MEMORANDUM

TO: Kevin Fry, Chair, Valuation of Securities (E) Task Force
Members of the Valuation of Securities (E) Task Force

FROM: Marc Perlman, Investment Counsel, NAIC Securities Valuation Office (SVO)

CC: Charles A. Therriault, Director, NAIC Securities Valuation Office (SVO)

RE: SVO Staff Memorandum on the Use and Regulation of Derivatives in Exchange Traded Funds

DATE: July 1, 2020

The SVO is providing this report on the use and regulation of derivatives in exchange-traded funds ("ETFs") at the request of the Valuation of Securities (E) Task Force ("VOSTF"), made December 2019 at the NAIC's Fall National Meeting. This report explains the current use of derivatives by ETFs, current regulations and proposed Rule 18f-4, released by the U.S. Securities and Exchange Commission (SEC) on November 25, 2019 which could change the way derivatives in ETFs are regulated.

Use of Derivatives by ETFs

ETFs, like other SEC registered fund types, use derivatives to manage both exposure to specific investments and risk as part of their investment strategies. The SEC permits an ETF to use derivatives to increase, maintain, or reduce exposure to a market, sector, or security more quickly, and with lower transaction costs and portfolio disruption, than investing directly in the underlying securities. An ETF may also use derivatives to obtain exposure to reference assets for which it may be difficult or impractical for the ETF to make a direct investment, such as commodities. ETFs may also manage risk by employing derivatives to hedge interest rate, currency, credit, and other risks, as well as to hedge portfolio exposures.

Derivative transactions, such as futures, swaps, and written options, involve leverage or the potential for leverage because they enable the ETF to magnify its gains and losses compared to the ETF's investment, while also obligating the ETF to make a payment or deliver assets to a counterparty under specified conditions. Losses on derivatives therefore can result in counterparty payment obligations that directly affect the capital structure of an ETF and the relative rights of the ETF's counterparties and shareholders.

At the same time, an ETF's SEC permitted derivatives use may entail risks relating to, for example, markets, operations, liquidity and counterparties, as well as legal risks. An ETF's portfolio manager, therefore, must manage, and the board of directors oversee, the ETF's derivatives use, consistent with the ETF's investment objectives, policies, restrictions, and risk profile. Furthermore, an ETF's portfolio manager and board of directors must adhere to the requirements of Section 18 of the Investment Company Act of 1940 (the "Act"), as well as the Act's other requirements, when considering the use of derivatives.

Regulation of Derivatives in ETFs and other Funds

Section 18 of the Investment Company Act of 1940

Section 18 of the Investment Company Act is designed to limit the leverage a fund can obtain or incur by imposing limits on the ability of funds to issue "senior securities." According to the SEC, protecting investors against the potentially adverse effects of a fund's issuance of senior securities, and in particular the risks associated with excessive leverage of investment companies, is a core purpose of the Act. "Senior security" is defined, in part, as "any bond, debenture, note, or similar obligation or instrument constituting a security and evidencing indebtedness."

Section 18 generally limits leverage by prohibiting an investment company from issuing any class of senior security or selling any senior security of which it is the issuer, that represents indebtedness, unless immediately after such issuance or sale the investment company will have asset coverage of at least 300%.

General Statement of Policy (Release 10666)

In a 1979 General Statement of Policy (Release 10666), the SEC considered the application of Section 18's restrictions on the issuance of senior securities to reverse repurchase agreements, firm commitment agreements, and standby commitment agreements. In Release 10666, the SEC stated that, for purposes of section 18, "evidence of indebtedness" would include "all contractual obligations to pay in the future for consideration presently received." The Commission recognized that, while section 18 would generally prohibit funds' use of reverse repurchase agreements, firm commitment agreements, and standby commitment agreements, the Commission nonetheless permitted funds to use these and similar arrangements subject to certain constraints. These constraints relied on funds' use of "segregated accounts" to "cover" senior securities, which were intended to limit the investment company's risk of loss. The SEC also stated that segregated accounts function as "a practical limit on the amount of leverage which the investment company may undertake" and that it would "assure the availability of adequate funds to meet the obligations arising from such activities."

The SEC explained that its views were not limited to the particular trading practices discussed (e.g. reverse repurchase agreements), but that the SEC sought to address the implications of comparable trading practices that could similarly affect funds' capital structures. Since the Release's issuance, the SEC staff has issued more than thirty no-action letters to funds concerning the maintenance of segregated accounts or otherwise "covering" their obligations in connection with various transactions otherwise restricted by Section 18. The SEC has taken the position that reverse repurchase agreements, firm commitment agreements, standby commitment agreements, short sales, written options, forwards, futures, and certain other derivatives transactions may involve the issuance of a senior security subject to the prohibitions and asset coverage requirements of Section 18.

In response to the Release 10666, funds have developed asset segregation practices to cover their derivatives positions, based at least in part on the SEC's no-action letters and guidance. Practices vary based on the type of derivatives transaction. The SEC recognizes that as a result of these asset segregation practices, funds' derivatives use—and thus funds' potential leverage through derivatives transactions—does not appear to be subject to a practical limit as the SEC contemplated in Release 10666. Additionally, the SEC recognizes, first, that current asset segregation practices may not assure the availability of adequate assets to meet funds' derivatives obligations and, second, the segregated assets may be more likely to decline in value at the same time as the fund experiences losses on its derivatives, potentially forcing the fund to sell portfolio securities to meet its derivatives payment obligations during stressed market conditions, including at times when prudent management could advise against such liquidation.

Proposed Rule 18f-4: The possible future of the regulation of derivatives in ETFs

The SEC has stated that "funds' [including ETFs'] current practices regarding derivatives use may not address the undue speculation and asset sufficiency concerns underlying section 18."[1] As such, the proposed rule is "designed to address the investor protection purposes and concerns underlying section 18 of the Act and to provide an updated and more comprehensive approach to the regulation of funds' use of derivatives and the other transactions." The Rule would replace the catalogue of SEC no-action letters and guidance produced in the wake of Release 10666. The Rule would be an exemptive rule and therefore would generally permit funds, including ETFs, to enter into "derivative transactions"[2] notwithstanding the restrictions under Section 18, so long as the fund complies with

[1] The proposed Rule defines a "fund" as a registered open-end or closed end company or a BDC [business development company], including any separate series thereof. The Rule would therefore apply to mutual funds, ETFs, registered closed-end funds, and BDCs. The Rule's definition of a "fund" would, however, exclude money market funds regulated under rule 2a-7 under the Investment Company Act.

[2] The Rule defines the term "derivatives transaction" to mean: (1) any swap, security-based swap, futures contract, forward contract, option, any combination of the foregoing, or any similar instrument ("derivatives instrument"), under which a fund is or may be required to make any payment or delivery of cash or other assets during the life of the instrument or at maturity or early

certain conditions and disclosures. The proposed Rule does not include a specific asset segregation requirement for derivatives or other financial transactions to which the Rule would apply. The SEC explains that it believes the Rule's requirements, such as a derivatives risk management program and VaR-based limits on leverage, make asset segregation unnecessary. "Limited derivative users," however, would be exempt from several of these requirements. The proposed Rules conditions and disclosures include the following:

Limit on Fund Leverage Risk with Value-at-Risk (VaR) Calculation
A fund relying on the proposed Rule would have to comply with an outer limit on fund leverage based on the fund's value-at-risk ("VaR")[3]. Specifically, the fund's VaR would not be permitted to exceed 150% of the VaR of the fund's designated reference index (the "relative VaR test"), or, if the fund's derivatives risk manager is unable to identify an appropriate designated reference index ("DRI") [4], the fund's VaR would not be permitted to exceed 15% of the value of the fund's net assets (the "absolute VaR test"). The DRI is intended to provide an appropriate baseline VaR that approximates the VaR of the fund's unleveraged portfolio; it would need to be disclosed in the fund's annual report. The proposed rule would require a fund to determine its compliance with the applicable VaR test at least once each business day.

If a fund determines that it is not in compliance with its applicable VaR test, it must become compliant within three business days after such determination or it becomes subject to additional requirements including (i) the derivatives risk manager reporting and explaining to the board of directors how and when the derivatives risk manager expects the fund will return to compliance, (ii) the derivatives risk manager determining what caused the compliance breach

termination, whether as margin or settlement payment or otherwise; and (2) any short sale borrowing.
The SEC explains that the purpose of the definition is "designed to describe those derivatives transactions that involve the issuance of a senior security, because they involve a contractual future payment obligation. When a fund engages in these transactions, the fund will have an obligation (or potential obligation) to make payments or deliver assets to the fund's counterparty. This prong of the definition incorporates a list of derivatives instruments that, together with the proposed inclusion in the definition of "any similar instrument," covers the types of derivatives that funds currently use and that the requirements of section 18 would restrict. This list is designed to be sufficiently comprehensive to include derivatives that may be developed in the future." and "[The] definition also provides that a derivatives instrument, for purposes of the proposed rule, must involve a future payment obligation. This aspect of the definition recognizes that not every derivatives instrument imposes an obligation that may require the fund to make a future payment, and therefore not every derivatives instrument will involve the issuance of a senior security. A derivative that does not impose any future payment obligation on a fund generally resembles a securities investment that is not a senior security, in that it may lose value but will not require the fund to make any payments in the future."

[3] According to the proposed Rule, "*Value-at-risk* or *VaR* means an estimate of potential losses on an instrument or portfolio, expressed as a percentage of the value of the portfolio's net assets, over a specified time horizon and at a given confidence level, provided that any VaR model used by a fund for purposes of determining the fund's compliance with the relative VaR test or the absolute VaR test must:
(1) Take into account and incorporate all significant, identifiable market risk factors associated with a fund's investments, including, as applicable:
(i) Equity price risk, interest rate risk, credit spread risk, foreign currency risk and commodity price risk;
(ii) Material risks arising from the nonlinear price characteristics of a fund's investments, including options and positions with embedded optionality; and
(iii) The sensitivity of the market value of the fund's investments to changes in volatility;
(2) Use a 99% confidence level and a time horizon of 20 trading days; and
(3) Be based on at least three years of historical market data."
The SEC explains that "VaR is a commonly-known and broadly-used industry metric that integrates the market risk associated with different instruments into a single number that provides an overall indication of market risk, including the market risk associated with the fund's derivatives transactions."

[4] "The proposed Rule would define a "designated reference index" as an unleveraged index that is selected by the derivatives risk manager, and that reflects the markets or asset classes in which the fund invests. The proposed definition also would require that the designated reference index not be administered by an organization that is an affiliated person of the fund, its investment adviser, or principal underwriter, or created at the request of the fund or its investment adviser, unless the index is widely recognized and used. Additionally, the designated reference index must either be an "appropriate broad-based securities market index" or an "additional index" as defined in Item 27 of Form N-1A. A fund would have to disclose its designated reference index in the annual report, together with a presentation of the fund's performance relative to the designated reference index."

and, if appropriate, amending the derivatives risk management program accordingly and (iii) the fund becoming ineligible for new derivative transactions other than those designed to remedy the compliance breach.

Derivatives Risk Management Program

The proposed Rule would require a fund that engages in derivatives transactions, other than a limited derivatives user, to adopt and implement a written derivatives risk management program ("Program"), which would include policies and procedures reasonably designed to manage the fund's derivatives risks. The Program would be expected to identify and manage leverage, market, counterparty, liquidity, operational and legal risks, in addition to any other risks deemed material by the Derivatives Risk Manager. The fund's board of directors would not be required to approve the Program or any amendments to it, but the Derivatives Risk Manager would be required to keep the board of directors regularly apprised of the Program.

The proposed Rule would require reasonable segregation of the functions of the Program from the fund's management, rather than a complete firewall, to allow for the derivatives risk manager to work with the portfolio manager in implementing the Program requirements. The derivatives risk manager must have a direct line of communication with the board of directors.

The Program shall be administered by a derivatives risk manager, a new position which must be approved by the board of directors. A fund's derivatives risk manager can be an individual (who is not also a portfolio manager) or a group (but a majority of the group cannot also be portfolio managers), and the derivatives risk manager must have relevant experience regarding derivatives risk management.

The Program requirements are intended to result in a program with elements that are tailored to the particular types of derivatives that the fund uses and their related risks, as well as how those derivatives impact the fund's investment portfolio and strategy. The Program shall include the following elements:

- *Risk identification and assessment.* The Program would have to identify and assess a fund's derivatives risks, accounting for the fund's derivatives transactions and other investments.
- *Risk guidelines*. The Program would have to provide for the establishment, maintenance, and enforcement of investment, risk management, or related guidelines that provide for quantitative or otherwise measurable criteria, metrics, or thresholds related to a fund's derivatives risks. The Rule would not require funds to disclose their risk guidelines, or report guideline breaches, either publicly or with the SEC.
- *Stress testing.* The Program would have to provide for weekly stress testing of derivatives risks to evaluate potential losses to a fund's portfolio under stressed but plausible market conditions. The Rule would require stress test information to be provided to the board of directors, but it would not be required to be disclosed publicly or with the SEC.
- *Backtesting*. The Program would have to provide for daily backtesting of its VaR calculation model in order to monitor the its model's effectiveness. The backtesting would entail comparing the fund's gain or loss with the corresponding VaR calculation for the day and identifying instances where the fund experiences losses greater than the VaR calculation's estimated loss.
- *Internal reporting and escalation.* The Program must provide for the regular or frequent reporting of certain matters relating to a fund's derivatives use, such as guideline breaches and stress test results, to the fund's portfolio management and board of directors.
- *Periodic review of the program*. A fund's derivatives risk manager must review the Program, at least annually, to evaluate the program's effectiveness and to reflect changes in risk over time. The periodic review must include a review of the fund's VaR calculation model and an evaluation of the whether the DRI remains appropriate.

Board Oversight and Reporting

The proposed rule would require specific oversight and reporting obligations, including: (a) a fund's board of directors approval of the designation of the fund's derivatives risk manager, and (b) the derivatives risk manager providing regular written reports to the board of directors describing the Program's implementation and effectiveness, any instances in which the fund exceeded its guidelines, and the results of the fund's stress testing and backtesting. The Rule does not require the fund's board of directors to approve the Program.

Exception for Limited Users of Derivatives.
The proposed rule provides an exception from the derivatives risk management program requirement and the VaR-based limit on fund leverage risk for a fund that either (a) limits its derivatives exposure [5] to 10% of its net assets, or (b) uses derivatives transactions solely to hedge certain currency risks. A fund that relies on the proposed exception would still be required to adopt policies and procedures that are reasonably designed to manage its aggregate derivatives risk.

Reverse Repurchase Agreements and Unfunded Commitment Agreements
Reverse repurchase agreements and similar financing transactions are not treated as derivatives transactions under the Rule because, as the SEC explains, such agreements and transactions "have the economic effects of a secured borrowing, and thus more closely resemble bank borrowings with a known repayment obligation rather than the more-uncertain payment obligations of many derivatives." As such, the Rule would treat them differently than derivatives and would allow a fund to enter into a reverse repurchase agreement or other similar financing transaction so long as the fund meets the relevant asset coverage requirements of Section 18.

Proposed Rule 18f-4 would also allow a fund to enter into "unfunded commitment agreements,"[6] if the fund reasonably believes, at the time it enters into such an agreement, that it will have sufficient cash and cash equivalents to meet its obligations with respect to all of its unfunded commitment agreements, in each case as they come due. The proposed Rule states that a fund should consider its unique facts and circumstances when determining whether such a reasonable belief exists, and the proposed rule prescribes specific factors that the fund must take into account when making such a determination.

Comment Period and Transition
The comment period on proposed Rule 18f-4 expired in the first quarter of 2020. In conjunction with adoption of the new Rule, the SEC has also proposed rescinding Release 10666 and withdrawing several of the existing, topical, no-action letters. If Rule 18f-4 is adopted, as proposed or as amended based on comments, following its publication in the *Federal Register*, a one year transition period would be provided for funds, broker-dealers and investment advisors to prepare for compliance with the new rule.

Rule 18f-4's impact on SVO analysis of ETFs
The *Purposes & Procedures Manual* directs the SVO to undertake a Speculative Characteristics Analysis as part of each ETF review. The Speculative Characteristics Analysis includes (a) an "assessment of the fund's use of leverage including, but not limited to, its use of derivatives, financial commitment transactions and borrowings, to examine the impact the fund's use of leverage may have on the fund's portfolio cash flow" and (b) "a review and evaluation of the fund's policy and approaches to covering leverage obligations in relation to current and potential future guidance on the issue provided by the SEC. As used herein potential future guidance refers to proposed SEC Rule 18-f-4[7]." The *Purposes & Procedures Manual* then clarifies that, "The purpose of an analysis of speculative characteristics is to determine whether the fund's cash flow is inconsistent with a fixed income like determination." The SVO's primary analytic focus will remain the determination of whether an ETF's cash flows, accounting for its use of derivatives, is fixed income like. It is possible that derivatives risk management programs and VaR limits testing could provide increased transparency about an ETFs use of derivatives which could instruct the SVO's determination of whether an ETF's cash flow is fixed income like. However, since ETFs on the SVO-Identified Bond ETF and SVO-Identified Preferred Stock ETF Lists should "predominantly hold" bonds or preferred stock, respectively, pursuant to the *Purposes & Procedures Manual*, most ETFs the SVO adds to those lists likely already fall under the exception for limited users of derivatives and may not need to comply with all requirements of Rule

[5] According to the proposed Rule "derivatives exposure" means the sum of the notional amounts of the fund's derivatives instruments and, in the case of short sale borrowings, the value of the asset sold short. In determining derivatives exposure a fund may convert the notional amount of interest rate derivatives to 10-year bond equivalents and delta adjust the notional amounts of options contracts. The Rule does not define notional amount.
[6] The proposed Rule defines "unfunded commitment agreement" to mean a contract that is not a derivatives transaction, under which a fund commits, conditionally or unconditionally, to make a loan to a company or to invest equity in a company in the future, including by making a capital commitment to a private fund that can be drawn at the discretion of the fund's general partner.
[7] This reference is to the never-enacted 2015 version of proposed Rule 18f-4

18f-4. Additionally, while the Rule proposes changes to the regulation of leveraged/inverse ETFs, the SVO does not provide NAIC designations for those funds since they are not fixed income like.

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