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ESMA UCITS Guidelines Supplemental Information for the CBOE Volatility Index (VIX®)

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This document contains supplemental information intended to assist asset managers in determining whether the VIX[®] index and financial products based on the VIX[®] index comply with the European Securities and Markets Authority (ESMA) Guidelines on ETFs and Undertakings for Collective Investment in Transferable Securities (UCITS) published December 18, 2012 (ESMA/2012/832N). Reference may also be made to the VIX[®] index methodology description (VIX[®] White Paper) at: <http://www.cboe.com/micro/vix/vixwhite.pdf> and to the VIX[®] index components and weights information available at: <http://cfe.cboe.com/Products/vixsettleseries.aspx>. This document may be modified without notice.

Guideline 9(a):

The prospectus of an index-tracking UCITS should include a clear description of the indices including the information on their underlying constituents. In order to avoid the need to update the document frequently, the prospectus can direct investors to a website where the exact compositions of the indices are published.

CBOE Statement:

The VIX[®] index is a market estimate of expected volatility based on real-time quotes on S&P 500[®] index options (SPXSM options) during CBOE's Regular Trading Hours (RTH). The VIX[®] index uses non-zero bids on SPXSM options with at least 8 days left to expiration and then weights them to yield a 30-day measure of the expected volatility of the S&P 500[®] index.

The methodology CBOE uses to calculate the VIX[®] index is publicly available in the VIX[®] White Paper at: <http://www.cboe.com/micro/vix/vixwhite.pdf>. The VIX[®] White Paper includes a description of the VIX[®] methodology used to select the option series and all information required to calculate the VIX[®] index. The component and weight information available at: <http://cfe.cboe.com/Products/vixsettleseries.aspx>.

Section XIII – Financial Indices

Guideline 48:

When a UCITS intends to make use of the increased diversification limits referred to in Article 53 of the UCITS Directive, this should be disclosed clearly in the prospectus together with a description of the exceptional market conditions which justify this investment.

CBOE Statement:

CBOE uses quotes on S&P 500[®] index options (SPXSM options) to calculate the VIX[®] index as described in the VIX[®] White Paper at: <http://www.cboe.com/micro/vix/vixwhite.pdf>. Since December 2013, the contributions of the VIX[®] index constituent options to the index and their respective weightings have been published after each final settlement of VIX[®] derivatives at: <http://cfe.cboe.com/Products/vixsettleseries.aspx>.

Guideline 49:

A UCITS should not invest in a financial index which has a single component that has an impact on the overall index return which exceeds the relevant diversification requirements i.e. 20%/35%. In the case of a leveraged index, the impact of one component on the overall return of the index, after having taken into account the leverage, should respect the same limits.

CBOE Statement:

Since December 2013, the contributions of the VIX[®] index constituent options to the index and their respective weightings have been published after each final settlement of VIX[®] derivatives at: <http://cfe.cboe.com/Products/vixsettleseries.aspx>. During this period no single component of the VIX[®] index has had an impact on the overall index return which exceeds the relevant diversification requirements, i.e., 20%/35%. The VIX[®] index is not a leveraged index.

Guideline 50:

A UCITS should not invest in commodity indices that do not consist of different commodities. Sub-categories of the same commodity (for instance, from different regions or markets or derived from the same primary products by an industrialised process) should be considered as being the same commodity for the calculation of the diversification limits. For example, WTI Crude Oil, Brent Crude Oil, Gasoline or Heating Oil contracts should be considered as being all sub-categories of the same commodity (i.e. oil). Subcategories of a commodity should not be considered as being the same commodity if they are not highly correlated. With respect to the correlation factor, two components of a commodity index that are sub-categories of the same commodity should not be considered as highly correlated if 75% of the correlation observations are below 0.8. For that purpose the correlation observations should be calculated (i) on the basis of equally-weighted daily returns of the corresponding commodity prices and (ii) from a 250-day rolling time window over a 5-year period.

CBOE Statement:

Not applicable. The VIX[®] index is not a commodity index.

Guideline 51:

A UCITS should be able to demonstrate that an index satisfies the index criteria in Article 53 of the UCITS Directive and Article 9 of the Eligible Assets Directive, including that of being a benchmark for the market to which it refers. For that purpose: (a) an index should have a clear, single objective in order to represent an adequate benchmark for the market; (b) the universe of the index components and the basis on which these components are selected for the strategy should be clear to investors and competent authorities; (c) if cash management is included as part of the index strategy, the UCITS should be able to demonstrate that this does not affect the objective nature of the index calculation methodology.

CBOE Statement:

Guideline 51(a): The VIX[®] index measures 30-day expected volatility of the S&P 500[®] index based on SPXSM options as described in the VIX[®] White Paper available at: <http://www.cboe.com/micro/vix/vixwhite.pdf>. The VIX[®] index is calculated based on option quotations on the S&P 500[®] index, a broad-based equity benchmark index calculated from prices of shares of approximately 500 U.S. large-cap companies. Weight and component information for the S&P 500[®] index is available at: <http://www.spindices.com/indices/equity/sp-500/?geographicalRegion=europe&complianceLevel=esma&cvmlanguage=1>.

Guideline 51(b): The universe of VIX[®] index components, the basis on which these components are selected pursuant to the VIX[®] methodology, and the weighting of each of the VIX[®] index components, are described in the VIX[®] White Paper. See also the component and weight information for the S&P 500[®] index (that underlies the VIX[®] index) at: <http://www.spindices.com/indices/equity/sp-500/?geographicalRegion=europe&complianceLevel=esma&cvmlanguage=1>.

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Guideline 51(c): Not applicable. There is no cash management associated with the computation of the VIX[®] index.

Guideline 52:

An index should not be considered as being an adequate benchmark of a market if it has been created and calculated on the request of one, or a very limited number of, market participants and according to the specifications of those market participants.

CBOE Statement:

The VIX[®] index was not created and calculated at the request of one, or a very limited number of, market participants, or designed to the specifications of one, or a very limited number of, market participants.

Guideline 53:

The UCITS' prospectus should disclose the rebalancing frequency and its effects on the costs within the strategy.

CBOE Statement:

The VIX[®] index is not rebalanced. The selection of components used in the VIX[®] index calculation is determined by the methodology described in the VIX[®] White Paper available at:

<http://www.cboe.com/micro/vix/vixwhite.pdf>. The option selection methodology is a technical adjustment to the index calculation (not rebalancing). The S&P 500[®] index (that underlies the VIX[®] index) is rebalanced quarterly after the close of the third Friday of the quarter-ending month.

Information regarding rebalancing of the S&P 500[®] index is available at:

<http://www.spindices.com/indices/equity/sp-500/?geographicalRegion=europe&complianceLevel=esma&cvmlanguage=1>.

Guideline 54:

A UCITS should not invest in a financial index whose rebalancing frequency prevents investors from being able to replicate the financial index. Indices which rebalance on an intra-day or daily basis do not satisfy this criterion. For the purpose of these guidelines, technical adjustments made to financial indices (such as leveraged indices or volatility target indices according to publicly available criteria) should not be considered as rebalancing in the context of this paragraph.

CBOE Statement:

The VIX[®] index is a volatility index. The VIX[®] index is not rebalanced. The universe of index components and contributions of the index components change frequently based on the VIX[®] methodology set forth in the VIX[®] White Paper available at: <http://www.cboe.com/micro/vix/vixwhite.pdf>. The S&P 500[®] index (that underlies the VIX[®] index) is rebalanced quarterly after the close of the third Friday of the quarter-ending month. Information regarding rebalancing of the S&P 500[®] index is available at:

<http://www.spindices.com/indices/equity/sp-500/?geographicalRegion=europe&complianceLevel=esma&cvmlanguage=1>.

Guideline 55:

A UCITS should not invest in financial indices for which the full calculation methodology to, inter alia, enable investors to replicate the financial index is not disclosed by the index provider. This includes providing detailed information on index constituents, index calculation (including effect of leverage within the index), rebalancing methodologies, index changes and information on any operational difficulties in providing timely or accurate information. Calculation methodologies should not omit important parameters or elements to be taken into account by investors to replicate the financial index. This

information should be easily accessible, free of charge, by investors and prospective investors for example, via the internet. Information on the performance of the index should be freely available to investors.

CBOE Statement:

Not applicable. The VIX[®] methodology is fully disclosed on the CBOE website in the VIX[®] White Paper available at: <http://www.cboe.com/micro/vix/vixwhite.pdf>. The methodology for calculation of the S&P 500[®] index (that underlies the VIX[®] index) is described at: <http://www.spindices.com/indices/equity/sp-500/?geographicalRegion=europe&complianceLevel=esma&cvmlanguage=1>.

Guideline 56:

A UCITS should not invest in financial indices that do not publish their constituents together with their respective weightings. This information should be easily accessible, free of charge, by investors and prospective investors, for example, via the internet. Weightings may be published after each rebalancing on a retrospective basis. This information should cover the previous period since the last rebalancing and include all levels of the index.

CBOE Statement:

The VIX[®] index is calculated and published in real-time approximately four times per minute during CBOE's RTH. The VIX[®] White Paper describes how the constituent index options and their contributions are determined. On expiration days, CBOE identifies and publishes the constituent index options and the constituent contributions of those options after the final/exercise settlement value for VIX[®] futures and options is determined. Information regarding the weights and components of the S&P 500[®] index (that underlies the VIX[®] index) is described at: <http://www.spindices.com/indices/equity/sp-500/?geographicalRegion=europe&complianceLevel=esma&cvmlanguage=1>.

Guideline 57:

A UCITS should not invest in financial indices whose methodology for the selection and the rebalancing of the components is not based on a set of predetermined rules and objective criteria.

CBOE Statement:

The VIX[®] index is calculated in accordance with the VIX[®] methodology described in the VIX[®] White Paper available at: <http://www.cboe.com/micro/vix/vixwhite.pdf>. Information regarding the methodology for the selection and rebalancing of components of the S&P 500[®] index (that underlies the VIX[®] index) is described at: <http://www.spindices.com/indices/equity/sp-500/?geographicalRegion=europe&complianceLevel=esma&cvmlanguage=1>.

Guideline 58:

A UCITS should not invest in financial indices whose index provider accepts payments from potential index components for inclusion in the index.

CBOE Statement:

CBOE does not accept payments from potential VIX[®] index components for inclusion in the VIX[®] index. The inclusion of an index component (i.e., option series) is based solely on whether the index component meets the requirements of the rules-based VIX[®] methodology described in the VIX[®] White Paper publicly available at: <http://www.cboe.com/micro/vix/vixwhite.pdf>.

Guideline 59:

A UCITS should not invest in financial indices whose methodology permits retrospective changes to previously published index values ('backfilling').

CBOE Statement:

CBOE never restates previously published VIX[®] index values, although CBOE may make error corrections to previously published VIX[®] index values if an error is discovered (error correction is not backfilling).

Guideline 60:

The UCITS should carry out appropriate documented due diligence on the quality of the index. This due diligence should take into account whether the index methodology contains an adequate explanation of

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the weightings and classification of the components on the basis of the investment strategy and whether the index represents an adequate benchmark. The due diligence should also cover matters relating to the index components. The UCITS should also assess the availability of information on the index including: (a) whether there is a clear narrative description of the benchmark; (b) whether there is an independent audit and the scope of such an audit; (c) the frequency of index publication and whether this will affect the ability of the UCITS to calculate its net asset value.

CBOE Statement:

Guideline 60(a): A clear narrative description of the VIX[®] methodology is publicly available in the VIX[®] White Paper at: <https://www.cboe.com/micro/VIX/vixwhite.pdf>.

Guideline 60(b): Certain policies, procedures, and supporting technology used to maintain the VIX[®] index are subject to periodic audits by the CBOE Internal Audit Department, consistent with standards promulgated by the Institute of Internal Auditors (IIA). Independent third party licensees of the VIX[®] index and investors in VIX[®] products randomly verify VIX[®] index values.

Guideline 60(c): End-of-day VIX[®] index values are published on the public CBOE website. Intra-day VIX[®] index values are disseminated four times per minute during CBOE RTH when the market for constituent SPXSM options is open for trading.

Guideline 61:

The UCITS should ensure that the financial index is subject to independent valuation.

CBOE Statement:

Answer 7h in the Q&A published by ESMA on July 11, 2013 clarifies that index valuation is considered to be independent if the unit that performs the index valuation is functionally independent from the unit responsible for the design of the index. The CBOE staff responsible for the design of the index does not implement or maintain the software used to calculate the VIX[®] index.

Answer 7h further requires that the remuneration of the staff undertaking the valuation is not linked to the performance of the index. Remuneration of CBOE staff responsible for the valuation of the VIX[®] index is not linked to the performance of the VIX[®] index.

The information in this document is provided for information purposes only, and is not intended to provide, and should not be relied on for financial or legal advice. The CBOE Volatility Index[®] (VIX[®] index) and all other information provided by Chicago Board Options Exchange, Incorporated (CBOE) and its affiliates and their respective directors, officers, employees, agents, representatives and third party providers of information (the "Parties") in connection with the VIX[®] Index (collectively "Data") are presented "as is" and without representations or warranties of any kind. The Parties shall not be liable for loss or damage, direct, indirect or consequential, arising from any use of the Data or action taken in reliance upon the Data.

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