

**\$21,755,103,200.00 iPath® Series B S&P 500® VIX Short-Term Futures™ ETN\***  
**\$252,829,080.00 iPath® Series B S&P 500® VIX Mid-Term Futures™ ETN\*\***

This pricing supplement relates to two series of iPath® Exchange Traded Notes (the “ETNs”) that Barclays Bank PLC may issue from time to time. The return of one series of ETNs is linked to the performance of the S&P 500® VIX Short-Term Futures Index TR and the return of the other series of ETNs is linked to the performance of the S&P 500® VIX Mid-Term Futures Index TR (each, an “Index” and collectively, the “Indices”). The Indices are designed to provide investors with exposure to one or more maturities of futures contracts on the CBOE Volatility Index® (the “VIX Index” or “VIX”). The ETNs do not guarantee any return of principal at or prior to maturity and do not pay any interest during their term. Instead, you will receive a cash payment in U.S. dollars at maturity or upon early redemption based on the performance of the Index to which your ETNs are linked, less an investor fee (and, in the case of holder redemption, a redemption charge).

***You may lose all or a substantial portion of your investment within a single day if you invest in the ETNs. Any payment on the ETNs at or prior to maturity, including any repayment of principal, is not guaranteed by any third party and is subject to both the creditworthiness of Barclays Bank PLC and to the exercise of any U.K. Bail-in Power by the relevant U.K. resolution authority. If Barclays Bank PLC were to default on its payment obligations or become subject to the exercise of any U.K. Bail-in Power (or any other resolution measure) by the relevant U.K. resolution authority, you might not receive any amounts owed to you under the ETNs. See “Consent to U.K. Bail-in Power” and “Risk Factors” in this pricing supplement and “Risk Factors” in the accompanying prospectus supplement for more information.***

***THE ETNS OFFER EXPOSURE TO FUTURES CONTRACTS OF SPECIFIED MATURITIES ON THE VIX INDEX AND NOT DIRECT EXPOSURE TO THE VIX INDEX OR ITS SPOT LEVEL. These futures contracts will not track the performance of the VIX Index. In addition, the nature of the VIX futures market has historically resulted in a significant cost to “roll” a position in the VIX futures contracts underlying the Indices. As a result, the levels of the Indices, which each track a rolling position in specified VIX futures contracts, may experience significant declines as a result of these costs, known as roll costs, especially over a longer period. The VIX Index will perform differently than the Indices and, in certain cases, may have positive performance during periods where the Index underlying your ETNs is experiencing negative performance. In turn, an investment in the ETNs may experience a significant decline in value over time, the risk of which increases the longer that the ETNs are held. For more information, see “Risk Factors” beginning on page PS-12 of this pricing supplement and “The Indices—Hypothetical and Actual Historical Performance of the Indices” on page PS-32 of this pricing supplement.***

***The ETNs are intended to be trading tools for sophisticated investors to manage daily trading risks and are only suitable for a very short investment horizon. The ETNs may not be suitable for all investors and should be used only by investors with the sophistication and knowledge necessary to understand the risks inherent in the relevant Index, the futures contracts that the relevant Index tracks and investments in volatility as an asset class generally. Investors should consult with their broker or financial advisor when making an investment decision and to evaluate their investment in the ETNs and should actively manage and monitor their investments in the ETNs throughout each trading day.***

***Furthermore, because the investor fee reduces the amount of your return at maturity or upon issuer redemption, and the investor fee and the redemption charge reduce the amount of your return upon holder redemption, the level of the Index underlying your ETNs will need to increase significantly in order for you to receive at least the amount you invested in the ETNs at maturity or upon early redemption. If the increase in the level of the applicable Index is insufficient to offset the negative effect of the investor fee (and, in the case of holder redemption, the redemption charge), or the level of that Index decreases, you will receive less than the amount you invested in the ETNs at maturity or upon early redemption.***

***Our estimated value of each series of ETNs as of the inception date was \$27.193879 per ETN for the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs and \$16.855272 per ETN for the iPath® Series B S&P 500® VIX Mid-Term Futures™ ETNs. See “Risk Factors” beginning on page PS-12 of this pricing supplement for risks relating to an investment in the ETNs.***

\* 36,772,982 ETNs, principal amount \$27.193879 per ETN, were issued on January 19, 2018; 23,227,018 ETNs, principal amount \$27.193879 per ETN, were issued on July 23, 2019; 15,000,000 ETNs, principal amount \$27.193879 per ETN, were issued on November 20, 2019; 25,000,000 ETNs, principal amount \$27.193879 per ETN, were issued on February 10, 2020 and an additional 50,000,000 ETNs, principal amount \$27.193879 per ETN, were issued on February 18, 2021. On April 9, 2021, Barclays Bank PLC announced a 1 for 4 reverse split of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs, effective April 23, 2021. Following the reverse split, 37,493,274 ETNs, principal amount \$108.775516 per ETN, were outstanding, which also reflects the cancellation of 6,726 ETNs in aggregate held in partial ETNs by holders upon the completion of the reverse split. An additional 12,500,000 ETNs, principal amount \$108.775516 per ETN, were issued on May 3, 2021, an additional 25,000,000 ETNs, principal amount \$108.775516 per ETN, were issued on October 22, 2021 and an additional 25,000,000 ETNs, principal amount \$108.775516 per ETN, were issued on September 27, 2022. On February 21, 2023, Barclays Bank PLC announced a second 1 for 4 reverse split of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs, effective March 7, 2023. Following the reverse split, approximately 24,996,464 ETNs, principal amount \$435.102064 per ETN, were outstanding, which also reflects the cancellation of 1,854 ETNs in aggregate held in partial ETNs by holders shortly after the completion of the reverse split. An additional 25,003,536 ETNs, principal amount \$435.102064 per ETN, will be issued on July 26, 2023. Following such issuance of additional ETNs, the total number of ETNs outstanding will be 50,000,000 ETNs.

\*\* 5,932,862 ETNs, principal amount \$16.855272 per ETN, were issued on January 19, 2018. An additional 9,067,138 ETNs, principal amount \$16.855272 per ETN, were issued on December 12, 2022. Following such issuance of additional ETNs, the total number of ETNs issued is 15,000,000.

The principal terms of each series of ETNs are as follows:

**Issuer:** Barclays Bank PLC

**Series:** Global Medium-Term Notes, Series A

**Principal Amount per ETN:** The principal amount is \$435.102064 per ETN for the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs and the principal amount is \$16.855272 per ETN for the iPath® Series B S&P 500® VIX Mid-Term Futures™ ETNs. The principal amount for the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs was (i) \$27.193879 per ETN from, and including, the inception date to, but excluding, April 23, 2021, the effective date of the first 1 for 4 reverse split of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs, and (ii) \$108.775516 per ETN from, and including, April 23, 2021 to, but excluding, March 7, 2023, the effective date of the second 1 for 4 reverse split of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs.

**Inception and Issue Dates:** The ETNs were first sold on January 17, 2018 (the “inception date”) and were first issued on January 19, 2018 (the “issue date”).

**Maturity Date:** January 23, 2048

**Secondary Market, CUSIP Numbers and ISINs:** We have listed each series of ETNs on the CBOE BZX Exchange. The ticker symbols, CUSIP numbers and ISINs for the respective ETNs are as follows:

ETNs	Ticker Symbol***	CUSIP	ISIN
iPath® Series B S&P 500® VIX Short-Term Futures™ ETN	VXX	06748F324	US06748F3249
iPath® Series B S&P 500® VIX Mid-Term Futures™ ETN	VXZ	06746P613	US06746P6135

To the extent that a series of ETNs is listed and an active secondary market in that series of ETNs exists, we expect that investors will purchase and sell the ETNs in that series primarily in this secondary market. We are not required to maintain any listing of any series of the ETNs on the CBOE BZX Exchange or any other securities exchange.

**Consent to U.K. Bail-in Power:** Notwithstanding and to the exclusion of any other term of the ETNs or any other agreements, arrangements or understandings between Barclays Bank PLC and any holder or beneficial owner of the ETNs, by acquiring the ETNs, each holder and beneficial owner of the ETNs acknowledges, accepts, agrees to be bound by, and consents to the exercise of, any U.K. Bail-in Power by the relevant U.K. resolution authority. See “Consent to U.K. Bail-in Power” on page PS-23 of this pricing supplement.

#### Underlying Indices

The return on each series of ETNs is linked to the performance of the relevant Index. Each Index seeks to provide investors with exposure to one or more maturities of futures contracts on the VIX Index, which reflect implied volatility of the S&P 500® at various points along the volatility forward curve. The calculation of the spot level of the VIX Index is based on prices of put and call options on the S&P 500®. Futures on the VIX Index allow investors the ability to invest in forward volatility based on their view of the future direction of movement of the VIX Index. Each index is intended to reflect the returns that are potentially available through an unleveraged investment in the futures contract or contracts on the VIX index plus the rate of interest that could be earned on reinvestment into the Index of the return on the notional value of the Index based on the 3-month U.S. Treasury rate. The S&P 500® VIX Short-Term Futures™ Index TR targets a constant weighted average futures maturity of one month. The S&P 500® VIX Mid-Term Futures™ Index TR targets a constant weighted average futures maturity of five months. The Indices were created by S&P Dow Jones Indices LLC (“S&P Dow Jones Indices” or the “index sponsor”). The index sponsor calculates the level of the relevant Index daily when the Chicago Board Options Exchange, Incorporated (the “CBOE”) is open (excluding holidays and weekends) and publishes it on the Bloomberg pages specified herein as soon as practicable thereafter.

#### Payment at Maturity

**Payment at Maturity:** If you hold your ETNs to maturity, you will receive a cash payment in U.S. dollars per ETN equal to the applicable closing indicative value on the final valuation date.

**Closing Indicative Value:** The closing indicative value for the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs on the initial valuation date was equal to \$27.193879, and the closing indicative value for the iPath® Series B S&P 500® VIX Mid-Term Futures™ ETNs on the initial valuation date was equal to \$16.855272. On each subsequent calendar day until maturity or early redemption of the relevant series of ETNs, the closing indicative value per ETN for that series of ETNs will equal (1) the closing indicative value for that series on the immediately preceding calendar day *times* (2) the daily index factor for that series on such calendar day (or, if such day is not an index business day, one) *minus* (3) the investor fee for that series on such calendar day. An “index business day” for each Index is a day on which such Index is calculated and published by the index sponsor. If the ETNs undergo a split or reverse split, the closing indicative value will be adjusted accordingly.

Barclays Bank PLC implemented a 1 for 4 reverse split of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs, effective at the open of trading on April 23, 2021. For the purpose of calculating the closing indicative value of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs on April 23, 2021, the effective date of the reverse split, the closing indicative value for that series on the immediately preceding calendar day in the above formula was adjusted to \$41.64026716, which is equal to the closing indicative value of \$10.41006679 on April 22, 2021 *multiplied by* 4. Barclays Bank PLC implemented a second 1 for 4 reverse split of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs, effective at the open of trading on March 7, 2023. For the purpose of calculating the closing indicative value of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs on March 7, 2023, the effective date of the reverse split, the closing indicative value for that series on the immediately preceding calendar day in the above formula was adjusted to \$42.8632, which is equal to the closing indicative value of \$10.7158 on March 6, 2023 *multiplied by* 4.

\*\*\* Prior to May 2, 2019, the ticker symbol for the iPath® Series B S&P 500® VIX Short-Term Futures™ ETN was VXXB, and the ticker symbol for the iPath® Series B S&P 500® VIX Mid-Term Futures™ ETN was VXZB. The ticker symbols VXX and VXZ were used historically in connection with the listing of the iPath® S&P 500® VIX Short-Term Futures™ ETN and the iPath® S&P 500® VIX Mid-Term Futures™ ETN, respectively (together, the “Matured ETNs”), each of which matured on January 30, 2019. **The ETNs to which this pricing supplement relates are not the same securities as the Matured ETNs.**

**The closing indicative value is not the market price of a series of ETNs in any secondary market and is not intended as a price or quotation, or as an offer or solicitation for the purchase or sale of that series of ETNs or as a recommendation to transact in that series of ETNs at the stated price. The market price of a series of ETNs at any time may vary significantly from the closing indicative value.**

**Daily Index Factor:** The daily index factor for each series of ETNs on any index business day will equal (1) the closing level of the Index to which those ETNs are linked on such index business day *divided by* (2) the closing level of the Index to which those ETNs are linked on the immediately preceding index business day.

**Investor Fee:** The investor fee for each series of ETNs on the initial valuation date was equal to zero. On each subsequent calendar day until maturity or early redemption, the investor fee for each series of ETNs will be equal to (1) 0.89% *times* (2) the closing indicative value for that series on the immediately preceding calendar day *times* (3) the daily index factor for that series on that day (or, if such day is not an index business day, one) *divided by* (4) 365. Because the investor fee is calculated and subtracted from the closing indicative value on a daily basis, the net effect of the investor fee accumulates over time and is subtracted at the rate of approximately 0.89% per year, which we refer to as the “investor fee rate”. The investor fee reduces the daily return of each series of ETNs. Because the net effect of the investor fee is a fixed percentage of the value of each ETN, the aggregate effect of the investor fee will increase or decrease in a manner directly proportional to the value of each ETN and the amount of ETNs that are held, as applicable.

Barclays Bank PLC implemented a 1 for 4 reverse split of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs, effective at the open of trading on April 23, 2021. For the purpose of calculating the investor fee of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs on April 23, 2021, the effective date of the reverse split, the closing indicative value for that series on the immediately preceding calendar day in the above formula was adjusted to approximately \$41.6404, which is equal to the closing indicative value of approximately \$10.4101 on April 22, 2021 *multiplied by* 4. Barclays Bank PLC implemented a second 1 for 4 reverse split of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs, effective at the open of trading on March 7, 2023. For the purpose of calculating the investor fee of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs on March 7, 2023, the effective date of the reverse split, the closing indicative value for that series on the immediately preceding calendar day in the above formula was adjusted to approximately \$42.8632, which is equal to the closing indicative value of approximately \$10.7158 on March 6, 2023 *multiplied by* 4.

**Intraday Indicative Value:** The intraday indicative value for any series of ETNs is intended to provide investors with an approximation of the effect that changes in the level of the Index underlying the ETNs during the current trading day would have on the closing indicative value of such series of ETNs from the previous day. Intraday indicative value differs from the closing indicative value in two important respects: First, intraday indicative value is based on the most recent Index level published by the index sponsor, which reflects the most recent reported sales prices for the Index components, rather than the closing indicative value of a series of ETNs for the immediately preceding calendar day. Second, the intraday indicative value only reflects the accrued investor fee for a series of ETNs at the close of business on the preceding calendar day, but does not include any adjustment for the accrued investor fee of such series of ETNs accruing during the course of the current day.

**The intraday indicative value is not the market price of a series of ETNs in any secondary market and is not intended as a price or quotation, or as an offer or solicitation for the purchase or sale of that series of ETNs or as a recommendation to transact in that series of ETNs at the stated price. Because the intraday indicative value is based on the intraday Index levels, it will reflect any lags, disruptions or suspensions that affect the Index underlying your ETNs. The market price of a series of ETNs at any time may vary significantly from the intraday indicative value due to, among other things, imbalances of supply and demand for that series of ETNs (including as a result of any decision of ours to issue, stop issuing or resume issuing additional ETNs), futures contracts included in the Index underlying that series of ETNs and/or other derivatives related to the Index or that series of ETNs; any trading disruptions, suspension or limitations to any of the forgoing; lack of liquidity; severe volatility; transaction costs; credit considerations; and bid-offer spreads. A premium or discount market price over the intraday indicative value can also arise as a result of mismatches of trading hours between a series of ETNs and the futures contracts included in the Index underlying that series of ETNs, actions (or failure to take action) by the index sponsor and the CBOE and technical or human errors by service providers, market participants and others.**

**Valuation Date:** A valuation date is each trading day from January 17, 2018 to January 17, 2048, inclusive, subject to postponement (not in excess of five trading days) due to the occurrence of a market disruption event. We refer to January 17, 2018 as the “initial valuation date” and January 17, 2048 as the “final valuation date” for the ETNs.

**Trading Day:** A trading day with respect to any series of ETNs is a day on which (1) it is a business day in New York City, (2) trading is generally conducted on the CBOE BZX Exchange and (3) trading is generally conducted on the CBOE, in each case as determined by the calculation agent in its sole discretion.

#### **Early Redemption**

**Holder Redemption:** Subject to the notification requirements set forth under “Specific Terms of the ETNs — Early Redemption Procedures” in this pricing supplement, you may redeem your ETNs on any redemption date during the term of the ETNs. If you redeem your ETNs, you will receive a cash payment in U.S. dollars per ETN equal to the applicable closing indicative value on the applicable valuation date minus the redemption charge. You must redeem at least 25,000 ETNs of the same series at one time in order to exercise your right to redeem your ETNs on any redemption date. If you hold fewer than 25,000 ETNs of the same series or fewer than 25,000 ETNs of a series are outstanding, you will not be able to exercise your right to redeem your ETNs of that series. We may from time to time, in our sole discretion, reduce this minimum redemption amount on a consistent basis for all holders of the ETNs of any series.

**Redemption Charge:** The redemption charge is a one-time charge imposed upon holder redemption and is equal to 0.05% *times* the closing indicative value on the applicable valuation date. The redemption charge is intended to allow us to recoup the brokerage and other transaction costs that we will incur in connection with redeeming the ETNs. The proceeds we receive from the redemption charge may be more or less than such costs.

**Issuer Redemption:** We may redeem any series of ETNs (in whole but not in part) at our sole discretion on any business day on or after the inception date until and including maturity. To exercise our right to redeem a series of ETNs, we must deliver notice to the holders of that series of ETNs not less than ten calendar days prior to the redemption date on which we intend to redeem that series of ETNs. If we redeem a series of ETNs, you will receive a cash payment in U.S. dollars per ETN in an amount equal to the closing indicative value of that series of ETNs on the valuation date specified by us in such notice.

**Redemption Date:** In the case of a holder redemption, the redemption date is the second business day following the applicable valuation date (which must be earlier than the final valuation date) specified in your notice of redemption. Accordingly, the final redemption date will be the second business day following the valuation date that is immediately prior to the final valuation date. In the case of an issuer redemption, the redemption date for each series of ETNs is the fifth business day after the valuation date that we specify in an issuer redemption notice for such series. Such redemption date will in no event be prior to the tenth calendar day following the date on which we deliver the redemption notice.

#### **Sale to Public**

We sold a portion of each series of ETNs on the inception date at 100% of the principal amount through Barclays Capital Inc., our affiliate, as principal, in the initial distribution. Following the inception date, the remainder of the ETNs will be offered and sold from time to time through Barclays Capital Inc., as agent. Sales of each series of ETNs by us after their respective inception dates will be made at market prices prevailing at the time of sale, at prices related to market prices or at negotiated prices. However, we are under no obligation to issue or sell ETNs at any time. If we limit, restrict or stop sales of ETNs, or if we subsequently resume sales of ETNs, the liquidity and trading price of the ETNs in the secondary market could be materially and adversely affected. Barclays Capital Inc. will not receive an agent's commission in connection with sales of the ETNs. Please see "Supplemental Plan of Distribution" in this pricing supplement for more information.

We may use this pricing supplement in the initial sale of the ETNs. In addition, Barclays Capital Inc. or another of our affiliates may use this pricing supplement in market-making transactions in any ETNs after the initial sale of ETNs. ***Unless we or our agent informs you otherwise in the confirmation of sale or in a notice delivered at the same time as the confirmation of sale, this pricing supplement is being used in a market-making transaction.***

The ETNs are not deposit liabilities of Barclays Bank PLC and are not insured by the United States Federal Deposit Insurance Corporation or any other governmental agency of the United States, the United Kingdom or any other jurisdiction.

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these ETNs or determined that this pricing supplement is truthful or complete. Any representation to the contrary is a criminal offense.**



**Pricing Supplement dated July 25, 2023**

**iPath® Series B S&P 500® VIX Short-Term Futures™ ETN, issued in denominations of \$435.102064**

**iPath® Series B S&P 500® VIX Mid-Term Futures™ ETN, issued in denominations of \$16.855272**

## TABLE OF CONTENTS

PRICING SUPPLEMENT SUMMARY .....	PS-1
RISK FACTORS .....	PS-13
CONSENT TO U.K. BAIL-IN POWER .....	PS-24
THE INDICES .....	PS-25
MODIFICATIONS TO THE INDICES .....	PS-38
VALUATION OF THE ETNS.....	PS-39
SPECIFIC TERMS OF THE ETNS.....	PS-41
CLEARANCE AND SETTLEMENT .....	PS-48
USE OF PROCEEDS AND HEDGING.....	PS-48
MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS .....	PS-49
SUPPLEMENTAL PLAN OF DISTRIBUTION .....	PS-51
VALIDITY OF THE ADDITIONAL ETNS .....	<b>PS-Error! Bookmark not defined.</b>
NOTICE OF REDEMPTION .....	A-1
CONFIRMATION OF REDEMPTION .....	B-1

## PRICING SUPPLEMENT SUMMARY

The following is a summary of terms of two series of iPath® Exchange Traded Notes (the “**ETNs**”) that Barclays Bank PLC may issue from time to time, one linked to the performance of the S&P 500® VIX Short-Term Futures™ Index TR and the other linked to the performance of the S&P 500® VIX Mid-Term Futures™ Index TR (each, an “**Index**” and collectively, the “**Indices**”), as well as a discussion of risks and other considerations you should take into account when deciding whether to invest in the ETNs. The information in this section is qualified in its entirety by the more detailed explanations set forth elsewhere in this pricing supplement and the accompanying prospectus and prospectus supplement. References to the “prospectus” mean our accompanying prospectus, dated May 23, 2022, and references to the “prospectus supplement” mean our accompanying prospectus supplement, dated June 27, 2022, which supplements the prospectus. See “—Additional Documents Related to the Offering of the ETNs” below.

We may, without your consent, create and issue additional securities having the same terms and conditions as any series of the ETNs. We may consolidate the additional securities to form a single class with the outstanding ETNs of that series. We may, but are not required to, offer and sell ETNs after the inception date through Barclays Capital Inc., our affiliate, as agent. We may impose a requirement to purchase a particular minimum amount of ETNs of any series from our inventory in a single purchase, though we may waive this requirement with respect to any purchase at any time in our sole discretion. In addition, we may offer to sell ETNs of any series from our inventory at a price that is greater or less than the prevailing intraday indicative value or the prevailing market price at the time such sale is made. However, we are under no obligation to sell additional ETNs at any time, and if we do sell additional ETNs, we may limit such sales and stop selling additional ETNs at any time.

Any limitation or suspension on the issuance or sale of the ETNs of any series may materially and adversely affect the price and liquidity of the ETNs of that series in the secondary market. Alternatively, the decrease in supply may cause an imbalance in the market supply and demand, which may cause the ETNs of that series to trade

at a premium over their indicative value. Any premium may be reduced or eliminated at any time. Paying a premium purchase price over the indicative value of the ETNs of that series could lead to significant losses in the event you sell your ETNs of that series at a time when such premium is no longer present in the marketplace or if we redeem the ETNs of that series. Investors should consult their financial advisors before purchasing or selling the ETNs, especially ETNs trading at a premium over their indicative value.

This section summarizes the following aspects of the ETNs:

- What are the ETNs and how do they work?
- How do you redeem your ETNs?
- What are some of the risks of the ETNs?
- Is this the right investment for you?
- What are the tax consequences?

### What Are the ETNs and How Do They Work?

Each series of ETNs are medium-term notes that are senior, unsecured debt obligations of Barclays Bank PLC and are linked to the performance of an underlying Index that is designed to provide investors with exposure to one or more maturities of futures contracts on the VIX Index, which reflect implied volatility of the S&P 500® at various points along the volatility forward curve. The VIX Index is calculated based on the prices of put and call options on the S&P 500®. The two series of ETNs comprise:

- One series of ETNs that is linked to the performance of the S&P 500® VIX Short-Term Futures™ Index TR that is calculated based on the strategy of owning a continuously rolling portfolio of one-month and two-month VIX futures to target a constant weighted average futures maturity of one month; and
- One series of ETNs that is linked to the performance of the S&P 500® VIX Mid-Term Futures™ Index TR that is calculated based on the strategy of owning a continuously rolling portfolio of four-month, five-month, six-month and seven-month VIX futures to target a constant weighted average futures maturity of five months.

**The ETNs offer exposure to futures contracts of specified maturities on the VIX Index and not direct exposure to the VIX Index or its spot level. These futures contracts will not track the performance of the VIX Index. In addition, the nature of the VIX futures market has historically resulted in a significant cost to “roll” a position in the VIX futures contracts underlying the Indices. As a result, the levels of the Indices, which each track a rolling position in specified VIX futures contracts, may experience significant declines as a result of these roll costs, especially over a longer period. The VIX Index will perform differently than the Indices and, in certain cases, may have positive performance during periods where the Index underlying your ETNs is experiencing negative performance. In turn, an investment in the ETNs may experience a significant decline in value over time, the risk of which increases the longer that the ETNs are held. For more information, see “Risk Factors” beginning on page PS-12 of this pricing supplement and “The Indices—Hypothetical and Actual Historical Performance of the Indices” on page PS-32 of this pricing supplement.**

**The ETNs are intended to be trading tools for sophisticated investors to manage daily trading risks and are only suitable for a very short investment horizon. The ETNs may not be suitable for all investors and should be used only by investors with the sophistication and knowledge necessary to understand the risks inherent in the relevant Index, the futures contracts that the relevant Index tracks and investments in volatility as an asset class generally. Investors should consult with their broker or financial advisor when making an investment decision and to evaluate their investment in the ETNs and should actively manage and monitor their investments in the ETNs throughout each trading day.**

#### *The Indices*

The return on each series of ETNs is linked to the performance of the Index to which such series of ETNs is linked. Each Index seeks to provide investors with exposure to one or more maturities of futures contracts on the VIX Index, which reflect implied volatility in the S&P 500® at various points along the volatility forward curve. The VIX

Index is calculated based on the prices of put and call options on the S&P 500®. Each index is intended to reflect the returns that are potentially available through an unleveraged investment in the futures contract or contracts on the VIX index plus the rate of interest that could be earned on reinvestment into the Index of the return on the notional value of the Index based on the 3-month U.S. Treasury rate. Futures on the VIX Index allow investors the ability to invest in forward volatility based on their view of the future direction or movement of the VIX Index. The index sponsor calculates the level of the relevant Index on each index business day and publishes it on the applicable Bloomberg pages specified herein as soon as practicable thereafter.

#### *Inception, Issuance and Maturity*

Each series of ETNs was first sold on January 17, 2018 (the “**inception date**”). Each series of the ETNs were first issued on January 19, 2018 (the “**issue date**”), and each will be due on January 23, 2048 (the “**maturity date**”).

#### *Understanding the Value of the ETNs*

The “**principal amount**” is \$435.102064 per ETN for the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs and \$16.855272 per ETN for the iPath® Series B S&P 500® VIX Mid-Term Futures™ ETNs. The principal amount for the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs was \$27.193879 per ETN from, and including, the inception date to, but excluding, April 23, 2021, the effective date of the first 1 for 4 reverse split of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs, and \$108.775516 per ETN, from, and including, April 23, 2021 to, but excluding, March 7, 2023, the effective date of the second 1 for 4 reverse split of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs.

The “**closing indicative value**” per ETN for each series of ETNs is the value of the ETNs calculated by us on a daily basis and is used to determine the payment at maturity or upon early redemption. The calculation of the closing indicative value on any valuation date following the initial valuation date is based on the closing indicative value for the immediately preceding calendar day. The closing indicative value for the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs on the initial valuation date was equal to \$27.193879, and the closing indicative

value for the iPath® Series B S&P 500® VIX Mid-Term Futures™ ETNs on the initial valuation date was equal to \$16.855272. On each subsequent calendar day until maturity or early redemption of the relevant series of ETNs, the closing indicative value per ETN for such series of ETNs will equal (1) the closing indicative value for that series on the immediately preceding calendar day *times* (2) the daily index factor for that series on such calendar day (or, if such day is not an index business day, one) *minus* (3) the investor fee for that series on such calendar day. If the ETNs undergo any splits or reverse splits, the closing indicative value will be adjusted accordingly.

Barclays Bank PLC implemented a 1 for 4 reverse split of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs, effective at the open of trading on April 23, 2021. For the purpose of calculating the closing indicative value of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs on April 23, 2021, the effective date of the reverse split, the closing indicative value for that series on the immediately preceding calendar day in the above formula was adjusted to approximately \$41.6404, which is equal to the closing indicative value of approximately \$10.4101 on April 22, 2021 *multiplied by 4*.

Barclays Bank PLC implemented a second 1 for 4 reverse split of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs, effective at the open of trading on March 7, 2023. For the purpose of calculating the closing indicative value of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs on March 7, 2023, the effective date of the reverse split, the closing indicative value for that series on the immediately preceding calendar day in the above formula was adjusted to approximately \$42.8632, which is equal to the closing indicative value of approximately \$10.7158 on March 6, 2023 *multiplied by 4*.

The “**intraday indicative value**” for any series of ETNs is intended to provide investors with an approximation of the effect that changes in the level of the Index underlying the ETNs during the current trading day would have on the closing indicative value of such series of ETNs from the previous day. Intraday indicative value differs from the closing indicative value in two important respects: First, intraday indicative value is based on the most recent Index level published by the index sponsor, which reflects the most recent reported sales prices for the Index components,

rather than the closing indicative value of a series of ETNs for the immediately preceding calendar day. Second, the intraday indicative value only reflects the accrued investor fee for a series of ETNs at the close of business on the preceding calendar day, but does not include any adjustment for the accrued investor fee of such series of ETNs accruing during the course of the current day.

**The intraday indicative value is not the market price of a series of ETNs in any secondary market and is not intended as a price or quotation, or as an offer or solicitation for the purchase or sale of that series of ETNs or as a recommendation to transact in that series of ETNs at the stated price. Because the intraday indicative value is based on the intraday Index levels, it will reflect any lags, disruptions or suspensions that affect the Index underlying your ETNs. The market price of a series of ETNs at any time may vary significantly from the intraday indicative value due to, among other things, imbalances of supply and demand for that series of ETNs (including as a result of any decision of ours to issue, stop issuing or resume issuing additional ETNs), futures contracts included in the Index underlying that series of ETNs and/or other derivatives related to the Index or that series of ETNs; any trading disruptions, suspension or limitations to any of the forgoing; lack of liquidity; severe volatility; transaction costs; credit considerations; and bid-offer spreads. A premium or discount market price over the intraday indicative value can also arise as a result of mismatches of trading hours between a series of ETNs and the futures contracts included in the Index underlying that series of ETNs, actions (or failure to take action) by the index sponsor and the CBOE and technical or human errors by service providers, market participants and others.**

If you sell your ETNs on the secondary market, you will receive the “**trading price**” for your ETNs, which may be substantially above or below the principal amount, closing indicative value and/or the intraday indicative value because the trading price reflects investor supply and demand for the ETNs. In addition, if you purchase your ETNs at a price which reflects a premium over the closing indicative value, you may experience a significant loss if you sell or redeem your ETNs at a time when such premium is no longer present

in the market place or if we exercise our right to redeem the ETNs. Furthermore, if you sell your ETNs at a price which reflects a discount below the intraday indicative value, you may experience a significant loss.

The intraday indicative value for each series of ETNs is calculated and published every 15 seconds on each trading day from approximately 9:30 a.m. to approximately 4:00 p.m., New York City time by ICE Data Indices, LLC, or a successor, under the following ticker symbols:

ETNs	Ticker Symbol
iPath® Series B S&P 500® VIX Short-Term Futures™ ETN	VXX.IV
iPath® Series B S&P 500® VIX Mid-Term Futures™ ETN	VXZ.IV

The intraday indicative value will not be updated to reflect any trading in the futures contracts included in the Index underlying your ETNs that might take place after 4:00 p.m. The ETNs trade on the CBOE BZX Exchange from approximately 9:30 a.m. to 4:00 p.m., New York City time. The ETNs may also trade during after-hours trading. Therefore, during after-hours trading, the last-published intraday indicative value for any series of ETNs is likely to differ from any value of that series determined based on real-time trading data of the futures contracts included in the relevant Index, particularly if there is a significant price movement in the futures contracts during this time period. **It is possible that the value of the ETNs could undergo a rapid and substantial decline outside of ordinary market trading hours. You may not be able to accurately assess the value of the ETNs relative to the trading price during after-hours trading, including any premium or discount thereto, when there is no recent intraday indicative value available.**

For more information regarding the intraday indicative value, see “Valuation of the ETNs—Intraday Indicative Value” in this pricing supplement.

**The ETN performance is linked to the performance of the Index underlying your ETNs less an investor fee (and, in the case of holder redemption, the redemption charge). There is no minimum limit to the level of the Index underlying your ETNs. Moreover, the**

**ETNs are not principal protected. Therefore, a decrease in the level of the Index underlying your ETNs could cause you to lose up to your entire investment in the ETNs.**

**Furthermore, because the investor fee reduces the amount of your return at maturity or upon issuer redemption, and the investor fee and the redemption charge reduce the amount of your return upon holder redemption, the level of the Index underlying your ETNs will need to increase significantly in order for you to receive at least the amount you invested in the ETNs at maturity or upon redemption. If the increase in the level of the applicable Index is insufficient to offset the negative effect of the investor fee (and, in the case of holder redemption, the redemption charge), or the level of that Index decreases, you will receive less than the amount you invested in the ETNs at maturity or upon redemption.**

#### How Do You Redeem Your ETNs?

We have listed both series of ETNs on the CBOE BZX Exchange. If an active secondary market in a series of ETNs exists, we expect that investors will purchase and sell the ETNs primarily in this secondary market.

To redeem your ETNs, you must instruct your broker or other person through whom you hold your ETNs to take the following steps:

- deliver a notice of holder redemption, in proper form, which is attached as Annex A, to us via facsimile or email by no later than 4:00 p.m., New York City time, on the business day prior to the applicable valuation date. If we receive your notice by the time specified in the preceding sentence, we will respond by sending you a form of confirmation of holder redemption, which is attached as Annex B;
- deliver the signed confirmation of holder redemption to us via facsimile or email in the specified form by 5:00 p.m., New York City time, on the same day. We or our affiliate must acknowledge receipt in order for your confirmation to be effective;
- instruct your Depository Trust Company (“DTC”) custodian to book a delivery vs. payment trade with respect to your ETNs on the applicable valuation date at a price equal

to the applicable closing indicative value per ETN minus the redemption charge, facing Barclays DTC 229; and

- cause your DTC custodian to deliver the trade as booked for settlement via DTC at or prior to 10:00 a.m., New York City time, on the applicable redemption date (the second business day following the applicable valuation date).

Different brokerage firms may have different deadlines for accepting instructions from their customers. Accordingly, you should consult the brokerage firm through which you own your interest in the ETNs in respect of such deadlines. If we do not receive your notice of holder redemption by 4:00 p.m., New York City time, or your confirmation of holder redemption by 5:00 p.m., New York City time, on the business day prior to the applicable valuation date, your notice will not be effective and we will not redeem your ETNs on the applicable redemption date. Any redemption instructions for which we (or our affiliate) receive a valid confirmation in accordance with the procedures described above will be irrevocable.

**The redemption value is determined according to a formula which relies upon the closing indicative value and will be calculated on a valuation date that will occur after the redemption notice is submitted. It is not possible to publicly disclose, or for you to determine, the precise redemption value prior to your election to redeem. The redemption value may be below the most recent intraday indicative value or closing indicative value of your ETNs at the time when you submit your redemption notice.**

#### **What Are Some of the Risks of the ETNs?**

An investment in the ETNs involves risks. Some of these risks are summarized here, but we urge you to read the more detailed explanation of risks in “Risk Factors” in this pricing supplement.

- **Uncertain Principal Repayment** – There is no minimum limit to the level of each Index. Moreover, the ETNs are not principal protected. Therefore, a decrease in the level of the Index underlying your ETNs could cause you to lose up to your entire investment in the ETNs. Furthermore, because the investor fee reduces the

amount of your return at maturity or upon issuer redemption, and the investor fee and the redemption charge reduce the amount of your return upon holder redemption, the level of the Index underlying your ETNs will need to increase significantly in order for you to receive at least the amount you invested in the ETNs at maturity or upon early redemption. If the increase in the level of the Index underlying your ETNs is not sufficient to offset the negative effect of the investor fee (and, in the case of holder redemption, the redemption charge), or if the level of the Index underlying your ETNs decreases, you will receive less than the amount you invested in the ETNs at maturity or upon early redemption.

- **Credit of Issuer** – Each series of ETNs are unsecured and unsubordinated debt obligations of the Issuer, Barclays Bank PLC, and are not, either directly or indirectly, an obligation of any third party. Any payment to be made on the ETNs, including any repayment of principal, is subject to the ability of Barclays Bank PLC to satisfy its obligations as they come due and is not guaranteed by any third party. As a result, the actual and perceived creditworthiness of Barclays Bank PLC may affect the market value of the ETNs and, in the event Barclays Bank PLC were to default on its obligations, you might not receive any amount owed to you under the terms of the ETNs.
- **Issuer Redemption** – Subject to the procedures described in this pricing supplement, we have the right to redeem or “call” each series of ETNs (in whole but not in part) at our sole discretion without your consent on any trading day on or after the inception date until and including maturity.
- **Market and Volatility Risk** – The return on each series of ETNs is linked to the performance of an Index which, in turn, is linked to the prices of one or more futures contracts on the VIX Index. The VIX Index measures the 30-day forward volatility of the S&P 500® as calculated based on the prices of certain put and call options on the S&P 500®. The level of the S&P 500®, the prices of options on the S&P 500®, and the level of the VIX Index may change unpredictably, affecting the value of futures contracts on

the VIX Index and, consequently, the level of each Index and the value of your ETNs in unforeseeable ways.

- **No Interest Payments** – You will not receive any periodic interest payments on your ETNs.
- **A Trading Market for the ETNs May Not Exist** – Although we have listed each series of ETNs on CBOE BZX Exchange, a trading market for any series of the ETNs may not exist at any time. Even if there is a secondary market for the ETNs, whether as a result of any listing of the ETNs or on an over-the-counter basis, it may not provide enough liquidity to trade or sell your ETNs easily. Certain affiliates of Barclays Bank PLC intend to engage in limited purchase and resale transactions. If they do, however, they are not required to do so and may stop at any time. We are not required to maintain the listing of any series of ETNs on CBOE BZX Exchange or on any other securities exchange and may cause the ETNs to be de-listed at our discretion.

#### **Is This the Right Investment for You?**

The ETNs may be a suitable investment for you if:

- You do not seek a guaranteed return of principal and you are willing to risk losing up to your entire investment in the ETNs.
- You intend to regularly monitor your investment in the ETNs to ensure that it remains consistent with your market views and investment strategies.
- You do not seek current income from your investment.
- You seek an investment with a return linked to the forward implied volatility of the S&P 500®.
- You are willing to accept the risk of fluctuations in volatility in general and in the prices of futures contracts on the VIX Index in particular.
- You believe the level of the Index underlying your ETNs will increase by an amount sufficient to offset the investor fee (and, in the case of holder redemption, the redemption charge) during the term of the ETNs.

redemption charge) during the term of the ETNs.

- You are willing to accept the risks of an investment linked to the underlying Index, which tracks a rolling position in futures contracts on the VIX Index, and in particular risks associated with roll costs reflected in the level of the underlying Index.
- You are willing to hold securities that are subject to the issuer redemption right on or after the inception date.
- You are willing and able to assume the credit risk of Barclays Bank PLC, as issuer of the ETNs, for all payments under the ETNs and understand that if Barclays Bank PLC were to default on its payment obligations or become subject to the exercise of any U.K. Bail-in Power, you might not receive any amounts due to you under the ETNs, including any repayment of principal.

The ETNs may not be a suitable investment for you if:

- You seek a guaranteed return of principal and you are not willing to risk losing up to your entire investment in the ETNs.
- You do not intend to regularly monitor your investment in the ETNs to ensure that it remains consistent with your market views and investment strategies.
- You seek current income from your investment.
- You are not willing to be exposed to fluctuations in volatility in general and in the prices of futures contracts on the VIX Index in particular.
- You are not willing to accept the risks of an investment linked to the underlying Index, which tracks a rolling position in futures contracts on the VIX Index, and in particular risks associated with roll costs reflected in the level of the underlying Index.
- You believe the level of the Index underlying your ETNs will decrease or will not increase by an amount sufficient to offset the investor fee (and, in the case of holder redemption, the redemption charge) during the term of the ETNs.

- You are not willing to hold securities that are subject to the issuer redemption right on or after the inception date.
- You prefer the lower risk and therefore accept the potentially lower returns of fixed income investments with comparable maturities and credit ratings.
- You are unwilling or unable to assume the credit risk of Barclays Bank PLC, as issuer of the ETNs, for all payments under the ETNs or you are not willing to be exposed to the risk that if Barclays Bank PLC were to default on its payment obligations or become subject to the exercise of any U.K. Bail-in Power, you might not receive any amounts due to you under the ETNs, including any repayment of principal.

#### **What Are the Tax Consequences?**

Absent a change in law or an administrative or judicial ruling to the contrary, in the opinion of our special tax counsel, Davis Polk & Wardwell LLP, each series of ETNs should be treated for U.S. federal income tax purposes as prepaid forward contracts with respect to the relevant Index that are not debt instruments, as discussed further in the section below entitled “Material U.S. Federal Income Tax Considerations.” If the ETNs are so treated, you should generally recognize capital gain or loss upon the sale, exchange, early redemption or maturity of your ETNs in an amount equal to the difference between the amount you receive at such time and your tax basis in the ETNs.

However, the U.S. federal income tax consequences of your investment in the ETNs are uncertain. It is possible that the Internal Revenue Service (the “IRS”) may assert an alternative treatment. **Because of this uncertainty, we urge you to consult your own tax advisor as to the tax consequences of your investment in the ETNs.**

**For a more complete discussion of the U.S. federal income tax consequences of your investment in the ETNs, including possible alternative treatments for the ETNs, see**

#### **“Material U.S. Federal Income Tax Considerations” in this pricing supplement.**

#### **Additional Documents Related to the Offering of the ETNs**

You should read this pricing supplement together with the prospectus dated May 23, 2022, as supplemented by the prospectus supplement dated June 27, 2022 relating to our Global Medium-Term Notes, Series A, of which these ETNs are a part. This pricing supplement, together with the documents listed below, contains the terms of the ETNs and supersedes all prior or contemporaneous oral statements as well as any other written materials including preliminary or indicative pricing terms, correspondence, trade ideas, structures for implementation, sample structures, brochures or other educational materials of ours. You should carefully consider, among other things, the matters set forth under “Risk Factors” in the prospectus supplement and this pricing supplement, as the ETNs involve risks not associated with conventional debt securities. We urge you to consult your investment, legal, tax, accounting and other advisors before you invest in the ETNs.

You may access these documents on the SEC website at [www.sec.gov](http://www.sec.gov) as follows (or if such address has changed, by reviewing our filings for the relevant date on the SEC website):

- Prospectus dated May 23, 2022:  
<http://www.sec.gov/Archives/edgar/data/000312070/000119312522157585/d337542df3asr.htm>
- Prospectus Supplement dated June 27, 2022:  
[http://www.sec.gov/Archives/edgar/data/000312070/000095010322011301/dp169388\\_424b2-prosupp.htm](http://www.sec.gov/Archives/edgar/data/000312070/000095010322011301/dp169388_424b2-prosupp.htm)

Our SEC file number is 1-10257. As used in this pricing supplement, “we,” “us” and “our” refer to Barclays Bank PLC.

#### **Conflicts of Interest**

Barclays Capital Inc. is an affiliate of Barclays Bank PLC and, as such, has a “conflict of interest” in this offering within the meaning of Rule 5121 of Financial Industry Regulatory Authority, Inc. (“FINRA”). Consequently, this offering is being

conducted in compliance with the provisions of FINRA Rule 5121 (or any successor rule thereto). In addition, Barclays Capital Inc. will not sell the ETNs to a discretionary account without specific written approval from the account holder. For

more information, please refer to “Plan of Distribution (Conflicts of Interest)—Conflicts of Interest” in the accompanying prospectus supplement.

*Hypothetical Examples*

The following hypothetical examples show how a series of ETNs would perform in hypothetical circumstances, assuming a starting level for the relevant Index of 100. We have included two examples in which the relevant Index has increased by approximately 68.898% at maturity, as well as two examples in which the relevant Index has decreased by approximately 32.261% at maturity. These examples highlight the behavior of the investor fee in different circumstances. Because the investor fee is deducted daily in the calculation of the closing indicative value, the absolute level of the investor fee will be dependent upon the path taken by the respective Index to arrive at its ending level. The figures in these examples have been rounded for convenience. While the actual term of each series of ETNs is 30 years, for purposes of these hypothetical examples, only 10 years of performance is shown, figures for year 10 are deemed to be as of the final valuation date, and given the indicated assumptions, a holder would receive payment at maturity in the indicated amount, according to the indicated formula.

The hypothetical examples in this section do not take into account the effects of applicable taxes. The after-tax return you receive on your ETNs will depend on the U.S. tax treatment of your ETNs and on your particular circumstances. Accordingly, the after-tax rate of return of your ETNs could be different than the after-tax return of a direct investment in the Index components or the Index.

***These hypothetical examples are provided for illustrative purposes only. Past performance of the Index underlying your ETNs and the hypothetical performance of your ETNs are not indicative of the future results of the Index or the ETNs. The actual performance of the Index and the ETNs will vary, perhaps significantly, from the examples illustrated below.***

Assumptions:

Investor Fee Rate	Days	Principal	Starting Index
0.89%	365	\$100.00	100.000

A	B	C	D	E	F
Year	Index Level	Index Annual Percentage Change	Yearly Fee	Investor Fee	Closing Indicative Value
A	B	$B / B \text{ previous year}$	$C \times \text{Principal} \times 0.89\%$	Running Total of D	$(\text{Principal} \times C) - E$
0	100.000	-	\$0.00	\$0.00	\$100.00
1	114.655	114.65%	\$0.95	\$0.95	\$113.64
2	135.460	118.15%	\$1.10	\$2.05	\$133.07
3	153.420	113.26%	\$1.26	\$3.30	\$149.38
4	146.744	95.65%	\$1.29	\$4.60	\$141.61
5	136.305	92.89%	\$1.21	\$5.81	\$130.37
6	131.748	96.66%	\$1.14	\$6.94	\$124.90
7	120.959	91.81%	\$1.06	\$8.00	\$113.65
8	131.592	108.79%	\$1.05	\$9.05	\$122.55
9	147.405	112.02%	\$1.15	\$10.20	\$136.06
10	168.898	114.58%	\$1.29	\$11.49	\$154.52
<b>Annualized Index Return</b>					<b>5.38%</b>
<b>Annualized ETN Return</b>					<b>4.45%</b>

*Hypothetical Examples*

A	B	C	D	E	F
Year	Index Level	Index Annual Percentage Change	Yearly Fee	Investor Fee	Closing Indicative Value
<i>A</i>	<i>B</i>	<i>B / B previous year</i>	<i>C x Principal x 0.89%</i>	<i>Running Total of D</i>	<i>(Principal x C) – E</i>
0	100.000	-	\$0.00	\$0.00	\$100.00
1	95.714	95.71%	\$0.87	\$0.87	\$94.87
2	91.612	95.71%	\$0.82	\$1.69	\$90.00
3	87.686	95.71%	\$0.78	\$2.47	\$85.38
4	83.928	95.71%	\$0.74	\$3.21	\$80.99
5	75.650	90.14%	\$0.70	\$3.91	\$72.36
6	88.832	117.43%	\$0.70	\$4.61	\$84.21
7	104.312	117.43%	\$0.81	\$5.42	\$98.01
8	122.489	117.43%	\$0.94	\$6.36	\$114.07
9	143.834	117.43%	\$1.10	\$7.46	\$132.76
10	168.898	117.43%	\$1.28	\$8.73	\$154.52
			<b>Annualized Index Return</b>		<b>5.38%</b>
			<b>Annualized ETN Return</b>		<b>4.45%</b>

*Hypothetical Examples*

A	B	C	D	E	F
Year	Index Level	Index Annual Percentage Change	Yearly Fee	Investor Fee	Closing Indicative Value
<i>A</i>	<i>B</i>	<i>B / B previous year</i>	<i>C x Principal x 0.89%</i>	<i>Running Total of D</i>	<i>(Principal x C) – E</i>
0	100.000	-	\$0.00	\$0.00	\$100.00
1	90.016	90.02%	\$0.84	\$0.84	\$89.22
2	79.529	88.35%	\$0.74	\$1.58	\$78.13
3	70.863	89.10%	\$0.65	\$2.24	\$69.00
4	74.001	104.43%	\$0.62	\$2.86	\$71.41
5	79.197	107.02%	\$0.65	\$3.52	\$75.75
6	83.947	106.00%	\$0.69	\$4.21	\$79.58
7	90.470	107.77%	\$0.73	\$4.94	\$85.01
8	83.349	92.13%	\$0.72	\$5.66	\$77.62
9	73.963	88.74%	\$0.65	\$6.31	\$68.27
10	67.739	91.59%	\$0.58	\$6.89	\$61.97
			<b>Annualized Index Return</b>		<b>-3.82%</b>
			<b>Annualized ETN Return</b>		<b>-4.67%</b>

*Hypothetical Examples*

A	B	C	D	E	F
Year	Index Level	Index Annual Percentage Change	Yearly Fee	Investor Fee	Closing Indicative Value
<i>A</i>	<i>B</i>	<i>B / B previous year</i>	<i>C x Principal x 0.89%</i>	<i>Running Total of D</i>	<i>(Principal x C) – E</i>
0	100.000	-	\$0.00	\$0.00	\$100.00
1	90.284	90.28%	\$0.84	\$0.84	\$89.48
2	81.511	90.28%	\$0.75	\$1.60	\$80.07
3	73.591	90.28%	\$0.67	\$2.27	\$71.65
4	66.441	90.28%	\$0.60	\$2.87	\$64.12
5	47.022	70.77%	\$0.54	\$3.41	\$44.98
6	50.584	107.57%	\$0.41	\$3.83	\$47.95
7	54.415	107.57%	\$0.44	\$4.27	\$51.13
8	58.536	107.57%	\$0.47	\$4.74	\$54.51
9	62.970	107.57%	\$0.50	\$5.24	\$58.12
10	67.739	107.57%	\$0.53	\$5.77	\$61.97
			<b>Annualized Index Return</b>		<b>-3.82%</b>
			<b>Annualized ETN Return</b>		<b>-4.67%</b>

## RISK FACTORS

The ETNs are senior, unsecured debt obligations of Barclays Bank PLC and are not secured debt. The ETNs are riskier than ordinary unsecured debt securities. The return on a series of ETNs is linked to the performance of the Index underlying those ETNs. Investing in a series of ETNs is not equivalent to investing directly in the underlying index components, the Index itself or the VIX Index. See the section entitled “The Indices”, as well as the Index-specific sections, in this pricing supplement for more information.

***The ETNs are intended to be trading tools for sophisticated investors to manage daily trading risks and are only suitable for a very short investment horizon. The ETNs may not be suitable for all investors and should be used only by investors with the sophistication and knowledge necessary to understand the risks inherent in the relevant Index, the futures contracts that the relevant Index tracks and investments in volatility as an asset class generally. Investors should consult with their broker or financial advisor when making an investment decision and to evaluate their investment in the ETNs and should actively manage and monitor their investments in the ETNs throughout each trading day.***

***You may lose all or a substantial portion of your investment within a single day if you invest in the ETNs.***

This section describes the most significant risks relating to an investment in the ETNs. **We urge you to read the following information about these risks, together with the other information in this pricing supplement and the accompanying prospectus and prospectus supplement before investing in the ETNs.**

You should also consider the tax consequences of investing in the ETNs, significant aspects of which are uncertain. See “Material U.S. Federal Income Tax Considerations” in this pricing supplement.

### ***Risks Relating to the ETNs Generally***

#### **The ETNs Do Not Guarantee Any Return of Principal, and You May Lose Some or All of Your Investment**

The ETN performance is linked to the performance of the Index underlying your ETNs less an investor fee. There is no minimum limit to the level of the Index underlying your ETNs.

Moreover, the ETNs are not principal protected. Therefore, a decrease in the level of the Index underlying your ETNs could cause you to lose up to your entire investment in the ETNs. You may lose all or a substantial portion of your investment within a single day if you invest in the ETNs.

Furthermore, because the investor fee reduces the amount of your return at maturity or upon issuer redemption, and the investor fee and the redemption charge reduce the amount of your return upon holder redemption, the level of the Index underlying your ETNs will need to increase significantly in order for you to receive at least the amount you invested in the ETNs at maturity or upon early redemption. If the increase in the level of the Index underlying your ETNs is insufficient to offset the negative effect of the investor fee (and, in the case of holder redemption, the redemption charge), or if the level of the Index underlying your ETNs decreases, you will receive less than the amount of you invested in the ETNs at maturity or upon early redemption.

#### **We May Redeem Each Series of ETNs at Any Time on or after the Inception Date**

We have the right to redeem or “call” each series of ETNs (in whole but not in part) at our sole discretion without your consent on any business day on or after the inception date until and including the maturity date. If we elect to redeem a series of ETNs, we will deliver written notice of such election to redeem to the holders of that series of ETNs not less than ten calendar days prior to the redemption date on which we intend to redeem that series of ETNs. In this scenario, the ETNs will be redeemed on the fifth business day following the valuation date specified by us in the issuer redemption notice, but in no event prior to the tenth calendar day following the date on which we deliver such notice.

If we exercise our right to redeem a series of ETNs, the payment you receive may be less than the payment that you would have otherwise been entitled to receive at maturity and may be less than the secondary market trading price of that series of ETNs. Also, you may not be able to reinvest any amounts received on the redemption date in a comparable investment. Our right to redeem the ETNs may also adversely impact your ability to sell your ETNs, and/or the price at which you may be able to sell your ETNs, particularly after delivery of the issuer redemption notice.

**You Will Not Benefit from Any Increase in the Level of the Underlying Index If Such Increase Is Not Reflected in the Level of Index on the Applicable Valuation Date**

If the positive effect of any increase in the level of the Index underlying your ETNs is insufficient to offset the negative effect of the investor fee (and in the case of holder redemption, the redemption charge) between the inception date and the applicable valuation date (including the final valuation date), we will pay you less than the principal amount of your ETNs at maturity or upon early redemption. This will be true even if the level of the Index underlying your ETNs as of some date or dates prior to the applicable valuation date would have been sufficiently high to offset the negative effect of the investor fee and redemption charge.

**You Will Not Receive Interest Payments on the ETNs or Have Rights in Any of the Futures Contracts Included in the Index**

You will not receive any periodic interest payments on your ETNs. As a holder of a series of ETNs, you will not have rights that investors in the futures contracts included in the Index underlying those ETNs may have. Your ETNs will be paid in cash, and you will have no right to receive delivery of any equity securities comprising the S&P 500®, of any dividends or distributions relating to such securities, of payment or delivery of amounts in respect of the options used to calculate the level of the VIX Index or of payment or delivery of amounts in respect of the futures contracts included in the Index underlying your ETNs.

**If You Hold Your ETNs as a Long Term Investment, It Is Likely That You Will Lose All or a Substantial Portion of Your Investment**

The ETNs are only suitable for a very short investment horizon. The relationship between the level of the VIX Index and the underlying futures on the VIX Index will begin to break down as the length of an investor's holding period increases, even within the course of a single index business day. The relationship between the level of the applicable underlying Index and the closing indicative value and intraday indicative value of the ETNs will also begin to break down as the length of an investor's holding period increases due to the effect of accrued fees. The long term expected value of your ETNs is zero. If you hold your ETNs as a long term investment, it is likely that you will lose all or a substantial portion of your investment.

**If a Market Disruption Event Has Occurred or Exists on a Valuation Date, the Calculation Agent Can Postpone the Determination of, as Applicable, the Closing Indicative Value or the Maturity Date or a Redemption Date**

The determination of the value of the ETNs on a valuation date, including the final valuation date, may be postponed if the calculation agent determines that a market disruption or force majeure event has occurred or is continuing on such valuation date. If such a postponement occurs, the value of the index components unaffected by the market disruption event shall be determined on the scheduled valuation date and the value of the affected index component shall be determined using the closing value of the affected index component on the first trading day after that day on which no market disruption event occurs or is continuing. In no event, however, will a valuation date for any series of ETNs be postponed by more than five trading days. As a result, the maturity date or a redemption date could also be postponed to the fifth business day following such valuation date, as postponed. If a valuation date is postponed until the fifth trading day following the scheduled valuation date but a market disruption event occurs or is continuing on such day, that day will nevertheless be the valuation date and the calculation agent will make a good faith estimate in its sole discretion of the level of the relevant Index for such day. See "Specific Terms of the ETNs—Market Disruption Event" in this pricing supplement.

**Postponement of a Valuation Date May Result in a Reduced Amount Payable at Maturity or Upon Early Redemption**

As the payment at maturity or upon early redemption is a function of, among other things, the change in Index level on the final valuation date or applicable valuation date, as the case may be, the postponement of any valuation date may result in the application of a different change in Index level and an increase in the accrued value of the investor fee and, accordingly, decrease the payment you receive at maturity or upon early redemption.

**Owning the ETNs is Not the Same as Owning the Futures Contracts Included in the Underlying Index or a Security Directly Linked to the Performance of the Underlying Index due to the Negative Effect of the Investor Fee and the Redemption Charge and Other**

## **Factors Affecting the Market Value of the ETNs**

The return on your ETNs will not reflect the return you would have realized if you had actually owned the futures contracts included in the Index underlying your ETNs or a security directly linked to the performance of the applicable Index and held such investment for a similar period. Any return on your ETNs includes the negative effect of the accrued investor fee (and in the case of holder redemption, the redemption charge). Furthermore, if the level of the Index underlying your ETNs increases during the term of the ETNs, the market value of the ETNs may not increase by the same amount or may even decline.

### ***Risks Relating to the Issuer***

#### **The ETNs Are Subject to the Credit Risk of the Issuer, Barclays Bank PLC**

The ETNs are senior, unsecured debt obligations of the issuer, Barclays Bank PLC, and are not, either directly or indirectly, an obligation of any third party. Any payment to be made on the ETNs depends on the ability of Barclays Bank PLC to satisfy its obligations as they come due and are not guaranteed by a third party. As a result, the actual and perceived creditworthiness of Barclays Bank PLC may affect the market value of the ETNs and, in the event Barclays Bank PLC were to default on its obligations, you may not receive the amounts owed to you under the terms of the ETNs.

#### **You May Lose Some or All of Your Investment If Any U.K. Bail-in Power Is Exercised by the Relevant U.K. Resolution Authority**

Notwithstanding and to the exclusion of any other term of the ETNs or any other agreements, arrangements or understandings between Barclays Bank PLC and any holder or beneficial owner of the ETNs, by acquiring the ETNs, each holder and beneficial owner of the ETNs acknowledges, accepts, agrees to be bound by, and consents to the exercise of, any U.K. Bail-in Power by the relevant U.K. resolution authority as set forth under “Consent to U.K. Bail-in Power” in this pricing supplement. Accordingly, any U.K. Bail-in Power may be exercised in such a manner as to result in you and other holders and beneficial owners of the ETNs losing all or a part of the value of your investment in the ETNs or receiving a different security from the ETNs, which may be worth significantly less than the ETNs and which may have significantly fewer protections than those typically afforded to debt securities. Moreover, the relevant U.K. resolution

authority may exercise the U.K. Bail-in Power without providing any advance notice to, or requiring the consent of, the holders and beneficial owners of the ETNs. The exercise of any U.K. Bail-in Power by the relevant U.K. resolution authority with respect to the ETNs will not be a default or an event of default and the Trustee (as defined herein) will not be liable for any action that the Trustee takes, or abstains from taking, in either case, in accordance with the exercise of the U.K. Bail-in Power by the relevant U.K. resolution authority with respect to the ETNs. See “Consent to U.K. Bail-in Power” in this pricing supplement as well as “U.K. Bail-in Power,” “Risk Factors—Risks Relating to the Securities Generally—Regulatory action in the event a bank or investment firm in the Group is failing or likely to fail, including the exercise by the relevant U.K. resolution authority of a variety of statutory resolution powers, could materially adversely affect the value of any securities” and “Risk Factors—Risks Relating to the Securities Generally—Under the terms of the securities, you have agreed to be bound by the exercise of any U.K. Bail-in Power by the relevant U.K. resolution authority” in the accompanying prospectus supplement.

### ***Risks Relating to the Indices Generally***

#### **Your ETNs Are Not Linked to the VIX Index or Its Spot Level and the Value of Your ETNs May Be Less Than It Would Have Been Had Your ETNs Been Linked to the VIX Index**

The value of your ETNs will be linked to the level of the underlying Indices, which offers exposure to futures contracts of specified maturities on the VIX Index and not direct exposure to the VIX Index or its spot level. These futures contracts will not track the performance of the VIX Index. Therefore, your ability to benefit from any rise or fall in the level of the VIX Index is limited. Your ETNs may not benefit from increases in the level of the VIX Index because such increases will not necessarily cause the level of VIX Index futures to rise.

#### **The VIX Index Is a Theoretical Calculation and Is Not a Tradable Index**

The VIX Index is a theoretical calculation and cannot be traded on a spot price basis. The settlement price at maturity of the VIX futures contained in the Index is based on this theoretically derived calculation. As a result, the behavior of the futures contracts may be different from futures contracts whose settlement price is based on a tradable asset.

### **Changing Prices of the Futures Contracts Included in the Index May Result in a Reduced Amount Payable at Maturity or Upon Redemption**

Each underlying Index is composed of futures contracts on the VIX Index. 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 underlying asset or for settlement in cash based on the level of the underlying asset. As the futures contracts that comprise the Indices approach expiration, they are replaced by similar contracts that have a later expiration. Thus, for example, a futures contract purchased and held in August may specify an October expiration. As time passes, the contract expiring in October may be replaced by a contract for delivery in November. This process is referred to as “rolling”. If the market for these contracts is (putting aside other considerations) in “contango”, which means that the prices are higher in the distant delivery months than in the nearer delivery months, the sale of the October contract would take place at a price that is lower than the price of the November contract, thereby creating a negative “roll yield”.

Absent stressed market conditions, VIX futures have historically traded in “contango” markets, and VIX futures have frequently exhibited very high contango in the past, resulting in a significant cost to “roll” the futures. The existence of contango in the futures markets have resulted in the past and may result in the future in negative “roll yields”, which could cause a significant and sustained decline in the level of the Index underlying your ETNs and, accordingly, significantly decrease the payment you receive at maturity or upon early redemption. **Since the non-investable VIX Index is based on the price of a constantly changing portfolio of option contracts, rather than futures contracts subject to contango and backwardation, the VIX Index may experience less severe downturns or may even provide positive performance during periods where the Index underlying your ETNs is experiencing severe downturns.**

The contracts included in the Indices have not historically exhibited consistent periods of backwardation, and backwardation will most likely not exist at many, if not most, times. Backwardation markets are those in which the prices of contracts are lower in the distant delivery months than in the nearer delivery

months. In cases where backwardation is exhibited, the actual realization of a potential roll yield will be dependent upon the level of the related VIX Index price relative to the unwind price of the relevant VIX Index futures contract at the time of hypothetical sale of the contract.

### **The Level of the VIX Index Has Historically Reverted to a Long-Term Mean Level and Any Increase in the Spot Level of the VIX Index May Be Constrained**

In the past, the level of the VIX Index has typically reverted over the longer term to a historical mean, and its absolute level has been constrained within a band. It is likely that spot level of the VIX Index will continue to do so in the future, especially when the economic uncertainty recedes. If this happens, the value of futures contracts on the VIX Index is likely to decrease, reflecting the market expectation of reduced volatility in the future, and the potential upside of your investment in your ETNs may correspondingly be limited as a result.

### **The VIX Index Is A Measure of Forward Volatility of the S&P 500® and Your ETN Is Not Linked to the Options Used to Calculate the VIX Index, to the Actual Volatility of the S&P 500® or the Equity Securities Included in the S&P 500®, Nor Will the Return on Your ETN Be a Participation in the Actual Volatility of the S&P 500®**

The VIX Index measures the 30-day forward volatility of the S&P 500® as calculated based on the prices of certain put and call options on the S&P 500®. The actual volatility of the S&P 500® may not conform to a level predicted by the VIX Index or to the prices of the put and call options included in the calculation of the VIX Index. The value of your ETNs is based on the value of the relevant futures on the VIX Index included in the Index underlying your ETNs. Your ETNs are not linked to the realized volatility of the S&P 500® and will not reflect the return you would realize if you owned the equity securities underlying the S&P 500® or if you traded the put and call options used to calculate the level of the VIX Index.

### **The Policies of the Index Sponsor and the CBOE and Changes That Affect the Composition and Valuation of the S&P 500®, the VIX Index or the Underlying Indices Could Affect the Amount Payable on Your ETNs and Their Market Value**

The policies of the Index sponsor and the CBOE concerning the calculation of the level of the S&P

500<sup>®</sup>, the VIX Index and the underlying Indices, respectively, and any additions, deletions or substitutions of equity securities or options contracts and the manner in which changes affecting the equity securities, options contracts or futures contracts are reflected in the S&P 500<sup>®</sup>, the VIX Index or the underlying Indices, respectively, could affect the value of the underlying Indices and, therefore, the amount payable on your ETNs at maturity or upon redemption and the market value of your ETNs prior to maturity.

S&P Dow Jones Indices can add, delete or substitute the equity securities underlying the S&P 500<sup>®</sup> or make other methodological changes that could change the level of the S&P 500<sup>®</sup>. S&P Dow Jones Indices can also add, delete or substitute the futures contracts underlying the underlying Indices or make other methodological changes that could change the level of the Indices. The changing of equity securities included in the S&P 500<sup>®</sup> may affect the S&P 500<sup>®</sup>, as a newly added equity security may perform significantly better or worse than the equity security or securities it replaces. Such a change may also affect the value of the put and call options used to calculate the level of the VIX Index. The changing of the futures contracts underlying the Indices may affect the performance of the Indices in similar ways. Additionally, S&P Dow Jones Indices may alter, discontinue or suspend calculation or dissemination of the S&P 500<sup>®</sup> or any of the Indices. Any of these actions could adversely affect the value of your ETNs. S&P Dow Jones Indices has no obligation to consider your interests in calculating or revising the S&P 500<sup>®</sup> or the Indices. See “The S&P 500<sup>®</sup>” and “The Indices” below.

The CBOE can make methodological changes to the calculation of the VIX Index that could affect the value of futures contracts on the VIX Index and, consequently, the value of your ETNs. There can be no assurance that the CBOE will not change the VIX Index calculation methodology in a way which may affect the value of your ETNs. Additionally, the CBOE may alter, discontinue or suspend calculation or dissemination of the VIX Index. Any of these actions could adversely affect the value of your ETNs. The CBOE has no obligation to consider your interests in calculating or revising the VIX Index. See “The VIX Index” below.

If events such as these occur, or if the value of any underlying Index is not available or cannot be

calculated because of a market disruption event or for any other reason, the calculation agent may be required to make a good faith estimate in its sole discretion of the value of such Index. The circumstances in which the calculation agent will be required to make such a determination are described more fully under “Specific Terms of the ETNs—Market Disruption Event,” “—Discontinuance or Modification of an Index” and “—Role of Calculation Agent”.

#### **Changes in Law or Regulation Relating To Commodities Futures Contracts May Adversely Affect the Market Value of the ETNs and the Amounts Payable on Your ETNs**

Commodity futures contracts, such as the VIX futures, are subject to legal and regulatory regimes that are in the process of changing in the United States and, in some cases, in other countries. The Dodd-Frank Wall Street Reform and Consumer Protection Act, commonly known as the “**Dodd-Frank Act**”, provides for substantial changes in the regulation of the futures and over-the-counter derivatives markets. Among other things, the legislation requires that most over-the-counter transactions be executed on organized exchanges or facilities and be cleared through regulated clearing houses. This requirement has become effective for certain categories of interest rate and credit default swaps. It is anticipated that other products will become subject to the mandatory centralized execution and clearing requirement in the future. In addition, the legislation requires registration of, and imposes regulations on, swap dealers and major swap participants. The enactment of the Dodd-Frank Act could make participation in the markets more burdensome and expensive. This could adversely affect the prices of futures contracts and, in turn, the market value of the ETNs and the amounts payable on the ETNs at maturity or upon early redemption. In addition, other parts of the legislation, by increasing regulation of, and imposing additional costs on, swap transactions, could reduce trading in the swap and futures markets, which would further restrict liquidity, increase volatility and adversely affect prices, which could in turn adversely affect the value of the applicable underlying Index.

#### **Changes in the Margin Requirements for the Futures Contracts Included in the Relevant Index May Adversely Affect the Value of the ETNs**

Futures exchanges require market participants to post collateral in order to open and keep open

positions in futures contracts. If an exchange changes the amount of collateral required to be posted to hold positions in futures contracts included in the relevant Index, market participants may adjust their positions, which may affect prices of the relevant futures contracts. As a result, the value of any relevant futures contracts may be affected, which may adversely affect the level of the relevant Index and the value of the ETNs.

#### **Historical Levels of Comparable Indices Should Not Be Taken as an Indication of the Future Performance of any Index During the Term of the ETNs**

It is impossible to predict whether any Index underlying the ETNs will rise or fall. The actual performance of each Index over the term of the series of ETNs linked to that Index, as well as the amount payable at maturity or upon redemption, may bear little relation to the historical levels of comparable indices, which in most cases have been highly volatile.

#### **The Indices May in the Future Include Contracts That Are Not Traded on Regulated Futures Exchanges**

The Indices are currently based solely on futures contracts traded on regulated futures exchanges (referred to in the United States as “designated contract markets”). If these exchange-traded futures cease to exist, any Index may also cease to exist or may in the future include over-the-counter contracts (such as swaps and forward contracts) traded on trading facilities that are subject to lesser degrees of regulation or, in some cases, no substantive regulation. As a result, trading in such contracts, and the manner in which prices and volumes are reported by the relevant trading facilities, may not be subject to the provisions of, and the protections afforded by, the U.S. Commodity Exchange Act of 1936, or other applicable statutes and related regulations, that govern trading on regulated U.S. futures exchanges, or similar statutes and regulations that govern trading on regulated foreign exchanges. In addition, many electronic trading facilities have only recently initiated trading and do not have significant trading histories. As a result, the trading of contracts on such facilities, and the inclusion of such contracts in any of the Indices, may be subject to certain risks not presented by most exchange-traded futures contracts, including risks related to the liquidity and price histories of the relevant contracts.

#### **Changes in the Treasury Bill Rate of Interest Will Affect the Level of the Indices and Your ETNs**

Because the level of each Index is linked, in part, to the rate of interest that could be earned on reinvestment into the Index of the return on the notional value of the Index based on a specified Treasury Bill rate, changes in the Treasury Bill rate of interest will affect the amount payable on your ETNs at maturity or upon redemption and, therefore, the market value of your ETNs. Assuming the trading prices of the index components included in the Index to which your ETNs are linked remain constant, an increase in the Treasury Bill rate of interest will increase the value of each Index and, therefore, the value of your ETNs. A decrease in the Treasury Bill rate of interest will adversely impact the value of each Index and, therefore, the value of your ETNs.

#### ***Risks Relating to Liquidity and the Secondary Market***

#### **The Estimated Value of the ETNs Is Not a Prediction of the Prices at Which the ETNs May Trade in the Secondary Market, If Any Such Market Exists, and Such Secondary Market Prices, If Any, May Be Lower Than the Principal Amount of the ETNs and May Be Lower Than Such Estimated Value of the ETNs**

The estimated value of the ETNs is not a prediction of the prices at which the ETNs may be redeemed or at which the ETNs may trade in secondary market transactions, if any such market exists, including on the CBOE BZX Exchange. The price at which you may be able to sell the ETNs in the secondary market at any time will be influenced by many factors that cannot be predicted, such as market conditions, and any bid and ask spread for similar sized trades, and may be substantially less than our estimated value of the ETNs at the time of pricing as of the inception date. For more information regarding additional factors that may influence the market value of the ETNs, please see the risk factor “—The Market Value of Each Series of ETNs May Be Influenced by Many Unpredictable Factors” below.

#### **The Market Value of Each Series of ETNs May Be Influenced by Many Unpredictable Factors**

The market value of your ETNs may fluctuate between the date you purchase them and the applicable valuation date. You may also sustain a

significant loss if you sell your ETNs in the secondary market. We expect that generally the value of the index components and Index will affect the market value of the ETNs and the payment you receive at maturity or upon early redemption more than any other factor. Several other factors, many of which are beyond our control, and many of which could themselves affect the prices of the futures contracts underlying the Indices, will influence the market value of the ETNs and the payment you receive at maturity or upon early redemption, including the following:

- prevailing market prices and forward volatility levels of the U.S. stock markets, the equity securities included in the S&P 500<sup>®</sup> and the S&P 500<sup>®</sup>, and prevailing market prices of options on the S&P 500<sup>®</sup>, the VIX Index, options on the VIX Index, relevant futures contracts on the VIX Index, or any other financial instruments related to the S&P 500<sup>®</sup> and the VIX Index;
- supply and demand for the ETNs, including inventory positions with Barclays Capital Inc. or any market maker and any decision we may make not to issue additional ETNs or to cease or suspend sales of ETNs from inventory;
- the level of contango or backwardation in the markets for futures contracts on the VIX Index and the roll costs associated with maintaining a rolling position in such futures contracts;
- the financial condition or credit rating of the U.S. government;
- the time remaining to the maturity of the ETNs;
- interest rates;
- economic, financial, political, regulatory, geographical or judicial events that affect the level of the underlying Index or the market price or forward volatility of the U.S. stock markets, the equity securities included in the S&P 500<sup>®</sup>, the S&P 500<sup>®</sup>, the VIX Index or the relevant futures contracts on the VIX Index;
- the perceived creditworthiness of Barclays Bank PLC; or
- supply and demand in the listed and over-the-counter equity derivative markets.

These factors interrelate in complex ways, and the effect of one factor on the market value of your ETNs may offset or enhance the effect of another factor.

#### **There May Not Be an Active Trading Market in the ETNs; Sales in the Secondary Market May Result in Significant Losses**

We have listed each series of ETNs on the CBOE BZX Exchange, but a trading market for any series of ETNs may not exist at any time. Even if there is a secondary market for one or both series of the ETNs, whether as a result of any listing of the ETNs of such series or on an over-the-counter basis, it may not provide enough liquidity for you to trade or sell your ETNs easily. In addition, although certain affiliates of Barclays Bank PLC may engage in limited purchase and resale transactions in the ETNs, they are not required to do so. If they decide to engage in such transactions, they may stop at any time. We are not required to maintain the listing of any series of ETNs on the CBOE BZX Exchange or any other securities exchange and may cause the ETNs to be de-listed at our discretion.

#### **The Liquidity of the Market for the ETNs May Vary Materially Over Time**

As stated on the cover of this pricing supplement, we sold a portion of each series of ETNs on the inception date, and the remainder of the ETNs may be offered and sold from time to time through Barclays Capital Inc., our affiliate, as agent. Also, the number of ETNs of any series outstanding or held by persons other than our affiliates could be reduced at any time due to holder redemptions of the ETNs. Accordingly, the liquidity of the market for a series of ETNs could vary materially over the term of the ETNs. While you may elect to redeem your ETNs prior to maturity, holder redemption is subject to the conditions and procedures described elsewhere in this pricing supplement, including the conditions that you must pay a redemption charge and redeem at least 25,000 ETNs of the same series at one time in order to exercise your right to redeem your ETNs on any redemption date.

#### **The ETNs May Trade at a Substantial Premium to or Discount from the Closing Indicative Value and/or the Intraday Indicative Value**

The ETNs may trade at a substantial premium to or discount from the closing indicative value and/or the intraday indicative value. The closing indicative value is the value of the ETNs calculated by us on a daily basis and is used to

determine the payment at maturity or upon early redemption. The intraday indicative value is meant to approximate on an intraday basis the component of the ETN's value that is attributable to the Index and is provided for reference purposes only. In contrast, the market price of the ETNs at any time is the price at which you may be able to sell your ETNs in the secondary market at that time, if one exists.

If you sell your ETNs on the secondary market, you will receive the market price for your ETNs, which may be substantially above or below the closing indicative value and/or the intraday indicative value due to, among other things, imbalances of supply and demand for that series of ETNs (including as a result of any decision of ours to issue, stop issuing or resume issuing additional ETNs), futures contracts included in the Index underlying that series of ETNs and/or other derivatives related to the Index or that series of ETNs; any trading disruptions, suspension or limitations to any of the foregoing; lack of liquidity; severe volatility; transaction costs; credit considerations; and bid-offer spreads. A premium or discount market price over the intraday indicative value can also arise as a result of mismatches of trading hours between a series of ETNs and the futures contracts included in the Index underlying that series of ETNs, actions (or failure to take action) by the index sponsor and the CBOE and technical or human errors by service providers, market participants and others. In addition, paying a premium purchase price over the intraday indicative value could lead to significant losses if you sell your ETNs at a time when such premium is no longer present in the market place or if we exercise our right to redeem the ETNs. Furthermore, if you sell your ETNs at a price which reflects a discount below the intraday indicative value, you may experience a significant loss.

The intraday indicative value for each series of ETNs is calculated and published every 15 seconds on each trading day from approximately 9:30 a.m. to approximately 4:00 p.m., New York City time. The intraday indicative value will not be updated to reflect any trading in the futures contracts included in the Index underlying your ETNs that might take place after 4:00 p.m. The ETNs trade on the CBOE BZX Exchange from approximately 9:30 a.m. to 4:00 p.m., New York City time. The ETNs may also trade during after-hours trading. Therefore, during after-hours trading, the last-published intraday indicative value for any series of ETNs is likely to differ from

any value of that series determined based on real-time trading data of the futures contracts included in the relevant Index, particularly if there is a significant price movement in the futures contracts during this time period. It is possible that the value of the ETNs could undergo a rapid and substantial decline outside of ordinary market trading hours. You may not be able to accurately assess the value of the ETNs relative to the trading price during after-hours trading, including any premium or discount thereto, when there is no recent intraday indicative value available.

### **We Have No Obligation to Issue Additional ETNs, and We May Cease or Suspend Sales of the ETNs**

As further described in the accompanying prospectus supplement under "Summary—Medium-Term Notes—Amounts That We May Issue" on page S-3 and "Summary—Medium-Term Notes—Reissuances or Reopened Issues" on page S-3, we have the right, but not the obligation, to issue additional ETNs of any series once the initial distribution is complete. We also reserve the right to cease or suspend sales of the ETNs of any series from inventory held at any time after the inception date.

Any limitation or suspension on the issuance or sale of the ETNs may materially and adversely affect the price and liquidity of the ETNs of that series in the secondary market. Alternatively, the decrease in supply may cause an imbalance in the market supply and demand, which may cause the ETNs of that series to trade at a premium over their indicative value. Any premium may be reduced or eliminated at any time. Paying a premium purchase price over the indicative value of the ETNs of any series could lead to significant losses in the event you sell your ETNs of that series at a time when such premium is no longer present in the marketplace or if we redeem the ETNs of that series at our discretion. Investors should consult their financial advisors before purchasing or selling the ETNs, especially ETNs trading at a premium over their indicative value.

### **Changes in Our Credit Ratings May Affect the Market Value of the ETNs**

Our credit ratings are an assessment of our ability to pay our obligations, including those on the ETNs. Consequently, actual or anticipated changes in our credit ratings may affect the market value of your ETNs. However, because the return on your ETNs is dependent upon certain factors in addition to our ability to pay our obligations on your ETNs, an improvement in our

credit ratings will not reduce the other investment risks related to your ETNs.

### **There Are Restrictions on the Minimum Number of ETNs You May Redeem and on the Dates on Which You May Redeem Them**

You must redeem at least 25,000 ETNs of the same series at one time and pay a redemption charge in order to exercise your right to redeem your ETNs on any redemption date. Accordingly, if you hold fewer than 25,000 ETNs of the same series or fewer than 25,000 ETNs of the same series are outstanding, you will not be able to purchase enough ETNs to meet the minimum size requirement in order to exercise your early repurchase right. The unavailability of the repurchase right can result in the ETNs trading in the secondary market at a discount below their closing indicative value and/or intraday indicative value. The number of ETNs outstanding or held by persons other than our affiliates could be reduced at any time due to early repurchase of the ETNs or due to our or our affiliates' purchases of ETNs in the secondary market. A suspension of additional issuances of the ETNs could result in a significant reduction in the number of outstanding ETNs if investors subsequently exercise their right to have the ETNs repurchased by us.

You may redeem your ETNs on a redemption date only if we receive a notice of redemption from you by no later than 4:00 p.m., New York City time, and a confirmation of redemption by no later than 5:00 p.m., New York City time, on the business day prior to the applicable valuation date. If we do not receive your notice of redemption by 4:00 p.m., New York City time, or your confirmation of redemption by 5:00 p.m., New York City time, on the business day prior to the valuation date specified in your notice of redemption, your notice will not be effective and we will not redeem your ETNs on the applicable redemption date. Your notice of redemption and confirmation of redemption will not be effective until we confirm receipt. See "Specific Terms of the ETNs—Early Redemption Procedures" in this pricing supplement for more information.

### **There May Be Restrictions on Your Ability to Purchase Additional ETNs From Us**

We may, but are not required to, offer and sell ETNs after the inception date through Barclays Capital Inc., our affiliate, as agent. We may impose a requirement to purchase a particular minimum amount of ETNs from our inventory in a single purchase, though we may waive this

requirement with respect to any purchase at any time in our sole discretion. In addition, we may offer to sell ETNs from our inventory at a price that is greater or less than the intraday indicative value or the prevailing market price at the time such sale is made. However, we are under no obligation to issue or sell additional ETNs at any time, and if we do issue or sell additional ETNs, we may limit such sales and stop selling additional ETNs at any time.

Any limitations or restrictions that we place on the sale of the ETNs from inventory, and the price at which we sell the ETNs from inventory, may impact supply and demand for the ETNs and may impact the liquidity and price of the ETNs in the secondary market. See "Specific Terms of the ETNs—Further Issuances" and "Supplemental Plan of Distribution" in this pricing supplement for more information.

### ***Risks Relating to Conflicts of Interest and Hedging***

#### **There Are Potential Conflicts of Interest Between You and the Calculation Agent**

Currently, Barclays Bank PLC serves as the calculation agent. The calculation agent will, among other things, determine the amount of the return paid out to you on the ETNs at maturity or upon early redemption. For a more detailed description of the calculation agent's role. See "Specific Terms of the ETNs—Role of Calculation Agent" in this pricing supplement.

If the index sponsor were to discontinue or suspend calculation or publication of an Index, it may become difficult to determine the market value of the ETNs linked to that Index. If events such as these occur, or if the level of the Index underlying your ETNs is not available or cannot be calculated because of a market disruption event, or for any other reason, the calculation agent may be required to make a good faith estimate in its sole discretion of the level of that Index. The circumstances in which the calculation agent will be required to make such a determination are described more fully under "Specific Terms of the ETNs—Role of Calculation Agent" in this pricing supplement.

The calculation agent will exercise its judgment when performing its functions. For example, the calculation agent may have to determine whether a market disruption event affecting an Index has occurred or is continuing on a valuation date, including the final valuation date. This determination may, in turn, depend on the calculation agent's judgment as to whether the

event has materially interfered with our ability to unwind our or our affiliates' hedge positions. Since these determinations by the calculation agent may affect the market value of the ETNs, the calculation agent may have a conflict of interest if it needs to make any such decision.

**Trading and Other Transactions by Barclays Bank PLC or Its Affiliates in Instruments Linked to the Equity Securities Underlying the S&P 500<sup>®</sup> or Instruments Linked to the Indices, the VIX Index, the S&P 500<sup>®</sup> or the Equity Securities Underlying the S&P 500<sup>®</sup> May Impair the Market Value of the ETNs**

As described below under "Use of Proceeds and Hedging" in this pricing supplement, we or one or more of our affiliates may hedge our obligations under any series of ETNs by purchasing or selling equity securities underlying the S&P 500<sup>®</sup> or listed or over-the-counter options, futures, swaps or other derivative instruments linked to the Indices, the VIX Index (including the VIX futures which are used to calculate the Index), the S&P 500<sup>®</sup> (including the put and call options used to calculate the level of the VIX Index) and the equity securities underlying the S&P 500<sup>®</sup>, and we may adjust these hedges by, among other things, purchasing or selling any of the foregoing. Any of these hedging activities may adversely affect the market price of those items or the level of the Indices and, therefore, the market value of the ETNs. It is possible that we or one or more of our affiliates could receive substantial returns from these hedging activities while the market value of the ETNs declines.

We or one or more of our affiliates may also engage in trading in equity securities underlying the S&P 500<sup>®</sup> or listed or over-the-counter options, futures, swaps or other derivative financial instruments linked to the Indices, the VIX Index (including the VIX futures which are used to calculate the Index), the S&P 500<sup>®</sup> (including the put and call options used to calculate the level of the VIX Index) and the equity securities underlying the S&P 500<sup>®</sup> on a regular basis as part of our general broker-dealer and other businesses, for proprietary accounts, for hedging or reducing risk of loss to us or an affiliate, for other accounts under management or to facilitate transactions for customers. Any of these activities could adversely affect the market price of those items or the level of the Indices and, therefore, the market value of the ETNs. We or one or more of our other affiliates may also issue or underwrite other securities or financial or derivative financial instruments with returns

linked or related to changes in the performance of any of the foregoing. By introducing competing products into the marketplace in this manner, we or one or more of our affiliates could adversely affect the market value of the ETNs. With respect to any of the activities described above, neither Barclays Bank PLC nor any of its affiliates has any obligation to take the needs of any buyer, seller or holder of the ETNs into consideration at any time.

**Our Business Activities May Create Conflicts of Interest**

We and our affiliates expect to play a variety of roles in connection with the issuance of the ETNs.

As noted above, we and our affiliates expect to engage in trading activities related to equity securities underlying the S&P 500<sup>®</sup> or listed or over-the-counter options, futures, swaps or other derivative instruments with returns linked to the Indices, the VIX Index (including the VIX futures which are used to calculate the Index), the S&P 500<sup>®</sup> (including the put and call options used to calculate the level of the VIX Index) and the equity securities underlying the S&P 500<sup>®</sup> that are not for the accounts of holders of the ETNs or on their behalf. These trading activities may present a conflict between the holders' interest in the ETNs and the interests that we and our affiliates will have in our and our affiliates' proprietary accounts, in facilitating transactions, including options and other derivatives transactions, for our and our affiliates' customers and in accounts under our and our affiliates' management. These trading activities, if they influence the value of the futures contracts underlying the Indices or level of the Indices, the VIX Index, the S&P 500<sup>®</sup> or any financial instrument linked thereto, could be adverse to the interests of the holders of the ETNs.

Moreover, we and our affiliates have published and in the future may publish research reports with respect to equity securities underlying the S&P 500<sup>®</sup> or listed or over-the-counter options, futures, swaps or other derivative financial instruments linked to the Indices, the VIX Index (including the VIX futures which are used to calculate the Index), the S&P 500<sup>®</sup> (including the put and call options used to calculate the level of the VIX Index) and the equity securities underlying the S&P 500<sup>®</sup>. This research is modified from time to time without notice and may express opinions or provide recommendations that are inconsistent with purchasing or holding the ETNs. The research should not be viewed as

a recommendation or endorsement of the ETNs in any way and investors must make their own independent investigation of the merits of your investment.

Any of these activities by us, Barclays Capital Inc. or our other affiliates may affect the market price of equity securities underlying the S&P 500® or listed or over-the-counter options, futures, swaps or other derivative financial instruments linked to the Indices, the VIX Index (including the VIX futures which are used to calculate the Index), the S&P 500® (including the put and call options used to calculate the level of the VIX Index) and the equity securities underlying the S&P 500® and, therefore, the market value of the ETNs. With respect to any of the activities described above, neither Barclays Bank PLC nor its affiliates has any obligation to take the needs of any buyer, seller or holder of the ETNs into consideration at any time.

### ***Risks Relating to Tax Consequences***

#### **The Tax Consequences Are Uncertain**

The U.S. federal income tax treatment of each series of ETNs is uncertain and the IRS could assert that either series of ETNs should be taxed in a manner that is different from that described in this pricing supplement. As discussed further below, the U.S. Treasury Department and the IRS issued a notice in 2007 indicating that the U.S. Treasury Department and the IRS are actively considering whether, among other issues, you should be required to accrue interest over the term of an instrument such as the ETNs and whether all or part of the gain you may recognize upon the sale, early redemption or maturity of an instrument such as the ETNs should be treated as ordinary income. It is impossible to anticipate how any ultimate guidance would affect the tax treatment of instruments such as the ETNs.

Moreover, each series of ETNs might be treated as debt instruments. In that event, if you are a U.S. Holder, you will be required under Treasury regulations relating to the taxation of “contingent payment debt instruments” to accrue into income original issue discount on the ETNs every year at a “comparable yield” determined at the time of issuance and recognize any gain on the ETNs as ordinary income. It is also possible that the IRS could seek to tax your ETNs by reference to your deemed ownership of the relevant Index components. In this case, it is possible that Section 1256 of the Internal Revenue Code (the “Code”) could apply to your ETNs, in which case any gain or loss that you recognize with respect

to the ETNs that is attributable to the regulated futures contracts represented in the relevant Index would be treated as 60% long-term capital gain or loss and 40% short-term capital gain or loss, without regard to your holding period in the ETNs, and you would be required to mark such portion of the relevant ETNs to market at the end of each taxable year (i.e., recognize gain and loss as if the relevant portion of your ETNs had been sold for fair market value).

Even if the ETNs are treated as prepaid forward contracts, due to the lack of controlling authority, there remain substantial uncertainties regarding the tax consequences of an investment in the ETNs. For example, the IRS could assert that a “deemed” taxable exchange has occurred on one or more roll dates or Index rebalance dates under certain circumstances. If the IRS were successful in asserting that a taxable exchange had occurred, you could be required to recognize gain (but probably not loss) prior to a taxable disposition of your ETNs.

**For a discussion of the U.S. federal income tax treatment applicable to your ETNs as well as other potential alternative characterizations for your ETNs, please see the discussion under “Material U.S. Federal Income Tax Considerations” below. You should consult your tax advisor as to the possible alternative treatments in respect of the ETNs.**

## CONSENT TO U.K. BAIL-IN POWER

Notwithstanding and to the exclusion of any other term of the ETNs or any other agreements, arrangements or understandings between us and any holder or beneficial owner of the ETNs, by acquiring the ETNs, each holder and beneficial owner of the ETNs acknowledges, accepts, agrees to be bound by, and consents to the exercise of, any U.K. Bail-in Power by the relevant U.K. resolution authority.

Under the U.K. Banking Act of 2009, as amended, the relevant U.K. resolution authority may exercise a U.K. Bail-in Power in circumstances in which the relevant U.K. resolution authority is satisfied that the resolution conditions are met. These conditions include that a U.K. bank or investment firm is failing or is likely to fail to satisfy the Financial Services and Markets Act 2000 (“**FSMA**”) threshold conditions for authorization to carry on certain regulated activities (within the meaning of section 55B FSMA) or, in the case of a U.K. banking group company that is a European Economic Area (“**EEA**”) or third country institution or investment firm, that the relevant EEA or third country relevant authority is satisfied that the resolution conditions are met in respect of that entity.

The U.K. Bail-in Power includes any write-down, conversion, transfer, modification and/or suspension power, which allows for (i) the reduction or cancellation of all, or a portion, of the principal amount of, interest on, or any other amounts payable on, the ETNs; (ii) the conversion of all, or a portion, of the principal amount of, interest on, or any other amounts payable on, the ETNs into shares or other securities or other obligations of Barclays Bank PLC or another person (and the issue to, or conferral on, the holder or beneficial owner of the ETNs such shares, securities or obligations); (iii) the cancellation of the ETNs and/or (iv) the

amendment or alteration of the maturity of the ETNs, or amendment of the amount of interest or any other amounts due on the ETNs, or the dates on which interest or any other amounts become payable, including by suspending payment for a temporary period; which U.K. Bail-in Power may be exercised by means of a variation of the terms of the ETNs solely to give effect to the exercise by the relevant U.K. resolution authority of such U.K. Bail-in Power. Each holder and beneficial owner of the ETNs further acknowledges and agrees that the rights of the holders or beneficial owners of the ETNs are subject to, and will be varied, if necessary, solely to give effect to, the exercise of any U.K. Bail-in Power by the relevant U.K. resolution authority. For the avoidance of doubt, this consent and acknowledgment is not a waiver of any rights holders or beneficial owners of the securities may have at law if and to the extent that any U.K. Bail-in Power is exercised by the relevant U.K. resolution authority in breach of laws applicable in England.

For more information, please see “Risk Factors—Risks Relating to the Issuer—You May Lose Some or All of Your Investment If Any U.K. Bail-in Power Is Exercised by the Relevant U.K. Resolution Authority” in this pricing supplement as well as “U.K. Bail-in Power,” “Risk Factors—Risks Relating to the Securities Generally—Regulatory action in the event a bank or investment firm in the Group is failing or likely to fail, including the exercise by the relevant U.K. resolution authority of a variety of statutory resolution powers, could materially adversely affect the value of any securities” and “Risk Factors—Risks Relating to the Securities Generally—Under the terms of the securities, you have agreed to be bound by the exercise of any U.K. Bail-in Power by the relevant U.K. resolution authority” in the accompanying prospectus supplement.

## THE INDICES

We have derived the following description of the Indices from the S&P U.S. Index Committee Rules, which governs the management and calculation of the Indices and is published by the index sponsor. We have also derived certain information about the Indices, the S&P 500® Index and the VIX Index from public sources without independent verification.

Each Index seeks to provide investors with exposure to one or more maturities of futures contracts on the VIX Index, which reflects forward implied volatility of the S&P 500® Index at various points along the volatility forward curve. The VIX Index is calculated based on the prices of put and call options on the S&P 500® Index. Each Index is intended to reflect the returns that are potentially available through an unleveraged investment in the relevant futures contract or contracts on the VIX Index plus the rate of interest that could be earned on reinvestment into the Index of the return on the notional value of the Index based on the 3-month U.S. Treasury rate. Specifically, the S&P 500® VIX Short-Term Futures™ Index TR measures the return from a daily rolling long position in the first and second month VIX futures contracts, and the S&P 500® VIX Mid-Term Futures™ Index TR measures the return from a daily rolling long position in the fourth, fifth, sixth and seventh month VIX futures contracts. The total return feature of each Index is based upon interest accrual and reinvestment into the return of the notional value of the relevant Index based on the 3-month U.S. Treasury rate.

Information contained on certain websites mentioned below is not incorporated by reference in, and should not be considered part of, this pricing supplement or the accompanying prospectus supplement and prospectus.

### Publication of Index Values

The level of each of the Indices is calculated in accordance with the method described in “—Composition of the Indices” below. The value of each Index in real time and at the close of trading on each index business day will be published by

Bloomberg Professional Services (“**Bloomberg**”) or a successor under the following ticker symbols:

Index	Ticker
S&P 500® VIX Short-Term Futures™ Index TR	SPVXSTR
S&P 500® VIX Mid-Term Futures™ Index TR	SPVXMTR

Each Index is calculated as described below under “—Composition of the Indices” and “—Calculation of the Indices”. We will first describe the S&P 500® Index and the VIX Index and provide an overview of the futures markets generally before describing the Indices in detail.

### The S&P 500® Index

All information contained in this pricing supplement regarding the S&P 500® Index, including, without limitation, its make-up, method of calculation and changes in its components, has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, the index sponsor. The S&P 500® Index is calculated, maintained and published by the index sponsor. The S&P 500® Index is calculated, maintained and published by the index sponsor. The index sponsor has no obligation to continue to publish, and may discontinue the publication of, the S&P 500® Index. The S&P 500® Index is reported by Bloomberg under the ticker symbol “SPX”.

The S&P 500® Index consists of stocks of 500 companies selected to provide a performance benchmark for the U.S. equity markets. The S&P 500® Index is a float-adjusted market capitalization-weighted index. On any given day, the index value of the S&P 500® Index is the total float-adjusted market capitalization of its constituents *divided* by its divisor. The float-adjusted market capitalization reflects the price of each stock in the S&P 500® Index *multiplied* by the number of shares used in the index value calculation.

Additions to the S&P 500® Index are evaluated based as follows:

- *Domicile*. The company should be a U.S. company, meaning a company that has the following characteristics:
  - the company should file 10-K annual reports;

- the U.S. portion of fixed assets and revenues should constitute a plurality of the total but need not exceed 50%. When these factors are in conflict, fixed assets determine plurality. Revenue determines plurality when there is incomplete asset information. Geographic information for revenue and fixed asset allocations are determined by the company as reported in its annual filings. If this criteria is not met or is ambiguous, the index sponsor may still deem the company to be a U.S. company for index purposes if its primary listing, headquarters and incorporation are all in the United States and/or “**a domicile of convenience**” (Bermuda, Channel Islands, Gibraltar, islands in the Caribbean, Isle of Man, Luxembourg, Liberia or Panama); and
- the primary listing must be on an eligible U.S. exchange as described under “—*Exchange Listing*” below.

In situations where the only factor suggesting that a company is not a U.S. company is its tax registration in a domicile of convenience or another location chosen for tax-related reasons, the index sponsor normally determines that the company is still a U.S. company. The final determination of domicile eligibility is made by the index sponsor’s U.S. index committee.

- *Exchange Listing.* A primary listing on one of the following U.S. exchanges is required: New York Stock Exchange, NYSE Arca, NYSE American, Nasdaq Global Select Market, Nasdaq Select Market, Nasdaq Capital Market, Cboe BZX, Cboe BYX, Cboe EDGA or Cboe EDGX exchanges. Ineligible exchanges include the OTC Bulletin Board and Pink Sheets.
- *Organizational Structure and Share Type.* Eligible organizational structures and share types are corporations, including equity and mortgage real estate investment trusts (“**REITs**”), and common stock (*i.e.*, shares). Ineligible organizational structures and share types include, but are not limited to, business development companies, limited partnerships, master limited partnerships, limited liability companies, closed-end funds, exchange-traded funds, exchange-traded notes, royalty trusts, special purposes acquisition companies, tracking stocks,

preferred and convertible preferred stock, unit trusts, equity warrants, convertible bonds, investment trusts, rights and American depositary receipts.

As of July 2017, the securities of companies with multiple share class structures (including companies with listed and unlisted share classes) are no longer eligible to be added to the S&P 500® Index, but securities already included in the S&P 500® Index have been grandfathered and are not affected by this change.

- *Market Capitalization.* The total company market capitalization should be within a specified range for the S&P 500® Index. These ranges are reviewed quarterly and updated as needed to ensure they reflect current market conditions. A company meeting the total company market capitalization criteria is also required to have a security level float-adjusted market capitalization (“**FMC**”) that is at least 50% of the S&P 500® Index’s total company level minimum market capitalization threshold. For spin-offs, S&P 500® Index membership eligibility is determined using when-issued prices, if available.
- *Liquidity.* A float-adjusted liquidity ratio (“**FALR**”), defined as the annual dollar value traded divided by the FMC, is used to measure liquidity. Using composite pricing and consolidated volume (excluding dark pools) across all venues (including historical values), annual dollar value traded is defined as the average closing price multiplied by the historical volume over the 365 calendar days prior to the evaluation date. This is reduced to the available trading period for initial public offerings (“**IPOs**”) or spin-offs that do not have 365 calendar days of trading history. In these cases, the dollar value traded available as of the evaluation date is annualized. The price, shares outstanding and IWF (as defined below) as of the evaluation date are used to calculate the FMC. The evaluation date is the open of trading on the day prior to the announcement date. The stock should trade a minimum of 250,000 shares in each of the six months leading up to the evaluation date. The FALR must be greater than or equal to 1.0 at the time of addition to the S&P 500® Index. Current index constituents have no minimum requirement.

- *Financial Viability.* The sum of the most recent four consecutive quarters' Generally Accepted Accounting Principles (“**GAAP**”) earnings (net income excluding discontinued operations) should be positive as should the most recent quarter. For equity REITs, financial viability is based on GAAP earnings and/or funds from operations, if reported.
- *Treatment of IPOs.* IPOs should be traded on an eligible exchange for at least 12 months before being considered for addition to the S&P 500® Index. For former special purpose acquisition companies (“**SPACs**”), the index sponsor considers the de-SPAC transaction to be an event equivalent to an IPO, and 12 months of trading post the de-SPAC event are required before a former SPAC can be considered for inclusion in the S&P 500® Index. Spin-offs or in-specie distributions from existing constituents do not need to be seasoned for 12 months prior to their inclusion in the S&P 500® Index.
- *Sector Classification.* The company is evaluated for its contribution to sector balance maintenance, as measured by a comparison of each Global Industry Classification Standard sector's weight in the S&P 500® Index with its weight in the S&P Total Market Index, in the relevant market capitalization range. The S&P Total Market Index is a float-adjusted market capitalization-weighted index designed to track the broad U.S. equity market, including large-, mid-, small- and micro-cap stocks.

Companies that migrate from an ineligible exchange, emerge from bankruptcy, are newly designated to be domiciled in the U.S. for index purposes by the index sponsor or convert from an ineligible share or organizational type to an eligible type do not need to trade on an eligible U.S. exchange for 12 months before being considered for addition to the S&P 500® Index.

Current constituents of the S&P 500® Index, the S&P MidCap 400® Index and the S&P SmallCap 600® Index (each, an “**S&P U.S. Index**”) can be migrated from one S&P U.S. Index to another, *provided* they meet the total company level market capitalization eligibility criteria for the new S&P U.S. Index. Migrations from one S&P U.S. Index to another S&P U.S. Index do not need to meet the financial viability, liquidity or 50% of the

new S&P U.S. Index's total company level minimum market capitalization threshold criteria.

Companies that are spun-off from current S&P U.S. Index constituents do not need to meet the outside addition criteria, but they should be considered U.S. domiciled for index purposes and have a total market cap representative of the S&P 500® Index.

Removals from the S&P 500® Index are evaluated based as follows:

- *Companies that are involved in mergers, acquisitions or significant restructuring such that they no longer meet the eligibility criteria.* Companies delisted as a result of merger, acquisition or other corporate action are removed at a time announced by the index sponsor, normally at the close of the last day of trading or expiration of a tender offer. Constituents that are halted from trading may be kept in the S&P 500® Index until trading resumes, at the discretion of the index sponsor's U.S. index committee. If a stock is moved to Pink Sheets or the OTC Bulletin Board, the stock is removed.

Any company that is removed from the S&P 500® Index (including discretionary and bankruptcy/exchange delistings) must wait a minimum of one year from its index removal date before being screened for the eligibility criteria.

- *Companies that substantially violate one or more of the addition criteria.* The index sponsor believes turnover in index membership should be avoided when possible. At times, a stock may appear to temporarily violate one or more of the addition criteria. However, the addition criteria are for addition to the S&P 500® Index, not for continued membership. As a result, the S&P 500® Index constituent that appears to violate criteria for addition to that index is not deleted unless ongoing conditions warrant an index change. When a stock is removed from the S&P 500® Index, the index sponsor explains the basis for the removal.

### **The VIX Index**

All information contained in this pricing supplement regarding the VIX Index, including, without limitation, its make-up, method of

calculation and changes in its components, has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, the CBOE. The VIX Index was developed by the CBOE and is calculated, maintained and published by the CBOE. The CBOE has no obligation to continue to publish, and may discontinue the publication of, the VIX Index. The VIX Index is reported by Bloomberg under the ticker symbol "VIX".

The VIX Index is a benchmark index designed to measure the market price of volatility in large cap U.S. stocks over 30 days in the future, and calculated based on the prices of certain put and call options on the S&P 500® Index. The VIX Index measures the premium paid by investors for certain options linked to the level of the S&P 500® Index. During periods of market instability, the implied level of volatility of the S&P 500® Index typically increases and, consequently, the prices of options linked to the S&P 500® Index typically increase (assuming all other relevant factors remain constant or have negligible changes). This, in turn, causes the level of the VIX Index to increase. Because the VIX Index may increase in times of uncertainty, the VIX Index is known as the "fear gauge" of the broad U.S. equities market. The VIX Index has historically had negative correlations to the S&P 500® Index.

The calculation of the VIX Index involves a formula that uses the prices of a weighted series of out-of-the money put and call options on the level of the S&P 500® Index ("**SPX Options**") with two adjacent expiry terms to derive a constant 30-day forward measure of market volatility. The VIX Index is calculated independent of any particular option pricing model and in doing so seeks to eliminate any biases which may otherwise be included in using options pricing methodology based on certain assumptions.

Although the VIX Index measures the 30-day forward volatility of the S&P 500® Index as implied by the SPX Options, 30-day options are only available once a month. To arrive at the VIX Index level, a broad range of out-of-the money SPX Options expiring on the two closest nearby months ("near term options" and "next term options," respectively) are selected in order to bracket a 30-day calendar period. SPX Options having a maturity of less than eight days are excluded at the outset and, when the near term

options have eight days or less left to expiration, the VIX Index rolls to the second and third contract months in order to minimize pricing anomalies that occur close to expiration. The model-free implied volatility using prices of the near term options and next term options are then calculated on a strike price weighted average basis in order to arrive at a single average implied volatility value for each month. The results of each of the two months are then interpolated to arrive at a single value with a constant maturity of 30 days to expiration.

Futures on the VIX Index were first launched for trading by the CBOE in 2004. VIX Index futures may have expirations that include six near-term expiration weeks, nine near-term serial months and five months of quarterly expiries on the February quarterly cycle.

Investors that believe the implied volatility of the S&P 500® Index will increase may buy VIX futures, expecting that the level of the VIX Index will increase. Conversely, investors that believe that the implied volatility of the S&P 500® Index will decline may sell VIX futures, expecting that the level of the VIX Index will fall.

VIX Index futures are reported by Bloomberg under the ticker symbol "VX".

### **Futures Markets**

Each of the Indices is composed of one or more futures contracts on the VIX Index. Futures contracts on the VIX Index are traded on regulated futures exchanges, in the over-the-counter market and on various types of electronic trading facilities and markets. At present, all of the contracts included in the Indices are exchange-traded futures contracts. An exchange-traded futures contract provides for the purchase and sale of a specified type and quantity of an underlying asset or financial instrument during a stated delivery month for a fixed price. Because the VIX Index is not a tangible item that can be purchased and sold directly, a futures contract on the VIX Index provides for the payment and receipt of cash based on the level of the VIX Index at settlement or liquidation of the contract. A futures contract provides for a specified settlement month in which the cash settlement is made or in which the underlying asset or financial instrument is to be delivered by the seller (whose position is therefore described as "short") and acquired by

the purchaser (whose position is therefore described as “long”).

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

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

Futures contracts are traded on organized exchanges, known as “designated contract markets” in the United States. At any time prior to the expiration of a futures contract, subject to the availability of a liquid secondary market, a trader may elect to close out its position by taking an opposite position on the exchange on which the trader obtained the position. This operates to terminate the position and fix the trader’s profit or loss. Futures contracts are cleared through the facilities of a centralized clearing house and a brokerage firm, referred to as a “futures commission merchant”, which is a member of the clearing house. The clearing house guarantees the performance of each clearing member that is a party to a futures contract by, in effect, taking the opposite side of the transaction. Clearing houses do not guarantee the performance by clearing members of their obligations to their customers.

Unlike equity securities, futures contracts, by their terms, have stated expirations and, at a specified point in time prior to expiration, trading in a futures contract for the current delivery month will cease. As a result, a market participant wishing to maintain its exposure to a futures contract on

a particular asset or financial instrument with the nearest expiration must close out its position in the expiring contract and establish a new position in the contract for the next delivery month, a process referred to as “rolling”. For example, a market participant with a long position in November VIX Index futures that wishes to maintain a position in the nearest delivery month will, as the November contract nears expiration, sell November futures, which serves to close out the existing long position, and buy December futures. This will “roll” the November position into a December position, and, when the November contract expires, the market participant will still have a long position in the nearest delivery month.

Futures exchanges and clearing houses in the United States are subject to regulation by the Commodities Futures Trading Commission. Exchanges may adopt rules and take other actions that affect trading, including imposing speculative position limits, maximum price fluctuations and trading halts and suspensions and requiring liquidation of contracts in certain circumstances. Futures markets outside the United States are generally subject to regulation by comparable regulatory authorities. The structure and nature of trading on non-U.S. exchanges, however, may differ from this description.

### **Composition of the Indices**

The S&P 500<sup>®</sup> VIX Short-Term Futures Index<sup>™</sup> TR and the S&P 500<sup>®</sup> VIX Mid-Term Futures<sup>™</sup> Index TR are indices composed of futures contracts on the VIX Index with a daily rolling position in contracts of specified maturities and are intended to reflect the returns that are potentially available through (1) an unleveraged investment in those contracts plus (2) the rate of interest that could be earned on the return on the notional value of the Index at the specified Treasury Bills rate, which is then reinvested in the Index.

The Indices are rolling Indices, each of which rolls on a daily basis. One of the effects of daily rolling is to maintain a constant weighted average maturity for the underlying futures contracts. The Indices are composed of futures contracts on the VIX Index. Unlike equities, which typically entitle the holder to a continuing stake in a corporation, futures contracts normally specify a certain date for the delivery of the underlying asset or financial

instrument or, in the case of futures contracts relating to indices such as the VIX Index, a certain date for payment in cash of an amount determined by the level of the underlying index. As described in more detail below, the Indices operate by selling futures contracts on the VIX Index on a daily basis, specifying cash settlement on a nearby date and purchasing futures contracts on the VIX Index on a daily basis specifying cash settlement on a later date. The roll for each contract occurs on each index business day according to a pre-determined schedule that has the effect of keeping constant the weighted average maturity of the relevant futures contracts. This process is known as “rolling” a futures position, and each Index is a “rolling index”. The constant weighted average maturity for the futures underlying the S&P 500® VIX Short-Term Futures™ Index TR is one month and for the futures underlying the S&P 500® VIX Mid-Term Futures™ Index TR is five months.

#### Calculation of the Indices

The Indices model returns from a long VIX futures position that is rolled continuously throughout the period between futures expiration dates. The total return version of the Indices incorporates interest accrual on the return of the notional value of the Indices and reinvestment of returns and interest into the Indices. Interest accrues based on the 3-month U.S. Treasury rate. The S&P 500® VIX Short-Term Futures™ Index measures the return from a rolling long position in the first and second month VIX futures contracts. The Index rolls continuously throughout each month from the first month VIX futures contract into the second month VIX futures contract. The S&P 500® VIX Mid-Term Futures™ Index measures the return from a rolling long position in the fourth, fifth, sixth and seventh month VIX futures contracts. The Index rolls continuously throughout each month from the fourth month contract into the seventh month contract while maintaining positions in the fifth month and sixth month contracts. The ETNs are linked to the total return version of the Indices, which includes interest accrual on the return on the notional value of the relevant Index based on the 3-month U.S. Treasury rate and reinvestment into the relevant Index as shown in more detail below.

On any S&P 500 VIX Futures Business Day,  $t$ , each Index is calculated as follows:

$$IndexTR_t = IndexTR_{t-1} * (1 + CDR_t + TBR_t)$$

where:

$IndexTR_{t-1}$  = The Index TR on the preceding business day, defined as any date on which the Index is calculated.

$CDR_t$  = Contract Daily Return, as determined by the following formula:

$$CDR_t = \frac{TWDO_t}{TWDO_{t-1}} - 1$$

where:

$t-1$  = the preceding business day.

$TWDO_t$  Total Dollar Weight Obtained on  $t$ , as determined by the following formula for each of the indices:

$$TWDO_t = \sum_{i=1}^n CRW_{i,t} * DCRP_{i,t}$$

$TWDI_{t-1}$  Total Dollar Weight Invested on  $t-1$ , as determined by the following formula for each of the indices:

$$TWDI_{t-1} = \sum_{i=m}^n CRW_{i,t-1} * DCRP_{i,t-1}$$

where:

$CRW_{i,t}$  = Contract Roll Weight of the  $i^{\text{th}}$  VIX Futures Contract on date  $t$ .

$DCRP_{i,t}$  = Daily Contract Reference Price of the  $i^{\text{th}}$  VIX Futures Contract on date  $t$ .

$m$  = For the S&P 500® VIX Short-Term Futures™ Index  $m=1$ . For the S&P 500® VIX Mid-Term Futures™ Index  $m=4$ .

$n$  = For the S&P 500® VIX Short-Term Futures™ Index  $n=2$ . For the S&P 500® VIX Mid-Term Futures™ Index  $n=7$ .

$TBR_t$  = Treasury Bill Return, as determined by the following formula:

$$TBR_t = \left[ \frac{1}{1 - \frac{91}{360} * TBAR_{t-1}} \right]^{\frac{Delta_t}{91}} - 1$$

where:

$\Delta t_t$  = the number of calendar days between the current and previous business days.

$TBAR_{t-1}$  = the most recent weekly high discount rate for 91-day US Treasury bills effective on the preceding business day. Generally the rates are announced by the US Treasury on each Monday. On Mondays that are bank holidays, Friday's rates will apply. The Bloomberg ticker is USB3MTA.

### *Contract Rebalancing*

The Roll Period starts on the Tuesday prior to the monthly CBOE VIX Futures Settlement Date (the Wednesday falling 30 calendar days before the S&P 500 option expiration for the following month), and runs through the Tuesday prior to the subsequent month's CBOE VIX Futures Settlement Date. Thus, the indices are rolling on a continual basis. On the business date after the current Roll Period ends the following Roll Period will begin. In calculating the Total Return of each of the indices, the Contract Roll Weights ( $CRW_{i,t}$ ) of each of the contracts in the index, on a given day,  $t$ , are determined as follows:

#### S&P 500® VIX Short-Term Futures™ Index

$$CRW_{1,t} = 100 * \frac{dr}{dt}$$

$$CRW_{2,t} = 100 * \frac{dt-dr}{dt}$$

where:

$dt$  = The total number of business days in the current Roll Period beginning with and including, the starting CBOE VIX Futures Settlement Date and ending with, but excluding, the following CBOE VIX Futures Settlement Date. The number of business days stays constant in cases of a new holiday introduced intra-month or an unscheduled market closure.

$dr$  = The total number of business days within a Roll Period beginning with, and including the following business day and ending with, but excluding, the following CBOE VIX Futures Settlement Date. The number of business days includes a new holiday introduced intra-month up to the business day preceding such a holiday.

At the close on the Tuesday, corresponding to the start of the Roll Period, all of the weight is allocated to the first month contract. Then on each subsequent business day a fraction of the first month VIX futures holding is sold and an equal notional amount of the second month VIX futures is bought. The fraction, or quantity, is proportional to the number of first month VIX futures contracts as of the previous index roll day, and inversely proportional to the length of the current Roll Period. In this way the initial position in the first month contract is progressively moved to the second month contract over the course of the month, until the following Roll Period starts when the old second month VIX futures contract becomes the new first month VIX futures contract.

In addition to the transactions described above, the weight of each index component is also adjusted every day to ensure that the change in total dollar exposure for the index is only due to the price change of each contract and not due to using a different weight for a contract trading at a higher price.

#### S&P 500® VIX Mid-Term Futures™ Index

$$CRW_{4,t} = 100 * \frac{dr}{dt}$$

$$CRW_{5,t} = 100$$

$$CRW_{6,t} = 100$$

$$CRW_{7,t} = 100 * \frac{dt-dr}{dt}$$

At the close on the Tuesday, corresponding to the start of the Roll Period, an equal weight is allocated to the fourth, fifth and sixth month contracts. Then on each subsequent business day a fraction of the fourth month VIX futures holding is sold and an equal notional amount of the seventh month VIX futures is bought. The fraction, or quantity, is proportional to the number of fourth month VIX futures contracts as of the previous index roll day, and inversely proportional to the length of the current Roll Period. In this way the initial position in the fourth month contract is progressively moved to the seventh month contract over the course of the month, until the following Roll Period start when the old fifth month VIX futures contract becomes the new fourth month VIX futures contract.

In addition to the transactions described above, the weight of each index component is also adjusted every day to ensure that the change in total dollar exposure for the index is only due to the price change of each contract and not due to using a different weight for a contract trading at a higher price.

### Index Maintenance

#### Base Dates

The base date of each of the Indices is December 20, 2005, and the base level of each of the Indices is 100,000.

#### Historical Assumptions

Prior to April 2008, not all consecutive first to seventh month VIX futures were listed. For the purpose of historical Index calculations, the following assumptions have been made in interpolating VIX futures contract prices from near-by listed contracts.

When  $i^{th}$  future was not listed, but  $i^{th} + 1$  and  $i^{th} - 1$  futures were listed, the following interpolation has been assumed:

$$DCRP_{i,t}^2 = DCRP_{i+1,t}^2 + \frac{BDays(T_i - T_{i-1})}{BDays(T_{i+1} - T_{i-1})} (DCRP_{i+1,t}^2 - DCRP_{i-1,t}^2)$$

When  $i^{th}$  and  $i^{th} + 1$  futures were not listed, but  $i^{th} + 2$  and  $i^{th} - 1$  futures were listed, the following interpolation has been assumed:

$$DCRP_{i,t}^2 = DCRP_{i+2,t}^2 + \frac{BDays(T_i - T_{i-1})}{BDays(T_{i+2} - T_{i-1})} (DCRP_{i+2,t}^2 - DCRP_{i-1,t}^2)$$

When  $i^{th}$ ,  $i^{th} + 1$  and  $i^{th} + 2$  futures were not listed, the following interpolation has been assumed:

$$DCRP_{i,t}^2 = DCRP_{i+1,t}^2 + \frac{BDays(T_i - T_{i-1})}{BDays(T_{i-1} - T_{i-2})} (DCRP_{i+1,t}^2 - DCRP_{i+2,t}^2)$$

where:

$T_i$  = Expiration of the  $i^{th}$  VIX Futures contract

$BDays$  = Number of business days between VIX Futures Expiration Days

#### Unscheduled Exchange Closures and New Holidays

In situations where an exchange is forced to close early due to unforeseen events, such as

computer or electric power failures, weather conditions or other events, the index sponsor will calculate the level of the relevant Index based on the most recent prior closing futures price published by the CBOE Futures Exchange and the roll for that day is carried to the next CBOE business day as described above under "Composition of the Indices—Contract Rebalancing". If an exchange fails to open due to unforeseen circumstances, the index sponsor may determine not to publish the affected Index for that day. The daily roll percentage is determined on the day when the relevant Index is fully rolled from the first month contract to the second month contract, and stays constant throughout the month. If the relevant Index is not calculated or published due to unforeseen circumstances during the month, the unrolled portion for that day is carried to the next CBOE business day. It does not change the daily roll percentage on the remaining days of the month.

In situations where an exchange introduces a holiday during the month of the index calculation the affected Index is not be published and the roll for that day is carried to the next CBOE business day as described above under "Composition of the Indices—Contract Rebalancing".

#### Real-time Index Calculation

S&P Dow Jones Indices generally calculates intraday index calculations using real-time exchange traded prices. S&P Dow Jones Indices does not calculate with each traded price, but rather, calculates on a pre-determined fixed interval (e.g. every 5 seconds). At each fixed interval, the relevant Index is computed with the latest real-time pricing for each component included in that Index. If a new price is not available since the last real-time calculation, the calculation will leverage the last available traded price provided by the exchange. In the absence of a real-time traded price for a given component, the calculation will leverage the prior days' closing price.

S&P Dow Jones Indices also maintains price thresholds for real-time components and indices to prevent unusually large price movements or incorrect price adjustments to adversely impact index calculations.

- Component Level: In the event a component price breaches a threshold, S&P Dow Jones Indices will temporarily hold the last price prior to the breach. For index calculations, a

held component will continue to be included in the calculation but the calculation will use the last accepted price prior to the breach. Once the held price is confirmed or falls back within the acceptable tolerance, the latest real-time price for this component will be used for index calculations.

- **Index Level:** In the event an index calculation breaches a threshold, S&P Dow Jones Indices will temporarily hold the last index value prior to the breach. While the index is held, the last held index value will be distributed as defined by the set dissemination frequency. Once the held index value is confirmed or falls back within the acceptable tolerance, index calculations will resume with the latest market data.

In the event there is a disruption in intraday calculations, S&P Dow Jones Indices will not recalculate the impacted period.

#### **Index Governance**

The Commodities Index Committee (the “**Index Committee**”) maintains the Indices. All members of the Index Committee are full-time professionals at S&P Dow Jones Indices. The Index Committee meets quarterly. At each meeting, the Index Committee reviews any significant market events. In addition, the Index Committee may revise Index policy for timing of rebalancings or other matters.

The index sponsor considers information about changes to its indices and related matters to be potentially market moving and material. Therefore, all Index Committee discussions are confidential.

In addition to the daily governance of the indices and maintenance of index methodologies, at least once within any 12-month period, the Index Committee reviews the methodology to ensure the indices continue to achieve the stated objectives and that the data and methodology remain effective.

#### **Hypothetical and Actual Historical Performance of the Indices**

The base level of each Index is deemed to have been 100,000 on December 20, 2005 (the “**Index Base Date**”). The index sponsor began calculating each Index on January 22, 2009. Therefore, the historical information for each Index for the period from December 20, 2005 until

January 22, 2009 is hypothetical and is provided as an illustration of how the relevant Index would have performed during the period had the index sponsor begun calculating such Index on the Index Base Date. Historical information from the period from and including January 22, 2009 is based on the actual performance of each Index.

The hypothetical historical information was determined using the methodology currently used to calculate the Indices. The hypothetical historical information does not reflect actual performance of the Indices and has not been verified by an independent third party. Hypothetical historical information has inherent limitations and is achieved by means of a retroactive setting of the selection criteria designed with the benefit of hindsight. Alternative selection criteria or assumptions may produce different hypothetical historical information that might prove to be more appropriate and that might differ significantly from the hypothetical historical information provided below.

All calculations of historical information are based on information obtained from various third-party independent and public sources, without independent verification.

The hypothetical and actual historical performance of the Indices shown below should not be taken as an indication of future performance, and no assurance can be given that the level of any Index will increase sufficiently to cause holders of the ETNs to receive any return on their initial investment at maturity or upon early redemption of the ETNs. The hypothetical and actual historical performance of the Indices shown below does not represent the performance of the ETNs, which are subject to certain fees.

The following tables illustrate the hypothetical and actual monthly and annual performance of each Index based on the hypothetical monthly returns of each Index for each calendar month from January 2006 through December 2008 and the actual monthly returns of each Index for each calendar month from including January 2009 onwards, with January 2009 monthly return data including hypothetical performance data until January 22, 2009.

## S&P 500® VIX Short-Term Futures™ Index Total Return Hypothetical and Actual Periodic Returns\*

Source: Based on publicly available Bloomberg data

	January	February	March	April	May	June	July	August	September	October	November	December	Year
2006	-10.97%	-7.75%	-5.76%	-3.56%	28.30%	-8.58%	1.74%	-14.19%	-8.16%	-23.08%	-5.88%	-3.29%	-50.85%
2007	-13.65%	5.81%	7.30%	-9.82%	-1.97%	14.45%	25.33%	19.96%	-15.42%	-1.82%	23.92%	-6.86%	42.93%
2008	7.50%	3.44%	0.64%	-20.18%	-14.13%	14.50%	-2.94%	-6.99%	36.59%	117.29%	16.75%	-17.56%	126.49%
2009	6.60%	5.40%	4.36%	-17.50%	-18.33%	77.00%	-9.01%	-4.53%	-15.88%	-3.14%	-15.99%	-16.27%	-30.37%
2010	-5.65%	-18.10%	-19.07%	0.35%	37.97%	7.92%	-28.20%	-3.38%	-20.23%	-24.37%	-5.61%	-24.13%	-71.99%
2011	-14.29%	-6.31%	-1.92%	-21.46%	-8.34%	-0.85%	11.59%	66.19%	38.76%	-24.18%	1.98%	-13.93%	-3.72%
2012	-24.82%	-7.87%	-32.63%	-1.07%	28.71%	-29.05%	-9.17%	-15.49%	-22.66%	5.54%	-21.86%	6.96%	-77.92%
2013	-22.91%	0.69%	-17.21%	-6.00%	2.61%	7.26%	-27.83%	13.28%	-13.03%	-12.70%	-11.64%	-6.00%	-65.72%
2014	17.32%	-13.11%	-2.44%	-4.82%	-16.41%	-15.03%	12.66%	-11.84%	10.60%	-2.43%	-9.46%	14.19%	-25.50%
2015	14.84%	-24.22%	-5.97%	-14.83%	-13.37%	7.36%	-21.43%	71.16%	-4.90%	-26.97%	-0.97%	6.66%	-36.05%
2016	19.84%	4.21%	-29.28%	-5.31%	-19.23%	1.41%	-25.52%	-11.08%	-4.60%	0.01%	-17.87%	-9.46%	-67.81%
2017	-23.70%	-5.26%	-13.85%	-5.24%	-10.59%	-4.06%	-13.53%	4.16%	-14.95%	-13.51%	-4.98%	-12.49%	-72.11%
2018	5.86%	50.09%	3.09%	-19.02%	-8.14%	4.82%	-15.86%	-8.24%	-7.46%	43.68%	-6.21%	45.07%	68.10%
2019	-32.60%	-11.97%	-1.92%	-11.69%	-10.47%	13.31%	-2.58%	-7.19%	-14.13%	-21.39%	-12.74%	-14.46%	-66.71%
2020	10.97%	40.72%	107.42%	-24.18%	-21.37%	1.52%	-13.30%	-5.39%	-7.80%	6.01%	-33.65%	-2.97%	17.22%
2021	15.20%	-19.46%	-23.44%	-9.07%	-10.57%	-17.00%	-4.72%	-18.89%	11.89%	-22.79%	19.13%	-27.31%	-72.20%
2022	15.83%	12.22%	-15.19%	24.74%	-15.35%	4.44%	-19.98%	0.31%	17.54%	-16.22%	-15.49%	-5.26%	-23.06%
2023	-19.68%	1.72%	-2.48%	-15.72%	-8.86%	-27.65%							

\* Monthly and annual returns for which some or all performance data reflects actual historical performance marked in blue

**PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS**

## S&P 500® VIX Mid-Term Futures™ Index Total Return Hypothetical and Actual Periodic Returns\*

Source: Based on publicly available Bloomberg data

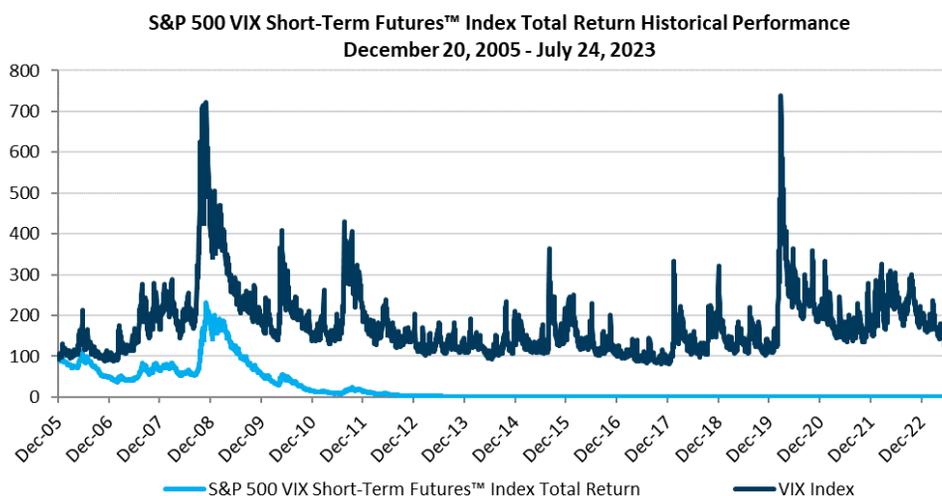
	January	February	March	April	May	June	July	August	September	October	November	December	Year
2006	-5.18%	-4.13%	-8.02%	-0.56%	12.77%	-2.73%	1.71%	-0.34%	2.80%	-12.55%	-3.63%	2.18%	-18.16%
2007	-8.96%	-0.95%	0.49%	-1.30%	3.94%	10.23%	27.41%	3.60%	-9.15%	8.03%	15.96%	-0.04%	53.88%
2008	3.58%	5.09%	1.10%	-11.16%	1.04%	4.16%	-3.19%	2.51%	13.28%	44.00%	15.10%	-4.04%	83.92%
2009	1.89%	6.65%	2.59%	-7.19%	-14.61%	77.00%	0.01%	2.26%	-3.43%	-2.45%	0.90%	-7.80%	40.14%
2010	-3.57%	-5.16%	-3.85%	7.04%	23.80%	10.48%	-13.32%	8.07%	-5.82%	-13.97%	-0.37%	-10.83%	-13.19%
2011	-12.02%	-3.75%	-1.71%	-6.88%	-2.50%	1.35%	-3.27%	28.81%	16.67%	-15.96%	7.55%	-8.19%	-7.61%
2012	-9.70%	1.26%	-17.41%	-0.78%	13.13%	-12.24%	-5.70%	-2.50%	-17.78%	-5.83%	-10.60%	-0.42%	-52.85%
2013	-18.63%	-3.10%	-3.24%	-6.68%	5.97%	8.51%	-16.64%	6.53%	-7.49%	-4.23%	-5.31%	-7.81%	-43.77%
2014	3.21%	-4.19%	-2.80%	-3.18%	-3.96%	-9.87%	1.41%	-3.71%	6.49%	-2.18%	-2.53%	4.56%	-16.49%
2015	7.07%	-10.47%	0.91%	-5.02%	-6.46%	1.01%	-7.80%	27.31%	-0.74%	-15.33%	-0.26%	0.40%	-14.23%
2016	8.69%	5.99%	-14.97%	3.64%	-6.31%	1.80%	-8.46%	-0.46%	-3.14%	-1.99%	-4.48%	-1.32%	-21.04%
2017	-12.20%	-3.61%	-10.31%	-5.79%	-2.20%	-6.26%	-8.08%	3.96%	-3.69%	-8.35%	1.76%	-0.0912	-48.87%
2018	0.03%	0.25%	3.95%	-9.02%	-4.43%	2.27%	-6.72%	-1.68%	-2.81%	21.53%	-2.72%	16.29%	27.24%
2019	-13.42%	-8.34%	2.09%	-0.88%	5.76%	-6.20%	2.49%	8.13%	-0.67%	-6.14%	-0.74%	-6.40%	-18.97%
2020	1.69%	12.34%	65.87%	-6.05%	-6.47%	2.23%	-0.50%	1.57%	1.37%	0.92%	-11.41%	1.98%	78.72%
2021	13.21%	-1.50%	-13.13%	-0.05%	-4.03%	-5.35%	4.46%	-5.27%	6.80%	-5.78%	8.61%	-6.87%	-15.57%
2022	-0.09%	5.20%	-1.75%	11.64%	-2.09%	3.24%	-7.59%	2.67%	6.57%	-6.43%	-6.53%	-1.42%	1.59%
2023	-17.19%	3.33%	3.54%	0.20%	-6.41%	-17.98%							

\* Monthly and annual returns for which some or all performance data reflects actual historical performance marked in blue

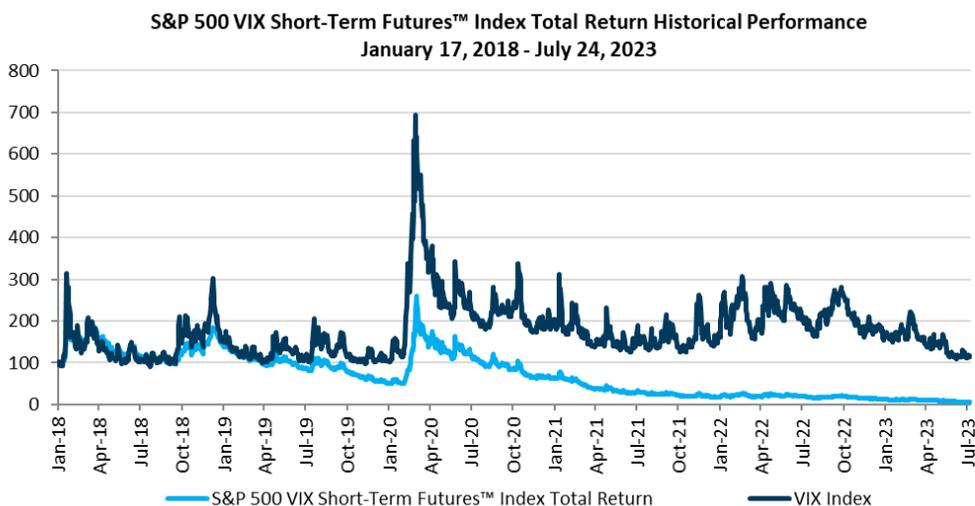
**PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS**

The following graphs show the hypothetical performance of each Index during the period from the Index Base Date through January 21, 2009 and the actual performance of each Index during the period from January 22, 2009 through July 24, 2023 and from January 17, 2018 through July 24, 2023, in each case as compared to the historical performance of the VIX Index, with the levels of each Index and the VIX Index normalized based on an initial level of 100 as of the start date of the graph.

Hypothetical and actual historical performance of the Indices is not an indication of future performance. Future performance of the Indices may differ significantly from hypothetical and actual historical performance, either positively or negatively.

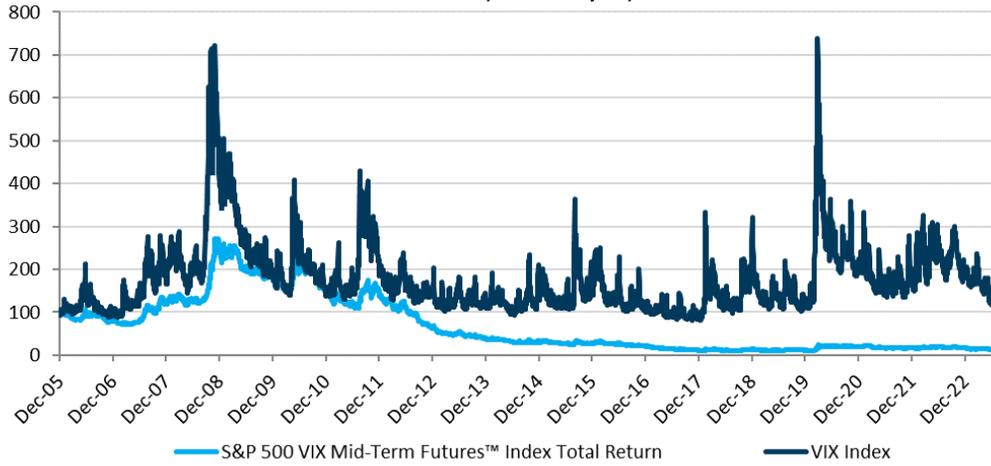


**PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS**



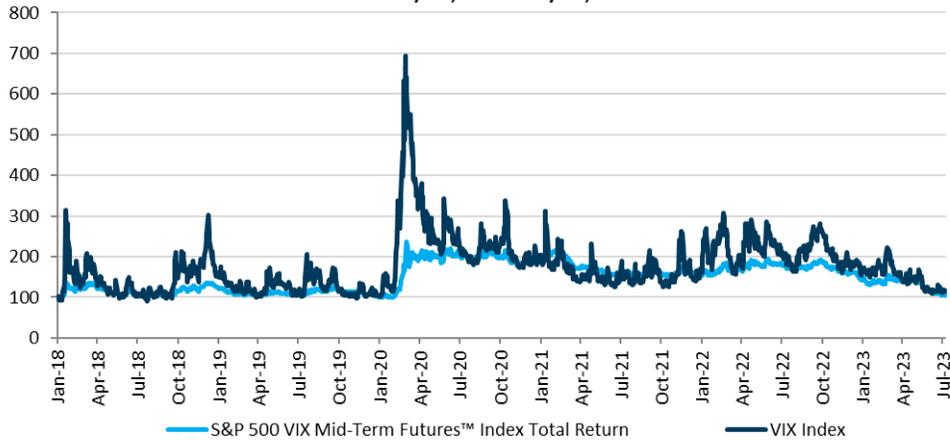
**PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS**

**S&P 500 VIX Mid-Term Futures™ Index Total Return Historical Performance  
December 20, 2005 - July 24, 2023**



**PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS**

**S&P 500 VIX Mid-Term Futures™ Index Total Return Historical Performance  
January 17, 2018 - July 24, 2023**



**PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS**

## LICENSE AGREEMENT

The S&P 500 VIX Futures Indices are products of S&P Dow Jones Indices LLC (“SPDJI”). S&P®, S&P 500®, S&P 500® VIX Short-Term Futures™ and S&P 500® VIX Mid-Term Futures™ are trademarks of Standard & Poor’s Financial Services LLC (“SPFS”). VIX® is a registered trademark of Chicago Board Options Exchange, Incorporated (“CBOE”). These trademarks have been licensed to S&P Dow Jones Indices LLC (“SPDJI”) and its affiliates, and sublicensed to Barclays Bank PLC for certain purposes.

The ETNs are not sponsored, endorsed, sold or promoted by SPDJI, SPFS, CBOE, or any of their respective affiliates (collectively, “S&P Dow Jones Indices”). S&P Dow Jones Indices does not make any representation or warranty, express or implied, to the holders of the ETNs or any member of the public regarding the advisability of investing in securities generally or in the ETNs particularly or the ability of the S&P 500 VIX Futures Indices to track general market performance. S&P Dow Jones Indices’ only relationship to Barclays Bank PLC with respect to the S&P 500 VIX Futures Indices are the licensing of the S&P 500 VIX Futures Indices and certain trademarks, service marks and/or trade names of S&P Dow Jones Indices and/or its licensors. The S&P 500 VIX Futures Indices are determined, composed and calculated by SPDJI without regard to Barclays Bank PLC or the ETNs. SPDJI has no obligation to take the needs of Barclays Bank PLC or the holders of the ETNs into consideration in determining, composing or calculating the S&P 500 VIX Futures Indices. S&P Dow Jones Indices is not responsible for and has not participated in the determination of the prices, and amount of the ETNs or the timing of the issuance or sale of the ETNs or in the determination or calculation of the equation by which the ETNs are to be converted into cash, surrendered or redeemed, as the case may be. S&P Dow Jones Indices has no obligation or liability in connection with the administration, marketing or trading of the ETNs. There is no assurance that investment products based on the S&P 500 VIX Futures Indices will accurately track the performance of the index or provide positive investment returns. SPDJI is not an investment advisor. Inclusion of a security within the S&P 500 VIX Futures Indices are not a recommendation by S&P Dow Jones Indices to buy, sell, or hold such security, nor is it considered to be investment advice. In addition,

CME Group Inc. and its affiliates may trade financial products which are linked to the performance of the S&P 500 VIX Futures Indices. It is possible that this trading activity will affect the value of the S&P 500 VIX Futures Indices and the ETNs.

S&P DOW JONES INDICES DOES NOT GUARANTEE THE ADEQUACY, ACCURACY, TIMELINESS AND/OR THE COMPLETENESS OF THE S&P 500 VIX FUTURES INDICES OR ANY DATA RELATED THERETO OR ANY COMMUNICATION (INCLUDING BUT NOT LIMITED TO, ORAL OR WRITTEN COMMUNICATION (INCLUDING ELECTRONIC COMMUNICATIONS)) WITH RESPECT THERETO. S&P DOW JONES INDICES SHALL NOT BE SUBJECT TO ANY DAMAGES OR LIABILITY FOR ANY ERRORS, OMISSIONS, OR DELAYS THEREIN. S&P DOW JONES INDICES MAKES NO EXPRESS OR IMPLIED WARRANTIES, AND EXPRESSLY DISCLAIMS ALL WARRANTIES, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE OR AS TO RESULTS TO BE OBTAINED BY BARCLAYS BANK PLC, HOLDERS OF THE ETNS, OR ANY OTHER PERSON OR ENTITY FROM THE USE OF THE S&P 500 VIX FUTURES INDICES OR WITH RESPECT TO ANY DATA RELATED THERETO. WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT WHATSOEVER SHALL S&P DOW JONES INDICES BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES INCLUDING BUT NOT LIMITED TO, LOSS OF PROFITS, TRADING LOSSES, LOST TIME OR GOODWILL, EVEN IF THEY HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, WHETHER IN CONTRACT, TORT, STRICT LIABILITY, OR OTHERWISE. THERE ARE NO THIRD PARTY BENEFICIARIES OF ANY AGREEMENTS OR ARRANGEMENTS BETWEEN S&P DOW JONES INDICES AND BARCLAYS BANK PLC, OTHER THAN THE LICENSORS OF S&P DOW JONES INDICES.

## MODIFICATIONS TO THE INDICES

The index sponsor may revise Index policy for timing of rebalancings or other matters as described above under “The Indices—Index Governance”. The effect of any such changes is described below under “Specific Terms of the ETNs—Discontinuance or Modification of an

Index". The index sponsor or the calculation agent may also make determinations relating to market disruption and force majeure events as described below.

#### *Market Disruption and Force Majeure Events Relating to the Indices*

If the index sponsor determines, in its sole discretion, that an exchange is forced to close early due to unforeseen events, such as computer or electric power failures, weather conditions or other events, the index sponsor will calculate the value of each Index based on the most recent prior closing futures prices published by the CBOE and the roll of each Index for that day will be carried to the next CBOE business day as described above under "Composition of the Indices—Contract Rebalancing". If an exchange fails to open due to unforeseen circumstances, the index sponsor may determine not to publish an Index for that day.

If an exchange introduces a holiday during the month of an Index calculation, the Index will not be published on that holiday and the roll for that day will be carried to the next CBOE business day as described above under "Composition of the Indices—Contract Rebalancing".

#### **VALUATION OF THE ETNS**

The market value of each series of ETNs will be affected by several factors, many of which are beyond our control. We expect that generally the level of the Index on any day will affect the market value of the ETNs more than any other factors. Other factors that may influence the market value of the ETNs include, but are not limited to, prevailing market prices and forward volatility levels of the U.S. stock markets, the equity securities included in the S&P 500® and the S&P 500®, and prevailing market prices of options on the S&P 500®, the VIX Index, options on the VIX Index, relevant futures contracts on the VIX Index or any other financial instruments related to the S&P 500® and the VIX Index; supply and demand for the ETNs including inventory positions with Barclays Capital Inc. or any market maker and any decision we may make not to issue additional ETNs or to cease or suspend sales of ETNs from inventory; the level of contango or backwardation in the markets for futures contracts on the VIX Index and the roll costs associated with maintaining a rolling position in such futures contracts; the time remaining to the maturity of the ETNs; prevailing rates of interest or the

general interest rate environment; the volatility of securities markets; economic, financial, political, regulatory, geographical or judicial events that affect the level of the underlying Index or the market price or forward volatility of the U.S. stock markets, the equity securities included in the S&P 500®, the S&P 500®, the VIX Index or the relevant futures contracts on the VIX Index; the perceived creditworthiness of Barclays Bank PLC; or supply and demand in the listed and over-the-counter equity derivative markets. See "Risk Factors" in this pricing supplement for a discussion of the factors that may influence the market value of the ETNs prior to maturity.

These factors interrelate in complex ways, and the effect of one factor on the market value of your ETNs may offset or enhance the effect of another factor. See "Risk Factors" in this pricing supplement for a discussion of the factors that may influence the market value of the ETNs prior to maturity.

#### **Intraday Indicative Value**

The "intraday indicative value" is published for reference purposes only and is intended to provide investors with an approximation of the effect that changes in the level of the Index underlying the ETNs during the current trading day would have on the closing indicative value of such series of ETNs from the previous day. The intraday indicative value differs from the closing indicative value in two important respects. First, intraday indicative value is based on the most recent Index level published by the index sponsor, which reflects the most recent reported sales prices for the Index components, rather than the closing indicative value of a series of ETNs for the immediately preceding calendar day. Second, the intraday indicative value only reflects the accrued investor fee for a series of ETNs at the close of business on the preceding calendar day, but does not include any adjustment for the accrued investor fee of such series of ETNs accruing during the course of the current day.

The intraday indicative value for any series is published as a convenience for reference purposes only and does not represent the actual trading price of such ETNs, which may be influenced by bid-offer spreads, hedging and transaction costs and market liquidity, among other factors.

The intraday indicative value for each series of ETNs is calculated and published by ICE Data Indices, LLC (the “**IIV calculation agent**”), or a successor, under the following ticker symbols:

ETNs	Ticker Symbol
iPath® Series B S&P 500® VIX Short-Term Futures™ ETN	VXX.IV
iPath® Series B S&P 500® VIX Mid-Term Futures™ ETN	VXZ.IV

In connection with any series of ETNs, we use the term “intraday indicative value” to refer to the value at a given time on any trading day determined based on the following equation:

$$\text{Intraday Indicative Value} = \frac{\text{Closing Indicative Value on the immediately preceding calendar day}}{\text{X Current Daily Index Factor}}$$

where:

Closing Indicative Value = The closing indicative value of each series of ETNs as described in this pricing supplement; and

Current Daily Index Factor = The most recent published level of the Index underlying the ETNs as reported by the index sponsor / the closing level of that Index on the immediately preceding index business day.

The IIV calculation agent is not affiliated with Barclays Bank PLC and does not approve, endorse, review or recommend Barclays Bank PLC or the ETNs.

The intraday indicative value will be derived from sources deemed reliable, but the IIV calculation agent and its suppliers do not guarantee the correctness or completeness of the intraday indicative value or other information furnished in connection with any series of ETNs. The IIV calculation agent makes no warranty, express or implied, as to results to be obtained by Barclays Bank PLC, Barclays Bank PLC’s customers, holders of the ETNs, or any other person or entity from the use of the intraday indicative value or any data included therein. The IIV calculation agent makes no express or implied warranties, and expressly disclaims all warranties of merchantability or fitness for a particular purpose with respect to the intraday indicative value or any data included therein.

The IIV calculation agent, its employees, subcontractors, agents, suppliers and vendors shall have no liability or responsibility, contingent or otherwise, for any injury or damages, whether

caused by the negligence of the IIV calculation agent, its employees, subcontractors, agents, suppliers or vendors or otherwise, arising in connection with the intraday indicative value or any series of the ETNs, and shall not be liable for any lost profits, losses, punitive, incidental or consequential damages. The IIV calculation agent shall not be responsible for or have any liability for any injuries or damages caused by errors, inaccuracies, omissions or any other failure in, or delays or interruptions of, the intraday indicative value, from whatever cause. The IIV calculation agent is not responsible for the selection of or use of any Index or any series of the ETNs, the accuracy and adequacy of any Index or information used by Barclays Bank PLC and the resultant output thereof.

The intraday indicative value calculation is not intended as a price or quotation, or as an offer or solicitation for the purchase, sale, redemption or termination of your ETNs. The actual trading price of any series of ETNs in the secondary market may vary significantly from their intraday indicative value. See “Risk Factors—Risks Relating to Liquidity and the Secondary Market—The ETNs May Trade at a Substantial Premium to or Discount from the Closing Indicative Value and/or Intraday Indicative Value” in this pricing supplement.

Furthermore, as the intraday indicative value is calculated using the closing indicative value on the immediately preceding calendar day, the intraday indicative value published at any time during a given trading day will not reflect the investor fee that may have accrued over the course of such trading day. Published Index levels from the index sponsor may occasionally be subject to delay or postponement. Any such delays or postponements will affect the current Index level and therefore the intraday indicative value for a series of ETNs. The actual trading price of any series of ETNs may be different from their intraday indicative value.

### **Split or Reverse Split of the ETNs**

On any business day we may elect to initiate a split of your ETNs or a reverse split of your ETNs. Such date shall be deemed to be the “**announcement date**”, and we will issue a notice to holders of the relevant ETNs and a press release announcing the split or reverse split, specifying the effective date of the split or reverse split and the split or reverse split ratio.

If a series of ETNs undergoes a split, we will adjust the terms of such series of ETNs accordingly. For example, if the split ratio is 4 and hence a series of ETNs undergo a 4:1 split, every investor who holds ETNs of such series via DTC on the relevant record date will, after the split, hold four ETNs of such series, and adjustments will be made as described below. The record date for the split will be the 9<sup>th</sup> business day after the announcement date. The closing indicative value of such series of ETNs on such record date will be divided by 4 to reflect the 4:1 split of your ETNs. Any adjustment of the closing indicative value of such series of ETNs will be rounded to 8 decimal places. The split will become effective at the opening of trading of such series of ETNs on the business day immediately following the record date.

In the case of a reverse split of a series of ETNs, we reserve the right to address odd numbers of ETNs of such series (commonly referred to as “**partials**”) in a commercially reasonable manner determined by us in our sole discretion. For example, if the reverse split ratio is 4 and the a series of ETNs undergo a 1:4 reverse split, every investor who holds 4 ETNs of such series via DTC on the relevant record date will, after the reverse split, hold only one ETN of such series and adjustments will be made as described below. The record date for the reverse split will be on the 9<sup>th</sup> business day after the announcement date. The closing indicative value of such series of ETNs on such record date will be multiplied by four to reflect the 1:4 reverse split of your ETNs. Any adjustment of the closing indicative value of such series of ETNs will be rounded to 8 decimal places. The reverse split will become effective at the opening of trading of such series of ETNs on the business day immediately following the record date.

In the case of a reverse split of a series of ETNs, holders who own a number of ETNs of such series on the record date which is not evenly divisible by the split ratio will receive the same treatment as all other holders of such series of ETNs for the maximum number of ETNs of such series they hold which is evenly divisible by the split ratio, and we will have the right to compensate holders for their remaining or “partial” ETNs in a commercially reasonable manner determined by us in our sole discretion. Our current intention is to provide holders with a cash payment for their partials on the 17<sup>th</sup> business day following the announcement date in

an amount equal to the appropriate percentage of the closing indicative value of the reverse split-adjusted ETNs on the 14<sup>th</sup> business day following the announcement date. For example, if the reverse split ratio is 1:4, a holder who held 23 ETNs of the affected series via DTC on the record date would receive 5 post reverse split ETNs of the affected series on the immediately following business day, and a cash payment on the 17<sup>th</sup> business day following the announcement date that is equal to 3/4 of the closing indicative value of the reverse split-adjusted ETNs on the 14<sup>th</sup> business day following the announcement date.

In the event of a reverse split, the redemption amount will be adjusted accordingly by the Issuer, in its sole discretion and in a commercially reasonable manner, to take into account the reverse split.

On April 9, 2021, Barclays Bank PLC announced a reverse split of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs in accordance with the procedures described above. The record date for the reverse split was April 22, 2021 and the reverse split became effective on April 23, 2021. The amount of cash payment due on any partials following the reverse split was determined based on the closing indicative value of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs on April 29, 2021 and such cash payment was made on May 4, 2021. On February 21, 2023, Barclays Bank PLC announced that it intended to implement a second reverse split of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs in accordance with the procedures described above. The record date for the reverse split was March 6, 2023 and the reverse split became effective on March 7, 2023. The amount of cash payment due on any partials following the reverse split was determined based on the closing indicative value of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs on March 13, 2023 and such cash payment was made on March 16, 2023.

## **SPECIFIC TERMS OF THE ETNS**

In this section, references to “holders” mean those who own the ETNs registered in their own names, on the books that we or the Trustee (as defined below), or any successor trustee, as applicable, maintain for this purpose, and not those who own beneficial interests in the ETNs registered in street name or in the ETNs issued in

book-entry form through The Depository Trust Company (“**DTC**”) or another depository. Owners of beneficial interests in the ETNs should read the section entitled “Description of Debt Securities—Legal Ownership; Form of Debt Securities” in the accompanying prospectus.

Each series of ETNs is part of a series of debt securities entitled “Global Medium-Term Notes, Series A” (the “**medium-term notes**”) that we may issue under the senior debt securities indenture, dated September 16, 2004 (as may be amended or supplemented from time to time, the “**Indenture**”), between Barclays Bank PLC and The Bank of New York Mellon, as trustee (the “**Trustee**”), from time to time. This pricing supplement summarizes specific financial and other terms that apply to each series of ETNs. Terms that apply generally to all medium-term notes are described in “Summary—Medium-Term Notes” and “Terms of the Notes” in the accompanying prospectus supplement. The terms described in this pricing supplement supplement those described in the accompanying prospectus, prospectus supplement and any related free writing prospectuses and, if the terms described here are inconsistent with those described in those documents, the terms described here are controlling.

Please note that the information about the price to the public and the proceeds to Barclays Bank PLC on the front cover of this pricing supplement relates only to the initial sale of the ETNs. If you have purchased the ETNs in a market-making transaction after the initial sale, information about the price and date of sale to you will be provided in a separate confirmation of sale.

We describe the terms of each series of ETNs in more detail below.

#### **Inception, Issuance and Maturity**

Each series of ETNs was first sold on January 17, 2018, which we refer to as the “**inception date**”. Each series of ETNs were first issued on January 19, 2018 (the “**issue date**”), and each will be due on January 23, 2048 (the “**maturity date**”).

If the maturity date for a series of ETNs stated on the cover of this pricing supplement is not a business day, the maturity date will be the next following business day. If the final valuation date is postponed (as described above), the maturity date will be the fifth business day following the

final valuation date, as postponed. The calculation agent may postpone the final valuation date—and therefore the maturity date—of the ETNs if a market disruption event occurs or is continuing on a day that would otherwise be the final valuation date or if the level of the Index is not available or cannot be calculated. We describe market disruption events under “—Market Disruption Event” below.

In the event that payment at maturity is deferred beyond the stated maturity date, penalty interest will not accrue or be payable with respect to that deferred payment.

#### **Coupon**

We will not pay you interest during the term of the ETNs.

#### **Denomination**

We will offer the ETNs in denominations of \$435.102064 for the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs and \$16.855272 for the iPath® Series B S&P 500® VIX Mid-Term Futures™. The iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs were issued in denominations of \$27.193879 from, and including, the inception date to, but excluding, April 23, 2021, the effective date of the first 1 for 4 reverse split of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs, and \$108.775516 per ETN, from, and including, April 23, 2021 to, but excluding, March 7, 2023, the effective date of the 1 for 4 reverse split of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs. We reserve the right to initiate a split or reverse split of the ETNs in our sole discretion.

#### **Payment at Maturity**

If you hold your ETNs to maturity, you will receive a cash payment in U.S. dollars per ETN equal to the applicable closing indicative value on the final valuation date.

The “**closing indicative value**” for the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs on the initial valuation date was equal to \$27.193879, and the closing indicative value for the iPath® Series B S&P 500® VIX Mid-Term Futures™ ETNs on the initial valuation date was equal to \$16.855272. On each subsequent calendar day until maturity or early redemption of the relevant series of ETNs, the closing indicative value for that series of ETNs will equal (1) the

closing indicative value for that series on the immediately preceding calendar day *times* (2) the daily index factor for that series on such calendar day (or, if such day is not an index business day, one) *minus* (3) the investor fee for that series on such calendar day.

If the ETNs undergo a split or reverse split, the closing indicative value will similarly be adjusted accordingly.

Barclays Bank PLC implemented a 1 for 4 reverse split of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs, effective at the open of trading on April 23, 2021. For the purpose of calculating the closing indicative value of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs on April 23, 2021, the effective date of the reverse split, the closing indicative value for that series on the immediately preceding calendar day in the above formula was adjusted to approximately \$41.6404, which is equal to the closing indicative value of approximately \$10.4101 on April 22, 2021 *multiplied by* 4. Barclays Bank PLC implemented a second 1 for 4 reverse split of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs, effective at the open of trading on March 7, 2023. For the purpose of calculating the closing indicative value of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs on March 7, 2023, the effective date of the reverse split, the closing indicative value for that series on the immediately preceding calendar day in the above formula was adjusted to approximately \$42.8632, which is equal to the closing indicative value of approximately \$10.7158 on March 6, 2023 *multiplied by* 4.

An “**index business day**” is a day on which the Index is calculated and published by the index sponsor.

The “**daily index factor**” for a series of ETNs on any index business day will equal (1) the closing level of the Index for that series on such index business day *divided by* (2) the closing level of the Index for that series on the immediately preceding index business day.

The “**investor fee**” for each series of ETNs on the initial valuation date was equal to zero. On each subsequent calendar day until maturity or early redemption, the investor fee for each series of ETNs will be equal to (1) 0.89% *times* (2) the closing indicative value for that series on the immediately preceding calendar day *times* (3) the daily index factor for that series on that day (or, if

such day is not an index business day, one) *divided by* (4) 365. Because the investor fee is calculated and subtracted from the closing indicative value on a daily basis, the net effect of the investor fee accumulates over time and is subtracted at the rate of 0.89% per year, which we refer to as the “**investor fee rate**”. The investor fee reduces the daily return of each series of ETNs. Because the net effect of the investor fee is a fixed percentage of the value of each ETN, the aggregate effect of the investor fee will increase or decrease in a manner directly proportional to the value of each ETN and the amount of ETNs that are held, as applicable.

Barclays Bank PLC implemented a 1 for 4 reverse split of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs, effective at the open of trading on April 23, 2021. For the purpose of calculating the investor fee of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs on April 23, 2021, the effective date of the reverse split, the closing indicative value for that series on the immediately preceding calendar day in the above formula was adjusted to approximately \$41.6404, which is equal to the closing indicative value of approximately \$10.4101 on April 22, 2021 *multiplied by* 4. Barclays Bank PLC implemented a second 1 for 4 reverse split of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs, effective at the open of trading on March 7, 2023. For the purpose of calculating the investor fee of the iPath® Series B S&P 500® VIX Short-Term Futures™ ETNs on March 7, 2023, the effective date of the reverse split, the closing indicative value for that series on the immediately preceding calendar day in the above formula was adjusted to approximately \$42.8632, which is equal to the closing indicative value of approximately \$10.7158 on March 6, 2023 *multiplied by* 4.

A “**business day**” means a Monday, Tuesday, Wednesday, Thursday or Friday that is not a day on which banking institutions in New York City generally are authorized or obligated by law, regulation, or executive order to close.

A “**trading day**” for a series of ETNs is a day on which (1) it is a business day in New York City, (2) trading is generally conducted on the CBOE BZX Exchange and (3) trading is generally conducted on the CBOE, in each case as determined by the calculation agent in its sole discretion.

A “**valuation date**” means each trading day from January 17, 2018 to January 17, 2048, inclusive, subject to postponement due to the occurrence of a market disruption event, such postponement not to exceed five trading days. We refer to January 17, 2018 as the “**initial valuation date**” and January 17, 2048 as the “**final valuation date**” for the ETNs.

### **Payment Upon Holder Redemption and Issuer Redemption**

Up to the valuation date immediately preceding the final valuation date, and subject to certain restrictions, you may elect to redeem your ETNs on any redemption date during the term of the ETNs, provided that you present at least 25,000 ETNs of the same series for redemption, or your broker or other financial intermediary (such as a bank or other financial institution not required to register as a broker-dealer to engage in securities transactions) bundles your ETNs for redemption with those of other investors to reach this minimum. We may from time to time, in our sole discretion, reduce this minimum redemption amount on a consistent basis for all holders of ETNs. If you choose to redeem your ETNs, you will receive a cash payment in U.S. dollars for each ETN on the applicable redemption date equal to the closing indicative value applicable to such ETN on the applicable valuation date minus the redemption charge.

The “**redemption charge**” is a one-time charge imposed upon holder redemption and is equal to 0.05% *times* the closing indicative value on the applicable valuation date. The redemption charge is intended to allow us to recoup the brokerage and other transaction costs that we will incur in connection with redeeming the ETNs. The proceeds we receive from the redemption charge may be more or less than such costs.

We may redeem the ETNs (in whole but not in part) at our sole discretion on any business day on or after the inception date until and including maturity. If we redeem the ETNs, you will receive a cash payment in U.S. dollars per ETN in an amount equal to the closing indicative value applicable to such ETN on the applicable valuation date.

### **Redemption Date**

A redemption date is:

- in the case of a holder redemption, the second business day following the applicable valuation date (which must be earlier than the final valuation date) specified in your notice of redemption. Accordingly, the final redemption date will be the second business day following the valuation date that is immediately prior to the final valuation date; and
- in the case of an issuer redemption, the fifth business day following the valuation date that we specify in an issuer redemption notice, which will in no event be prior to the tenth calendar day following the date on which we deliver such notice.

In the event that payment upon early redemption is deferred beyond the original redemption date, penalty interest will not accrue or be payable with respect to that deferred payment.

### **Early Redemption Procedures**

#### *Holder Redemption Procedures*

You may, subject to the minimum redemption amount described above, elect to redeem your ETNs on any redemption date. To redeem your ETNs, you must instruct your broker or other person through whom you hold your ETNs to take the following steps:

- deliver a notice of holder redemption, in proper form, which is attached as Annex A, to us via facsimile or email by no later than 4:00 p.m., New York City time, on the business day prior to the applicable valuation date specified in your notice of redemption. If we receive your notice by the time specified in the preceding sentence, we will respond by sending you a form of confirmation of holder redemption, which is attached as Annex B;
- deliver the signed confirmation of holder redemption to us via facsimile or email in the specified form by 5:00 p.m., New York City time, on the same day. We or our affiliate must acknowledge receipt in order for your confirmation to be effective;
- instruct your DTC custodian to book a delivery vs. payment trade with respect to your ETNs on the valuation date at a price equal to the applicable closing indicative

value minus the redemption charge, facing Barclays DTC 229; and

- cause your DTC custodian to deliver the trade as booked for settlement via DTC at or prior to 10:00 a.m., New York City time, on the applicable redemption date (the second business day following the valuation date).

Different brokerage firms may have different deadlines for accepting instructions from their customers. Accordingly, you should consult the brokerage firm through which you own your interest in the ETNs in respect of such deadlines. If we do not receive your notice of holder redemption by 4:00 p.m., New York City time, or your confirmation of holder redemption by 5:00 p.m., New York City time, on the business day prior to the applicable valuation date specified in your notice of redemption, your notice will not be effective and we will not redeem your ETNs on the applicable redemption date. Any redemption instructions for which we (or our affiliate) receive a valid confirmation in accordance with the procedures described above will be irrevocable.

If you elect to redeem your ETNs on a redemption date that is later in time than the redemption date resulting from our election to exercise our issuer redemption right, your election to redeem your ETNs will be deemed to be ineffective, and your ETNs will instead be redeemed on the redemption date pursuant to such issuer redemption.

**The redemption value is determined according to a formula which relies upon the closing indicative value and will be calculated on a valuation date that will occur after the redemption notice is submitted. It is not possible to publicly disclose, or for you to determine, the precise redemption value prior to your election to redeem. The redemption value may be below the most recent intraday indicative value or closing indicative value of your ETNs at the time when you submit your redemption notice.**

#### *Issuer Redemption Procedures*

We have the right to redeem or “call” the ETNs (in whole but not in part) at our sole discretion without your consent on any business day on or after inception date until and including maturity. If we elect to redeem the ETNs, we will deliver written notice of such election to redeem to the

holders of such ETNs not less than ten calendar days prior to the redemption date on which we intend to redeem the ETNs. In this scenario, the final valuation date will be the date specified by us as such in such notice (subject to postponement in the event of a market disruption event as described above in this pricing supplement), and the ETNs will be redeemed on the fifth business day following such valuation date, but in no event prior to the tenth calendar day following the date on which we deliver such notice.

#### **Market Disruption Event**

If an Index is not published on an index business day, or if a market disruption event or a force majeure event (each as defined below) has occurred or is occurring, and such event affects any Index, any futures contract underlying any Index and/or the ability to hedge any Index, the calculation agent may (but is not required to) make determinations and/or adjustments to the affected Index or method of calculating the affected Index. The determination of the value of an ETN on a valuation date, including the final valuation date, may be postponed if the calculation agent determines that a market disruption or force majeure event has occurred or is continuing on such valuation date. In no event, however, will a valuation date for any series of ETNs be postponed by more than five trading days. If a valuation date is postponed until the fifth trading day following the scheduled valuation date but a market disruption event occurs or is continuing on such day, that day will nevertheless be the valuation date and the calculation agent will make a good faith estimate in its sole discretion of the value of the relevant Index for such day. All determinations and adjustments to be made by the calculation agent may be made in the calculation agent’s sole discretion. See “Risk Factors” in this pricing supplement for a discussion of certain conflicts of interest which may arise with respect to the calculation agent.

The occurrence or existence of any of the following, as determined by the calculation agent in its sole discretion, will constitute a market disruption event:

- the index sponsor does not publish the level of an Index on any index business day;
- a suspension, absence or material limitation of trading of equity securities then constituting 20% or more of the level of the

S&P 500® on the relevant exchanges (as defined below) for such securities for more than one hour of trading during, or during the one hour period preceding the close of, the principal trading session on such relevant exchange;

- a breakdown or failure in the price and trade reporting systems of any relevant exchange for the S&P 500® as a result of which the reported trading prices for equity securities then constituting 20% or more of the level of the S&P 500® are materially inaccurate (i) during the one hour preceding the close of the principal trading session on such relevant exchange or (ii) during any one hour period of trading on such relevant exchange;
- a suspension, absence or material limitation of trading on any relevant exchange for the futures contracts on the VIX Index (or any relevant successor index) for more than one hour of trading during, or during the one hour period preceding the close of, the principal trading session on such relevant exchange;
- a breakdown or failure in the price and trade reporting systems of the relevant exchange for the futures contracts on the VIX Index (or the relevant successor index) as a result of which the reported trading prices for SPX Options or futures contracts on the VIX Index (or futures contracts on the relevant successor index) during the one hour period preceding, and including, the scheduled time at which the value of SPX Options is calculated for purposes of the VIX Index (or the relevant successor index) are materially inaccurate;
- a decision to permanently discontinue trading in SPX Options or futures contracts on the VIX Index (or futures contracts on the relevant successor index);
- on any index business day, the occurrence or existence of a lack of, or a material decline in, the liquidity in the market for trading in any futures contract underlying an Index;
- any event or any condition (including without limitation any event or condition that occurs as a result of the enactment, promulgation, execution, ratification, interpretation or application of, or any change in or amendment to, any law, rule or regulation by

an applicable governmental authority) that results in an illiquid market for trading in any futures contract underlying an Index; and

- the declaration or continuance of a general moratorium in respect of banking activities in any relevant city.

A force majeure event includes any event or circumstance (including, without limitation, a systems failure, natural or man-made disaster, act of God, armed conflict, act of terrorism, riot or labor disruption or any similar intervening circumstance) that the calculation agent determines to be beyond the calculation agent's reasonable control and to materially affect any Index, any futures contract underlying any Index, or the calculation of the VIX Index.

For purposes of determining whether a market disruption event has occurred:

- a limitation on the hours or number of days of trading will not constitute a market disruption event if it results from an announced change in the regular business hours of the relevant exchange for the S&P 500® or the VIX Index (or the relevant successor index);
- limitations pursuant to the rules of any relevant exchange similar to NYSE 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 NYSE Rule 80B as determined by the index sponsor) on trading during significant market fluctuations will constitute a suspension, absence or material limitation of trading;
- a suspension of trading in an SPX Option or a futures contract on the VIX Index (or futures contract on the relevant successor index) by the relevant exchange for the VIX Index (or the relevant successor index) by reason of:
  - a price change exceeding limits set by such relevant exchange,
  - an imbalance of orders relating to such options, or
  - a disparity in bid and ask quotes relating to such options

will, in each such case, constitute a suspension, absence or material limitation of trading on such relevant exchange; and

- a “suspension, absence or material limitation of trading” on any relevant exchange will not include any time when such relevant exchange is itself closed for trading under ordinary circumstances.

“**Relevant exchange**” means, with respect to the S&P 500®, the primary exchange or market of trading for any equity security (or any combination thereof) then included in the S&P 500® or, with respect to the VIX Index or any relevant successor index, the primary exchange or market for SPX Options or futures contracts on the VIX Index (or futures contracts on the relevant successor index).

#### **Default Amount on Acceleration**

For the purpose of determining whether the holders of our medium-term notes, of which the ETNs are a part, are entitled to take any action under the Indenture, we will treat the principal amount of the ETNs outstanding as their principal amount. Although the terms of the ETNs may differ from those of the other medium-term notes, holders of specified percentages in principal amount of all medium-term notes, together in some cases with other series of our debt securities, will be able to take action affecting all the medium-term notes, including the ETNs. This action may involve changing some of the terms that apply to the medium-term notes, accelerating the maturity of the medium-term notes after a default or waiving some of our obligations under the Indenture. We discuss these matters in the attached prospectus under “Description of Debt Securities—Modification and Waiver” and “—Senior Events of Default; Dated Subordinated Enforcement Events and Remedies; Limitations on Suits”.

If an event of default occurs and the maturity of the ETNs is accelerated, the amount declared due and payable upon any acceleration of the ETNs will be determined by the calculation agent and will equal, for each ETN, the closing indicative value on the date of acceleration.

#### **Further Issuances**

We may, without your consent, create and issue additional securities having the same terms and conditions as any series of ETNs. If there is

substantial demand for a series of ETNs, we may issue additional ETNs frequently. We may consolidate the additional securities to form a single class with the outstanding ETNs. However, we are under no obligation to issue or sell additional ETNs at any time, and if we do issue or sell additional ETNs, we may limit such sales and stop selling additional ETNs at any time.

We also reserve the right to cease or suspend sales of ETNs from inventory held by our affiliate Barclays Capital Inc. at any time. If we limit, restrict or stop sales of ETNs, or if we subsequently resume sales of ETNs, the liquidity and trading price of the relevant series of ETNs in the secondary market could be materially and adversely affected.

#### **Discontinuance or Modification of an Index**

If the index sponsor discontinues publication of an Index and they or any other person or entity publishes an index that the calculation agent determines is comparable to the discontinued Index and approves as a successor index, then the calculation agent will determine the level of the relevant Index on the applicable valuation date and the amount payable at maturity or upon early redemption by reference to such successor index.

If the calculation agent determines that the publication of an Index is discontinued and that there is no successor index, or that the closing level of an Index is not available because of a market disruption event or for any other reason, on the date on which the level of that Index is required to be determined, or if for any other reason an Index is not available to us or the calculation agent on the relevant date, the calculation agent will determine the amount payable by a computation methodology that the calculation agent determines will as closely as reasonably possible replicate the relevant Index.

If the calculation agent determines that an Index, the index components of an Index or the method of calculating an Index has been changed at any time in any respect—including any addition, deletion or substitution and any reweighting or rebalancing of index components, and whether the change is made by the index sponsor under its existing policies or following a modification of those policies, is due to the publication of a successor index, is due to events affecting one or more of the index components, or is due to any other reason—then the calculation agent will be

permitted (but not required) to make such adjustments to that Index or method of calculating that Index as it believes are appropriate to ensure that the level of the Index used to determine the amount payable on the maturity date or upon redemption is equitable.

All determinations and adjustments to be made by the calculation agent with respect to the level of an Index and the amount payable at maturity or upon early redemption or otherwise relating to the value of an Index may be made in the calculation agent's sole discretion. See "Risk Factors" in this pricing supplement for a discussion of certain conflicts of interest which may arise with respect to the calculation agent.

#### **Manner of Payment and Delivery**

Any payment on or delivery of a series of ETNs at maturity will be made to accounts designated by you and approved by us, or at the office of the Trustee in New York City, but only when the ETNs are surrendered to the Trustee at that office. We also may make any payment or delivery in accordance with the applicable procedures of DTC.

#### **Role of Calculation Agent**

Currently, Barclays Bank PLC serves as the calculation agent. We may change the calculation agent after the original issue date of the ETNs without notice. The calculation agent will, in its sole discretion, make all determinations regarding the value of each series of ETNs, including at maturity or upon early redemption, market disruption events, business days, index business days, trading days, valuation dates, the daily index factor, the investor fee, the default amount, the level of any index on any valuation date, the closing indicative value of the ETNs on any valuation date, the maturity date, redemption dates, the amount payable in respect of your ETNs at maturity or upon early redemption and any other calculations or determinations to be made by the calculation agent as specified herein. Absent manifest error, all determinations of the calculation agent will be final, conclusive and binding on you and us, without any liability on the part of the calculation agent. You will not be entitled to any compensation from us for any loss suffered as a result of any of the above determinations by the calculation agent.

The calculation agent reserves the right to make adjustments to correct errors contained in

previously published information and to publish the corrected information, but is under no obligation to do so and shall have no liability in respect of any errors or omissions contained in any subsequent publication.

#### **CLEARANCE AND SETTLEMENT**

DTC participants that hold the ETNs through DTC on behalf of investors will follow the settlement practices applicable to equity securities in DTC's settlement system with respect to the primary distribution of the ETNs and secondary market trading between DTC participants.

#### **USE OF PROCEEDS AND HEDGING**

We will use the net proceeds we receive from the sale of the ETNs for the purposes we describe in the accompanying prospectus supplement under "Use of Proceeds and Hedging". We or our affiliates may also use those proceeds in transactions intended to hedge our obligations under the ETNs as described below.

In anticipation of the sale of a series of ETNs, we or our affiliates expect to enter into hedging transactions involving purchases or sales of equity securities underlying the S&P 500<sup>®</sup> or listed or over-the-counter options, futures, swaps or other derivative financial instruments linked to the Indices, the VIX Index (including the VIX futures which are used to calculate the Index), the S&P 500<sup>®</sup> (including the put and call options used to calculate the level of the VIX Index) and the equity securities underlying the S&P 500<sup>®</sup>. In addition, from time to time after we issue a series of ETNs, we or our affiliates may enter into additional hedging transactions or unwind those hedging transactions we have entered into. In this regard, we or our affiliates may:

- acquire or dispose of long or short positions in listed or over-the-counter options, futures, swaps or other derivative financial instruments linked to the Indices, the VIX Index, the S&P 500<sup>®</sup> or any equity securities underlying the S&P 500<sup>®</sup>;
- acquire or dispose of long or short positions in equity securities underlying the S&P 500<sup>®</sup>; or
- any combination of the above.

We or our affiliates may acquire a long or short position in securities similar to a series of ETNs

from time to time and may, in our or their sole discretion, hold or resell those securities.

Our affiliate, Barclays Capital Inc., may make a market in any series of ETNs. In connection with any such market making activities, Barclays Capital Inc. may acquire long or short positions in a series of ETNs, including through options or other derivative financial instruments linked to such ETNs, and may hedge such long or short positions by selling or purchasing the ETNs of such series or entering into options or other derivative financial instruments linked to such ETNs.

We or our affiliates may close out our or their hedge positions on or before the final valuation date. That step may involve sales or purchases of equity securities underlying the S&P 500® or listed or over-the-counter options, futures, swaps or other derivative financial instruments linked to the Indices, the VIX Index (including the VIX futures which are used to calculate the Index), the S&P 500® (including the put and call options used to calculate the level of the VIX Index) and the equity securities underlying the S&P 500®.

**The hedging activity discussed above may adversely affect the level of an Index and, as a consequence, the market value of the ETNs linked to that Index from time to time and the amount payable at maturity or upon early redemption. See “Risk Factors” in this pricing supplement for a discussion of possible adverse effects related to our hedging activities.**

#### **MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS**

The following section supplements the discussion of U.S. federal income taxation in the accompanying prospectus supplement and, when read in combination therewith, is the opinion of Davis Polk & Wardwell LLP, our special tax counsel. The following discussion supersedes the discussion in the accompanying prospectus supplement to the extent it is inconsistent therewith. This section applies to you only if you are a U.S. Holder (as defined below) and you hold your ETNs as capital assets for tax purposes. This discussion does not address all aspects of U.S. federal income taxation that may be relevant to you in light of your particular circumstances, including alternative minimum tax consequences and the application of the “Medicare contribution tax” on investment income. This section does not

apply to you if you are a member of a class of U.S. Holders subject to special rules, such as:

- a dealer in securities;
- a trader in securities that elects to use a mark-to-market method of accounting for your securities holdings;
- a financial institution;
- an insurance company;
- a tax-exempt entity, including an “individual retirement account” or “Roth IRA” as defined in Code Section 408 or 408A, respectively;
- a “regulated investment company” as defined in Code Section 851;
- a “real estate investment trust” as defined in Code Section 856;
- a partnership or other pass-through entity;
- a person that owns an ETN as part of a straddle or conversion transaction for tax purposes or that has entered into a “constructive sale” with respect to the ETN; or
- a person whose functional currency for tax purposes is not the U.S. dollar.

If you are a partnership for U.S. federal income tax purposes, the U.S. federal income tax treatment of your partners will generally depend on the status of your partners and your activities.

This section is based on the Code, its legislative history, existing and proposed regulations under the Code, published rulings and court decisions, all as currently in effect. These laws are subject to change, possibly on a retroactive basis.

**You should consult your tax advisor concerning the U.S. federal income tax and other tax consequences of your investment in the ETNs in your particular circumstances, including the application of state, local or other tax laws and the possible effects of changes in federal or other tax laws.**

You are a U.S. Holder if you are a beneficial owner of an ETN and you are for U.S. federal income tax purposes:

- a citizen or individual resident of the United States;

- a corporation or other entity taxable as a corporation created or organized under the laws of the United States, any state therein or the District of Columbia;
- an estate whose income is subject to U.S. federal income tax regardless of its source; or
- a trust if a U.S. court can exercise primary supervision over the trust's administration and one or more U.S. persons are authorized to control all substantial decisions of the trust.

In the opinion of our special tax counsel, which is based on current market conditions, each series of ETNs should be treated for U.S. federal income tax purposes as prepaid forward contracts with respect to the relevant Index that are not debt instruments. If the ETNs are so treated, you should not recognize taxable income or loss over the term of the ETNs prior to maturity, other than pursuant to a sale, exchange, early redemption, or "deemed exchange" as described below. You should generally recognize capital gain or loss upon the sale, exchange, early redemption or maturity of your ETNs in an amount equal to the difference between the amount you receive at such time and your tax basis in the ETNs. In general, your tax basis in your ETNs will be equal to the price you paid for your ETNs. This capital gain or loss should be long-term capital gain or loss if you have held the ETN for more than one year at that time. The deductibility of capital losses is subject to limitations. Unless otherwise indicated, the following discussion assumes that the treatment of the ETNs as prepaid forward contracts that are not debt is correct.

The IRS could assert that a "deemed" taxable exchange has occurred on one or more roll dates or Index rebalance dates under certain circumstances. If the IRS were successful in asserting that a taxable exchange had occurred, you could be required to recognize gain (but probably not loss), which would equal the amount by which the fair market value of the ETN exceeds your tax basis therein on the relevant roll date or Index rebalance date. Any gain recognized on a deemed exchange should be capital gain. You should consult your tax advisor regarding the possible U.S. federal income tax consequences of Index rolls or rebalancings.

#### *Alternative Treatments*

There is no judicial or administrative authority discussing how your ETNs should be treated for U.S. federal income tax purposes. Therefore, the IRS might assert that your ETNs should be treated in a manner that differs from that described above. For example, the IRS might assert that your ETNs should be treated as debt instruments subject to the special tax rules governing contingent payment debt instruments. If your ETNs were so treated, regardless of whether you are an accrual-method or cash-method taxpayer, you would be required to accrue interest income over the term of your ETNs based upon the yield at which we would issue a non-contingent fixed-rate debt instrument with other terms and conditions similar to your ETNs. You would recognize gain or loss upon the sale, exchange, early redemption or maturity of your ETNs in an amount equal to the difference, if any, between the amount you receive at such time and your adjusted basis in your ETNs. In general, your adjusted basis in your ETNs would be equal to the amount you paid for your ETNs, increased by the amount of interest you previously accrued with respect to your ETNs. Any gain you recognize upon the sale, exchange, early redemption or maturity of your ETNs would be ordinary income and any loss recognized by you at such time would be ordinary loss to the extent of interest you included in income in the current or previous taxable years in respect of your ETNs, and thereafter, would be capital loss. Additionally, if you recognized a loss above certain thresholds, you might be required to file a disclosure statement with the IRS.

Even if the treatment of the ETNs as prepaid forward contracts that are not debt instruments is respected, due to the lack of controlling authority there remain significant additional uncertainties regarding the tax consequences of your ownership and disposition of your ETNs. For instance, you might be required to treat all or a portion of the gain or loss on the sale or exchange of your ETNs as ordinary income or loss or as short-term capital gain or loss, without regard to how long you held your ETNs.

Moreover, it is possible that the IRS could seek to tax your ETNs by reference to your deemed ownership of the relevant Index components. In this case, it is possible that Code Section 1256 could apply to your ETNs, in which case any gain or loss that you recognize with respect to the ETNs that is attributable to the regulated futures contracts represented in the relevant Index would

be treated as 60% long-term capital gain or loss and 40% short-term capital gain or loss, without regard to your holding period in the ETNs and, you would be required to mark such portion of the relevant ETNs to market at the end of each taxable year (i.e., recognize gain and loss as if the relevant portion of your ETNs had been sold for fair market value).

In addition, in 2007, the U.S. Treasury Department and the IRS released a notice that may affect the taxation of the ETNs. According to the notice, the U.S. Treasury Department and the IRS are actively considering whether the beneficial owner of an instrument such as the ETNs should be required to accrue ordinary income on a current basis. The notice also states that the U.S. Treasury Department and the IRS are considering other relevant issues, including whether gain or loss from such instruments should be treated as ordinary or capital, whether non-U.S. investors in instruments such as the ETNs should be subject to withholding tax on any deemed income accruals, and whether the special “constructive ownership rules” of Code Section 1260 might be applied to such instruments.

It is impossible to anticipate how any ultimate guidance would affect the tax treatment of instruments such as the ETNs.

**No statutory, judicial or administrative authority directly discusses how your ETNs should be treated for U.S. federal income tax purposes. As a result, the U.S. federal income tax consequences of your investment in the ETNs are uncertain and alternative characterizations are possible. Accordingly, we urge you to consult your tax advisor in determining the tax consequences of an investment in your ETNs in your particular circumstances, including the application of state, local or other tax laws and the possible effects of changes in federal or other tax laws.**

#### *“Specified Foreign Financial Asset” Reporting*

Owners of “specified foreign financial assets” with an aggregate value in excess of \$50,000 (and in some circumstances, a higher threshold) may be required to file an information report with respect to such assets with their tax returns. “Specified foreign financial assets” may include any financial accounts maintained by foreign financial institutions as well as any of the following (which may include the ETNs), but only if they are held

for investment and not held in accounts maintained by financial institutions: (i) stocks and securities issued by non-U.S. persons, (ii) financial instruments and contracts that have non-U.S. issuers or counterparties and (iii) interests in foreign entities. Holders are urged to consult their tax advisors regarding the application of this legislation to their ownership of the ETNs.

#### *Information Reporting and Backup Withholding*

Please see the discussion under “Material U.S. Federal Income Tax Consequences—Information Reporting and Backup Withholding” in the accompanying prospectus supplement for a description of the applicability of the information reporting and backup withholding rules to payments made on your ETNs.

#### **VALIDITY OF THE ADDITIONAL ETNS**

In the opinion of Davis Polk & Wardwell LLP, as special United States products counsel to Barclays Bank PLC, when the ETNs expected to be issued on July 26, 2023 (the “Additional ETNs”) offered by this pricing supplement have been executed and issued by Barclays Bank PLC and authenticated by the trustee pursuant to the Indenture, and delivered against payment as contemplated herein, such Additional ETNs will be valid and binding obligations of Barclays Bank PLC, enforceable in accordance with their terms, subject to applicable bankruptcy, insolvency and similar laws affecting creditors’ rights generally, concepts of reasonableness and equitable principles of general applicability (including, without limitation, concepts of good faith, fair dealing and the lack of bad faith) and possible judicial or regulatory actions or application giving effect to governmental actions or foreign laws affecting creditors’ rights, *provided* that such counsel expresses no opinion as to the effect of fraudulent conveyance, fraudulent transfer or similar provision of applicable law on the conclusions expressed above. This opinion is given as of the date hereof and is limited to the laws of the State of New York. Insofar as this opinion involves matters governed by English law, Davis Polk & Wardwell LLP has relied, with Barclays Bank PLC’s permission, on the opinion of Davis Polk & Wardwell London LLP, dated as of July 14, 2023, filed as an exhibit to a report on Form 6-K by Barclays Bank PLC on July 14, 2023, and this opinion is subject to the same

assumptions, qualifications and limitations as set forth in such opinion of Davis Polk & Wardwell London LLP. In addition, this opinion is subject to customary assumptions about the trustee's authorization, execution and delivery of the indenture and its authentication of the Additional ETNs and the validity, binding nature and enforceability of the indenture with respect to the trustee, all as stated in the opinion of Davis Polk & Wardwell LLP, dated July 14, 2023, which has been filed as an exhibit to the report on Form 6-K referred to above.

#### **SUPPLEMENTAL PLAN OF DISTRIBUTION**

We sold a portion of each series of ETNs on the inception date at 100% of the principal amount through Barclays Capital Inc., our affiliate, as principal, in the initial distribution. Following the inception date, the remainder of the ETNs of each series will be offered and sold from time to time through Barclays Capital Inc., as agent. Sales of each series of ETNs by us after the inception date will be made at market prices prevailing at the time of sale, at prices related to market prices or at negotiated prices. Barclays Capital Inc. will not receive an agent's commission in connection with sales of the ETNs.

In connection with this offering, we will sell the ETNs of any series to dealers (including our affiliate Barclays Capital Inc.) as principal, and such dealers may then resell such ETNs to the public at varying prices that the dealers will determine at the time of resale. In addition, such dealers may make a market in the ETNs of any series, although none of them are obligated to do so and any of them may stop doing so at any time without notice. This prospectus (including this pricing supplement and the accompanying prospectus and prospectus supplement) may be used by such dealers in connection with market-making transactions. In these transactions, dealers may resell an ETN covered by this prospectus that they acquire from us or other holders after the original offering and sale of the ETNs, or they may sell an ETN covered by this prospectus in short sale transactions.

Barclays Capital Inc., or another affiliate of ours, or a third party distributor, may purchase and hold some of the ETNs for subsequent resale at variable prices after the initial issue date of the ETNs. In offering ETNs for sale after the initial issue date of the ETNs of any series, there may be circumstances where investors may be offered

ETNs from one distributor (including Barclays Capital Inc. or an affiliate) at a more favorable price than from other distributors. Furthermore, from time to time, Barclays Capital Inc. or an affiliate may offer and sell ETNs of any series to purchasers of a large quantity of the ETNs of the same series at a more favorable price than it would offer to a purchaser acquiring a smaller quantity of the ETNs of the same series.

Broker-dealers and other persons are cautioned that some of their activities may result in their being deemed participants in the distribution of the ETNs of any series in a manner that would render them statutory underwriters and subject them to the prospectus delivery and liability provisions of the Securities Act of 1933, as amended (the "**Securities Act**"). Among other activities, broker-dealers and other persons may make short sales of the ETNs of any series and may cover such short positions by borrowing ETNs from us or our affiliates or by purchasing ETNs from us or our affiliates subject to our obligation to repurchase such ETNs at a later date. As a result of these activities, these market participants may be deemed statutory underwriters. A determination of whether a particular market participant is an underwriter must take into account all the facts and circumstances pertaining to the activities of the participant in the particular case, and the example mentioned above should not be considered a complete description of all the activities that would lead to designation as an underwriter and subject a market participant to the prospectus delivery and liability provisions of the Securities Act. This prospectus will be deemed to cover any short sales of ETNs of any series by market participants who cover their short positions with ETNs borrowed or acquired from us or our affiliates in the manner described above.

**NOTICE OF REDEMPTION**

To: [ipathredemptions@barclays.com]

Subject: iPath® Notice of Redemption, CUSIP No.

[BODY OF EMAIL]

Name of holder: [ ]

Number of ETNs to be redeemed: [ ]

Applicable Valuation Date: [ ], 20[ ]

Contact Name: [ ]

Telephone #: [ ]

Acknowledgement: I acknowledge that the ETNs specified above will not be redeemed unless all of the requirements specified in the pricing supplement relating to the ETNs are satisfied.

**CONFIRMATION OF REDEMPTION**

Dated:

Barclays Bank PLC

Barclays Bank PLC, as Calculation Agent

Fax: 212-412-1232

Dear Sir/Madam:

The undersigned holder of Barclays Bank PLC's Global Medium-Term Notes, Series A, iPath® Exchange Traded Notes due [insert maturity date] CUSIP No. [insert CUSIP No.] (the "ETNs"), redeemable for a cash amount based on [insert name of relevant Index] hereby irrevocably elects to exercise, on the redemption date of \_\_\_\_\_, with respect to the number of ETNs indicated below, as of the date hereof, the redemption right as described in the pricing supplement relating to the ETNs (the "Pricing Supplement"). Terms not defined herein have the meanings given to such terms in the Pricing Supplement.

The undersigned certifies to you that it will (i) instruct its DTC custodian with respect to the ETNs (specified below) to book a delivery vs. payment trade on the valuation date with respect to the number of ETNs specified below at a price per ETN equal to the applicable closing indicative value on the applicable valuation date, facing Barclays DTC 229 and (ii) cause the DTC custodian to deliver the trade as booked for settlement via DTC at or prior to 10:00 a.m., New York City time, on the redemption date.

Very truly yours,  
[NAME OF HOLDER]

\_\_\_\_\_  
Name:  
Title:  
Telephone:  
Fax:  
E-mail:

Number of ETNs surrendered for redemption: \_\_\_\_\_

DTC # (and any relevant sub-account): \_\_\_\_\_

Contact Name:

Telephone:

*(You must redeem at least 25,000 ETNs at one time and pay a redemption charge in order to exercise your right to redeem your ETNs on any redemption date.)*