant day; or
  - (vii) the relevant market for any relevant Reference Commodity is not open for trading during its regular trading session as scheduled for the relevant day.
- (f) **“Commodity 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) the official settlement price or fixing for the relevant Reference Commodity or for any relevant futures contract on the relevant Reference Commodity.
- (g) **“Exchange-Traded Product Disruption Event”** means, in each case as determined by the the Index Sponsor or the Index Calculation Agent (subject to the prior agreement of the Index Sponsor) in its sole discretion, subject to the provisions of Section 6(h):
- (i) the occurrence or existence of a suspension, absence or material limitation of trading of the securities of an Exchange-Traded Fund on the relevant primary exchange 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 exchange;
  - (ii) a breakdown or failure in the price and trade reporting systems of the relevant primary exchange for the securities of an Exchange-Traded Fund as a result of which the reported trading prices for such securities 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 securities of an Exchange-Traded Fund or on any exchange for futures or options in respect of such Exchange-Traded Fund 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) as applicable, if any of the following is calculated or announced in the ordinary course, but is not calculated or is not announced by or on behalf of the relevant sponsor or issuer of the Exchange-Traded Fund or the relevant calculation agent or information provider that the relevant sponsor or issuer of the Exchange-Traded Fund designates: the intraday net asset value or the intraday indicative value of an Exchange-Traded Fund, the intraday indicative value of a relevant Reference Commodity of an Exchange-Traded Fund, or any intraday value or level that indicates or affects the approximate intrinsic economic value of an Exchange-Traded Fund or the amount of any payment in respect of an Exchange-Traded Fund;

(v) as applicable, if any of the following is calculated or announced in the ordinary course, but is not calculated or is not announced by or on behalf of the relevant sponsor or issuer of the Exchange-Traded Fund or the relevant calculation agent or information provider that the relevant sponsor or issuer of the Exchange-Traded Fund designates: the closing net asset value or the closing indicative value of an Exchange-Traded Fund, the closing indicative value of a relevant Reference Commodity of an Exchange-Traded Fund, or any closing value or level or other value or level that indicates or affects the approximate intrinsic economic value of an Exchange-Traded Fund or the amount of any payment in respect of an Exchange-Traded Fund; or

(vi) as applicable, the relevant sponsor or issuer of an Exchange-Traded Fund suspends creations, issuances or redemptions of securities of such Exchange-Traded Fund.

(h) For the purpose of determining whether an Equity Index Disruption Event or an Exchange-Traded Product 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 Exchange-Traded Product 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 securities;

(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 Sponsor or the Index Calculation Agent (subject to the prior agreement of the Index Sponsor)) 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 or securities of an Exchange-Traded Fund by the primary exchange or market for trading in such contracts or securities of such Exchange-Traded Fund 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 securities of such Exchange-Traded Fund or (c) a disparity in bid and ask quotes relating to such contracts or securities of such Exchange-Traded Fund, will constitute a suspension, absence or material limitation of trading in futures or options contracts related to such equity index or the securities of such Exchange-Traded Fund; 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 or the securities of an Exchange-Traded Fund are traded will not include any time when such exchange or market is itself closed for trading under ordinary circumstances.

## **7. Component Underlying Adjustment Events**

### **7.1 Successor Component Underlying or Cash Component**

If any Component Underlying or the Cash Component is either:

- (i) not calculated and is not announced by the applicable Component Sponsor but is calculated and announced by a successor sponsor acceptable to the Index Sponsor; or
- (ii) replaced by a successor of the same Component Type (as set forth in the Component Underlyings Table) using, in the determination of the Index Sponsor, the same or substantially similar formula, for and method of calculation as used in the calculation of, that Component Underlying or Cash Component;

then that successor will be the successor Component Underlying or Cash Component, as applicable, as the same is calculated and announced by that successor sponsor or trades, with effect from a date determined by the Index Sponsor or the Index Calculation Agent (subject to the prior agreement of the Index Sponsor) who may make such adjustment to the Component Underlyings Table in Annex 1 and the Weight Category Restrictions Table and the ADTV Weight Limit Table in Section 8.2 as the Index Sponsor or the Index Calculation Agent (subject to the prior agreement of the Index Sponsor) determines in good faith to account for such change.

### **7.2 Component Underlying Disruption**

If paragraph (ii) of Section 7.1 above applies, and a Component Continuing Disruption Event has occurred, the Index Sponsor may, acting in good faith and in a commercially reasonable manner, select a replacement Component Underlying of the same Component Type (as set forth in the Component Underlyings Table) or Cash Component that possesses similar characteristics to the Component Underlying or Cash Component being replaced, in its discretion. If the Index Sponsor does not or is unable to make any such substitution, then the Index Sponsor shall allocate the amount synthetically allocated to such Component Underlying or Cash Component to a non-interest bearing synthetic cash balance and make such adjustment that the Index Sponsor determines to be appropriate to any variable, calculation methodology, valuation or other terms of the Index to account for such event.

### **7.3 Material Changes**

If, on or prior to any Index Calculation Day, any Component Sponsor makes a material change in the formula for or the method of calculating a Component Underlying or the Cash Component or in any other way materially modifies that Component Underlying or Cash Component (other than a modification prescribed in that formula or method to maintain that Component Underlying or Cash Component in the event of routine events), then the Index Sponsor shall either:

- (i) select a replacement Component Underlying of the same Component Type (as set forth in the Component Underlyings Table) or Cash Component, acting in good faith and in a commercially reasonable manner, that possesses similar characteristics to the Component Underlying or Cash Component being replaced, in its discretion; or
- (ii) in the case of Component Underlyings other than the Cash Component, select the Cash Component to replace such Component Underlying.

The Index Sponsor may make such adjustment to the Component Underlyings Table in Annex 1 and the Weight Category Restrictions Table and the ADTV Weight Limit Table in Section 8.2 as it determines in good faith to account for such change.

### **7.4 Component Underlying Cancellation**

If, on or prior to any Index Calculation Day (any of the following events being a "**Component Underlying Cancellation**"):

- (i) a Component Sponsor permanently cancels such Component Underlying or the Cash Component and no successor index exists; or
- (ii) the license granted (if required) to the Index Sponsor or the Index Calculation Agent (or any of their affiliates) to use a Component Underlying for the purposes of the Index terminates, or the Index Sponsor's or the Index Calculation Agent's rights (or any of their affiliates' rights) to use the Component Underlying for the purpose of the Index is otherwise disputed, impaired or ceases (for any reason),

the Index Sponsor may, in good faith, make such adjustment(s) that the Index Sponsor determines to be appropriate to any variable, calculation methodology, valuation terms or any other rule in relation to the relevant Component Underlying or the Cash Component to account for such Component Underlying Cancellation which may include, without limitation, selecting a replacement Component Underlying or Cash Component, and make such adjustment to the Component Underlyings Table in Annex 1 and the Weight Category Restrictions Table and the ADTV Weight Limit Table in Section 8.2 as the Index Sponsor determines in good faith to account for such change.

## 7.5 Extraordinary Events in respect of an ETF Component

If, an Extraordinary Event occurs in respect of an ETF Component (an “**ETF Extraordinary Event**”), the Index Sponsor may, acting in good faith and in a commercially reasonable manner, select a substitute for such ETF Component. Such substitute shall be an Exchange-Traded Fund that the Index Sponsor determines, in its discretion, possesses substantially similar characteristics or provides a substantially similar exposure (as considered prior to the occurrence of such ETF Extraordinary Event) as compared to the ETF Component that is being replaced (such substitute ETF Component being referred to herein as a “**substitute ETF Component**”). In such a case, the Index Sponsor shall, in good faith, make such adjustment(s) that the Index Sponsor determines to be appropriate to any variable, calculation methodology, valuation terms or any other rule in relation to the Index. If the Index Sponsor determines that no suitable Exchange-Traded Fund is available as a replacement for such affected ETF Component, such affected ETF Component shall be removed from the Index, and the Index Sponsor shall in good faith, make such adjustment(s) that the Index Sponsor determines to be appropriate to any variable, calculation methodology, valuation terms or any other rule in relation to the Index to account for such removal, and make such adjustment to the Component Underlyings Table in Annex 1 and the Weight Category Restrictions Table and the ADTV Weight Limit Table in Section 8.2 as the Index Sponsor determines in good faith to account for such change..

For the purposes of this Section 7.5, an ETF Extraordinary Event will have occurred with respect to an ETF Component if, after the Component Base Date with respect to such ETF Component:

- (i) the sponsor of the relevant Reference Index of the ETF Component makes a material change in the formula for or the method of calculating that Reference Index of the ETF Component or in any other way materially modifies that Reference Index of the ETF Component (other than a modification prescribed in that formula or method to maintain that Reference Index of the ETF Component in routine circumstances);
- (ii) the Component Underlying Sponsor replaces the Reference Index of the ETF Component with a successor index that does not, in the determination of the Index Sponsor, 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 Component;
- (iii) the ETF Component is delisted from the primary exchange in the United States on which such ETF Component is listed, or is liquidated or otherwise terminated; or
- (iv) a Lock-In Event occurs in respect of such ETF Component.

A "**Lock-In Event**" shall occur with respect to an ETF Component if one or more of the following events occur, and the Index Sponsor determines in its discretion that such event or combination of events is material (although, for the avoidance of doubt, the Index Sponsor has no obligation to monitor actively whether or not any of the following events has occurred):

- (a) there is, subsequent to the Component Base Date with respect to such ETF Component, an amendment, variation or modification to the constitutive or offering documents of such ETF Component, that, in the reasonable determination of the Index Sponsor, would materially adversely affect the ability of market participants to trade in shares of the ETF Component;
- (b) the Average Daily Trading Volume of such ETF Component is less than USD 2,000,000;
- (c) the Average Daily Trading Volume of such ETF Component is less than 25% of the Average Daily Trading Volume of such ETF Component as of the Component Base Date for such ETF Component;
- (d) the Market Capitalization of such ETF Component is less than USD 125,000,000;
- (e) the Market Capitalization of such ETF Component is less than 25% of the Market Capitalization of such ETF Component as of the Component Base Date for such ETF Component;
- (f) the net asset value of such ETF Component is not calculated or is not announced by the relevant Component Sponsor for 5 consecutive Component Scheduled Trading Days for such ETF Component;
- (g) the relevant sponsor of the Reference Index of such ETF Component fails to calculate and publish the closing level for such index for 5 consecutive Component Scheduled Trading Days for such ETF Component; or
- (h) the Component Sponsor for such ETF Component suspends creations or redemptions of shares of such ETF Component for 5 consecutive Component Scheduled Trading Days, for such ETF Component or announces a suspension of unlimited duration of such creations or redemptions.

## 7.6 Change in Law

If a Change in Law occurs in respect of a Component Underlying, the Index Sponsor acting in good faith and in a commercially reasonable manner, may select a substitute for such Component Underlying. Such substitute shall be, (i) in the case of an ETF Component, an Exchange-Traded Fund and (ii) in the case of an FX Tracker Index, Government Bond Tracker Index or Cash Tracker Index, an index, that, in each case, the Index Sponsor determines, in its discretion, possesses substantially similar characteristics or provides a substantially similar exposure (as considered prior to the occurrence of such Change In Law) as compared to the Component Underlying that is being replaced (such substitute being referred to herein as the "**substitute**"); in such a case, the Index Sponsor shall, in good faith, make such adjustment(s) that the Index Sponsor determines to be appropriate to any variable, calculation methodology, valuation terms or any other rule in relation to the Index. If the Index Sponsor determines that no suitable replacement for such affected Component Underlying exists, such affected Component Underlying shall be removed from the Index without replacement. The Index Sponsor shall, in good faith, make such adjustment(s) that the Index Sponsor determines to be appropriate to any variable, calculation methodology, valuation terms or any other rule in relation to the Index to account for such removal or substitution, and make such adjustment to the Component Underlyings Table in Annex 1 and the Weight Category Restrictions Table and the ADTV Weight Limit Table in Section 8.2 as the Index Sponsor determines in good faith to account for such change.

A "**Change in Law**" occurs when, on or after the Component Base Date with respect to any Component Underlying, due to either:

- (a) the adoption of, or any change in, any applicable law, regulation or rule (including, without limitation, any tax law); or

- (b) the promulgation of, or any change in, the interpretation by any court, tribunal or regulatory authority with competent jurisdiction of any applicable law, regulation, rule or order (including, without limitation, as implemented by the U.S. Commodity Futures Trading Commission or any exchange or trading facility or any action taken by a taxing authority),

the Index Sponsor determines in good faith that (x) it is (or will be) contrary to such law, rule, regulation or order for any market participants that are brokers or financial intermediaries (individually or collectively, and including their respective successors) to hold, acquire or dispose of (in whole or in part) any relevant asset necessary to hedge the price risk associated with a hypothetical transaction that references the Index, any Component Underlying, any transaction referencing any Component Underlying or any component of any Component Underlying or of any Reference Index of any ETF Component or, (y) holding a position in any relevant asset necessary to hedge the price risk associated with a hypothetical transaction that references the Index, any Component Underlying, any transaction referencing any Component Underlying or any component of any Component Underlying or of any Reference Index of any ETF Component 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, regulation, rule or order in relation to any relevant asset necessary to hedge the price risk associated with a hypothetical transaction that references the Index, such Component Underlying, transaction referencing the Component Underlying or component of the Component Underlying or of the Reference Index of the ETF Component, including in any case traded on any exchange(s) or other trading facility (including, without limitation, any relevant exchange).

## **7.7 Anti-Dilution Adjustment**

With respect to each ETF Component, the Index Sponsor will make anti-dilution adjustments to the Closing Price of such ETF Component only (a) if the shares of an ETF Component are subject to a share split or reverse share split, once such split has become effective, or (b) if an ETF Component is subject to (i) an issuance of additional shares of such ETF Component that is given rateably to all or substantially all holders of shares of such ETF Component or (ii) a distribution of shares of such ETF Component as a result of the triggering of any provision of the constitutive documents or charter (or the like) of such ETF Component, once the dividend or distribution has become effective and the shares of such ETF Component are trading ex-dividend. The Index Sponsor will be solely responsible for the determination and calculation of any such anti-dilution adjustments and any related determinations and calculations, and the Index Sponsor's determinations and calculations with respect thereto will be conclusive in the absence of manifest error.

## **8. Index Allocation Agent and Rebalancing; Allocation Restrictions; Addition of Component Underlying; Substitution of Component Underlying**

### **8.1 Rebalancings**

The Index Allocation Agent may, at its election, prior to 2 p.m. New York time on a NYSE Business Day, notify (such notice, a "**Rebalancing Notice**") the Index Sponsor that the Index Allocation Agent wishes to effect a rebalancing of the weights of the Component Underlyings by providing the Proposed Synthetic Allocations to the Index Sponsor by electronic mail to the electronic mail address as may be agreed between the Index Allocation Agent and the Index Sponsor, or such other method as may be agreed between the Index Allocation Agent and the Index Sponsor from time to time, and the Index Allocation Agent shall send a copy of such electronic mail simultaneously to the Index Calculation Agent by copying the electronic mail address as may be agreed between the Index Allocation Agent and the Index Calculation Agent, or by use of such other method as may be agreed between the Index Allocation Agent and the Index Calculation Agent from time to time), provided that if such Proposed Synthetic Allocations are provided on a day that is not a NYSE Business Day or at or after 2 p.m. New York time on a NYSE Business Day, then such Proposed Synthetic Allocations shall be deemed to have been provided prior to 2 p.m. New York time on the next following NYSE Business Day (and, in any case, such NYSE Business Day on which the Proposed Synthetic

Allocations are provided (or deemed to be provided) prior to 2 p.m. New York time shall be a "**Rebalancing Notification Date**"). On each Rebalancing Notification Date for a Rebalancing Notice, the Index Sponsor shall determine whether the Proposed Synthetic Allocations satisfy the Allocation Restrictions. On each Rebalancing Notification Date:

- (i) if the Index Sponsor determines that the Proposed Synthetic Allocations satisfy the Allocation Restrictions, then (A) the Index Sponsor shall provide written notice of such determination to the Index Allocation Agent (by electronic mail or such other method as may be selected by the Index Sponsor), (B) (1) if such Rebalancing Notification Date is a Rebalance Eligible Day ("**Rebalance Eligible Day**" means a day that is both (x) an Index Calculation Day and (y) a Component Valuation Day for each Component Underlying with a non-zero Proposed Synthetic Allocation in the relevant Rebalance Notice), such Rebalancing Notification Date shall be the "**Rebalancing Date**" associated with such Rebalancing Notice and (2) if such Rebalancing Notification Date is not a Rebalance Eligible Day, the Rebalance Eligible Day immediately following such Rebalancing Notification Date shall be the "**Rebalancing Date**" associated with such Rebalancing Notice, and the weights of the Component Underlyings shall be changed in accordance with such Proposed Synthetic Allocations; or
- (ii) if the Index Sponsor determines that the Proposed Synthetic Allocations do not satisfy the Allocation Restrictions or if the Index Calculation Agent does not confirm to the Index Allocation Agent that it has received the Rebalancing Notice, then there shall not be any Rebalancing Date associated with such Rebalancing Notice and then, in respect of such Rebalancing Notice, no rebalancing shall take place and the Specified Weights of the Component Underlyings shall not be changed as a result of such Rebalancing Notice. The Index Sponsor shall provide written notice of such determination to the Index Allocation Agent (by electronic mail or such other method as may be selected by the Index Sponsor); and
- (iii) the Index Sponsor shall inform the Index Calculation Agent promptly in the event of the occurrence of a Rebalancing Date.

The following restrictions shall apply to rebalancings pursuant to this Section 8.1:

- (i) a maximum of 35 Rebalancing Notices that result in the determination of a Rebalancing Notification Date may take place during any Measuring Period. The term "Measuring Period" shall mean each of (x) the period from but excluding the Index Base Date, to and including the first one year anniversary thereof; and (y) from but excluding each subsequent anniversary of the Index Base Date, to and including the next following anniversary of the Index Base Date;
- (ii) any Rebalancing Notice shall be void and of no effect if given during a Measuring Period in which 35 Rebalancing Notices that resulted in the determination of a Rebalancing Notification Date have already been given;
- (iii) no Rebalancing Notice may be delivered (or shall be considered) prior to the second Index Calculation Day immediately following the most recent Rebalancing Date, if any.

## 8.2 Allocation Restrictions

The following restrictions (the "**Allocation Restrictions**") will apply to the weight that the Index Allocation Agent may allocate to each Component Underlying on each Rebalancing Date by means of Proposed Synthetic Allocations:

- (i) each Component Underlying that is not an ETF Component may have a Specified Weight that does not exceed the Maximum Weight identified for such Component Underlying in the Component Underlyings Table in Annex 1;
- (ii) each Component Underlying that is an ETF Component may have a Specified Weight that does not exceed the *lesser* of (i) the Maximum Weight for such Component Underlying identified in the Component Underlyings Table in Annex 1; and (ii) the ADTV Weight Limit applicable to such Component Underlying set forth in the ADTV Weight Limit Table below;

- (iii) each Component Underlying that is neither in the Weight Category “FX G10 Tracker” nor the Weight Category “Government Bond Tracker” may have a Same Way Directional Linkage and a Specified Weight equal to or greater than zero percent (that is, 0%);
- (iv) each Component Underlying that is in the Weight Category “FX G10 Tracker” may have (x) a Same Way Directional Linkage and a Specified Weight equal to or greater than zero percent (that is, 0%) or (y) an Opposite Way Directional Linkage and a Specified Weight equal to or greater than minus fifty percent (-50%) and less than zero percent (that is, 0%);
- (v) each Component Underlying that is in the Weight Category “Government Bond Tracker” may have (x) a Same Way Directional Linkage and a Specified Weight equal to or greater than zero percent (that is, 0%) or (y) an Opposite Way Directional Linkage and a Specified Weight equal to or greater than minus seventy-five percent (-75%) and less than zero percent (that is, 0%);
- (vi) the sum of the Specified Weights of all Component Underlyings in a single Weight Category shall be no greater than the “Maximum Weight” indicated for such Weight Category in the Weight Category Restrictions Table below;
- (vii) the sum of the absolute values of the Specified Weights of all Component Underlyings in a single Weight Category shall be no greater than the Gross Maximum Weight indicated for such Weight Category in the Weight Category Restrictions Table below;
- (viii) the sum of the Specified Weights of all Component Underlyings in each Weight Category in the Weight Category Restrictions Table below, other than the Weight Category “FX G10 Tracker” and the Weight Category “Government Bond Tracker”, shall be equal to or greater than zero percent (that is, 0%) ;
- (ix) the sum of the Specified Weights of all Component Underlyings in each of the “FX G10 Tracker” and the “Government Bond Tracker” Weight Categories, as set forth in the in the Weight Category Restrictions Table below, shall be equal to or greater than minus one hundred percent (that is, -100%) and less than one hundred percent (that is, +100%);
- (x) in respect of all the Component Underlyings, the sum of the absolute values of the Specified Weights of all Component Underlyings shall be equal to one hundred percent (that is, +100%).

#### Weight Category Restrictions Table

Weight Category	Maximum Weight	Gross Maximum Weight
DM Equity	+100%	+100%
EM Equity	+100%	+100%
DM Bond	+100%	+100%
Commodity	+50%	+50%
FX G10 Tracker	+100%	+100%
Government Bond Tracker	+100%	+100%

#### ADTV Weight Limit Table

Rebalance ADTV	ADTV Weight Limit
Less than USD 5 million	0%
Greater than USD 5 million and less than USD 15 million	25%
Greater than USD 15 million and less than	50%



USD 50 million	
Greater than USD 50 million and less than USD 100 million	75%
Equal to or greater than USD 100 million	100%

For informational purposes only: The Allocations Restrictions effectively limit Proposed Synthetic Allocations to economically “long” positions in Component Underlyings, other than Component Underlyings classified in the Component Underlyings Table within the Weight Class of Government Bond Tracker. The Proposed Synthetic Allocations may not contain a short position against an ETF. The Proposed Synthetic Allocations may contain a negative weight of up to -50% with respect to an FX Tracker Index or -75% with respect to a Government Bond Tracker Index, however, the FX Tracker Indices can be viewed as positions in the potential appreciation of specified non-USD currencies against the U.S. dollar. A “negative” weight accorded to an FX Tracker Index can be viewed as a position in the specified currency’s depreciation in USD terms. A negative weight with respect to a Government Bond Tracker Index is an economically “short” position in that Government Bond Tracker Index.

### 8.3 Index Allocation Agent May Add Additional Component Underlyings

The Index Allocation Agent may, on any NYSE Business Day following the Index Base Date, notify the Index Sponsor that the Index Allocation Agent wishes to add to the Component Underlyings Table a new investment vehicle as an additional Component Underlying (a “**Proposed Component Underlying**”). Such notification (the “**Addition Request**”) shall be in writing to the Index Sponsor (including by electronic mail to the electronic mail address designated by the Index Allocation Agent and the Index Sponsor from time to time, or such other method as may be agreed between the Index Allocation Agent and the Index Sponsor from time to time, with the Index Allocation Agent confirming receipt by the Index Sponsor, and the Index Allocation Agent shall send a copy of such electronic mail simultaneously to the Index Calculation Agent by copying the electronic mail address as may be agreed between the Index Allocation Agent and the Index Calculation Agent, or by use of such other method as may be agreed between the Index Allocation Agent and the Index Calculation Agent from time to time). Such notice shall be identified as an Addition Request and shall include the Proposed Component Underlying Details.

An Addition Request received by the Index Allocation Agent prior to 2:00 p.m. New York time on a NYSE Business Day shall be deemed received on such NYSE Business Day. An Addition Request received by the Index Allocation Agent at or after 2:00 p.m. New York time on a NYSE Business Day (or at any time on any date that is not a NYSE Business Day) shall be deemed received by the Index Allocation Agent on the next NYSE Business Day. The NYSE Business Day on which the Addition Request is deemed to be received in accordance with this paragraph is referred to as the “**Addition Request Date**”.

The Index Sponsor shall review each Addition Request, as of the Addition Request Date, to determine whether the Proposed Component Underlying is a Qualified Additional ETF. On or before the fifth (5th) NYSE Business Day following the Addition Request Date (the “**Proposed Addition Determination Date**”), the Index Sponsor shall notify in writing (by electronic mail or such other method as selected by the Index Sponsor) the Index Allocation Agent regarding whether the Proposed Component Underlying is a Qualified Additional ETF.

- (i) If the Index Sponsor determines that the Proposed Component Underlying is a Qualified Additional ETF, then:
  - (a) the Proposed Component Underlying shall be a Component Underlying with effect as of the Index Calculation Day that is ten (10) NYSE Business Days after the Addition Request Date;

- (b) the Component Underlyings Table shall be amended by the addition of the Proposed Component Underlying, with effect as of the Index Calculation Day that is ten (10) NYSE Business Days after the Addition Request Date, provided that the following characteristics categories shall be filled in as set forth below:

<b>Component Underlying</b>	As provided in the Addition Request*
<b>Component Sponsor</b>	[Specify Designated ETF Sponsor]
<b>Component Underlying Bloomberg Code</b>	As provided in the Addition Request*
<b>Country Focus</b>	As provided in the Addition Request*
<b>Cash Component</b>	JPMorgan Cash Index USD 3 Month
<b>Weight Category</b>	[EM Equities] [DM Equities]**
<b>Carry Cost</b>	0.75%
<b>Transaction Cost</b>	0.02%
<b>Component Type</b>	ETF
<b>Initial Weight</b>	0%
<b>Same Way Directional Linkage or Opposite Way Directional Linkage</b>	Same Way Directional Linkage
<b>Maximum Weight</b>	25%
<b>Same Day Component or Next Following Day Component</b>	Same Day Component
<b>Component Base Date ADTV and Market Cap</b>	[ ]/[ ]

\* with such clarifications or similar changes from the Addition Request as the Index Sponsor may determine to make in order to ensure accurate identification of the Component Underlying.

\*\* The Weight Category with respect to any Qualified Additional ETF will be "DM Equities" if the Single Country Market Cap Index that is the Reference Index for such Qualified Additional ETF is a Designated DM Country. The Weight Category with respect to any other Qualified Additional ETF will be "EM Equities".

; and

- (c) the Index Sponsor shall provide promptly the updated Component Underlyings Table to the Index Allocation Agent and the Index Calculation Agent; or
- (ii) If the Index Sponsor determines that the Proposed Component Underlying is not a Qualified Additional ETF, then, for the avoidance of doubt, the Component Underlyings Table shall not be changed by the addition of the Proposed Component Underlying.

#### 8.4 Index Allocation Agent May Substitute Component Underlyings

The Index Allocation Agent may, on any NYSE Business Day following the Index Base Date, notify the Index Sponsor that the Index Allocation Agent wishes to revise the Component Underlyings Table to replace a Component Underlying then included in the Component Underlyings Table that is an Exchange-Traded Fund (the "**Proposed Removed Component**") with a substitute Exchange-Traded Fund (the "**Proposed Substitute**") and such proposed removal and replacement, the "**Proposed Substitution**"). Such notification (the "**Substitution Request**") shall be in writing to the Index Sponsor (including by electronic mail to the electronic mail address designated by the Index Allocation Agent and the Index Sponsor from time to time, or such other method as may be agreed between the Index Allocation Agent and the Index Sponsor from time to time, with the Index Allocation Agent confirming receipt by the Index Sponsor, and the Index Allocation Agent shall send a copy of such electronic mail simultaneously to the Index Calculation Agent by copying the electronic mail address as may be agreed between the Index Allocation Agent and the Index Calculation Agent, or by use of such other method as may be agreed between the Index Allocation Agent and the Index Calculation Agent from time to time), Such notice shall be identified as a Proposed Substitution Request and shall identify the Proposed Removed Component and include the Proposed Component Underlying Details with respect to the Proposed Substitute.

A Substitution Request received by the Index Allocation Agent prior to 2:00 p.m. New York time on a NYSE Business Day shall be deemed received on such NYSE Business Day. A Substitution Request received by the Index Allocation Agent at or after 2:00 p.m. New York time on a NYSE Business Day (or at any time on any date that is not a NYSE Business Day) shall be deemed received by the Index Allocation Agent on the next NYSE Business Day. The NYSE Business Day on which the Substitution Request is deemed to be received in accordance with this paragraph is referred to as the "**Substitution Request Date**".

The Index Sponsor shall review each Substitution Request to determine whether the Proposed Substitution is a Qualifying Substitution, as of the Substitution Request Date. On or before the fifth (5th) NYSE Business Day following the Substitution Request Date (the "**Proposed Substitution Determination Date**"), the Index Sponsor shall notify in writing (by electronic mail or such other method as selected by the Index Sponsor) the Index Allocation Agent and the Index Calculation Agent of the Index Sponsor's determination regarding whether the Proposed Substitution is a Qualifying Substitution.

- (i) If the Index Sponsor determines that the Proposed Substitution is a Qualifying Substitution, then:
  - (a) the Proposed Removed Component Underlying shall immediately be removed from the Component Underlyings Table and may not be selected as a Component Underlying in any Rebalancing Notice;
  - (b) the Proposed Substitute shall be a Component Underlying with effect as of the Index Calculation Day that is ten (10) NYSE Business Days after the Substitution Request Date;
  - (c) the Component Underlyings Table shall be deemed amended by the replacement of the Proposed Removed Component by the Proposed Substitute, with effect as of the Index Calculation Day that is ten (10) NYSE Business Days after the Substitution Request Date, provided that the following characteristics categories shall be filled in as set forth below:

<b>Component Underlying</b>	As provided in the Substitution Request*
<b>Component Sponsor</b>	[Specify Designated ETF Sponsor]
<b>Component Underlying Bloomberg Code</b>	As provided in the Substitution

	Request*
<b>Country Focus</b>	[Same as Country Focus, if any, of Proposed Removed Component]
<b>Cash Component</b>	JPMorgan Cash Index USD 3 Month
<b>Weight Category</b>	DM Bond
<b>Carry Cost</b>	0.75%
<b>Transaction Cost</b>	0.02%
<b>Component Type</b>	ETF
<b>Initial Weight</b>	0%
<b>Same Way Directional Linkage or Opposite Way Directional Linkage</b>	Same Way Directional Linkage
<b>Maximum Weight</b>	Same as Maximum Weight of Proposed Removed Component
<b>Same Day Component or Next Following Day Component</b>	Same Day Component
<b>Component Base Date ADTV and Market Cap</b>	[ ]/[ ]

\* with such clarifications or similar changes from the Substitution Request as the Index Sponsor may determine to make in order to ensure accurate identification of the Component Underlying.

; and

- (d) the Index Sponsor shall provide promptly the updated Component Underlyings Table to the Index Allocation Agent and the Index Calculation Agent; or
- (ii) If the Index Sponsor determines that the Proposed Substitution is not a Qualifying Substitution, then, for the avoidance of doubt, the Component Underlyings Table shall not be changed by the addition or removal of any Component Underlying.

## 9. Definitions

In respect of the Index, the capitalized terms defined below have the following meanings in the Index Rules:

**“Average Daily Trading Volume”** means, with respect to an Exchange-Traded Fund and any date of determination, the average daily trading volume for such Exchange-Traded Fund as measured as of the most recent Index Calculation Day on or prior to such date of determination, by calculating the product of (a) the average volume of trading in the shares of such Exchange-Traded Fund on all U.S. exchanges over the preceding three-month period, as

reported by Bloomberg (or another recognized financial information provider) using the function ETF Component Ticker US HP and selecting a 3 month range or as reported by another information provider selected by the Index Sponsor and (b) the closing level of such Exchange-Traded Fund for such Index Calculation Day.

**"Basket Base Date"** has the meaning given to such term in Annex 1.

**"Cash Component"** means, in respect of each Component Underlying for which the "Cash Component" column in the Component Underlyings Table is not specified to be "N/A", and subject to Sections 7.1 through 7.4, the JPMorgan Cash Index USD 3 Month, as identified in the Component Underlyings Table.

**"Cash Tracker Index"** a Component Underlying identified as such in the "Component Type" column in the Component Underlyings Table.

**"Closing Level"** means, (i) for any Component Underlying that is an index and a relevant Component Scheduled Trading Day, the official closing level published in respect of that index by the Component Sponsor or (ii) for any Component Underlying that is an ETF Component, the Closing TR Level.

**"Closing Price"** means, with respect to an Exchange-Traded Fund, the last reported sale price, regular way (or, in the case of The NASDAQ Stock Market, the official closing price) of the shares of such Exchange-Traded Fund for the principal trading session on each scheduled trading day on the principal U.S. securities exchange on which the shares of such Exchange-Traded Fund are listed or admitted to trading.

**"Closing TR Level"** means an amount calculated by the Index Calculation Agent in accordance Part B, Section 9.

**"Component Base Date"** means (i) for any Component Underlying first included in the Component Underlyings Table on the Index Base Date, such Index Base Date; or (ii) for any Component Underlying first included in the Component Underlyings Table after the Index Base Date, the date that such Component Underlying was added to the Component Underlyings Table.

**"Component Continuing Disruption Event"** means, in respect of a Component Underlying, five consecutive Component Scheduled Trading Days that are Component Disrupted Days.

**"Component Disrupted Day"** means, in respect of a Component Underlying, a Component Scheduled Trading Day on which a Market Disruption Event occurs or is continuing in respect of such Component Underlying.

**"Component Scheduled Trading Day"** means either:

- (a) in respect of an index, including the Cash Component, a day for which the Closing Level for that index is (or, but for the occurrence of a Market Disruption Event, would have been) scheduled to be calculated and published by the relevant sponsor of such index; or
- (b) in respect of an exchange-traded fund, a day on which the primary exchange in the United States on which such exchange-traded fund is listed is scheduled to be open for trading for its regular trading session.

**"Component Sponsor"** means the sponsor of a Component Underlying identified in the Component Underlyings Table.

**"Component Underlying"** means each component underlying identified in the column entitled "Component Underlying" in the Component Underlyings Table.

**"Component Underlying Adjustment Event"** means an event identified in Section 7.

**"Component Underlyings Table"** means the "Component Underlyings Table" in Annex 1.

**"Component Valuation Day"** means, in respect of a Component Underlying, a Component Scheduled Trading Day for which no Market Disruption Event occurs or is continuing in respect of such Component Underlying.

**"Designated DM Country"** means each of Austria, Belgium, Denmark, Finland, Greece, Hong Kong, Ireland, Israel, Luxembourg, Netherlands, New Zealand, Norway and Portugal.

**"Designated ETF Sponsor"** means each of the following (including their respective successors in interest and affiliates under common control): State Street Bank & Trust Company; BlackRock Fund Advisors; WisdomTree Asset Management, Inc.; Invesco PowerShares Capital Management LLC; and The Vanguard Group, Inc.

**"Effective Synthetic Allocations"** means, in respect of a Rebalancing Date, the Proposed Synthetic Allocations specified in the associated Rebalancing Notice.

**"ETF Component"** means each Component Underlying in the Component Underlyings Table for which the "Component Type" is specified to be "ETF".

**"ETF Extraordinary Event"** has the meaning provided in Section 7.5.

**"ETF Initial Listing Date"** means, with respect to an Exchange-Traded Fund, the date on which the shares of such Exchange-Traded Fund were initially listed or admitted for trading, and actually commenced trading, on either the NYSE or the Nasdaq.

**"Exchange-Traded Fund"** means a collective investment vehicle possessing each of the following characteristics:

- 1) includes the term "exchange-traded fund", "ETF" or a similar label in its title or otherwise holds itself out as an "exchange-traded fund";
- 2) the shares of which are listed on any of the NYSE, NYSE Arca or the NASDAQ Global Select Market (including any successor thereto), and trade primarily thereon;
- 3) has its shares originally issued and redeemed or retired in the form of "creation units", "formation units" or something similar;
- 4) is registered with the U.S. Securities and Exchange Commission as an open-ended investment company under the Investment Company Act of 1940, as amended; and
- 5) the issuer of which is registered with the U.S. Securities and Exchange Commission as a reporting company under the Securities Exchange Act of 1934, as amended.

**"Ex-Dividend Date"** means, with respect to a dividend or other distribution for an ETF Component, the first Component Scheduled Trading Day on which transactions in the shares of such ETF Component trade on the relevant exchange without the right to receive that dividend or other distribution.

**"FX Tracker Index"** a Component Underlying identified as such in the "Component Type" column in the Component Underlyings Table.

**"Government Bond Tracker Index"** a Component Underlying identified as such in the "Component Type" column in the Component Underlyings Table.

**"Index Allocation Agent"** means Republica AFAP, S.A.

**"Index Calculation Day"** means each calendar day that is:

- (1) a Weekday on which each of the following exchanges is scheduled to be open for trading and does in fact open for its regular trading session for such Weekday: (i) the New York Stock Exchange, (ii) Nasdaq, (iii) the Eurex Exchange, and (iv) the Tokyo Stock Exchange;
- (2) a Weekday that is a Component Valuation Day for each Component Underlying with a non-zero Specified Weight for such Weekday; and
- (3) a Weekday that is not a Component Disruption Day for the Cash Component.

**"Index Tracker ETF"** means an Exchange-Traded Fund, the publicly announced investment strategy of which is to generally track the performance of an unleveraged long investment in the Reference Index for such Exchange-Traded Fund primarily by means of a passive sampling or passive replication investment strategy.

**"Market Capitalization"** means, with respect to an Exchange-Traded Fund and any date of determination, the market capitalization of such Exchange-Traded Fund as of the most recent Index Calculation Day on or prior to such date of determination, as determined by reference to the market capitalization of such Exchange-Traded Fund provided by Bloomberg (or such successor market information provider as may be designated by the Index Sponsor) on the

"DES" page (or a successor Bloomberg page, or a relevant page with respect to any other designated market information provider).

**"Net Dividend Amount"** means, for an ETF Component and an Ex-Dividend Date for such ETF Component, 70% of the gross cash dividend or other distribution per share of the ETF Component declared by the Component Sponsor to holders of record of a share of such ETF Component immediately prior to that Ex-Dividend Date, as determined by the Index Calculation Agent in its discretion as (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 Component (other than share dividends or distributions referred to in Section 7.7 (Anti-Dilution Adjustment)). 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.

**"Next Following Day Component"** means each Component Underlying designated with "N" in the column titled Same Day Component or Next Following Day Component in the Component Underlyings Table.

**"NYSE Business Day"** means a day on which the New York Stock Exchange is scheduled to be open for trading for its regular trading session.

**"Observed Volatility"** means, with respect to any Exchange-Traded Fund and any date of determination, the observed volatility of the Closing Price of such Exchange-Traded Fund, calculated by implementing the methodology described in Part B, Section 5 of these Index Rules, but with the following modifications (1) substituting for the Index Base Date, the Component Scheduled Trading Day that is at least one calendar year prior to such date of determination, (2) substituting for the Index Level, the Closing Price of such Exchange-Traded Fund, and (3) substituting for each Index Calculation Day from the Index Base Date to such date of determination, each Component Scheduled Trading Day in respect of such Exchange-Traded Fund for such period.

**"Proposed Component Underlying Details"** means, with respect to any Proposed Component Underlying or Proposed Substitute, the name, ticker and country focus of such Proposed Component Underlying or Proposed Substitute.

**"Proposed Substitute Component Underlying Details"** means, in respect of each Rebalancing Date, the ticker of the (1) Proposed Substitute Component Underlying that the Index Allocation Agent wishes to add to the set of Component Underlyings and (2) the Removed Component Underlying.

**"Proposed Synthetic Allocations"** means, in respect of each Rebalancing Notice and its associated Rebalancing Notification Date, the weight of each Component Underlying that the Index Allocation Agent specifies in such Rebalancing Notice.

**"Qualified Additional ETF"** means an investment fund meeting all of the following criteria as of the date of the Proposed Addition Determination Date relating thereto:

- (i) is an Exchange-Traded Fund;
- (ii) such Exchange-Traded Fund is an Index Tracker ETF
- (iii) the Reference Index with respect to such Exchange-Traded Fund is a Single Country Market Cap Index;
- (iv) the investment adviser of such Exchange-Traded Fund is a Designated ETF Sponsor;
- (v) has an ETF Initial Listing Date that falls at least two calendar years prior to such Proposed Addition Determination Date;
- (vi) meets all of the Qualified Additional ETF Trading Criteria; and
- (vii) no ETF Extraordinary Event shall have occurred or be continuing in respect of such Exchange-Traded Fund in the 24-month period ending on the Addition Request Date or Substitution Request Date, as applicable.

**"Qualified Additional ETF Trading Criteria"** means, with respect to any Exchange-Traded

Fund:

- (i) an Average Daily Trading Volume of not less than USD 10,000,000;
- (ii) a Market Capitalization of not less than USD 250,000,000; and
- (iii) an Observed Volatility equal to or less than 40%.

**"Qualified Substitute ETF"** means an investment fund meeting all of the following criteria as of the date of the Proposed Substitution Determination Date relating thereto:

- (i) is an Exchange-Traded Fund;
- (ii) the investment adviser of such Exchange-Traded Fund is a Designated ETF Sponsor;
- (iii) the Reference Index with respect to such Proposed Substitute is the same Reference Index as the Reference Index for the Proposed Removed Component;
- (iv) has an ETF Initial Listing Date that falls at least two calendar years prior to such Proposed Substitution Determination Date;
- (v) meets all of the Qualified Additional ETF Trading Criteria; and
- (vi) no ETF Extraordinary Event shall have occurred or be continuing in respect of such Exchange-Traded Fund.

**"Qualifying Substitution"** means:

- (i) the Proposed Substitute is a Qualified Substitute ETF;
- (ii) the Proposed Removed Component is listed in the Component Underlyings Table as (x) "Weight Category": "DM Bond"; and (y) "Type of Component": "ETF";
- (iii) the Proposed Removed Component must have a Specified Weight of zero percent (0%); and
- (iv) the Specified Weight of the Proposed Removed Component as of each Index Calculation Day from the date of such Substitution Request, to and including the date that is ten NYSE Business Days thereafter, must be zero.

**"Rebalance ADTV"** means, with respect to any Rebalancing Notice and any Component Underlying that is an ETF Component, the Average Daily Trading Volume of such ETF Component, as measured as of the Rebalancing Notification Date.

**"Rebalancing Notice"** has the meaning given such term in Section 8.1.

**"Rebalancing Notification Date"** has the meaning given such term in Section 8.1.

**"Reference Commodity"** means, with respect to an ETF Component, each commodity underlying such ETF Component.

**"Reference Index"** means with respect to an Exchange-Traded Fund, the index tracked by such Exchange-Traded Fund, as announced by such Exchange-Traded Fund.

**"Relevant Persons"** means the Index Sponsor and the Index Calculation Agent and any affiliate or subsidiary of the Index Sponsor or the Index Calculation Agent and their respective directors, officers, employees, representatives, delegates or agents.

**"Same Day Component"** means each Component Underlying designated with "S" in the column titled Same Day Component or Next Following Day Component in the Component Underlyings Table.

**"Single Country Market Cap Index"** means an index (i) that is intended to track the performance of an unleveraged "long" investment in common equities focused in a single country (the **"Reference Country"**), (ii) the name of which includes the name of the Reference Country or a similar geographic reference; (iii) the Reference Country of which is not named in the Component Underlyings Table, as amended from time to time, under the column titled "Country Focus"; (iv) is calculated on a market capitalization basis (i.e., not on a price-weighted or an equal-weighted basis, but which may employ generally accepted variations on market



capitalization measures, including, without limitation, limiting recognized market capitalization by free float or concentration caps); and (v) contains no fewer than 20 issuers.

**"Specified Weight"** means, in respect of a Component Underlying:

- (i) for each calendar day prior to the first Rebalancing Date determined pursuant to Section 8.1, the Initial Weight (as specified in Component Underlyings Table in Annex 1) of such Component Underlying; and
- (ii) for each calendar day that occurs on or after the first Rebalancing Date determined pursuant to Section 8.1, the Effective Synthetic Allocation of such Component Underlying for the most recent Rebalancing Date prior to such calendar day.

**"Weekday"** means each calendar day that is not a Saturday or a Sunday.

## Notices, Disclaimers and Conflicts

The Index Rules have been developed with the possibility of the Index Sponsor, the Index Calculation Agent or any of the Relevant Persons entering into or promoting, offering or selling transactions or investments (structured or otherwise) linked to the Index and the hedging of such transactions or investments in any manner that any of them sees fit.

### **Conflicts of interest; Use of J.P. Morgan Internal Pricing Sources**

The construction of the JPMorgan USD Cash Index 3-Month (*Bloomberg code: JPCAUS3M Index*) is based in whole, or in part, on J.P. Morgan internal pricing sources. A purchaser of a financial product or a counterparty to a transaction (as applicable), synthetically linked to, or that references, the Index must agree and acknowledge that the internal data so used may give rise to potential, and in some cases actual, conflicts of interest.

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**THIS DOCUMENT IS IMPORTANT. YOU SHOULD NOT INVEST IN A PRODUCT LINKED TO THE INDEX UNLESS YOU HAVE ENSURED THAT YOU FULLY UNDERSTAND THE NATURE OF SUCH AN INVESTMENT AND THE RISKS INVOLVED AND ARE SATISFIED THAT THE INVESTMENT IS SUITED TO YOUR CIRCUMSTANCES AND OBJECTIVES. IF YOU ARE IN ANY DOUBT ABOUT THIS YOU SHOULD TAKE ADVICE FROM AN APPROPRIATELY QUALIFIED ADVISER. UNLESS YOU ARE A HIGHLY SOPHISTICATED INVESTOR WHO REGULARLY TRANSACTS IN PRODUCTS LINKED TO INDICES OF THIS TYPE YOU ARE STRONGLY ADVISED TO TAKE SUCH ADVICE IN ANY EVENT.**

**Dependence on the Index Allocation Agent:** The rebalancing of the Component Underlyings of the Index will be made by the Index Allocation Agent. As a result, the success of the Index will depend largely upon the decisions and abilities of the Index Allocation Agent and certain key individuals employed by the Index Allocation Agent. There can be no assurance that the Index Allocation Agent will be successful in the rebalancing of the Index and the loss of one or more such key individuals may have a material adverse impact on the performance of the Index.

**Termination of Republica AFAP, S.A. as Index Allocation Agent:** Upon the termination of Republica AFAP, S.A. as Index Allocation Agent in accordance with the provisions of the Index Allocation Agreement, no successor Index Allocation Agent will be appointed and the Index shall cease to exist. This may have an adverse effect on anyone who has taken economic exposure to the Index by investing in any product that references it.

**Index Allocation Agent Discretion:** The Index Allocation Agent is solely responsible for selecting the Component Underlyings that comprise the Index from time to time and ensuring that they comply with the requirements of Index Rules including, without limitation, the Allocation Restrictions. The returns of products linked to the Index will depend on the Index Allocation Agent's asset allocation decisions and abilities. There can be no assurance that the Index Allocation Agent will cause the Index to produce positive returns or returns that outperform any other basket selected by another person or by any other method. Under the Index Rules, the Index Allocation Agent has broad discretion in the rebalancing and management of the Component Underlyings referenced by the Index. The exercise of such discretion may have an adverse impact on the performance of the Index.

**Index Allocation Agent's Responsibility to Monitor Compliance with Index Rules:** It is the Index Allocation Agent's responsibility to ensure that the Index complies with the Index Rules as of each Rebalancing Date. None of the Index Sponsor, the Index Calculation Agent or any other person owes any obligation to the Index Allocation Agent or any other person to monitor the Index's compliance with the Index Rules other than to check that any Rebalancing Notice satisfies the Allocation Restrictions or to take any remedial action whatsoever in relation to any breach of the Index Rules including, without limitation, notifying the Index Sponsor, the Index Calculation Agent, the Index

Allocation Agent or any other person of such breach.

**NONE OF THE INDEX SPONSOR, THE INDEX CALCULATION AGENT, ANY RELEVANT PERSON OR ANY MEMBER OF THE J.P. MORGAN GROUP HAS ANY RESPONSIBILITY FOR THE SELECTION OF THE COMPONENT UNDERLYINGS OR THE WEIGHTS ALLOCATED TO THE COMPONENT UNDERLYINGS AND NO LIABILITY WHATSOEVER SHALL ATTACH TO ANY OF THEM AS A RESULT OF THE COMPOSITION OR ANY RE-COMPOSITION OF THE INDEX BY THE INDEX ALLOCATION AGENT. NONE OF THE INDEX SPONOR, THE INDEX CALCULATION AGENT, ANY RELEVANT PERSON OR ANY MEMBER OF THE J.P. MORGAN GROUP HAS ANY RESPONSIBILITY FOR ANY ACTS OR OMISSIONS OF, OR BREACH OF ANY OBLIGATIONS OF, OR DUTY ON THE PART OF, THE INDEX ALLOCATION AGENT OR SHALL BE REQUIRED TO TAKE ANY ACTION (INCLUDING LEGAL PROCEEDINGS OR ENFORCEMENT OF ANY RIGHTS) AGAINST ANY THIRD PARTY (INCLUDING THE INDEX ALLOCATION AGENT).**

**UNDER THE INDEX ALLOCATION AGREEMENT, THE INDEX SPONSOR MAY TERMINATE THE INDEX ALLOCATION AGENT IF, AMONG OTHER EVENTS, THERE OCCURS A VOLUNTARY OR INVOLUNTARY BANKRUPTCY, INSOLVENCY OR ANY ANALOGOUS PROCEEDING OCCURS OR EXISTS WITH RESPECT TO THE INDEX ALLOCATION AGENT, IF THE INDEX ALLOCATION AGENT IS INVOLVED IN REGULATORY OR LEGAL PROCEEDINGS THAT ARE MATERIALLY ADVERSE IN THE CONTEXT OF SUCH AGREEMENT, IF THE INDEX ALLOCATION AGENT BREACHES ANY OF THE BASKET ALLOCATION AGREEMENT'S TERMS, IF THE INDEX ALLOCATION AGENT OR ANY OF ITS DIRECTORS, OFFICERS, EMPLOYEES OR AGENTS (THE "INDEX ALLOCATION AGENT RELATED PERSONS") HAS COMMITTED FRAUD OR ENGAGED IN CRIMINAL ACTIVITY IN PERFORMING ITS GENERAL BUSINESS ACTIVITIES OR IS BEING CHARGED WITH A CRIMINAL OFFENSE, IF THE INDEX ALLOCATION AGENT OR ANY INDEX ALLOCATION AGENT RELATED PERSON HAS ANY OF THEIR RESPECTIVE REGISTRATIONS, AUTHORIZATIONS, LICENCES OR MEMBERSHIPS WITH ANY ADMINISTRATIVE OR REGULATORY AUTHORITIES REVOKED, SUSPENDED, TERMINATED, LIMITED OR QUALIFIED IN A WAY THAT IMPAIRS THE ABILITY OF THE INDEX ALLOCATION AGENT TO FULFIL ITS OBLIGATIONS UNDER SUCH AGREEMENT, OR IF THE INDEX ALLOCATION AGENT'S ABILITY TO FULFIL ITS OBLIGATIONS UNDER SUCH AGREEMENT IS SUBSTANTIALLY CURTAILED BY ANY COMPETENT LEGAL OR REGULATORY AUTHORITY.**

**Part B**  
**Index Algorithm**

**1. Introduction**

The Index tracks a basket of fixed income and foreign exchange indices and exchange-traded funds. The weights of each of the components of the Index may be changed with effect from a Rebalancing Date, resulting in a different exposure of the Index to the Component Underlyings of the Index.

The Index Calculation Agent will determine the Index Level for each Index Calculation Day (t) by implementing the steps described below.

**2. Calculation of the Index Level**

The level of the Index (the "**Index Level**"):

- (i) on the Index Base Date, shall be 100.00; and
- (ii) on each Index Calculation Day following the Index Base Date (such Index Calculation Day being an "**Index Calculation Day (t)**") and the Index Level on such day being "**Index(t)**") shall be determined by the Index Calculation Agent in accordance with the following formula:

$$\text{Index}(t-1) \times \left[ 1 + E_{t-1} \times \left( \frac{BL_t}{BL_{t-1}} - 1 \right) - \text{AdjustmentCost}_t \right]$$

Where:

"**AdjustmentCost<sub>t</sub>**" means, in respect of each Index Calculation Day (t), the Adjustment Cost on such Index Calculation Day as calculated in Section 6 below;

"**E<sub>t-1</sub>**" means, for an Index Calculation Day (t), the Exposure in respect of the immediately preceding Index Calculation Day, with the exception that, in respect of the first Index Calculation Day following the Index Base Date, E<sub>t-1</sub> shall instead be the Exposure on the Index Base Date;

"**BL<sub>t</sub>**" means, in respect of an Index Calculation Day (t), the Basket Level on such Index Calculation Day (t);

"**BL<sub>t-1</sub>**" means, in respect of an Index Calculation Day (t), the Basket Level on the immediately preceding Index Calculation Day;

"**Index(t-1)**" means, in respect of an Index Calculation Day (t), the Index Level on the immediately preceding Index Calculation Day, with the exception that, in respect of the first Index Calculation Day following the Index Base Date, Index(t-1) shall instead be the Index Level on the Index Base Date, which was 100.00;

**3. Calculation of the Basket Level**

The "**Basket Level**" or "**BL<sub>t</sub>**" of the Index shall be:

- (i) on the Index Base Date, one; and
- (ii) (a) on each Index Calculation Day (t) from but excluding Rebalancing Date (k) to and including the next following Rebalancing Date (k+1), an amount determined by the Index Calculation Agent in accordance with the following formula (each such Index Calculation Day being an "**Index Calculation Day(t)**"):

$$BL_k \times \left\{ 1 + \sum_{j=1}^N \left[ w_{j,k} \times \left( \frac{S_{j,t}}{S_{j,k}} - \frac{C_{j,t}}{C_{j,k}} - \left( SGN(w_{j,k}) \times CarryCost_j \times \frac{Days_{k,t}}{360} \right) \right) \right] \right\} + RLA_k$$

Where:

"**Rebalancing Date (k)**" means, in respect of Index Calculation Day (t), the Rebalancing Date (as defined in Part A, Section 8.1 of these Index Rules) immediately preceding Index Calculation Day (t)

"**C<sub>j,t</sub>**" means, in respect of Index Calculation Day (t), the Closing Level of the Cash Component corresponding to Component Underlying (j) on such Index Calculation Day, provided that if there is no Cash Component associated with Component Underlying (j), then C<sub>j,t</sub> shall instead be one;

"**C<sub>j,k</sub>**" means, in respect of Index Calculation Day (t), the Closing Level of the Cash Component corresponding to Component Underlying (j) on Rebalancing Date (k), provided that if there is no Cash Component associated with Component Underlying (j), then C<sub>j,k</sub> shall instead be one;

"**BL<sub>k</sub>**" means, in respect of Index Calculation Day (t), the Basket Level on Rebalancing Date (k), provided that, in respect of any Index Calculation Day from but excluding the Index Base Date to and including the next Rebalancing Date, BL<sub>k</sub> shall instead be the Basket Level on the Index Base Date, which was one;

"**j**" means, in respect of Index Calculation Day (t), a positive integer indicating a unique reference asset corresponding to each Component Underlying;

"**N**" means, in respect of Index Calculation Day (t), the number of Component Underlyings;

"**S<sub>j,t</sub>**" means, in respect of Index Calculation Day (t), the Closing Level of Component Underlying (j) on such Index Calculation Day;

"**S<sub>j,k</sub>**" means, in respect of Index Calculation Day (t), the Closing Level of Component Underlying (j) on Rebalancing Date (k);

"**w<sub>j,k</sub>**" means, in respect of Index Calculation Day(t), the Specified Weight in respect of each unique reference asset (j) on Rebalancing Date (k), provided that, in respect of each Index Calculation Day following the Basket Base Date to, and including, the next Rebalancing Date, w<sub>j,k</sub> shall instead be the Initial Weight of each unique reference asset (j);

"**SGN**" followed by a number inside parentheses, means based on the sign of the number inside the parentheses, (x) negative one (that is, -1) if such number is less than zero (which shall also correspond to an Opposite Way Directional Linkage for the relevant unique reference asset) or (y) positive one (that is, +1) if such number is greater than or equal to zero (which shall also correspond to a Same Way Directional Linkage for the relevant unique reference asset);

"**CarryCost<sub>j</sub>**" means the Carry Cost of Component Underlying (j) specified in the Component Underlyings Table in Annex 1;

"**Days<sub>k,t</sub>**" means the number of calendar days, from but excluding Rebalancing Date (k), to and including Index Calculation Day (t);

"**RLA<sub>k</sub>**" means, the Rebalance Lag Adjustment in respect of Rebalancing Date (k);

#### 4. Rebalance Lag Adjustment

The "**Rebalance Lag Adjustment**" or "**RLA<sub>k</sub>**" in respect of Rebalancing Date (k) shall be determined by the Index Calculation Agent as follows:

$$RLA_k = BL_{k-1} \times \sum_{j=1}^Q \left( w_{j,k-1} \times \left[ \frac{S_{j,p} - S_{j,k}}{S_{j,k-1}} - \frac{C_{j,p} - C_{j,k}}{C_{j,k-1}} \right] \right) - BL_k \times \sum_{j=1}^M \left( w_{j,k} \times \left[ \frac{S_{j,p}}{S_{j,k}} - \frac{C_{j,p}}{C_{j,k}} \right] \right)$$

Where:

"**M**" means, in respect of a Rebalancing Date (k), the number of Next Following Day Components for which  $w_{j,k}$  is not zero;

"**Q**" means, in respect of a Rebalancing Date (k-1), the number of Next Following Day Components for which  $w_{j,k-1}$  is not zero;

"**BL<sub>k</sub>**" means, the Basket Level on Rebalancing Date (k);

"**BL<sub>k-1</sub>**" means, the Basket Level on Rebalancing Date (k-1);

"**Rebalancing Date (k-1)**" means the Rebalancing Date immediately preceding Rebalancing Date (k);

"**w<sub>j,k-1</sub>**" means, the Specified Weight in respect of Component Underlying (j) in respect of Rebalancing Date (k-1), with the exception that, in respect of each Index Calculation Day following the Basket Base Date to and including the next Rebalancing Date, the  $w_{j,k}$  shall instead be the Initial Weight of such Component Underlying.

"**C<sub>j,p</sub>**" means, in respect of a Rebalancing Date (k), the Closing Level of the Cash Component associated with Component Underlying (j) on the Rebalance Effective Date corresponding to such Component Underlying (j) and Rebalancing Date (k), with the exception that if there is no Cash Component associated with Component Underlying (j), then  $C_{j,p}$  shall instead be one;

"**C<sub>j,k-1</sub>**" means, the Closing Level of the Cash Component corresponding to Component Underlying (j) on Rebalancing Date (k-1), with the exception that if there is no Cash Component associated with Component Underlying (j), then  $C_{j,k-1}$  shall instead be one;

"**S<sub>j,p</sub>**" means, in respect of a Rebalancing Date (k), the Closing Level of Component Underlying (j) on the Rebalance Effective Date corresponding to such Component Underlying (j) and Rebalancing Date (k)

"**S<sub>j,k-1</sub>**" means, the Closing Level of Component Underlying (j) on Rebalancing Date (k-1);

"**Rebalance Effective Date**" means, in respect of Component Underlying (j) and a Rebalancing Date (k), the next Component Valuation Day (which Rebalance Effective Date shall be indicated by "p") for such Component Underlying (j) that falls immediately after Rebalancing Date (k)

## 5. Exposure

The "**Exposure**" of the Index on the Index Base Date and on each Index Calculation Day (t) shall be determined by the Index Calculation Agent in accordance with the following formula:

$$\text{Min} \left( \text{Cap}; \frac{\text{TargetVol}}{\text{RealizedVol}_{t-2}} \times \text{VAF}_{t-2} \right)$$

Where:

"**Cap**" means 1.50;

"**Min**" followed by a series of amounts inside parentheses, means whichever is the lesser of the amounts separated by a semi-colon inside those parentheses;

"**TargetVol**" means the Target Volatility;

"**RealizedVol<sub>t-2</sub>**" means, in respect of Index Calculation Day (t), the Basket Realized Volatility in respect of the Index Calculation Day that is two Index Calculation Days prior to such Index Calculation Day (t);

"**VAF<sub>t-2</sub>**" means, in respect of Index Calculation Day (t), the Volatility Adjustment Factor in respect of the Index Calculation Day that is two Index Calculation Days prior to such Index Calculation Day (t);

"**Target Volatility**" means ten percent (that is, 10%).

## 6. Calculation of the Basket Realized Volatility

The "**Basket Realized Volatility**" in respect of the Index Base Date and each Index Calculation Day (t) shall be an amount determined by the Index Calculation Agent in accordance with the following formula:

$$\sqrt{252 \times \text{Max}(\text{VarianceST}_t; \text{VarianceLT}_t)}$$

### 6.1 VarianceST

"**VarianceST**" means, in respect of each Index Calculation Day (t):

- (i) for an Index Calculation Day (t) that is prior to the Index Base Date or that is the Index Base Date, the Initial Short Term Variance specified in Annex 1;
- (ii) for an Index Calculation Day (t) after the Index Base Date that is an Index Calculation Day in the Lag Period in respect of Rebalancing Date (k), an amount determined by the Index Calculation Agent in accordance with the following formula:

$$(\lambda_{ST} \times \text{VarianceST}_{t-1}) + (1 - \lambda_{ST}) \times R_t^2$$

- (iii) for each Index Calculation Day (t) that is an Index Calculation Day in the Lag Period in respect of Rebalancing Date (k), an amount determined by the Index Calculation Agent in accordance with the following formula:

$$\frac{1}{\text{Lookback}_{ST}} \sum_f (X_f)^2$$

Where:

"**Lookback<sub>ST</sub>**" means 20;

"**f**" means, in respect of such Index Calculation Day (t), each Index Calculation Day from and including the 19<sup>th</sup> Index Calculation Day falling prior to such Index Calculation Day (t) to, and including, such Index Calculation Day (t); and

"**X<sub>f</sub>**" means, in respect of such Index Calculation Day (f), an amount calculated by the Index Calculation Agent in accordance with the following formula:

$$\sum_{j=1}^N \left\{ w'_{j,m} \times \left( \frac{S_{j,f}}{S_{j,f-1}} - \frac{C_{j,f}}{C_{j,f-1}} \right) \right\}$$

### 6.2 VarianceLT

"**VarianceLT**" means, in respect of each Index Calculation Day (t):

- (i) for an Index Calculation Day (t) that is prior to the Index Base Date or that is the Index Base Date, the Initial Long Term Variance specified in Annex 1;
- (ii) for each Index Calculation Day (t) after the Index Base Date that is an Index Calculation Day in the Lag Period in respect of Rebalancing Date (k), an amount determined by the Index Calculation Agent in accordance with the following formula:

$$(\lambda_{LT} \times \text{VarianceLT}_{t-1}) + (1 - \lambda_{LT}) \times R_t^2$$

- (iii) for each Index Calculation Day (t) that is an Index Calculation Day in the Lag Period in respect of Rebalancing Date (k), an amount determined by the Index Calculation Agent in accordance with the following formula:

$$\frac{1}{\text{Lookback}_{LT}} \sum_f (X_f)^2$$

Where:

"**Lookback<sub>LT</sub>**" means 60;

"f" means, in respect of such Index Calculation Day (t), each Index Calculation Day from and including the 59<sup>th</sup> Index Calculation Day falling prior to such Index Calculation Day (t) to, and including, such Index Calculation Day (t); and

"X<sub>f</sub>" means, in respect of such Index Calculation Day (t), an amount calculated by the Index Calculation Agent in accordance with the following formula:

$$\sum_{j=1}^N \left\{ w'_{j,m} \times \left( \frac{S_{j,f}}{S_{j,f-1}} - \frac{C_{j,f}}{C_{j,f-1}} \right) \right\}$$

### 6.3 Relevant definitions for Section 6.1 and Section 6.2

The following terms and symbols shall have the following meanings:

"**Index Calculation Day(f)**" means an Index Calculation Day falling within the period Lookback<sub>ST</sub> or the period Lookback<sub>LT</sub>, as applicable;

"j" means, in respect of the Index Base Date or an Index Calculation Day (t), a positive integer uniquely corresponding to each Component Underlying;

"λ<sub>LT</sub>" means 0.97;

"λ<sub>ST</sub>" means 0.88;

"**Lag Period**" means, in respect of Rebalancing Date (k), the period of 3 Index Calculation Days from and including the Index Calculation Day that is 2 Index Calculation Days immediately preceding such Rebalancing Date (k) to and including such Rebalancing Date (k).

"**Max**" followed by a series of amounts inside parentheses, means the greater of the amounts separated by a semi-colon inside those parentheses;

"N" means, in respect of Index Calculation Day (t), the number of Component Underlyings;

"R<sub>t</sub>" means, in respect of Index Calculation Day (t), an amount calculated by the Index Calculation Agent in accordance with the following formula:

$$\ln \left( \frac{BL_t}{BL_{t-1}} \right)$$

"BL<sub>t</sub>" means the Basket Level in respect of Index Calculation Day (t);

"BL<sub>t-1</sub>" means the Basket Level in respect of the Index Calculation Day immediately preceding Index Calculation Day (t);

"**VarianceLT<sub>t-1</sub>**" means Variance LT in respect of the Index Calculation Day immediately preceding Index Calculation Day (t);

"**VarianceST<sub>t-1</sub>**" means Variance ST in respect of the Index Calculation Day immediately preceding Index Calculation Day (t);

"w'<sub>j,m</sub>" means, in respect of Index Calculation Day (t), the Specified Weight of Component Underlying (j) on the Rebalancing Date that immediately follows Index Calculation Day (t) (which is denoted as Rebalancing Date (m)).

## 7. Calculation of the Volatility Adjustment Factor

The "**Volatility Adjustment Factor**" (x) on the Index Base Date and the first Index Calculation Day following the Index Base Date, shall be 1.0 and (y) on each Index Calculation Day (t) after the first Index Calculation Day following the Index Base Date, shall be an amount determined by the Index Calculation Agent in accordance with the following formula:



$$\text{Min} \left( \text{VAFC}, \sqrt{\frac{\text{Max} \left( 0, 1 - \frac{\text{Aggregate Observed Variance}}{\text{Total Variance}} \right)}{\left( 1 - \frac{\text{Elapsed Daycount}}{\text{Expected Trading Days}} \right)}} \right)$$

## 7.1 Relevant definitions

The following terms and symbols shall have the following meanings:

“**Aggregate Observed Variance**” means, in respect of an Index Calculation Day (t), the sum of the square of the natural logarithm of the daily returns of the Index in respect of each Index Calculation Day (i) failing in the period from and including the first Index Calculation Day in the Variance Observation Period (being Index Calculation Day (1)) to, and including Index Calculation Day (t), determined in accordance with the following formula:

$$\text{Aggregate Observed Variance (t)} = \sum_{i=1}^t \text{IndexR}_i^2$$

“**IndexR<sub>i</sub>**” means, in respect of an Index Calculation Day (i), an amount calculated by the Index Calculation Agent in accordance with the following formula:

$$\ln \left( \frac{\text{Index}_i}{\text{Index}_{i-1}} \right)$$

“**Index<sub>i</sub>**” means the Index Level in respect of Index Calculation Day (i);

“**Index<sub>i-1</sub>**” means the Index Level in respect of the Index Calculation Day immediately preceding Index Calculation Day (i);

“**Total Variance**” means, an amount calculated by the Index Calculation Agent in accordance with the following formula:

$$\text{TargetVol}^2 \times \frac{\text{Expected Trading Days}}{252}$$

“**TargetVol**” means the Target Volatility;

“**Expected Trading Days**” means the expected number of trading days in the Variance Observation Period

“**Variance Observation Period**” means the period from but excluding the Index Base Date to and including the ten year anniversary of the Index Base Date.

“**Elapsed Daycount**” means the number of Index Calculation Days in the period from but excluding the Index Base Date to and including Index Calculation Day (t)

“**Variance Adjustment Factor Cap**” or “**VAFC**” means 1.0

## 8. Adjustment Cost

The “**Adjustment Cost**” of the Index on an Index Calculation Day (t) shall be determined by the Index Calculation Agent in accordance with the following formula:

$$\sum_{j=1}^N \{ \text{ABS}[(w_{t-1,j} \times E_{t-1}) - (w_{t-2,j} \times E_{t-2})] \times \text{TC}_j \} + \text{Max} \left( 0, (1 - E_{t-1}) \times \text{CashComponentCarryCost} \times \frac{\text{Days}_{t-1,t-2}}{360} \right)$$

Where:

"**ABS**" followed by a formula or amount within brackets, means the absolute value of the amount given by such formula or such amount;

"**E<sub>t-1</sub>**" means, in respect of Index Calculation Day (t), the Exposure on the Index Calculation Day immediately preceding Index Calculation Day (t), with the exception that, on the first Index Calculation Day following the Index Base Date, E<sub>t-1</sub> shall instead be the Exposure on the Index Base Date;

"**E<sub>t-2</sub>**" means, in respect of Index Calculation Day (t), the Exposure on the second Index Calculation Day immediately preceding Index Calculation Day (t), with the exception that, on the first and the second Index Calculation Day following the Index Base Date, E<sub>t-2</sub> shall instead be the Exposure on the Index Base Date;

"**N**" means the number of Component Underlyings;

"**TC<sub>j</sub>**" means, the Transaction Cost of Component Underlying (j) specified in the Component Underlyings Table in Annex 1 under the column heading "Transaction Cost";

"**w<sub>t,j</sub>**" means the Specified Weight of Component Underlying (j) on Index Calculation Day (t);

"**w<sub>t-1,j</sub>**" means the Specified Weight of Component Underlying (j) on the Index Calculation Day immediately preceding Index Calculation Day (t), with the exception that, on the first Index Calculation Day following the Index Base Date, w<sub>t-1,j</sub> shall instead be the Initial Weight of Component Underlying (j);

"**CashComponentCarryCost**" means 0.25%;

"**Days<sub>t-1,t-2</sub>**" means, the number of calendar days from but excluding Index Calculation Day (t-2) to and including Index Calculation Day (t-1).

## 9. Closing TR Level

With respect to an ETF Component, and a Index Calculation Day (t), the Closing TR Level of such ETF Component shall be determined by effecting a synthetic re-investment of the dividends of such ETF Component in accordance with the following formula:

$$\text{Closing TR Level}_t = \text{Closing TR Level}_{t-1} \times \left( \frac{\text{Closing Price}_t + d_t}{\text{Closing Price}_{t-1}} \right)$$

where:

Closing TR Level<sub>t-1</sub> means the Closing TR Level of such ETF Component on the Index Calculation Day immediately preceding Index Calculation Day (t);

Closing Price<sub>t</sub> means the Closing Price of such ETF Component on Index Calculation Day (t);

Closing Price<sub>t-1</sub> means the Closing Price of such ETF Component on the Index Calculation Day immediately preceding Index Calculation Day (t);

d<sub>t</sub> means:

- (a) If any calendar day in the period from but excluding Index Calculation Day (t-1) to and including Index Calculation Day (t) is an Ex-Dividend Date for such ETF Component, the sum of the Net Dividend Amounts for such ETF

Component in respect of each of the Ex-Dividend Dates in such period;

(b) If no calendar day in such period is an Ex-Dividend Date for such ETF Component, 0.

### Annex 1 – Component Underlyings Table and Initial Variances

Version/Date of Component Underlyings Table: 1 / Index Base Date

Initial Short Term Variance means: 0.000000002592

Initial Long Term Variance means: 0.000000002347

Basket Base Date means: June 28, 2016

	Component Underlying	Component Sponsor	Component Underlying Bloomberg Code	Country Focus	Cash Component	Weight Category	Carry Cost	Transaction Cost	Component Type	Initial Weight	Maximum Weight	Same Day Component ("S") or Next Following Day Component ("N")	Component Base Date ADTV/ Market Cap
1	SPDR S&P500 ETF Trust	State Street Bank & Trust Company	SPY	United States	JPMorgan Cash Index USD 3 Month	DM Equity	0.75%	0.02%	ETF	0%	100%	S	19,405,941,430 / 173,633,718,750
2	iShares Russell 2000 ETF	BlackRock Fund Advisors	IWM	United States	JPMorgan Cash Index USD 3 Month	DM Equity	0.75%	0.02%	ETF	0%	100%	S	3,258,140,718 / 24,379,283,203
3	PowerShares QQQ Trust Series 1	Invesco Powershares	QQQ	United States	JPMorgan Cash Index USD 3 Month	DM Equity	0.75%	0.02%	ETF	0%	100%	S	2,661,113,494 / 33,447,929,688
4	SPDR EURO STOXX 50 ETF	State Street Bank & Trust Company	FEZ		JPMorgan Cash Index USD 3 Month	DM Equity	0.75%	0.02%	ETF	0%	100%	S	99,022,527 / 2,629,676,758
5	iShares MSCI Japan ETF	BlackRock Fund Advisors	EWJ	Japan	JPMorgan Cash Index USD 3 Month	DM Equity	0.75%	0.02%	ETF	0%	100%	S	449,838,642 / 14,402,208,008
6	iShares MSCI United Kingdom ETF	BlackRock Fund Advisors	EWU	U.K.	JPMorgan Cash Index USD 3 Month	DM Equity	0.75%	0.02%	ETF	0%	75%	S	73,915,857 / 1,873,014,038
7	iShares MSCI Germany ETF	BlackRock Fund Advisors	EWG	Germany	JPMorgan Cash Index USD 3 Month	DM Equity	0.75%	0.02%	ETF	0%	75%	S	143,158,206 / 3,889,801,514
8	iShares MSCI France ETF	BlackRock Fund Advisors	EWQ	France	JPMorgan Cash Index USD 3 Month	DM Equity	0.75%	0.02%	ETF	0%	75%	S	22,796,606 / 296,751,984

9	iShares MSCI Switzerland Capped ETF	BlackRock Fund Advisors	EWL	Switzerland	JPMorgan Cash Index USD 3 Month	DM Equity	0.75%	0.02%	ETF	0%	75%	S	27,492,123 / 1,073,609,985
10	iShares MSCI Spain Capped ETF	BlackRock Fund Advisors	EWP	Spain	JPMorgan Cash Index USD 3 Month	DM Equity	0.75%	0.02%	ETF	0%	75%	S	29,774,801 / 698,409,424
11	iShares MSCI Italy Capped ETF	BlackRock Fund Advisors	EWI	Italy	JPMorgan Cash Index USD 3 Month	DM Equity	0.75%	0.02%	ETF	0%	75%	S	20,888,796 / 609,321,045
12	iShares MSCI Sweden ETF	BlackRock Fund Advisors	EWD	Sweden	JPMorgan Cash Index USD 3 Month	DM Equity	0.75%	0.02%	ETF	0%	75%	S	6,638,754 / 263,250,000
13	iShares MSCI Turkey ETF	BlackRock Fund Advisors	TUR	Turkey	JPMorgan Cash Index USD 3 Month	EM Equity	0.75%	0.02%	ETF	0%	50%	S	15,518,884 / 340,518,005
14	iShares MSCI Canada ETF	BlackRock Fund Advisors	EWC	Canada	JPMorgan Cash Index USD 3 Month	DM Equity	0.75%	0.02%	ETF	0%	50%	S	63,535,652 / 2,773,864,990
15	iShares MSCI Australia ETF	BlackRock Fund Advisors	EWA	Australia	JPMorgan Cash Index USD 3 Month	DM Equity	0.75%	0.02%	ETF	0%	50%	S	60,889,405 / 1,568,280,029
16	iShares MSCI India ETF	BlackRock Fund Advisors	INDA	India	JPMorgan Cash Index USD 3 Month	EM Equity	0.75%	0.02%	ETF	0%	25%	S	49,796,231 / 3,582,684,082
17	VanEck Vectors Russia ETF	Van Eck Associates Corporation	RSX	Russia	JPMorgan Cash Index USD 3 Month	EM Equity	0.75%	0.02%	ETF	0%	25%	S	193,900,695 / 1,657,447,021
18	iShares China Large-Cap ETF	BlackRock Fund Advisors	FXI	China	JPMorgan Cash Index USD 3 Month	EM Equity	0.75%	0.02%	ETF	0%	50%	S	792,082,291 / 3,353,760,010
19	iShares MSCI South Africa ETF	BlackRock Fund Advisors	EZA	South Africa	JPMorgan Cash Index USD 3 Month	EM Equity	0.75%	0.02%	ETF	0%	50%	S	33,573,439 / 307,377,014
20	iShares MSCI South Korea Capped ETF	BlackRock Fund Advisors	EWY	South Korea	JPMorgan Cash Index USD 3 Month	EM Equity	0.75%	0.02%	ETF	0%	50%	S	140,226,262 / 3,077,622,803
21	iShares MSCI Malaysia ETF	BlackRock Fund Advisors	EWM	Malaysia	JPMorgan Cash Index USD 3 Month	EM Equity	0.75%	0.02%	ETF	0%	25%	S	17,933,345 / 308,245,514

2 2	iShares MSCI Thailand Capped ETF	BlackRock Fund Advisors	THD	Thailand	JPMorgan Cash Index USD 3 Month	EM Equity	0.75%	0.02%	ETF	0%	25%	S	15,499,648 / 338,750,000
2 3	iShares MSCI Singapore ETF	BlackRock Fund Advisors	EWS	Singapore	JPMorgan Cash Index USD 3 Month	EM Equity	0.75%	0.02%	ETF	0%	25%	S	14,448,672 / 535,342,529
2 4	iShares MSCI Taiwan ETF	BlackRock Fund Advisors	EWT	Taiwan	JPMorgan Cash Index USD 3 Month	EM Equity	0.75%	0.02%	ETF	0%	25%	S	105,896,808 / 2,303,840,088
2 5	iShares MSCI Mexico Capped ETF	BlackRock Fund Advisors	EWX	Mexico	JPMorgan Cash Index USD 3 Month	EM Equity	0.75%	0.02%	ETF	0%	50%	S	104,489,304 / 1,007,424,011
2 6	iShares MSCI Brazil Capped ETF	BlackRock Fund Advisors	EWZ	Brazil	JPMorgan Cash Index USD 3 Month	EM Equity	0.75%	0.02%	ETF	0%	50%	S	612,869,406 / 3,290,529,541
2 7	iShares MSCI Chile Capped ETF	BlackRock Fund Advisors	ECH	Chile	JPMorgan Cash Index USD 3 Month	EM Equity	0.75%	0.02%	ETF	0%	50%	S	13,346,541 / 305,235,016
2 8	iShares MSCI All Peru Capped ETF	BlackRock Fund Advisors	EPU	Peru	JPMorgan Cash Index USD 3 Month	EM Equity	0.75%	0.02%	ETF	0%	50%	S	7,089,121 / 198,722,000
2 9	WisdomTree Europe Hedged Equity Fund	WisdomTree Asset Management, Inc.	HEDJ		JPMorgan Cash Index USD 3 Month	DM Equity	0.75%	0.02%	ETF	0%	100%	S	165,699,099 / 10,657,417,969
3 0	WisdomTree Japan Hedged Equity Fund	WisdomTree Asset Management, Inc.	DXJ	Japan	JPMorgan Cash Index USD 3 Month	DM Equity	0.75%	0.02%	ETF	0%	100%	S	245,870,890 / 6,641,293,945
3 1	iShares Currency Hedged MSCI Eurozone ETF	BlackRock Fund Advisors	HEZU		JPMorgan Cash Index USD 3 Month	DM Equity	0.75%	0.02%	ETF	0%	100%	S	32,313,724 / 1,548,869,263
3 2	iShares Currency Hedged MSCI Germany ETF	BlackRock Fund Advisors	HEWG	Germany	JPMorgan Cash Index USD 3 Month	DM Equity	0.75%	0.02%	ETF	0%	75%	S	15,802,419 / 531,299,988
3 3	iShares 1-3 Year Treasury Bond ETF	BlackRock Fund Advisors	SHY	United States	JPMorgan Cash Index USD 3 Month	DM Bond	0.75%	0.02%	ETF	0%	75%	S	132,244,913 / 10,046,396,484
3	iShares 7-10 Year	BlackRock	IEF	United	JPMorgan Cash Index	DM Bond	0.75%	0.02%	ETF	0%	75%		227,318,119 /

4	Treasury Bond ETF	Fund Advisors		States	USD 3 Month							S	9,617,197,266
3 5	iShares 20+ Year Treasury Bond ETF	BlackRock Fund Advisors	TLT	United States	J.P. Morgan 3mth USD Cash Index	DM Bond	0.75%	0.02%	ETF	0%	75%	S	1,042,883,719 / 9,309,319,336
3 6	iShares TIPS Bond ETF	BlackRock Fund Advisors	TIP	United States	JPMorgan Cash Index USD 3 Month	DM Bond	0.75%	0.02%	ETF	0%	75%	S	148,194,969 / 17,937,224,609
3 7	iShares iBoxx \$ Investment Grade Corporate Bond ETF	BlackRock Fund Advisors	LQD	United States	JPMorgan Cash Index USD 3 Month	DM Bond	0.75%	0.02%	ETF	0%	75%	S	492,922,889 / 29,157,205,078
3 8	iShares iBoxx \$ High Yield Corporate Bond ETF	BlackRock Fund Advisors	HYG	United States	JPMorgan Cash Index USD 3 Month	DM Bond	0.75%	0.02%	ETF	0%	75%	S	1,106,725,803 / 14,494,777,344
3 9	SPDR Barclays International Treasury Bond ETF	State Street Bank & Trust Company	BWX		JPMorgan Cash Index USD 3 Month	DM Bond	0.75%	0.02%	ETF	0%	75%	S	25,978,668 / 1,658,286,621
4 0	SPDR Barclays Short Term International Treasury Bond ETF	State Street Bank & Trust Company	BWZ		JPMorgan Cash Index USD 3 Month	DM Bond	0.75%	0.02%	ETF	0%	75%	S	4,886,591 / 168,480,011
4 1	J.P. Morgan German Long Bond Futures Tracker Index (USD)	J.P. Morgan	JFBERXUS		N/A	Government Bond Tracker	0.35%	0.02%	Government Bond Tracker Index	0%	75%	N	
4 2	J.P. Morgan German Short Bond Futures Tracker Index (USD)	J.P. Morgan	JFBEDUUS		N/A	Government Bond Tracker	0.35%	0.02%	Government Bond Tracker Index	0%	75%	N	
4 3	J.P. Morgan Japanese Long Bond Futures Tracker Index (USD)	J.P. Morgan	J10EUSJP		N/A	Government Bond Tracker	0.35%	0.02%	Government Bond Tracker Index	0%	75%	N	
4 4	J.P. Morgan U.K. Long Bond Futures Tracker Index (USD)	J.P. Morgan	JFBG10US		N/A	Government Bond Tracker	0.35%	0.02%	Government Bond Tracker Index	0%	75%	N	

45	The J.P. Morgan US Treasury Note Futures Tracker	J.P. Morgan	RFJPUSBE		N/A	Government Bond Tracker	0.35%	0.02%	Government Bond Tracker Index	0%	75%	S	
46	The J.P. Morgan 2-Year US Treasury Note Futures Tracker	J.P. Morgan	FTJPUS2E		N/A	Government Bond Tracker	0.35%	0.02%	Government Bond Tracker Index	0%	75%	S	
47	J.P. Morgan 30-Year US Treasury bond Futures Tracker (net)	J.P. Morgan	FTJMTBE		N/A	Government Bond Tracker	0.35%	0.02%	Government Bond Tracker Index	0%	75%	S	
48	iShares Gold Trust	BlackRock Fund Advisors	IAU		JPMorgan Cash Index USD 3 Month	Commodity	0.75%	0.02%	ETF	0%	25%	S	13,273,065 / 8,558,569,336
49	iShares Silver Trust	BlackRock Fund Advisors	SLV		JPMorgan Cash Index USD 3 Month	Commodity	0.75%	0.02%	ETF	0%	25%	S	35,383,992 / 5,922,000,000
50	J.P. Morgan AUD FX Tracker Index	J.P. Morgan	JPFCTAUD		N/A	FX G10 Tracker	0.35%	0.02%	FX Tracker Index	0%	50%	N	
51	J.P. Morgan NZD FX Tracker Index	J.P. Morgan	JPFCTNZD		N/A	FX G10 Tracker	0.35%	0.02%	FX Tracker Index	0%	50%	N	
52	J.P. Morgan EUR FX Tracker Index	J.P. Morgan	JPFCTEUR		N/A	FX G10 Tracker	0.35%	0.02%	FX Tracker Index	0%	50%	N	
53	J.P. Morgan GBP FX Tracker Index	J.P. Morgan	JPFCTGBP		N/A	FX G10 Tracker	0.35%	0.02%	FX Tracker Index	0%	50%	N	
54	J.P. Morgan JPY FX Tracker Index	J.P. Morgan	JPFCTJPY		N/A	FX G10 Tracker	0.35%	0.02%	FX Tracker Index	0%	50%	N	
55	J.P. Morgan CAD FX Tracker Index	J.P. Morgan	JPFCTCAD		N/A	FX G10 Tracker	0.35%	0.02%	FX Tracker Index	0%	50%	N	
56	J.P. Morgan CHF FX Tracker Index	J.P. Morgan	JPFCTCHF		N/A	FX G10 Tracker	0.35%	0.02%	FX Tracker Index	0%	50%	N	
57	J.P. Morgan NOK FX Tracker Index	J.P. Morgan	JPFCTNOK		N/A	FX G10 Tracker	0.35%	0.02%	FX Tracker Index	0%	50%	N	



5 8	J.P. Morgan SEK FX Tracker Index	J.P. Morgan	JPFCTSEK		N/A	FX G10 Tracker	0.35%	0.02%	FX Tracker Index	0%	50%	N	
5 9	J.P. MORGAN CASH INDEX USD 3 MONTH	J.P. Morgan	JPCAUS3M		N/A	Cash	0.25%	0.00%	Cash Tracker Index	100%	100%	S	

**Schedule 3**

## Summary Description of ETF Component Underlyings

### SPDRS S&P 500 ETF Trust

The SPDR S&P 500 ETF Trust (the "**ETF**") is sponsored by PDR Services LLC, a registered investment company. State Street Global Markets, LLC is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the S&P 500 Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "SPY".

The Underlying Index is sponsored by S&P Dow Jones Indices LLC. The Underlying Index is a capitalization-weighted index of 500 stocks. The Underlying Index is designed to measure performance of the broad U.S. economy through changes in the aggregate market value of 500 stocks representing all major industries. The components of the Underlying Index, and the degree to which these components represent certain industries, may change over time.

PDR Services LLC files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 33-46080 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Notes linked to the performance of the ETF.

### iShares Russell 2000 ETF

The iShares Russell 2000 ETF (the "**ETF**") is issued by iShares Trust, a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the Russell 2000 Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "IWM".

The Underlying Index is sponsored by Frank Russell Company. The Underlying Index measures the performance of the small-capitalization sector of the U.S. equity market. The Underlying Index includes issuers representing approximately 9% of the total market capitalization of all publicly-traded U.S. equity securities. The Underlying Index is a float-adjusted capitalization-weighted index of equity securities issued by the approximately 2,000 smallest issuers in the Russell 3000 Index. Total market capitalization reflects all equity shares outstanding, while total market value reflects float-adjusted capitalizations based on equity shares available for general investment. Components primarily include consumer discretionary, financials, healthcare and information technology companies. Components of the Underlying Index primarily include energy, financials and utilities companies. The components of the Underlying Index, and the degree to which these components represent certain industries, may change over time.

iShares Trust files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09729 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Notes linked to the performance of the ETF.

## **PowerShares QQQ Trust Series 1**

The PowerShares QQQ (the "**ETF**") is issued by PowerShares QQQ Trust, Series 1. Invesco PowerShares Capital Management, LLC is the sponsor and investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the NASDAQ-100 Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NASDAQ Global Select Market under the trading symbol "QQQ".

The Underlying Index is sponsored by The NASDAQ OMX Group, Inc. The Underlying Index includes 100 of the largest domestic and international non-financial securities listed on The NASDAQ Stock Market based on market capitalization. The Underlying Index reflects companies across major industry groups including computer hardware and software, telecommunications, retail/wholesale trade and biotechnology. The Underlying Index may include large-, mid- or small-capitalization companies, and components primarily include consumer staples, energy, financials and materials companies. The components of the Underlying Index, and the degree to which these components represent certain industries, may change over time.

PowerShares QQQ Trust, Series 1 files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-8947 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Notes linked to the performance of the ETF.

## **SPDR EURO STOXX 50 ETF**

The SPDR EURO STOXX 50 ETF (the "**ETF**") is issued by SPDR Index Shares Funds, a registered investment company. SSGA Funds Management is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the EURO STOXX 50 Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "FEZ".

The Underlying Index is sponsored by STOXX Limited. The Underlying Index is a market capitalization weighted index designed to represent the performance of some of the largest companies across components of the 19 EURO STOXX Supersector Indexes. The EURO STOXX Supersector Indexes are subsets of the EURO STOXX Index. The EURO STOXX Index is a broad yet liquid subset of the STOXX Europe 600 Index, which covers the 600 largest companies in Europe. The Underlying Index captures approximately 60% of the free-float market capitalization of the EURO STOXX Total Market Index, which in turn covers approximately 95% of the free float market capitalization of the represented countries. Index composition is reviewed annually and weights are reviewed quarterly. Countries covered in the Underlying Index have historically included, among others, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands and Spain. The 50 companies in the Underlying Index are selected by first identifying the companies that equal approximately 60% of the free-float market capitalization of each corresponding EURO STOXX Total Market Index Supersector Index. In addition, any stocks that are currently components of the Underlying Index are added to the list. From that list, the 40 largest stocks are selected to be components of the Underlying Index. In addition, any stocks that are current components of the Underlying Index (and ranked 41-60 on the list) are included as components. If there are still less than 50 component stocks, the applicable number of the largest remaining stocks on the list ranked 41 or higher are included as components of the Underlying Index. The components of the Underlying Index, and the degree to which these components represent certain industries, may change over time.

SPDR Index Shares Funds files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-21145 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly

disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Securities linked to the performance of the ETF.

### **iShares MSCI Japan ETF**

The iShares MSCI Japan ETF (the "**ETF**") is issued by iShares, Inc., a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI Japan Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "EWJ".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index consists of stocks traded primarily on the Tokyo Stock Exchange. The Underlying Index may include large-, mid- or small-capitalization companies. Components of the Underlying Index primarily include consumer discretionary, financials and industrials companies. The components of the Underlying Index, and the degree to which these components represent certain industries, may change over time.

iShares, Inc. files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09102 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Securities linked to the performance of the ETF.

### **iShares MSCI United Kingdom ETF**

The iShares MSCI United Kingdom ETF (the "**ETF**") is issued by iShares Trust, a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI United Kingdom Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "EWU".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index consists of stocks traded primarily on the London Stock Exchange. The Underlying Index may include large, mid or small capitalization companies, and components primarily include consumer staples, energy and financials companies. The components of the Underlying Index, and the degree to which these components represent certain industries, may change over time.

iShares Trust files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09729 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Securities linked to the performance of the ETF.

### **iShares MSCI Germany ETF**

The iShares MSCI Germany ETF (the "**ETF**") is issued by iShares, Inc., a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI Germany Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "EWG".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index consists of stocks traded primarily on the Frankfurt Stock Exchange. The Underlying Index may include large, mid or small capitalization companies, and components primarily include consumer discretionary, financials and materials companies. The components of the Underlying Index, and the degree to which these components represent certain industries, may change over time.

iShares, Inc. files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09102 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Securities linked to the performance of the ETF.

### **iShares MSCI France ETF**

The iShares MSCI France ETF (the "**ETF**") is issued by iShares Trust, a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI France Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "EWQ".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index consists of stocks traded primarily on the Paris Stock Exchange. The Underlying Index may include large-, mid- or small-capitalization companies. Components of the Underlying Index primarily include consumer discretionary, financials and industrials companies. The components of the Underlying Index, and the degree to which these components represent certain industries, are likely to change over time.

iShares Trust files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09102 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Notes linked to the performance of the ETF.

### **iShares MSCI Switzerland Capped ETF**

The iShares MSCI Switzerland Capped ETF (the "**ETF**") is issued by iShares Trust, a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI Switzerland 25/50 Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "EWL".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index consists of stocks traded primarily on the Zurich Stock Exchange. The Underlying Index is a free float-adjusted market capitalization-weighted index with a capping methodology applied to issuer weights so that no single issuer of a component exceeds 25% of the Underlying Index weight, and all issuers with weight above 5% do not cumulatively exceed 50% of the Underlying Index weight. The Underlying Index may include large-, mid- or small-capitalization companies. Components of the Underlying Index primarily include consumer staples, financials and healthcare companies. The components of the Underlying Index, and the degree to which these components represent certain industries, are likely to change over time.

iShares Trust files information with the U.S. Securities and Exchange Commission (the "SEC") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09102 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Notes linked to the performance of the ETF.

### **iShares MSCI Spain Capped ETF**

The iShares MSCI Spain Capped ETF (the "ETF") is issued by iShares, Inc., a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI Spain 25/50 Index (the "Underlying Index"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "EWP".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index consists of stocks traded primarily on the Madrid Stock Exchange. The Underlying Index is a free-float adjusted market capitalization-weighted index with a capping methodology applied to issuer weights so that no single issuer of a component exceeds 25% of the Underlying Index weight, and all issuers with weight above 5% do not exceed 50% of the Underlying Index weight. The Underlying Index may include large-, mid- or small-capitalization companies, and components primarily include financials, industrials, telecommunications and utilities companies. The components of the Underlying Index, and the degree to which these components represent certain industries, may change over time.

iShares, Inc. files information with the U.S. Securities and Exchange Commission (the "SEC") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09102 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Securities linked to the performance of the ETF.

### **iShares MSCI Italy Capped ETF**

The iShares MSCI Italy Capped ETF (the "ETF") is issued by iShares, Inc., a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI Italy 25/50 Index (the "Underlying Index"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "EWI".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index consists of stocks traded primarily on the Milan Stock Exchange. The Underlying Index is a free float-adjusted market capitalization-weighted index with a capping methodology applied to issuer weights so that no single issuer of a component exceeds 25% of the Underlying Index weight, and all issuers with weight above 5% do not cumulatively exceed 50% of the Underlying Index weight. The Underlying Index may include

large-, mid- or small-capitalization companies. Components of the Underlying Index primarily include energy, financials and utilities companies. The components of the Underlying Index, and the degree to which these components represent certain industries, may change over time.

iShares, Inc. files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09102 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Securities linked to the performance of the ETF.

### **iShares MSCI Sweden ETF**

The iShares MSCI Sweden ETF (the "**ETF**") is issued by iShares Trust, a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI Sweden Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "EWD".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index consists of stocks traded primarily on the Stockholm Stock Exchange. The Underlying Index may include large-, mid- or small-capitalization companies. Components of the Underlying Index primarily include consumer discretionary, financials and industrials companies. The components of the Underlying Index, and the degree to which these components represent certain industries, are likely to change over time.

iShares Trust files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09102 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Notes linked to the performance of the ETF.

### **iShares MSCI Turkey ETF**

The iShares MSCI Turkey ETF (the "**ETF**") is issued by iShares Trust, a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI Turkey Investable Market Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "TUR".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index is a free float-adjusted market capitalization index designed to measure broad-based equity market performance in Turkey. The Underlying Index consists of stocks traded primarily on the Istanbul Stock Exchange. The Underlying Index may include large-, mid- or small-capitalization companies. Components of the Underlying Index primarily include consumer staples, financials and industrials companies. The components of the Underlying Index, and the degree to which these components represent certain industries, are likely to change over time.

iShares Trust files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09102 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF



may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Notes linked to the performance of the ETF.

### **iShares MSCI Canada ETF**

The iShares MSCI Canada ETF (the "**ETF**") is issued by iShares, Inc., a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI Canada Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "EWC".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index consists of stocks traded primarily on the Toronto Stock Exchange. The Underlying Index may include large-, mid- or small-capitalization companies. Components of the Underlying Index primarily include energy, financials and materials companies. The components of the Underlying Index, and the degree to which these components represent certain industries, may change over time.

iShares, Inc. files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09102 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Securities linked to the performance of the ETF.

### **iShares MSCI Australia ETF**

The iShares MSCI Australia ETF (the "**ETF**") is issued by iShares, Inc., a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI Australia Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "EWA".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index consists of stocks traded primarily on the Australian Stock Exchange. The Underlying Index may include large-, mid- or small-capitalization companies. Components of the Underlying Index primarily include consumer staples, financials and materials companies. The components of the Underlying Index, and the degree to which these components represent certain industries, may change over time.

iShares, Inc. files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09102 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Securities linked to the performance of the ETF.

### **iShares MSCI India ETF**

The iShares MSCI India ETF (the "**ETF**") is issued by iShares Trust, a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI India Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the BATS Exchange in the United States under the trading symbol "INDA".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index is designed to measure the performance of equity securities of companies whose market capitalization, as calculated by the index provider, represents the top 85% of companies in the Indian securities market. Components of the Underlying Index primarily include consumer staples, financials, healthcare and information technology companies. The component companies include large- and mid-capitalization companies. The components of the Underlying Index, and the degree to which these components represent certain industries, are likely to change over time.

iShares Trust files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09729 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Notes linked to the performance of the ETF.

### **VanEck Vectors Russia ETF**

The Market Vectors Russia ETF (the "**ETF**") is issued by Market Vectors ETF Trust, a registered investment company. Van Eck Associates Corporation is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the Market Vectors Russia Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "RSX".

The Underlying Index is sponsored by Market Vectors Index Solutions GmbH. The Underlying Index is comprised of securities of Russian companies. A company is generally considered to be a Russian company if it is incorporated in Russia or is incorporated outside of Russia but generates at least 50% of its revenues (or, in certain circumstances, has at least 50% of its assets) in Russia. Such companies may include medium-capitalization companies. The components of the Underlying Index, and the degree to which these components represent certain industries, may change over time.

Market Vectors ETF Trust files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-10325 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Securities linked to the performance of the ETF.

### **iShares China Large-Cap ETF**

The iShares China Large-Cap ETF (the "**ETF**") is issued by iShares Trust, a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield

performance, before fees and expenses, of the FTSE China 50 Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "FXI".

The Underlying Index is sponsored by FTSE International Limited. The Underlying Index is designed to track the performance of the largest companies in the Chinese equity market that are available to international investors. The Underlying Index consists of 50 of the largest and most liquid Chinese companies. Securities in the Underlying Index are weighted based on the total market value of their shares, so that securities with higher total market values generally have a higher representation in the Underlying Index. Each security in the Underlying Index is a current constituent of the FTSE All World Index and all of the securities in the Underlying Index currently trade on the Hong Kong Stock Exchange. Components primarily include financials, oil and gas and telecommunications companies. The components of the Underlying Index, and the degree to which these components represent certain industries, may change over time.

iShares Trust files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09729 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Securities linked to the performance of the ETF.

#### **iShares MSCI South Africa ETF**

The iShares MSCI South Africa ETF (the "**ETF**") is issued by iShares Trust, a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI South Africa Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "EZA".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index consists of stocks traded primarily on the Johannesburg Stock Exchange. The Underlying Index may include large-, mid- or small-capitalization companies. Components of the Underlying Index primarily include consumer discretionary, financials and telecommunications companies. The components of the Underlying Index, and the degree to which these components represent certain industries, are likely to change over time.

iShares Trust files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09102 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Notes linked to the performance of the ETF.

#### **iShares MSCI South Korea Capped ETF**

The iShares MSCI South Korea Capped ETF (the "**ETF**") is issued by iShares, Inc., a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI Korea 25/50 Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "EWY".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index consists of stocks traded primarily on the Stock Market Division of the Korea Exchange. The Underlying Index is a free float-adjusted market capitalization-weighted index with a capping methodology applied to issuer weights so that no single issuer of a component exceeds 25% of the Underlying Index weight, and all issuers with weight above 5% do not cumulatively exceed 50% of the Underlying Index weight. The Underlying Index may include large-, mid- or small-capitalization companies. Components of the Underlying Index primarily include consumer discretionary, financials and information technology companies. The components of the Underlying Index, and the degree to which these components represent certain industries, may change over time.

iShares, Inc. files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09102 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Securities linked to the performance of the ETF.

### **iShares MSCIMalaysia ETF**

The iShares MSCIMalaysia ETF (the "**ETF**") is issued by iShares Trust, a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCIMalaysia Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "EWM".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index consists of stocks traded primarily on the Kuala Lumpur Stock Exchange. The Underlying Index may include large-, mid- or small- capitalization companies. Components of the Underlying Index primarily include financials, industrials and utilities companies. The components of the Underlying Index, and the degree to which these components represent certain industries, are likely to change over time.

iShares Trust files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09102 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Notes linked to the performance of the ETF.

### **iShares MSCIThailand Capped ETF**

The iShares MSCIThailand Capped ETF (the "**ETF**") is issued by iShares Trust, a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCIThailand Investable Market Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "THD".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index is a free float-adjusted market capitalization index designed to measure broad-based equity market performance in Thailand. The Underlying Index consists of stocks traded primarily on the Stock Exchange of Thailand. A capping methodology is applied to issuer weights so that no single issuer of a component exceeds 25% of the Underlying Index weight, and all issuers with weight above 5% do not cumulatively exceed 50% of the Underlying Index weight. The Underlying Index may include large-, mid- or small- capitalization companies. Components

of the Underlying Index primarily include energy, financials, industrials, materials and telecommunications companies. The components of the Underlying Index, and the degree to which these components represent certain industries, are likely to change over time.

iShares Trust files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09102 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Notes linked to the performance of the ETF.

### **iShares MSCI Singapore ETF**

The iShares MSCI Singapore ETF (the "**ETF**") is issued by iShares Trust, a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI Singapore Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "EWS".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index consists of stocks traded primarily on the Singapore Stock Exchange. The Underlying Index may include large-, mid- or small- capitalization companies. Components of the Underlying Index primarily include financials, industrials and telecommunications companies. The components of the Underlying Index, and the degree to which these components represent certain industries, are likely to change over time.

iShares Trust files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09102 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Notes linked to the performance of the ETF.

### **iShares MSCI Taiwan ETF**

The iShares MSCI Taiwan ETF (the "**ETF**") is issued by iShares, Inc., a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI Taiwan Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "EWT".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index consists of stocks traded primarily on the Taiwan Stock Exchange. The Underlying Index may include large, mid or small capitalization companies, and components primarily include financials, information technology and materials companies. The components of the Underlying Index, and the degree to which these components represent certain industries, may change over time.

iShares, Inc. files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09102 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly

disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Securities linked to the performance of the ETF.

### **iShares MSCIMexico Capped ETF**

The iShares MSCI Mexico Capped ETF (the "**ETF**") is issued by iShares, Inc., a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI Mexico Investable Market Index (IMI) 25/50 (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "EWW".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index consists of stocks traded primarily on the Mexican Stock Exchange. The Underlying Index is a free float-adjusted market capitalization-weighted index with a capping methodology applied to issuer weights so that no single issuer of a component exceeds 25% of the Underlying Index weight, and all issuers with weight above 5% do not cumulatively exceed 50% of the Underlying Index weight. The Underlying Index may include large-, mid- or small-capitalization companies. Components of the Underlying Index primarily include consumer staples, financials and telecommunications companies. The components of the Underlying Index, and the degree to which these components represent certain industries, may change over time.

iShares, Inc. files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09102 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Securities linked to the performance of the ETF.

### **iShares MSCIBrazil Capped ETF**

The iShares MSCI Brazil Capped ETF (the "**ETF**") is issued by iShares, Inc., a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI Brazil 25/50 Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "EWZ".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index consists of stocks traded primarily on the BM&FBOVESPA (the Brazilian exchange). The Underlying Index is a free float-adjusted market capitalization-weighted index with a capping methodology applied to issuer weights so that no single issuer of a component exceeds 25% of the Underlying Index weight, and all issuers with weight above 5% do not cumulatively exceed 50% of the Underlying Index weight. The Underlying Index may include large-, mid- or small-capitalization companies. Components of the Underlying Index primarily include consumer staples, energy and financials companies. The components of the Underlying Index, and the degree to which these components represent certain industries, may change over time.

iShares, Inc. files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09102 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should

undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Securities linked to the performance of the ETF.

### **iShares MSCI Chile Capped ETF**

The iShares MSCI Chile Capped ETF (the "**ETF**") is issued by iShares, Inc., a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI Chile Investable Market Index (IMI) 25/50 (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "ECH".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index consists of stocks traded primarily on the Santiago Stock Exchange. The Underlying Index is a free float-adjusted market capitalization index that is designed to measure broad-based equity market performance in Chile. A capping methodology is applied to issuer weights so that no single issuer of a component exceeds 25% of the Underlying Index weight, and all issuers with weight above 5% do not cumulatively exceed 50% of the Underlying Index weight. The Underlying Index may include large-, mid- or small-capitalization companies. Components of the Underlying Index primarily include consumer staples, financials, materials and utilities companies. The components of the Underlying Index, and the degree to which these components represent certain industries, may change over time.

iShares, Inc. files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09102 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Securities linked to the performance of the ETF.

### **iShares MSCI All Peru Capped ETF**

The iShares MSCI All Peru Capped ETF (the "**ETF**") is issued by iShares Trust, a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI All Peru Capped Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "EPU".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index is an index designed to measure the performance of Peruvian equity securities as well as securities of companies that are headquartered in Peru or have the majority of their operations based in Peru. The Underlying Index may include large-, mid- or small- capitalization companies. Components of the Underlying Index primarily include consumer staples, financials and materials companies. The components of the Underlying Index, and the degree to which these components represent certain industries, are likely to change over time.

iShares Trust files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09729 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Notes linked to the performance of the ETF.

### **WisdomTree Europe Hedged Equity Fund**

The WisdomTree Europe Hedged Equity Fund (the "**ETF**") is issued by WisdomTree Trust, a registered investment company. WisdomTree Asset Management, Inc. is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the WisdomTree Europe Hedged Equity Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "HEDJ".

The Underlying Index is sponsored by WisdomTree Investments, Inc. The Underlying Index is a dividend weighted index designed to provide exposure to European equity securities, particularly shares of European exporters, while at the same time neutralizing exposure to fluctuations between the value of the U.S. dollar and the euro. Shares of European exporters stand to benefit from weakness in the value of the euro as this decreases the relative cost of the goods and services they are exporting. The Underlying Index consists of those dividend-paying companies within the WisdomTree International Equity Index, which defines the dividend-paying universe of companies in the industrialized world, excluding Canada and the United States, that are organized under the laws of a European country, trade in euros, have at least USD 1 billion in market capitalization, and derive at least 50% of their revenue from countries outside of Europe. Countries historically represented in the Underlying Index include: Germany, France, the Netherlands, Spain, Belgium, Finland, Italy, Portugal, Austria and Ireland. To be eligible for inclusion in the Underlying Index, a company must meet the following criteria: (i) payment of at least USD 5 million in cash dividends on shares of common stock in the annual cycle prior to the annual Underlying Index screening date; (ii) average daily dollar trading volume of at least USD 200,000 for three months preceding the Underlying Index screening date; and (iii) trading of at least 250,000 shares per month for each of the six months preceding the Underlying Index screening date. The components of the Underlying Index, and the degree to which these components represent certain industries, may change over time.

WisdomTree Trust files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-21864 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Securities linked to the performance of the ETF.

### **WisdomTree Japan Hedged Equity Fund**

The WisdomTree Japan Hedged Equity Fund (the "**ETF**") is issued by WisdomTree Trust, a registered investment company. WisdomTree Asset Management, Inc. is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the WisdomTree Japan Hedged Equity Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "DXJ".

The Underlying Index is sponsored by WisdomTree Investments, Inc. The Underlying Index is designed to provide exposure to Japanese equity markets while at the same time neutralizing exposure to fluctuations of the Japanese yen relative to the U.S. dollar. The Underlying Index consists of dividend-paying companies incorporated in Japan and traded on the Tokyo Stock Exchange that derive less than 80% of their revenue from sources in Japan. By excluding companies that derive 80% or more of their revenue from Japan, the Underlying Index is tilted towards companies with a more significant global revenue base. The companies included in the Underlying Index typically have greater exposure to the value of global currencies and, in many cases, their business prospects historically have improved when the value of the yen has declined and have weakened when the value of the yen has increased. To be eligible for inclusion in the Underlying Index, a company must meet the following criteria: (i) payment of at least USD 5 million in cash dividends on common shares in the annual cycle prior to the annual Underlying Index screening date; (ii) market capitalization of at least USD 100 million as of the Underlying Index screening date; (iii) average daily dollar trading volume of at least USD 100,000 for the three months preceding the Underlying Index screening date; and (iv)



trading of at least 250,000 shares per month for each of the six months preceding the Underlying Index screening date. The components of the Underlying Index, and the degree to which these components represent certain industries, may change over time.

WisdomTree Trust files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-21864 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Securities linked to the performance of the ETF.

### **iShares Currency Hedged MSCI Eurozone ETF**

The iShares Currency Hedged MSCI Eurozone ETF (the "**ETF**") is issued by iShares Trust, a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI EMU 100% Hedged to USD Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "HEZU".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index has been developed by MSCI Inc. as an equity benchmark for the European Monetary Union countries with the currency risk inherent in the Notes included in the Underlying Index hedged to the U.S. dollar on a monthly basis. As of June 30, 2015, the Underlying Index consists of stocks from the following 10 developed market countries: Austria, Belgium, Finland, France, Germany, Ireland, Italy, the Netherlands, Portugal and Spain. The Underlying Index may include large- or mid-capitalization companies. Components of the Underlying Index primarily include consumer discretionary, financials and industrials companies. The components of the Underlying Index, and the degree to which these components represent certain industries, are likely to change over time.

iShares Trust files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09729 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Notes linked to the performance of the ETF.

### **iShares Currency Hedged MSCI Germany ETF**

The iShares Currency Hedged MSCI Germany ETF (the "**ETF**") is issued by iShares Trust, a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI Germany 100% Hedged to USD Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "HEWG".

The Underlying Index is sponsored by MSCI Inc. The Underlying Index consists of stocks traded primarily on the Frankfurt Stock Exchange with the currency risk inherent in the Notes included in the Underlying Index hedged to the U.S. dollar on a monthly basis. The Underlying Index may include large- or mid-capitalization companies. Components of the Underlying Index

primarily include consumer discretionary, financials and healthcare companies. The components of the Underlying Index, and the degree to which these components represent certain industries, are likely to change over time.

iShares Trust files information with the U.S. Securities and Exchange Commission (the "SEC") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09729 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Notes linked to the performance of the ETF.

### **iShares 1-3 Year Treasury Bond ETF**

The iShares 1-3 Year Treasury Bond ETF (the "ETF") is issued by iShares Trust, a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the ICE U.S. Treasury 1-3 Year Bond Index (the "Underlying Index"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "SHY".

The Underlying Index is sponsored by Interactive Data Pricing and Reference Data LLC. The Underlying Index measures the performance of public obligations of the U.S. Treasury that have a remaining maturity of greater than or equal to one year and less than three years. As of November 30, 2015, there were 90 issues in the Underlying Index. The Underlying Index includes publicly-issued U.S. Treasury securities that have a remaining maturity of greater than or equal to one year and less than three years and have \$300 million or more of outstanding face value, excluding amounts held by the Federal Reserve. In addition, the securities in the Underlying Index must be fixed rate and denominated in U.S. dollars. Excluded from the Underlying Index are inflation-linked securities, Treasury bills, cash management bills, any government agency debt issued with or without a government guarantee and zero-coupon issues that have been stripped from coupon-paying bonds. The Underlying Index is weighted by market capitalization excluding amounts held by the Federal Reserve and the securities in the Underlying Index are updated on the last business day of each month.

iShares Trust files information with the U.S. Securities and Exchange Commission (the "SEC") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09729 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Notes linked to the performance of the ETF.

### **iShares 7-10 Year Treasury Bond ETF**

The iShares 7-10 Year Treasury Bond ETF (the "ETF") is issued by iShares Trust, a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the ICE U.S. Treasury 7-10 Year Bond Index (the "Underlying Index"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "IEF".

The Underlying Index is sponsored by Interactive Data Pricing and Reference Data LLC. The Underlying Index measures the performance of public obligations of the U.S. Treasury that have a remaining maturity of greater than or equal to twenty years. As of November 30, 2015, there were 33 issues in the Underlying Index. The Underlying Index includes publicly-issued U.S. Treasury securities that have a remaining maturity of greater than or equal to twenty years and have \$300 million or more of outstanding face value, excluding amounts held by the Federal Reserve. In addition, the securities in the Underlying Index must be fixed rate and denominated in U.S. dollars. Excluded from the Underlying Index are inflation-linked securities, Treasury bills, cash management bills, any government agency debt issued with or without a government guarantee and zero-coupon issues that have been stripped from coupon-paying bonds. The Underlying Index is weighted by market capitalization excluding amounts held by the Federal Reserve and the securities in the Underlying Index are updated on the last business day of each month.

iShares Trust files information with the U.S. Securities and Exchange Commission (the "SEC") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09729 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Notes linked to the performance of the ETF.

#### **iShares 20+ Year Treasury Bond ETF**

The iShares 20+ Year Treasury Bond ETF (the "**ETF**") is issued by iShares Trust, a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the ICE U.S. Treasury 20+ Year Bond Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the Nasdaq under the trading symbol "TLT".

The Underlying Index is sponsored by Interactive Data Pricing and Reference Data LLC. The Underlying Index measures the performance of public obligations of the U.S. Treasury that have a remaining maturity of greater than or equal to seven years and less than ten years. As of November 30, 2015, there were 17 issues in the Underlying Index. The Underlying Index includes publicly-issued U.S. Treasury securities that have a remaining maturity of greater than or equal to seven years and less than ten years and have \$300 million or more of outstanding face value, excluding amounts held by the Federal Reserve. In addition, the securities in the Underlying Index must be fixed rate and denominated in U.S. dollars. Excluded from the Underlying Index are inflation-linked securities, Treasury bills, cash management bills, any government agency debt issued with or without a government guarantee and zero-coupon issues that have been stripped from coupon-paying bonds. The Underlying Index is weighted by market capitalization excluding amounts held by the Federal Reserve and the securities in the Underlying Index are updated on the last business day of each month.

iShares Trust files information with the U.S. Securities and Exchange Commission (the "SEC") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09729 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Notes linked to the performance of the ETF.

#### **iShares TIPS Bond ETF**

The iShares TIPS Bond ETF (the "**ETF**") is issued by iShares Trust, a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF 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

"Underlying Index"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "TIP".

The Underlying Index is sponsored by Barclays Capital Inc. The Underlying Index measures the performance of the inflation-protected public obligations of the U.S. Treasury, commonly known as "TIPS." TIPS are securities issued by the U.S. Treasury that are designed to provide inflation protection to investors. TIPS are income-generating instruments whose interest and principal payments 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, the consumer price index ("CPI"), and TIPS' principal payments are adjusted according to changes in the CPI. 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. The Underlying Index includes all publicly-issued U.S. Treasury inflation-protected securities that have at least one year remaining to maturity, are rated investment-grade and have \$250 million or more of outstanding face value. In addition, the securities in the Underlying Index must be denominated in U.S. dollars and must be fixed-rate and non-convertible. The Underlying Index is market capitalization-weighted and the securities in the Underlying Index are updated on the last calendar day of each month.

iShares Trust files information with the U.S. Securities and Exchange Commission (the "SEC") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09729 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Notes linked to the performance of the ETF.

### **iShares iBoxx \$ Investment Grade Corporate Bond ETF**

The iShares iBoxx \$ Investment Grade Corporate Bond ETF (the "**ETF**") is issued by iShares Trust, a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the Markit iBoxx USD Liquid Investment Grade Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "LQD".

The Underlying Index is sponsored by Markit Indices Limited. The Underlying Index, which 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 Markit Indices Limited. The Underlying Index is designed to provide a broad representation of the U.S. dollar denominated liquid investment-grade corporate bond market. The Underlying Index is a modified market-value weighted index with a cap on each issuer of 3%. The Underlying Index may include large-, mid- or small-capitalization companies. Components of the Underlying Index primarily include consumer services, consumer staples, energy, financials, oil & gas and telecommunications companies. The components of the Underlying Index, and the degree to which these components represent certain industries, may change over time. The Underlying Index is a subset of the Markit iBoxx USD Corporate Bond Index. Bonds in the Underlying Index are selected from the universe of eligible bonds in the Markit iBoxx USD Corporate Bond Index using defined rules. Currently, the bonds eligible for inclusion in the Underlying Index include U.S. dollar-denominated corporate bonds that: (i) are issued by companies domiciled in countries classified as developed markets by Markit Indices Limited; (ii) have an average rating of investment grade. Ratings from Fitch Ratings, Inc., Moody's Investors Services or Standard & Poor's Ratings Services are considered. If more than one agency provides a rating, the average rating is attached to the bond; (iii) are from issuers with at least USD 2 billion outstanding face value; (iv) have at least USD 750 million of outstanding face value; and (v) have at least three years to maturity.

iShares Trust files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09729 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF

may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Securities linked to the performance of the ETF.

### **iShares iBoxx \$ High Yield Corporate Bond ETF**

The iShares iBoxx \$ High Yield Corporate Bond ETF (the "**ETF**") is issued by iShares Trust, a registered investment company. BlackRock Fund Advisors is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the Markit iBoxx USD Liquid High Yield Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "HYG".

The Underlying Index is sponsored by Markit Indices Limited. The Underlying Index, which 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 Markit Indices Limited. The Underlying Index is designed to provide a broad representation of the U.S. dollar-denominated liquid high yield corporate bond market. The Underlying Index is a modified market-value weighted index with a cap on each issuer of 3%. Bonds in the Underlying Index are selected using a rules-based criteria, as defined by Markit Indices Limited. The Underlying Index may include large-, mid- or small- capitalization companies. Components of the Underlying Index primarily include consumer cyclical, consumer discretionary, consumer services, consumer staples, energy, financials, industrials, oil & gas and telecommunications companies. The components of the Underlying Index, and the degree to which these components represent certain industries, may change over time. Currently, the bonds eligible for inclusion in the Underlying Index include U.S. dollar-denominated high yield corporate bonds that: (i) are issued by companies domiciled in countries classified as developed markets by Markit Indices Limited; (ii) have an average rating of sub-investment grade. Ratings from Fitch Ratings, Inc., Moody's Investors Services and Standard & Poor's Ratings Services are considered. If more than one agency provides a rating, the average rating is attached to the bond; (iii) are from issuers with at least USD 1 billion outstanding face value; (iv) have at least USD 400 million of outstanding face value; (v) have an original maturity date of less than 15 years; and (vi) have at least one year to maturity. The components of the Underlying Index, and the degree to which these components represent certain industries, may change over time.

iShares Trust files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-09729 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Securities linked to the performance of the ETF.

### **SPDR Barclays International Treasury Bond ETF**

The SPDR Barclays International Treasury Bond ETF (the "**ETF**") is issued by SPDR Series Trust, a registered investment company. SSGA Funds Management, Inc. is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the Barclays Global Treasury Ex-US Capped Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "BWX".

The Underlying Index is sponsored by Barclays, Inc. The Underlying Index is designed to track the fixed-rate local currency sovereign debt of investment grade countries outside the United States. The Index includes government bonds issued by

investment grade countries outside the United States, in local currencies, that have a remaining maturity of one year or more and are rated investment grade (Baa3/BBB-/BBB- or higher using the middle rating of Moody's Investors Service, Inc., Standard & Poor's Financial Services, LLC and Fitch Inc., respectively). Each of the component securities in the Underlying Index is a constituent of the Barclays Global Treasury ex-US Index, screened such that the following countries are included: Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Latvia, Luxembourg, Malaysia, Malta, Mexico, Netherlands, New Zealand, Norway, Poland, Russia, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Thailand, Turkey and the United Kingdom. In addition, the securities in the Underlying Index must be fixed-rate and have certain minimum amounts outstanding, depending upon the currency in which the bonds are denominated. The Underlying Index is calculated by Barclays using a modified "market capitalization" methodology. This design ensures that each constituent country within the Underlying Index is represented in a proportion consistent with its percentage with respect to the total market capitalization of the Index. Component securities in each constituent country are represented in a proportion consistent with their percentage relative to the other component securities in the constituent country. Under certain conditions, however, the par amount of a component security within the Underlying Index may be adjusted to conform to requirements under the Internal Revenue Code of 1986, as amended. As of September 30, 2015, there were approximately 690 securities in the Underlying Index and the modified adjusted duration of securities in the Underlying Index was approximately 7.78 years.

SPDR Series Trust files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-08839 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Securities linked to the performance of the ETF.

### **SPDR Barclays Short Term International Treasury Bond ETF**

The SPDR Barclays Short Term International Treasury Bond ETF (the "**ETF**") is issued by SPDR Series Trust, a registered investment company. SSGA Funds Management, Inc. is the investment advisor to the ETF. The ETF seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the Barclays 1-3 Year Global Treasury Ex-US Capped Index (the "**Underlying Index**"). There is no assurance that the price and yield performance of the Underlying Index can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "BWZ".

The Underlying Index is sponsored by Barclays, Inc. The Underlying Index is designed to measure the performance of fixed-rate local currency sovereign debt of investment grade countries outside the United States that have remaining maturities of one to three years. The Underlying Index includes government bonds issued by investment grade countries outside the United States, in local currencies, that have remaining maturities of one to three years and are rated investment grade (Baa3/BBB-/BBB- or higher using the middle rating of Moody's Investors Service, Inc., Standard & Poor's, Financial Services, LLC and Fitch Inc., respectively). Each of the component securities in the Underlying Index is a constituent of the Barclays Global Treasury ex-US Index, screened such that the following countries are included: Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Latvia, Luxembourg, Malaysia, Malta, Mexico, Netherlands, New Zealand, Norway, Poland, Russia, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Thailand, Turkey and the United Kingdom. In addition, the securities in the Underlying Index must be fixed-rate and have certain minimum amounts outstanding, depending upon the currency in which the bonds are denominated. The Underlying Index is calculated by Barclays using a modified "market capitalization" methodology. This design ensures that each constituent country within the Underlying Index is represented in a proportion consistent with its percentage with respect to the total market capitalization of the Underlying Index. Component securities in each constituent country are represented in a proportion consistent with their percentage relative to the other component securities in the constituent country. Under certain conditions, however, the par amount of a component security within the Underlying Index may be adjusted to conform to requirements under the Internal Revenue Code of 1986, as amended. The securities in the Underlying Index are updated monthly, on the last business day of each month. As of September 30, 2015, there were approximately 192 securities in the Underlying Index and the modified adjusted duration of securities in the Index was approximately 1.77 years.

SPDR Series Trust files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 811-08839 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Securities linked to the performance of the ETF.

### **iShares Gold Trust**

The purpose of the iShares Gold Trust (the "ETF") is to own gold transferred to it in exchange for shares that it issues. The sponsor of the ETF is iShares Delaware Trust Sponsor LLC. The Bank of New York Mellon is the trustee of the ETF.

The ETF seeks to reflect generally the performance of the price of gold. The ETF seeks to reflect such performance before payment of the Trust's expenses and liabilities. There is no assurance that the performance of gold can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "IAU".

iShares Trust files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended. Such information can be located by reference to SEC file number 001-32418 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Notes linked to the performance of the ETF.

### **iShares Silver Trust**

The iShares Silver Trust (the "**ETF**") is sponsored by iShares Delaware Trust Sponsor LLC, an indirect subsidiary of BlackRock, Inc. The ETF seeks to reflect generally the performance, before fees and expenses, of the price of silver. There is no assurance that the performance of the price of silver can be fully matched. The shares of the ETF are listed on the NYSE Arca under the trading symbol "SLV".

The ETF files information with the U.S. Securities and Exchange Commission (the "**SEC**") pursuant to the U.S. Securities Exchange Act of 1934, as amended, and the U.S. Investment Company Act of 1940, as amended. Such information can be located by reference to SEC file number 001-32863 through the SEC's website at [www.sec.gov](http://www.sec.gov). Information regarding the ETF may also be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. None of the Index Sponsor, the Issuer of the Notes or their respective affiliates makes any representation or warranty as to the accuracy or completeness of such information. Potential investors in the Notes should undertake an independent investigation of the ETF as in their judgment is appropriate to make an informed decision with respect to an investment in the Securities linked to the performance of the ETF.

**Disclosure Supplement for the J.P. Morgan Bond Futures Tracker Index Family (USD)  
(dated February 19, 2016)**

**About this Disclosure Supplement**

This Disclosure Supplement dated February 19, 2016 (the “**Disclosure Supplement**”) for the J.P. Morgan Bond Futures Tracker Index Family (USD) (each, an “**Index**”), when read in conjunction with the materials described below, is intended to constitute a summary of the strategy and methodology employed by the Index. This Disclosure Supplement is being provided to you pursuant to 17 CFR Part 23 (*Business Conduct Standards for Swap Dealers and Major Swap Participants*) and constitutes our disclosure to you of the material economic terms, material risks and potential conflicts of interests associated with entering into a transaction (a “**Transaction**”) that references the Index. Any terms not defined herein shall have the meaning ascribed thereto in the Index Rules (as defined below).

The terms of a Transaction may incorporate standard definitions, annexes thereto and other market standard terms. Such terms may in turn be amended or customized pursuant to the terms of the Transaction and its governing documentation. Before entering into a Transaction, you should obtain and review carefully any such materials incorporated by reference as their content could materially affect your rights and obligations under a Transaction, its value and its appropriateness for your particular objectives.

**Disclosure Documents Incorporated by Reference**

This Disclosure Supplement supplements and should be read in conjunction with the General Disclosure Statement (the “**General Disclosure Statement**”) and the Disclosure Annex for Interest Rate Transactions (the “**Interest Rate Disclosure Annex**”), each dated April 26, 2013, and published by the International Swaps & Derivatives Association Inc. The General Disclosure Statement and the Interest Rate Disclosure Annex are available via the following hyperlink:

<http://www2.isda.org/functional-areas/legal-and-documentation/disclosures/>

**NOTHING IN THIS DISCLOSURE SUPPLEMENT AMENDS OR SUPERSEDES THE EXPRESS TERMS OF ANY TRANSACTION BETWEEN YOU AND US OR ANY RELATED GOVERNING DOCUMENTATION.** Accordingly, descriptions in this Disclosure Supplement of the operation of the Index and of any Transactions referencing the Index, and the consequences of various events described herein, are in all cases subject to the actual terms of any Transaction executed between you and us and its governing documentation.



## Index Summary

Each Index in the J.P. Morgan Bond Futures Tracker Index Family (USD) is a synthetic, rules-based proprietary index developed and maintained by J.P. Morgan Securities plc (“**JPMS plc**” or the “**Index Calculation Agent**”). The relevant Index Level is published under the Bloomberg ticker as per the table below. The Index was first published as per relevant Index Live Date as specified in each of the rules of each index (the “Index Rules”) available via the hyperlinks set forth in the table below, and therefore has limited historical performance.

Index Name	Bloomberg Ticker	Index Rules
JPM US 2 year Treasury Note Futures Tracker	JFBU2USD	<a href="http://www.jpmorgan.com/directdoc/JFBU2USD">http://www.jpmorgan.com/directdoc/JFBU2USD</a>
JPM US 5 year Treasury Note Futures Tracker	JFBU5USD	<a href="http://www.jpmorgan.com/directdoc/JFBU5USD">http://www.jpmorgan.com/directdoc/JFBU5USD</a>
JPM US 10 year Treasury Note Futures Tracker	JFBU10US	<a href="http://www.jpmorgan.com/directdoc/JFBU10US">http://www.jpmorgan.com/directdoc/JFBU10US</a>
JPM US Long Treasury Note Futures Tracker	JFBULBUS	<a href="http://www.jpmorgan.com/directdoc/JFBULBUS">http://www.jpmorgan.com/directdoc/JFBULBUS</a>
JPM US Ultra Long Treasury Note Futures Tracker	JFBUSBUS	<a href="http://www.jpmorgan.com/directdoc/JFBUSBUS">http://www.jpmorgan.com/directdoc/JFBUSBUS</a>
JPM 2 Year Schatz Futures Tracker in USD	JFBEDUUS	<a href="http://www.jpmorgan.com/directdoc/JFBEDUUS">http://www.jpmorgan.com/directdoc/JFBEDUUS</a>
JPM 5 Year Bobl Futures Tracker in USD	JFBEBLUS	<a href="http://www.jpmorgan.com/directdoc/JFBEBLUS">http://www.jpmorgan.com/directdoc/JFBEBLUS</a>
JPM 10 year Bund Futures Tracker in USD	JFBERXUS	<a href="http://www.jpmorgan.com/directdoc/JFBERXUS">http://www.jpmorgan.com/directdoc/JFBERXUS</a>
JPM 25 year Buxl Futures Tracker in USD	JFBEBXUS	<a href="http://www.jpmorgan.com/directdoc/JFBEBXUS">http://www.jpmorgan.com/directdoc/JFBEBXUS</a>
JPM 10 year Italy Futures Tracker in USD	JFBEBPUS	<a href="http://www.jpmorgan.com/directdoc/JFBEBPUS">http://www.jpmorgan.com/directdoc/JFBEBPUS</a>
JPM 10 year France Futures Tracker in USD	JFBEOTUS	<a href="http://www.jpmorgan.com/directdoc/JFBEOTUS">http://www.jpmorgan.com/directdoc/JFBEOTUS</a>
JPM 10 year JGB Futures Tracker in USD	J10EUSJP	<a href="http://www.jpmorgan.com/directdoc/J10EUSJP">http://www.jpmorgan.com/directdoc/J10EUSJP</a>
JPM 10 year Gilt Futures Tracker in USD	JFBG10US	<a href="http://www.jpmorgan.com/directdoc/JFBG10US">http://www.jpmorgan.com/directdoc/JFBG10US</a>
JPM 3 Year Australian Futures Tracker in USD	JFBA3USD	<a href="http://www.jpmorgan.com/directdoc/JFBA3USD">http://www.jpmorgan.com/directdoc/JFBA3USD</a>
JPM 10 Year Australian Futures Tracker in USD	JFBA10US	<a href="http://www.jpmorgan.com/directdoc/JFBA10US">http://www.jpmorgan.com/directdoc/JFBA10US</a>
JPM 10 year Canadian Futures Tracker in USD	JFBC10US	<a href="http://www.jpmorgan.com/directdoc/JFBC10US">http://www.jpmorgan.com/directdoc/JFBC10US</a>

Each Index is a notional rules-based proprietary index that aims to replicate the returns of a long position in near listed futures contracts that reference certain government bonds (the “**Futures Contracts**”), as specified in the Index Rules in respect of each Index.

## Rolling Futures Contracts

On each quarterly Roll Date as specified in the Index Rules with respect to each Index, the Index Calculation Agent will calculate the Index Level based on the official settlement price of the current second near month Futures Contract (instead of the current first near month Futures Contract), as published by the Relevant Exchange as specified in the Index Rules with respect to each Index, thereby rolling the synthetic exposure of the Index from the current First Near Futures Contract to the current

second near month Futures Contract, subject to the market disruption provisions set forth in the Index rules. The Index only tracks the applicable price of the relevant futures contract and does not include any returns associated with rolling one futures contract to another futures contract.

## RISK FACTORS

*The following risk factors relate solely to the J.P. Morgan Bond Futures Tracker Index Family (USD) and supplements the other disclosures relating to risks set forth in the accompanying General Disclosure Statement and Interest Rate Disclosure Annex. These risk factors should be read together with the risk factors set forth in the General Disclosure Statement, the Interest Rate Disclosure Annex and any other disclosure annex. **You should carefully review these risk factors (including the risk factors relating to potential conflicts of interest) prior to making your investment decision to enter into any Transaction referencing the Index.***

### **Proprietary and rules-based Index**

The Index follows a notional rules-based proprietary trading strategy that operates on the basis of pre-defined rules. Accordingly, potential investors in Transactions linked to the performance of the Index should determine whether the applicable rules-based proprietary trading strategy (as described in the Index Rules) is appropriate in light of their individual circumstances and investment objectives.

**No assurance can be given that any synthetic investment strategy on which the Index is based will be successful or that the Index will outperform any alternative strategy that might be employed in respect of the Futures Contracts referenced therein.**

### **Notional Exposure**

The Index is constructed on a “notional” synthetic portfolio that references certain Futures Contracts. There is no actual portfolio to which any person is entitled or in which any person has any ownership interest. The Index merely defines certain Futures Contracts as well as a notional rules-based proprietary trading strategy, the performances of which are used as a reference point for the purposes of calculating the Index Level. Consequently, investment in Transactions that are linked to the performance of the Index will not have any claim against any of the Futures Contracts referenced by the Index.

### **Lack of Operating History**

The Index is only recently established and therefore there is limited history to evaluate its past performance. Any back-testing or similar analysis performed by any person in respect of the 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. Past performance should not be considered indicative of future performance.

### **The Index may not perform as expected**

The Index may not perform in the manner that is expected. Various market factors and circumstances at any time and/or over any period could cause the Index to perform differently than how it is expected to perform. Neither the Index Sponsor nor the Index Calculation Agent provides any assurance as to the expected results of the Index over any period of time.

### **Index Level**

The Index Level can be volatile and move dramatically over short periods of time. There can be no assurance that the relevant synthetic exposures will not be subject to substantial negative returns. Positive returns on the Index may therefore be reduced or eliminated entirely due to movements in any market parameters negatively affecting the relevant synthetic exposures.

## **Market risks**

The performance of the Index is dependent in part on the Futures Contracts referenced by the Index and the relevant notional rules-based proprietary trading strategy. As a consequence, investors in Transactions linked to the Index should appreciate that their investment is exposed to the performance of each of the Futures Contracts and such rules-based strategy. In particular, the Index Level depends significantly on changes in current interest rates.

### **The Index is subject to significant risks associated with fixed-income securities, including interest rate-related risks.**

The Index tracks the performance of fixed-income securities by referencing the Futures Contracts. 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.

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 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 fixed-income securities that underlie the Futures Contracts referenced by the Index mandate that each security must have a minimum term remaining to maturity for continued eligibility. This means that, at any time, only longer-term securities underlie the Index, which thereby increases the risk of price volatility in the underlying securities and, consequently, the volatility in the value of the Index. As a result, rising interest rates may cause the value of the securities underlying the Index to decline, possibly significantly. Interest rates are subject to volatility due to a variety of factors, including:

- sentiment regarding underlying strength of the economy of the country issuing the securities;
- expectations regarding the level of price inflation;
- sentiment regarding credit quality of the country issuing the securities;
- central bank policies regarding interest rates; and
- the performance of the U.S. and international capital markets.

### **The Index is subject to significant risks associated with fixed-income securities, including credit risk.**

The prices of the bonds underlying the Index are significantly influenced by the creditworthiness of the issuers of the bonds. The bonds underlying the Futures Contracts referenced by the Index may have their credit ratings downgraded, or have their credit spreads widen significantly. Following a ratings downgrade or the widening of credit spreads, the bonds underlying the Futures Contracts 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 Futures Contracts referenced by the Index 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 and, consequently, depress the price, perhaps significantly, of the underlying bonds and therefore the value of the Index.

### **Continued publication of constituent data**

The publication of the Index Level may depend on the maintenance of requisite index licenses, the continued publication and determination of the Futures Contracts. Any disturbance or discontinuation

of any of these actions may adversely affect the ability of the Index Calculation Agent to continue with the calculation and publication of the Index Level.

### **Index Calculation Agent Discretion**

The Index Rules 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 the Index.

### **Potential Conflicts of Interest**

Potential conflicts of interest may exist in the structure and operation of the Index and the course of the normal business activities of the Index Sponsor, the Index Calculation Agent and any of their affiliates or subsidiaries or their respective directors, officers, employees, representatives or agents (each a “**Relevant Person**”).

During the course of their normal business, the Index Sponsor, the Index Calculation Agent and each Relevant Person may enter into or promote, offer or sell transactions or investments (structured or otherwise) linked to the Index. In addition, the Index Sponsor, the Index Calculation Agent and any Relevant Person may have, or may have had, interests or positions, or may buy, sell or otherwise trade positions in or relating to the Index, 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. None of the Index Sponsor, the Index Calculation Agent or any 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 the Index.

### **Market Disruption Events**

The publication and/or determination of the Index Level may be affected by the occurrence of certain market disruption events with respect to the Futures Contracts, including the failure of the Relevant Exchange to publish an official settlement price in respect of the Futures Contract, or any event that disrupts or impairs the ability of market participants generally to effect transactions in or obtain market values for the Futures Contract. Such events are set out more fully in the Index Rules and are referred to as Market Disruption Events. If a Market Disruption Event occurs, the Index Calculation Agent will not calculate the Index Level for such Index Calculation Day and will suspend the calculation and publication of the Index Level until the first succeeding Index Calculation Day that is not a Disrupted Index Calculation Day, provided that the Index Calculation Agent may determine the value of a Futures Contract for purposes of calculating the Index Level following eleven consecutive Calculation Days that are Disrupted Index Calculation Days.

### **Extraordinary Events**

The calculation of the Index Level depends on, amongst other things, the continued existence of any Futures Contract. As a result, any discontinuation of any such Futures Contract may adversely affect the ability of the Index Calculation Agent to continue with the calculation and publication of the Index Level. In addition, amongst other things, a change in law that makes it contrary to law to hold, acquire or dispose of any transaction or interest in or relating to a Futures Contract may also result in the Index Calculation Agent excluding or substituting an affected Futures Contract. All such events are set out more fully in the Index Rules under the heading “Extraordinary Events” and in the related definitions.

The occurrence of certain Extraordinary Events (other than a Change in Law) with respect to a Futures Contract may result in the affected Futures Contract being replaced by a substitute Futures Contract having similar characteristics to the affected Futures Contract or the Index Calculation Agent may cease publishing the Index.

In respect of a Change in Law, the Index Calculation Agent may exclude or substitute any Futures Contract following such Change in Law and, if it excludes or substitutes such affected Futures Contract, then the Index Calculation Agent may adjust the Index Rules as it determines in good faith to be appropriate to account for such exclusion or substitution.

### **Amendments**

The Index Rules for an Index may be amended from time to time at the discretion of the Index Sponsor and will be re-published (in a manner determined by the Index Sponsor from time to time) no later than one calendar month following such amendment. Although the Index Rules are intended to be comprehensive, ambiguities may arise. If ambiguities arise, the Index Calculation Agent (if necessary, in consultation with the Index Sponsor) will resolve such ambiguities in its discretion and, if necessary, the Index Sponsor will amend the Index Rules to reflect such resolution.

# **The J.P. Morgan Futures Tracker Series**

**J.P.Morgan**

16 November 2009 (as amended and restated 18 June 2010 and 21 June 2013)

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**THE J.P. MORGAN FUTURES TRACKER SERIES  
RULES**

**PART A**

**1. Introduction**

This document comprises the rules (the “**Rules**”) of the J.P. Morgan Futures Tracker Series, a family of notional rule-based strategies (each such strategy a “**Futures Tracker**” and together, the “**Futures Trackers**”). The Rules may be amended from time to time at the discretion of J.P. Morgan Securities plc (“**JPMS**”) in its capacity as Calculation Agent. The Rules will be re-published no later than one calendar month following amendment to reflect any such changes. Copies of the current Rules are available from JPMS upon request.

Part A of the Rules sets out general information applicable to each Futures Tracker, such as the calculation algorithms which are applicable to all Futures Trackers. Specific information pertaining to each Futures Tracker, including, for example, the name of the Base Underlying, Futures Tracker Currency, Tracker Business Days are set out in the appendices of Part B.

This document is published by JPMS of 25 Bank Street, Canary Wharf, London E14 5JP, UK in its capacity as Calculation Agent.

**ALL PERSONS READING THIS DOCUMENT SHOULD REFER TO THE RISK FACTORS, DISCLAIMERS AND CONFLICTS SECTIONS BELOW AND CONSIDER THE INFORMATION CONTAINED IN THIS DOCUMENT IN LIGHT OF SUCH RISK FACTORS, DISCLAIMERS AND CONFLICTS.**

**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 each Futures Tracker**

Each Futures Tracker is a notional dynamic strategy that aims to replicate the returns of a long position in the near month listed futures contract on a specific underlying (the “**Base Underlying**”) traded on the Relevant Exchange (each futures contract on the Base Underlying traded on the Relevant Exchange being a “**Futures Contract**”). A futures contract is a standardized contract traded on an exchange to buy or sell a standard quantity of an asset at a specific date in the future (such date being its expiry date), at a price specified today. Each Futures Contract is identified by its expiry date.

On each Tracker Business Day, each Futures Tracker shall be notionally invested in the nearest listed expiry Futures Contract (the “**Near Futures Contract**”). It shall maintain this exposure until a day that is a specified number of Dealing Days before the expiry date of such Near Futures Contract or before such other date specified in Part B (such day, as set out in Part B, being the “**Re-weighting Date**” and the number of Dealing Days specified in the definition of Re-Weighting Date set out in Part B). After the Re-weighting Date, it shall then be notionally invested in the Futures Contract expiring next after the Near Futures Contract expiry date (the “**Far Futures Contract**”). For the avoidance of doubt, on any Tracker Business Day after the Near Futures Contract expiry date, the Far Futures Contract becomes the Near Futures Contract.

**No assurance can be given that the investment strategy used to construct the Futures Tracker will be successful or that the Futures Tracker will outperform any alternative basket or strategy that might be constructed from the Futures Contracts.**

Subject to the occurrence of Market Disruption Events, the level of the Futures Tracker (the “**Tracker Level**”) will be calculated by the Calculation Agent on each Tracker Business Day to an accuracy of two decimal places, or more where so specified in the relevant Appendix. The Tracker Level is calculated in its relevant currency (the “**Futures Tracker Currency**”) in accordance with the methodology set out in Section 7 (*the Futures Tracker Level*).

**The Futures Tracker 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. The Futures Tracker merely**



references certain assets, the performance of which will be used as a reference point for calculating the Tracker Level.

### 3. Calculation Agent

JPMS or any affiliate or subsidiary designated by it will act as calculation agent (the “**Calculation Agent**”) for the Futures Tracker. The Calculation Agent’s determinations in respect of the Futures Tracker and interpretation of these Rules are final. Further information is contained in the statement of responsibility set out in Section 11 (*Responsibility*) below.

### 4. The Futures Contracts

In respect of each Futures Tracker, there are typically 4 listed Futures Contracts per calendar year over the Base Underlying. The exact number of Futures Contracts per calendar year (the “**Number of Contracts p.a.**”) is specified in Part B of the Rules.

Each Futures Contracts has a specific expiry date (the “**Expiry Date**” and together, the “**Expiry Dates**”) specified in Part B.

### 5. Initial Composition of the Futures Tracker

Each Futures Tracker has a base date (the “**Base Date**”) which is the date on which the Futures Tracker comprised a notional investment of one contract in the relevant Near Futures Contract in respect of such date.

The composition of each of the Futures Trackers has been and will be adjusted in accordance with the methodology described in the remainder of these Rules.

### 6. Futures Tracker Rebalancing

Unless a Market Disruption Event has occurred and is continuing, the Futures Tracker will be rebalanced on the relevant Re-weighting Date.

### 7. Futures Tracker Level

Unless a Market Disruption Event has occurred and is continuing, the Tracker Level will be calculated by the Calculation Agent on each Tracker Business Day.

On the Base Date, the Tracker Level was equal to the initial tracker level as specified in Part B (the “**Initial Tracker Level**”) and the Exposure ( $E_0$ ) was set at 1. Re-weighting Date  $k$  is the Re-weighting Date immediately preceding Tracker Business Day  $t$ . Re-weighting Date  $k+1$  is the Re-weighting Date immediately following Re-weighting Date  $k$ . On each Tracker Business Day  $t$  from, but excluding, Re-weighting Date  $k$  to, and including, the next following Re-weighting Date  $k+1$ , the Tracker Level is calculated by the Calculation Agent in accordance with the following formula:

$$\text{Tracker}_{k,t} = E_k \times \text{Future}_{k+1,t}$$

where:

$\text{Tracker}_{k,t}$  means the Tracker Level for Tracker Business Day  $t$ ;

$\text{Future}_{k+1,t}$  means the Closing Price for Tracker Business Day  $t$  of the Futures Contract that expires on the first Expiry Date to occur following Re-weighting Date  $k+1$ ; and

$E_k$  means the Exposure of the Futures Tracker for Re-weighting Date  $k$  immediately preceding Tracker Business Day  $t$  calculated as:

$$E_k = E_{k-1} \times \frac{\text{Future}_k - A}{\text{Future}_{k+1}}$$

where:

- Future<sub>k</sub>* means the Closing Price for Re-weighting Date k of the Futures Contract that expires on the first Expiry Date to occur following Re-weighting Date k;
- Future<sub>k+1</sub>* means the Closing Price for Re-weighting Date k of the Futures Contract that expires on the first Expiry Date to occur following Re-weighting Date k+1; and
- A is the Adjustment Factor (as specified in Part B)

Unless a Market Disruption Event has occurred and is continuing, the Tracker Level will be published in respect of each Tracker Business Day by the Calculation Agent on the relevant Price Source.

## 8. Market Disruption

### 8.1 On a Re-weighting Date

If any Re-weighting Date is a Disrupted Day in respect of any relevant Futures Contract (each such Futures Contract for these purposes, an “**Affected Futures Contract**”), then the relevant Re-weighting Date for the Affected Futures Contract shall be deemed to be the first following Dealing Day for the Affected Futures Contract which is not a Disrupted Day (and, if such first following Dealing Day occurs on or after the day on which a relevant Futures Contract effectively settles, the level of the Futures Tracker for such first following Dealing Day will be calculated using the settlement price at which the relevant Futures Contract effectively settles in place of the Closing Price), unless the four Dealing Days for an Affected Futures Contract immediately following the day originally scheduled to be the Re-weighting Date are Disrupted Days for such Affected Futures Contract, in which case the fourth Dealing Day following the day originally scheduled to be the relevant Re-weighting Date shall be deemed to be the relevant Re-weighting Date (notwithstanding that it is a Disrupted Day in respect of the Affected Futures Contract), and the Calculation Agent shall re-weight the Futures Tracker acting in good faith using such information and/or methods as it determines, in its reasonable discretion, are appropriate (and, if such fourth Dealing Day occurs on or after the day on which a relevant Futures Contract effectively settles, using the settlement price at which the relevant Futures Contract effectively settles in place of the Closing Price).

### 8.2 On a Tracker Business Day

Notwithstanding Section 8.1, if any Tracker Business Day is a Disrupted Day for any relevant Futures Contract, the Calculation Agent may either:

- (a) calculate its good faith estimate of the Tracker Level for such Tracker Business Day, using its good faith estimate of the level of the Affected Futures Contract. Any such estimated level may be subject to correction on the first succeeding Tracker Business Day which is not a Disrupted Day in respect of any Affected Futures Contract; or
- (b) suspend the calculation and publication of the Tracker Level until the first succeeding Tracker Business Day which is not a Disrupted Day in respect of any relevant Futures Contract.

## 9. Extraordinary Events

### 9.1 Successor Futures Contract

If any Futures Contract is:

- (a) not calculated and quoted by the Relevant Exchange but by a successor exchange acceptable to the Calculation Agent; or

- (b) replaced by a successor futures contract using, in the determination of the Calculation Agent, the same or substantially similar formula and method of calculation as used in the calculation of the relevant Futures Contract,

then in each case that successor futures contract (the “**Successor Futures Contract**”) shall replace the relevant Futures Contract with effect from a date determined by the Calculation Agent who may make such adjustment to these Rules, as it determines in good faith is appropriate, to account for such change.

#### 9.2 *Material change to Futures Contracts*

Without prejudice to the ability of the Calculation Agent to amend the Rules (see Section 1), the Calculation Agent may, acting in good faith and in a commercially reasonable manner:

- (a) exclude; or
- (b) substitute,

any Futures Contract following the occurrence (and/or continuation) of a Change in Law or in circumstances where it considers it reasonably necessary to do so to reflect the intention of the Futures Tracker, including (without prejudice to the generality of the foregoing) changes announced by the Relevant Exchange relating to the modification, exclusion, inclusion or substitution of any one Futures Contract or any perception among market participants generally that the published price of the relevant Futures Contract is inaccurate (and the Relevant Exchange fails to correct such level), and if it so excludes or substitutes for any Futures Contract, then the Calculation Agent may adjust the Rules as it determines in good faith to be appropriate to account for such exclusion or substitution on such date(s) selected by the Calculation Agent. The Calculation Agent is under no obligation to continue the calculation and publication of any Futures Tracker upon the occurrence or existence of a Change in Law; and the Calculation Agent may decide to cancel any Futures Tracker if it determines, acting in good faith, that the objective of the relevant Futures Tracker can no longer be achieved.

#### 9.3 *Cancellation or non-publication*

If, at any time, any Relevant Exchange:

- (a) announces that it will make a material change in the definition of any Futures Contract or in any other way materially modifies such contract (other than a modification prescribed in the definition of such contract); or
- (b) (i) permanently cancels any Futures Contract and no Successor Futures Contract exists or (ii) is otherwise unable or unwilling to publish levels of the Futures Contract,

then the Calculation Agent may remove such futures contract from the Futures Tracker and may adjust the Rules as it determines in good faith to be appropriate to account for such change(s) (including, without limitation, selecting (a) a replacement underlying futures contract traded on an equivalent exchange and having similar characteristics to the Affected Futures Contract; and (b) the date of such replacement) on such date(s) as selected by the Calculation Agent.

### 10. **Corrections**

If (i) the Closing Price of any Futures Contract as of any date which is published or otherwise made available by or on behalf of the Relevant Exchange is subsequently corrected and such correction is published or otherwise made available by or on behalf of such Relevant Exchange; or (ii) the Calculation Agent identifies an error or omission in any of its calculations or determinations in respect of the Futures Tracker, then the Calculation Agent may, if practicable and the 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 Tracker Level as of any Tracker Business Day to take into account such correction, if such correction is practicable.

### 11. **Responsibility**

The 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 discretions pursuant to these Rules.

Whilst these Rules are intended to be comprehensive, ambiguities may arise. In such circumstances, the Calculation Agent will resolve such ambiguities in a reasonable manner and, if necessary, amend these Rules to reflect such resolution.

Neither the 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 the Futures Tracker and any use to which any person may put the Futures Tracker or the Tracker Level. All determinations of the Calculation Agent in respect of the Futures Tracker 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 Calculation Agent in respect of the Futures Tracker, neither the 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.

## **12. Information specified in Part B**

In respect of each Futures Tracker, the following items are listed in Part B:

- Tracker Name
- Additional Risk Factors, if applicable
- The Adjustment Factor
- The Base Date
- The Expiry Date for each Futures Contract (and table)
- The Futures Tracker Currency
- The Initial Tracker Level
- The name of the Base Underlying
- The Number of Contracts p.a.
- The Official Settlement Price
- The Price Source
- The Relevant Exchange
- The Re-weighting Date
- Futures Contract

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## Definitions

Terms not otherwise defined herein, shall have the following meanings:

“**Adjustment Factor**” see Part B;

“**Base Date**” see Part B;

“**Base Underlying**” see Part B;

“**Calculation Agent**” see Section 3;

“**Change in Law**” means:

(a) due to:

- (i) the adoption of, or any change in, any applicable law, regulation or rule (including, without limitation, any tax law); or
- (ii) the promulgation of, or any change in, the 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 and Futures Trading Commission or exchange or trading facility),

in each case, the 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 Futures Contract or any transaction referencing any Futures Contract or, (y) holding a position in any Futures Contract or any transaction referencing any Futures Contract 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, regulation in relation to such Futures Contract traded on any exchange(s) or other trading facility (including, without limitation, any relevant Exchange); or

(b) the occurrence or existence of any:

- (i) suspension or limitation imposed on trading commodities futures contracts (including, without limitation the Futures Contracts); or
- (ii) any other event that causes trading in commodity futures contracts (including, without limitation, the Futures Contracts) to cease;

“**Closing Price**” means, in respect of a Futures Contract and a Dealing Day, the Official Settlement Price;

“**Dealing Day**” means, in respect of a Futures Contract, a day upon which the Official Settlement Price for such Futures Contract is, or but for the occurrence of a Market Disruption Event would have been, scheduled to be calculated and published by the Relevant Exchange;

<b>“Disrupted Day”</b>	means, in respect of a Futures Contract, a Dealing Day on which a Market Disruption Event occurs or exists;
<b>“Early Closure”</b>	means the closure on any Tracker Business Day of the Relevant Exchange prior to its scheduled closing time unless such earlier closing time is announced by such exchange(s) at least one hour prior to the actual closing time for the regular trading session on such exchange(s) on such Tracker Business Day;
<b>“Exchange Disruption”</b>	means any event (other than an Early Closure) that disrupts or impairs (as determined by the Calculation Agent) the ability of market participants in general to effect transactions in, or obtain market values for, futures (including, without limitation, the Futures Contracts) or options contracts relating to the Base Underlying on any Relevant Exchange;
<b>“Expiry Date”</b>	see Part B;
<b>“Far Futures Contracts”</b>	see Section 2;
<b>“Futures Contracts”</b>	see Part B;
<b>“Futures Tracker Currency”</b>	means, in respect of a Futures Contract, the currency in which such Futures Contract is reported, as specified in respect of such Futures Contract in Part B;
<b>“JPMS”</b>	means J.P. Morgan Securities plc;
<b>“Market Disruption Event”</b>	means, in respect of a Futures Contract and a Dealing Day, a failure by the Relevant Exchange to calculate and publish the Closing Price for the Futures Contract on such Dealing Day, or any event that, in the determination of the Calculation Agent, disrupts or impairs the ability of market participants generally to effect transactions in or obtain market values for such Futures Contract. Such events may include, but not be limited to, the occurrence of any of a Trading Disruption, Exchange Disruption or Early Closure;
<b>“Near Futures Contract”</b>	see Section 2;
<b>“Number of Contracts p.a.”</b>	see Part B;
<b>“Official Settlement Price”</b>	see Part B;
<b>“Price Source”</b>	see Part B;
<b>“Relevant Exchange”</b>	see Part B;
<b>“Re-weighting Date”</b>	see Part B;
<b>“Rules”</b>	means this document, as may be supplemented, amended or restated from time to time;
<b>“Successor Futures Contract”</b>	see Section 9.1;
<b>“Tracker Business Day”</b>	means a day on which the Relevant Exchange is open for trading during its regular trading session;
<b>“Tracker Level”</b>	see Sections 2 and 7; and
<b>“Trading Disruption”</b>	means any suspension of or limitation imposed on trading by the Relevant Exchange or otherwise and whether by reason of movements in price exceeding limits permitted by the Relevant Exchange or otherwise in futures (including,

without limitation, the Futures Contracts) or options contracts relating to the Base Underlying on any Relevant Exchange.

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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 each of the Futures Trackers.**

### **(a) Proprietary and Rules-Based Trading Strategy**

The Futures Tracker follows a notional rules-based proprietary trading strategy that operates on the basis of pre-determined rules. Accordingly, potential investors in financial products which are linked to the performance of the Futures Tracker should determine whether those rules as described in the Rules of the Futures Tracker are appropriate in light of their individual circumstances and investment objectives.

**No assurance can be given that the investment strategy on which the Futures Tracker is based will be successful or that the Futures Tracker will outperform any alternative strategy that might be employed in respect of the Futures Contracts.**

### **(b) Notional Exposures**

The Futures Tracker comprises notional assets and liabilities. The exposures to the Futures Contracts are purely notional and will exist solely in the records maintained by or on behalf of the Calculation Agent. Consequently, investors in financial products which are linked to the performance of the Futures Tracker will not have any claim against any of the reference assets which comprise the Futures Tracker. The Futures Tracker tracks returns of a Futures Contract and as such constitutes an unfunded investment.

### **(c) Lack of Operating History**

The Futures Tracker 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 the Futures Tracker must be considered illustrative only and may be based on estimates or assumptions not used by the Calculation Agent when determining the Tracker Level of the Futures Tracker.

**Past performance should not be considered indicative of future performance.**

### **(d) Market Risks**

The performance of the Futures Tracker is dependent on the performance of the relevant Futures Contract. As a consequence, investors in financial products the return of which is linked to the Futures Tracker should appreciate that their investment is exposed to the price performance of the Futures Contracts.

A futures contract often displays on any given day considerably higher volatility than an index comprising equities such as the Base Underlying and investors should be willing to accept additional risks such as increased volatility, futures contract liquidity and supply and demand factors. These factors are likely to influence the Tracker Level, whereas such factors may not be relevant in respect of the level or volatility of the Base Underlying. The exposure of the Futures Tracker to the relevant Futures Contract is affected by the roll return. Additionally, the Tracker Level is affected by the magnitude of the Adjustment Factor.

Generally, futures contracts are often less liquid than the Base Underlying.

### **(e) Extraordinary Events**

Following the occurrence of certain extraordinary events as described in Section 9 of the Rules, with respect to a Futures Contract, the affected Futures Contract may be replaced by a substitute Futures Contract. Such substitution may have a material effect on the economics of the Futures Tracker.

### **(f) Calculation Agent Discretion**

The Rules of the Futures Tracker confer on the 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 the Futures Tracker. Without limitation to the generality of the foregoing, the Calculation Agent has a discretion in relation to the calculation of the Tracker Level in the event of a Market Disruption Event.

**(g) Potential Conflicts of Interest**

Potential conflicts of interest may exist in the structure and operation of the Futures Tracker and in the course of the normal business activities of JPMS 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 Calculation Agent or any of its affiliates or subsidiaries or any of their respective directors, officers, employees, representatives, delegates or agents.**

## Notices, Disclaimers and Conflicts of Interest

These Rules have been prepared solely for informational purposes and nothing in these Rules constitutes an offer to buy or sell any securities, participate in any transaction or adopt any investment Index or as legal, tax, regulatory, financial or accounting advice. These Rules may change at any time without prior notice.

Neither the Calculation Agent nor any of its affiliates or subsidiaries or their respective directors, officers, employees, representatives, delegates or agents (each a "**Relevant Person**") make any representation or warranty, whatsoever, express or implied, as to the results that may be obtained through the use of this document or the Futures Tracker. Each Relevant Person hereby expressly disclaims, to the fullest extent permitted by law, all warranties of accuracy, completeness, merchantability, or fitness for a particular purpose with respect to any information contained in this document and no Relevant Person shall have any liability (direct or indirect, special, punitive, consequential or otherwise) to any person even if notified of the possibility of any such damages.

The Calculation Agent is under no obligation to continue the calculation, publication and dissemination of the Futures Tracker or the Tracker Level.

During the course of their normal business, the 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 the Futures Tracker. 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 the Futures Tracker, or may invest or engage in transactions with other persons, or on behalf of such persons relating to such contracts. Such activity may or may not have an impact on the Tracker 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 Tracker Level. Neither the 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 favourable to anyone with exposure to the Futures Tracker.

The Rules have been developed with the possibility of the Calculation Agent or any of the other Relevant Persons entering into or promoting, offering or selling transactions or investments (structured or otherwise) linked to the Futures Tracker and hedging such transactions or investments in any manner that they see fit.

As mentioned above, the Futures Tracker is synthetic index because there is no actual portfolio of assets to which any person is entitled or in which any person has any ownership interest. The Futures Tracker merely identifies certain reference assets, the performance of which will be used as a reference point calculating the Tracker Level.

No one may reproduce or disseminate the information contained in this document or the Tracker Level of the Futures Tracker without the prior written consent of the Calculation Agent. This document is not intended for distribution to, or use by any person in, a jurisdiction where such distribution is prohibited by law or regulation.

The Rules shall be governed by and construed in accordance with the laws of England.

Copyright JPMorgan Chase & Co. 2013. All rights reserved. J. P. Morgan is the marketing name for JPMorgan Chase & Co. and its subsidiaries and affiliates worldwide. J.P. Morgan Securities plc is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority and is a member of the London Stock Exchange. The Calculation Agent owns all intellectual property rights in: the development of and methodology for

producing the J.P. Morgan Futures Tracker Series; the Futures Trackers within the J.P. Morgan Futures Tracker Series; the Tracker Levels in respect of such Futures Trackers; and these Rules. Such intellectual property rights must not be used without the prior written consent of the Calculation Agent (including in situations where a third party performs certain functions in relation to the Futures Trackers).

**Disclosures Related to the FX Tracker Indices  
(dated October 19, 2015)**

This Disclosure Supplement for the J.P. Morgan FX Tracker Indices, dated October 19, 2015 (the “**Disclosure Supplement**”), supplements and should be read in conjunction with the General Disclosure Statement (“**General Disclosure Statement**”) and the Interest Rate Disclosure Annex (the “**Interest Rate Annex**”), dated April 26, 2013 and April 26, 2013, respectively, published by the International Swaps & Derivatives Association Inc. **NOTHING IN THIS SUPPLEMENT AMENDS OR SUPERSEDES THE EXPRESS TERMS OF THE NOTES OR THE INDEX RULES.** Accordingly, descriptions in this Disclosure Supplement of the operation of Transactions (as defined below) and the consequences of various events are in all cases subject to the actual terms of a Transaction executed between you and us and its governing documentation. Any terms not defined herein shall have the meaning ascribed thereto in the Index Rules (as defined below). The General Disclosure Statement and the Commodities Disclosure Annex are each available via the following hyperlink:

[www2.isda.org/functional-areas/legal-and-documentation/disclosures/](http://www2.isda.org/functional-areas/legal-and-documentation/disclosures/)

When we refer to a “Transaction”, we are referring to Transactions in which the underlying(s) is/are or may include exposure to the Index (as defined herein). The terms of a Transaction may be customized pursuant to the terms of the Transaction and its governing documentation. Before entering into a Transaction, you should obtain and review carefully all governing documentation and disclosures, as their content could materially affect your rights and obligations under the Transaction, its value and its appropriateness for your particular objectives.

To the extent you enter into a Transaction that references the J.P. Morgan FX Tracker Indices, in whole or in part, you should carefully review the disclosure set forth herein. This Disclosure Supplement, together with the Index Rules (as defined below), the documents governing your Transaction, the disclosure annexes referenced above and any other disclosure delivered by us to you related to your specific Transaction, constitute our disclosure to you of the material economic terms, the material risks and potential conflicts of interests associated with your specific Transaction. You should carefully consider all of these documents prior to entering into a Transaction.

## Index Summary

The J.P. Morgan FX Tracker Indices (the “**Index Family**”) are a family of synthetic, rules-based proprietary indices developed and maintained by J.P. Morgan Securities plc (“**JPMS plc**” or the “**Index Calculation Index**”). The Index Level is published under the Bloomberg tickers specified in Table 1 below with respect to each index in the Index Family (each such index, an “**Index**”). The Index Family has an Index Live Date of November 26, 2015, and therefore has limited historical performance. The rules of the Index (the “**Index Rules**”) are available via the following hyperlink:

[www.jpmorgan.com/directdoc/FX\\_Tracker\\_Indices.pdf](http://www.jpmorgan.com/directdoc/FX_Tracker_Indices.pdf)

The Index aims to replicate the returns of a notional rolling portfolio of synthetic forwards transactions that have a scheduled term of twenty (20) Calculation Days and reference a single Currency pair as specified in Table 1 below with respect to each Index. The Index implements this idea by initiating synthetic FX forward positions in the applicable Currency Pairs set out in Table 1 below with respect to each Index.

**Table 1: Indices**

Index Name	Bloomberg Page	Index Base Date	Currency Pair <sub>i</sub>
J.P. Morgan EUR FX Tracker Index	JPFCTEUR <Index>	1 January 1999	EUR/USD
J.P. Morgan GBP FX Tracker Index	JPFCTGBP <Index>	1 January 1999	GBP/USD
J.P. Morgan CHF FX Tracker Index	JPFCTCHF <Index>	1 January 1999	USD/CHF
J.P. Morgan NOK FX Tracker Index	JPFCTNOK <Index>	1 January 1999	USD/NOK
J.P. Morgan SEK FX Tracker Index	JPFCTSEK <Index>	1 January 1999	USD/SEK
J.P. Morgan AUD FX Tracker Index	JPFCTAUD <Index>	1 January 1999	AUD/USD
J.P. Morgan NZD FX Tracker Index	JPFCTNZD <Index>	1 January 1999	NZD/USD
J.P. Morgan CAD FX Tracker Index	JPFCTCAD <Index>	1 January 1999	USD/CAD
J.P. Morgan JPY FX Tracker Index	JPFCTJPY <Index>	1 January 1999	USD/JPY
J.P. Morgan DKK FX Tracker Index	JPFCTDKK <Index>	1 January 1999	USD/DKK
J.P. Morgan SGD FX Tracker Index	JPFCTSGD <Index>	1 January 1999	USD/SGD
J.P. Morgan MXN FX Tracker Index	JPFCTMXN <Index>	1 January 1999	USD/MXN
J.P. Morgan CZK FX Tracker Index	JPFCTCZK <Index>	1 January 1999	USD/CZK
J.P. Morgan HUF FX Tracker Index	JPFCTHUF <Index>	1 January 1999	USD/HUF
J.P. Morgan ILS FX Tracker Index	JPFCTILS <Index>	1 July 2004	USD/ILS
J.P. Morgan PLN FX Tracker Index	JPFCTPLN <Index>	11 February 2002	USD/PLN
J.P. Morgan TRY FX Tracker Index	JPFCTTRY <Index>	2 January 2002	USD/TRY
J.P. Morgan ZAR FX Tracker Index	JPFCTZAR <Index>	1 January 1999	USD/ZAR
J.P. Morgan RUB FX Tracker Index	JPFCTRUB <Index>	1 July 2004	USD/RUB
J.P. Morgan RON FX Tracker Index	JPFCTRON <Index>	1 July 2005	USD/RON

## Index Summary

The J.P. Morgan FX Tracker Indices are a family of rules based proprietary indices. The family of indices currently includes twenty (20) reference currencies, each of which are expressed in a base currency and are described in greater detail in the Index Rules.

Each Index seeks to track the performance of a notional portfolio of synthetic forwards transactions that have a scheduled term of twenty (20) Calculation Days and reference a single Currency Pair. In respect of each Calculation Day that is not a Disrupted Day, each Index will synthetically initiate a new synthetic forward transaction on its applicable Currency Pair, and that synthetic forward transaction will have an initial notional amount equal to 1/20th of the Index Level of such Index on the immediately preceding Calculation Day that was not a Disrupted Day.

## Index Methodology Overview

As of the Index Base Date, the notional portfolio of each Index initially held no synthetic forwards transaction, and on such Index Base Date and each subsequent Calculation Day that is not a Disrupted Day, each Index initiate a new synthetic forward transaction. As of the twentieth (20<sup>th</sup>) Calculation Day from the Index Base Date, the notional portfolio of each Index is generally composed of twenty (20) synthetic forwards transactions.

The Index Calculation Agent will calculate the Index Level in respect of each Index on any Calculation Day that is not a Disrupted Day. In respect of each Calculation Day that is not a Disrupted Day, the Index Level for each Index is a valuation of its notional portfolio of synthetic forward transactions as of such Calculation Day and will be based on (a) the Index Level as of the immediately preceding Calculation Day that was not a Disrupted Day, (b) the change in the mark-to-market value of the portfolio of synthetic forward transactions on such Calculation Day that is not a Disrupted Day and (c) the settlement amount of any synthetic forward transaction referenced by that Index, which terminated in the period from and excluding the previous Calculation Day that was not a Disrupted Day to and including such Calculation Day, each as further described in the Index Rules. **If, in respect of a Calculation Day, the calculations referenced in Step 4 would result in an Index Level that is less than or equal to zero, the Index Level for that Calculation Day and each subsequent Calculation Day shall be deemed to be zero.**

The Index Level of each Index is a mathematical calculation only and the Indices do not actually buy, sell or hold any assets.

In respect of each Calculation Day that is not a Disrupted Day, the Index Calculation Agent will determine and publish the Index Level as described in these Index Rules. Notwithstanding anything to the contrary, the Index Calculation Agent will not publish the Index Level in respect of any Calculation Day that is a Disrupted Day.

## **RISK FACTORS**

*The following risk factors relate solely to the J.P. Morgan FX Tracker Indices and supplements the other risk factors set forth in the accompanying disclosures related to any Transaction between you and us. These risk factors should be read together with the risk factors set forth in the General Disclosure Statement, the Interest Rate Disclosure Annex and any other disclosure annex. **You should carefully review these risk factors (including the risk factors relating to potential conflicts of interest) prior to making your investment decision to enter into a Transaction.***

### **Proprietary and rules-based Index**

The Index follows a notional rules-based proprietary trading strategy that operates on the basis of pre-defined rules. Accordingly, potential investors in Transactions linked to the performance of the Index should determine whether the applicable rules-based proprietary trading strategy (as described in the Index Rules) is appropriate in light of their individual circumstances and investment objectives.

**No assurance can be given that any synthetic investment strategy on which the Index is based will be successful or that the Index will outperform any alternative strategy that might be employed in respect of the Currency Pairs referenced.**

### **Notional Exposure**

The Index is constructed on a “notional” synthetic portfolio of forward positions in respect of the Currency Pairs. There is no actual portfolio to which any person is entitled or in which any person has any ownership interest. The Index merely defines a notional rules-based proprietary trading strategy, the performances of which are used as a reference point for the purposes of calculating the Index Level. Consequently, investment in Transactions that are linked to the performance of the Index will not have any claim against any of the Currency Pairs in, or any other components referenced by, the Index.

### **Lack of Operating History**

The Index is only recently established and therefore there is limited history to evaluate its past performance. Any back-testing or similar analysis performed by any person in respect of the Index must be considered illustrative only and may be based on estimates or assumptions not used by the Index Calculation Index when determining the Index Level. Past performance should not be considered indicative of future performance.

### **The Index may not perform as expected**

The Index may not perform in the manner that is expected. Various market factors and circumstances at any time and/or over any period could cause the Index to perform differently than how it is expected to perform. Neither the Index Sponsor nor the Index Calculation Index provides any assurance as to the expected results of the Index over any period of time.

### **The Index Level may fall**

The Index Level is determined, in part, by reference to the performance of the synthetic long exposures (which are in turn determined by reference to the closing prices of certain synthetic forward transactions, (“**Synthetic Forward**”)). All other things being equal, the Index Level will fall when the closing prices of the Synthetic Forwards referenced by the synthetic long synthetic exposure fall.

## **Index Level**

The forward positions in respect of the Currency Pairs referenced by the Index can be volatile and move dramatically over short periods of time. There can be no assurance that the relevant synthetic exposures will not be subject to substantial negative returns. Positive returns on the Index may therefore be reduced or eliminated entirely due to movements in any market parameters negatively affecting the relevant synthetic exposures.

## **Market Risks**

The performance of the Index is dependent in part on the forward positions in respect of the Currency Pairs referenced by the Index and the relevant notional rules-based proprietary trading strategy. As a consequence, investors in Transactions linked to the Index should appreciate that their investment is exposed to the performance of each of the Currency Pairs and such rules-based strategy.

## **Currency Exchange Risk**

Investors in Transactions are exposed to currency exchange rate risk with respect to each of the relevant Currency Pairs. An investor's net exposure will depend on the extent to which those relevant currencies strengthen or weaken against each other in the relevant Currency Pairs. Of particular importance to potential currency exchange risks 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.

**The value of your investment in a Transaction could be affected by the actions of the governments of the United States and the originating nations of the relevant currencies.**

Foreign exchange rates can either be fixed by sovereign governments or floating. Exchange rates of most economically developed nations are permitted to fluctuate in value relative to the value of other currencies. However, governments do not always allow their currencies to float freely in response to economic forces. Governments use a variety of techniques, such as intervention by their central bank or imposition of regulatory controls or taxes, to affect the trading value of their respective currencies. They may also issue a new currency to replace an existing currency or alter the exchange rate or relative exchange characteristics by devaluation or revaluation of a currency. Thus, a special risk in entering into an Transaction is that the Index could be affected by the actions of sovereign governments which could change or interfere with freely determined currency valuation, fluctuations in response to other market forces and the movement of currencies across borders, which in turn could affect the observed trend in foreign exchange rates that realized volatility is lower than implied volatility.

**Currency exchange risks can be expected to heighten in periods of financial turmoil and may adversely affect the Index.**

In periods of financial turmoil, capital can move quickly out of regions that are perceived to be more vulnerable to the effects of the crisis than others with sudden and severely adverse consequences to the



currencies of those regions. In addition, governments around the world, including the United States government and governments of other major world currencies, have recently made, and may be expected to continue to make, very significant interventions in their economies, and sometimes directly in their currencies. Those interventions affect currency exchange rates globally and, in particular, the value of the currencies relative to the U.S. dollar. Further interventions, other government actions or suspensions of actions, as well as other changes in government economic policy or other financial or economic events affecting the currency markets, may cause currency exchange rates to fluctuate sharply in the future, which could have a material adverse effect on the return on your investment in a Transaction. These heightened currency exchange risks during periods of financial turmoil are unpredictable and may affect the observed trend in foreign exchange rates that realized volatility is lower than implied volatility.

**Suspensions or disruptions of market trading in the currency markets may adversely affect the value of your investment in a Transaction.**

The currency markets are subject to temporary distortions or other disruptions due to various factors, including the participation of speculators and government regulation and intervention. These circumstances could affect the value of the currencies underlying the Index, and, therefore, the amount of the return on your investment in a Transaction.

**Continued publication of constituent data**

The publication of the Index Level may depend on the maintenance of requisite index licenses and the continued Spot Rate publication of the currencies referenced by each of the Currency Pairs. Any disturbance or discontinuation of any of these actions may adversely affect the ability of the Index Calculation Index to continue with the calculation and publication of the Index Level.

**Index Calculation Index Discretion**

The Index Rules confer on the Index Calculation Index 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 the Index.

**Potential Conflicts of Interest**

Potential conflicts of interest may exist in the structure and operation of the Index and the course of the normal business activities of the Index Sponsor, the Index Calculation Index and any of their affiliates or subsidiaries or their respective directors, officers, employees, representatives or agents (each a “**Relevant Person**”).

During the course of their normal business, the Index Sponsor, the Index Calculation Index and each Relevant Person may enter into or promote, offer or sell transactions or investments (structured or otherwise) linked to the Index. In addition, the Index Sponsor, the Index Calculation Index and any Relevant Person may have, or may have had, interests or positions, or may buy, sell or otherwise trade positions in or relating to the Index, 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. None of the Index Sponsor, the Index Calculation Index or any 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 the Index.

**JPMorgan or JPMorgan’s affiliates may have economic interests that are adverse to counterparties of a Transaction as a result of JPMorgan’s hedging and other trading activities.**

JPMorgan expects to hedge its obligations under a Transaction through certain affiliates or unaffiliated counterparties by taking positions in instruments the value of which is derived from one or more currencies, currency futures contracts or currency indices, or positions in futures contracts underlying one or more indices or positions in related options or futures contracts. JPMorgan may also adjust its hedge by, among other things, purchasing or selling any of the foregoing at any time and from time to time, and close out or unwind our hedge. JPMorgan cannot give you any assurances that its hedging will not negatively affect the value of the underlying index/indices or the Transactions.

**JPMorgan or JPMorgan’s affiliates may have economic interests that are adverse to those of the counterparties to a Transaction as a result of JPMorgan’s business activities.**

In the course of our business, JPMorgan or JPMorgan’s affiliates may acquire nonpublic information about one or more relevant currencies, currency futures contracts or indices, and JPMorgan will not disclose any such information to you. In addition, one or more of JPMorgan’s affiliates may publish research reports or otherwise express views about one or more one or more relevant currencies, currency futures contracts or indices. Any prospective counterparty in a Transaction should undertake an independent investigation of any relevant currencies, currency futures contracts or indices as in its judgment is appropriate to make an informed decision with respect to a Transaction.

Additionally, JPMorgan or one of JPMorgan’s affiliates may serve as issuer, agent or underwriter for issuances of other securities or financial instruments or counterparty to derivative transactions (other than the Transactions) with returns linked or related to changes in the price or level, as applicable, of one or more relevant currencies. To the extent that JPMorgan or one of JPMorgan’s affiliates serves as issuer, agent or underwriter for those securities or financial instruments or counterparty to currency transactions (other than the Transactions), JPMorgan’s or JPMorgan’s affiliates’ interests with respect to those products may be adverse to those of the counterparty to a Transaction.

**Market Disruption Events**

The publication and/or determination of the Index Level may be affected by the occurrence of certain market disruption events with respect to the Currency Pairs, which could interfere with the ability of market participants generally to transact in positions with respect to the Currency Pairs. Such events are set out more fully in the Index Rules and are referred to as Market Disruption Events. If a Market Disruption Event occurs, the Index Calculation Index will not calculate the Index Level for such Calculation Day and will suspend the calculation and publication of the Index Level until the first succeeding Calculation Day that is not a Disrupted Calculation Day.

**Extraordinary Events**

The calculation of the Index Level depends on, amongst other things, the continued existence of the Currency Pair. As a result, any Extraordinary Event relating to any of the Currency Pairs may adversely affect the ability of the Index Calculation Index to continue with the calculation and publication of the Index Level. In addition, amongst other things, a change in law that makes it contrary to law to hold, acquire or dispose of any transaction or interest in or relating to a Currency Pair may also result in the Index Calculation Index excluding or substituting an affected Currency Pair. All such events are set out more fully in the Index Rules under the heading “Extraordinary Events” and in the related definitions.

The occurrence of certain Extraordinary Events with respect to a Currency Pair may result in the affected Currency Pair being replaced by a substitute Currency Pair and the Index Calculation Index may cease publishing the Index.

In respect of a Change in Law, the Index Calculation Index may exclude or substitute any Currency Pair following such Change in Law and, if it excludes or substitutes such affected Currency Pair, then the Index Calculation Index may adjust the Index Rules as it determines in good faith to be appropriate to account for such exclusion or substitution.

### **Amendments**

The Index Sponsor may amend the Index Rules from time to time at its discretion and will re-publish (in a manner determined by the Index Sponsor from time to time) the Index Rules no later than one calendar month following such amendment. JPMS plc as the Index sponsor (the “**Index Sponsor**”) shall not have any responsibility to any person for any determination, interpretation or calculation made or anything done (or omitted to be done) (whether as a result of negligence or otherwise) in respect of any Index or in respect of the publication of any Index Level (or failure to publish such level) or any use to which any person may put the Index or the Index Levels.

## PART B

### APPENDIX 1.16

#### The J.P. Morgan US Treasury Note Futures Tracker

##### 1. Introduction

This Appendix comprises the variables required to complete the Rules of the J.P. Morgan US Treasury Note Futures Tracker (the “**Variables**” and the “**Futures Tracker**”). Variables may be amended from time to time at the discretion of J.P. Morgan Securities plc (“**JPMS**”) in its capacity as Calculation Agent. The Variables will be re-published no later than one calendar month following amendment to reflect any such changes. This document must be read in conjunction with Part A of the Rules of the J.P. Morgan Futures Tracker Series. This Appendix 1.16 was amended and restated as of 4 December, 2013.

##### 2. Definitions

<b>Variables</b>	
<b>Tracker Name</b>	The J.P. Morgan US Treasury Note Futures Tracker
<b>Price Source</b>	Bloomberg page RFJPUSBE
<b>Base Underlying</b>	The 10 Year US Treasury Note
<b>Re-weighting Date</b>	The 2nd to last Dealing Day of February, May, August and November
<b>Adjustment Factor</b>	Shall equal 0.0625
<b>Futures Tracker Currency</b>	US Dollars (USD)
<b>Relevant Exchange</b>	Means, as at the Base Date, the Chicago Board of Trade (CBOT) or any successor thereof or otherwise any exchange on which any Successor Futures Contract is traded, from time to time
<b>Initial Tracker Level</b>	114.50
<b>Official Settlement Price</b>	Means the closing price published on the price source given by the relevant Bloomberg Code for the Futures Contract (defined below)
<b>Base Date</b>	25-Feb-99
<b>Expiry Dates</b>	Expected to be the 3rd Wednesday of March, June, September and December
<b>Number of Contracts p.a.</b>	4
<b>Futures Contract</b>	Means the futures contract identified by the following Bloomberg Codes from time to time

<i>Futures Contracts</i>				
<i>i</i>	<b>Futures Contract</b>	<b>Bloomberg Month Code</b>	<b>Currency</b>	<b>Expected Bloomberg Code*</b>
1	March	H	USD	TYH&"Year" <Comdty>
2	June	M	USD	TYM&"Year" <Comdty>
3	September	U	USD	TYU&"Year" <Comdty>
4	December	Z	USD	TYZ&"Year" <Comdty>

\*The Bloomberg codes are typically constructed as "TY" followed by the Bloomberg Month Code followed by the year in which the Expiry Date falls, so that the March 09 Futures Contract shall have ticker TYH09 Index or TYH9 Index. If the Relevant Exchange publishes any modification to the composition of the Bloomberg code referenced in the table above, such new Bloomberg code shall be deemed to be Bloomberg code in respect of the Futures Contract. If the Calculation Agent determines that a successor Futures Contract is to replace the existing Futures Contract, then, on and from the date of such replacement, the Bloomberg code for the successor Futures Contract shall be deemed to be the relevant Bloomberg code for the futures contract in question.

### **3. Additional Risk Factors**

Not Applicable

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## PART B

### APPENDIX 1.35

#### The J.P. Morgan 2-Year US Treasury Note Futures Tracker

##### 1. Introduction

This Appendix comprises the variables required to complete the Rules for the J.P. Morgan 2-Year US Treasury notes Futures Tracker (the “**Variables**” and the “**Futures Tracker**”). The Variables may be amended from time to time at the discretion of J.P. Morgan Securities plc (“**JPMS**”) in its capacity as Calculation Agent. The Variables will be re-published no later than one calendar month following amendment to reflect any such changes. This document must be read in conjunction with Part A of the Rules of the J.P. Morgan Futures Tracker Series. This Appendix 1.35 was amended and restated as of 15 January, 2014.

##### 2. Definitions

<b>Variables</b>	
<b>Tracker Name</b>	The J.P. Morgan 2-Year US Treasury Note Futures Tracker
<b>Price Source</b>	Bloomberg page FTJPUS2E
<b>Base Underlying</b>	2-Year US Treasury Note Futures (Bloomberg Ticker TU1 Comdy)
<b>Re-weighting Date</b>	Two (2) Dealing Days prior to the Expiry Month of the Near Futures Contract
<b>Adjustment Factor</b>	Shall equal 4/64
<b>Futures Tracker Currency</b>	US Dollar (USD)
<b>Relevant Exchange</b>	Means, as at the Base Date, the CBT-Chicago Board of Trade or any successor thereof or otherwise any exchange on which any Successor Futures Contract is traded, from time to time;
<b>Initial Tracker Level</b>	99.344
<b>Official Settlement Price</b>	Means the closing price published on the price source given by the relevant Bloomberg Code for the Futures Contract (defined below)
<b>Base Date</b>	22 December 1999
<b>Expiry Dates</b>	Last Business Day of the calendar months March, June, September and December
<b>Number of Contracts p.a.</b>	4
<b>Futures Contract</b>	Means the futures contract identified by the following Bloomberg Codes from time to time

<i>Futures Contracts</i>				
<i>i</i>	<b>Futures Contract</b>	<b>Bloomberg Month Code</b>	<b>Currency</b>	<b>Expected Bloomberg Code*</b>
1	March	H	USD	TUH&"Year" <Comdty>
2	June	M	USD	TUM&"Year" <Comdty>
3	September	U	USD	TUU&"Year" <Comdty>
4	December	Z	USD	TUZ&"Year" <Comdty>

\*The Bloomberg codes are typically constructed as "TU" followed by the Bloomberg Month Code followed by the year in which the Expiry Date falls, so that for the contract expiring prior to and including March 2012 such as March 2009 Futures Contract shall have ticker TUH09 Comdty, while June 2012 onwards contracts such as March 2013 Futures Contract shall have ticker TUH3 Comdty. If the Relevant Exchange or Bloomberg publishes any modification to the composition of the Bloomberg code referenced in the table above, such new Bloomberg code shall be deemed to be Bloomberg code in respect of the Futures Contract. If the Calculation Agent determines that a successor Futures Contract is to replace the existing Futures Contract, then, on and from the date of such replacement, the Bloomberg code for the successor Futures Contract shall be deemed to be the relevant Bloomberg code for the futures contract in question.

### **3. Additional Risk Factors**

Not Applicable

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## PART B

### APPENDIX 1.27

#### The J. P. Morgan 30-Year US Treasury Bond Futures Tracker

##### 1. Introduction

This Appendix comprises the variables required to complete the Rules for the J.P. Morgan 30-Year US Treasury bond Futures Tracker (the “**Variables**” and the “**Futures Tracker**”). The Variables may be amended from time to time at the discretion of J.P. Morgan Securities plc (“**JPMS**”) in its capacity as Calculation Agent. The Variables will be re-published no later than one calendar month following amendment to reflect any such changes. This document must be read in conjunction with Part A of the Rules of the J.P. Morgan Futures Tracker Series. This Appendix 1.27 was amended and restated as of 4 December, 2013.

##### 2. Definitions

<b>Variables</b>	
<b>Tracker Name</b>	J.P. Morgan 30-Year US Treasury bond Futures Tracker (net)
<b>Price Source</b>	Bloomberg page FTJMTBE
<b>Base Underlying</b>	The 30-Year US Treasury Note
<b>Re-weighting Date</b>	Second to last Dealing Day of February, May, August and November
<b>Adjustment Factor</b>	Shall equal 0.0625
<b>Futures Tracker Currency</b>	US Dollar (USD)
<b>Relevant Exchange</b>	Means, as at the Base Date, the CBT-Chicago Board of Trade or any successor thereof or otherwise any exchange on which any Successor Futures Contract is traded, from time to time;
<b>Initial Tracker Level</b>	120.97
<b>Official Settlement Price</b>	Means the closing price published on the price source given by the relevant Bloomberg Code for the Futures Contract (defined below)
<b>Base Date</b>	26 February 1999
<b>Expiry Dates</b>	Expected to be the third Wednesday of the delivery months March, June, September and December
<b>Number of Contracts p.a.</b>	4
<b>Futures Contract</b>	Means the futures contract identified by the following Bloomberg Codes from time to time



<i>Futures Contracts</i>				
<i>i</i>	<b>Futures Contract</b>	<b>Bloomberg Month Code</b>	<b>Currency</b>	<b>Expected Bloomberg Code*</b>
1	March	H	USD	USH&"Year" <Comdy>
2	June	M	USD	USM&"Year" <Comdy>
3	September	U	USD	USU&"Year" <Comdy>
4	December	Z	USD	USZ&"Year" <Comdy>

\*The Bloomberg codes are typically constructed as "US" followed by the Bloomberg Month Code followed by the year in which the Expiry Date falls, so that for year prior to and including 2010 contracts such as March 2009 Futures Contract shall have ticker USH09 Comdy, while 2011 onwards contracts such as March 2011 Futures Contract shall have ticker USH1 Comdy. If the Relevant Exchange publishes any modification to the composition of the Bloomberg code referenced in the table above, such new Bloomberg code shall be deemed to be Bloomberg code in respect of the Futures Contract. If the Calculation Agent determines that a successor Futures Contract is to replace the existing Futures Contract, then, on and from the date of such replacement, the Bloomberg code for the successor Futures Contract shall be deemed to be the relevant Bloomberg code for the futures contract in question.

### **3. Additional Risk Factors**

Not Applicable

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## **JPMORGAN CASH INDEX USD 3 MONTH**

All information contained in this underlying supplement regarding the JPMorgan Cash Index USD 3 Month (the "Cash Index"), including, without limitation, its make-up, method of calculation and changes in its components, has been derived from publicly available information and information supplied by the Global Index Research Group ("GIRG") of JPMorgan Chase & Co., an affiliate and ultimate parent of the sponsor of the Index, without independent verification. This information reflects the policies of, and is subject to change by, GIRG. The Cash Index was developed by GIRG and is calculated, maintained and published by GIRG. GIRG has no obligation to continue to publish, and may discontinue the publication of, the Cash Index.

The level of the Cash Index is reported by Bloomberg L.P. under the ticker symbol "JPCAUS3M."

The Cash Index measures the total return performance of constant maturity euro-currency deposits in the U.S. dollar from rolling over a euro-currency deposit every business day. The Cash Index is calculated daily for three-month deposits in the U.S. dollar. The Cash Index has been constructed from December 31, 1985 using daily data. From September 1, 1990 forward, the Cash Index has used quotes for the LIBOR rates for the U.S. dollar from the ICE Benchmark Administration Limited ("IBA"), as the successor LIBOR administrator to the British Bankers' Association (see Reuters page LIBOR01). To calculate 3-month LIBOR, IBA 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 18 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 IBA 3-month LIBOR rate for the U.S. dollar 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.

GIRG 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 Cash Index has a relatively constant maturity. The Cash Index assumes GIRG rolls over the corresponding deposit every business day. The maturity or duration of the 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.