

MEMORANDUM

To: Use of Derivatives by Registered Investment Companies and Business Development Companies Proposal File

From: James Maclean
Senior Counsel, Division of Investment Management (“IM”)

Date: November 1, 2016

Re: Meeting with Representatives of the Stone Ridge Asset Management LLC (“Stone Ridge”)

On October 28, 2016, David Grim (Director, IM), Diane Blizzard (Associate Director, IM), Sarah ten Siethoff (Deputy Associate Director, IM), Brian McLaughlin Johnson (Assistant Director, IM), Marian Fowler (Senior Special Counsel, IM), Penelope Saltzman (Senior Special Counsel, IM), Thoreau Bartmann (Senior Special Counsel, IM), Christopher Stavrakos (Senior Financial Analyst, IM), Adam Bolter (Senior Counsel, IM), Amy Miller (Senior Counsel, IM), Sirimal Mukerjee (Senior Counsel, IM), James Maclean (Senior Counsel, IM) and Dan Deli (Economist, Division of Economic and Risk Analysis) met with the following representatives of Stone Ridge:

- Jim Rothwell (Head of Legal)
- Robby Gutmann (Co-Founder & Head of Product Development and Execution)
- Rajib Chanda (Partner, Simpson Thacher)

Among other things, the participants discussed the Commission’s proposal relating to the use of derivatives by registered investment companies and business development companies. Information provided by Stone Ridge in connection with this meeting is set forth in Annex A.

Annex A

Stone Ridge Rule 18f-4 Proposal Outline

Materials prepared exclusively for meeting with the Staff of the U.S. Securities & Exchange Commission

Background:

- Stone Ridge is grateful to the Staff and the Director for their generosity with their time to meet with us a second time about Rule 18f-4.
- On March 16, 2016, we met with the Staff (Dan Townley, Brian Johnson, Thoreau Bartmann, Adam Bolter, John Cook and Yue Tang to discuss proposed Rule 18f-4. We submitted a comment letter on March 28, 2016.
- In that comment letter, we made four proposals:
 - To permit netting of certain narrowly-delineated offsetting transactions, with a reduced (from the proposed 150%) notional exposure limit.
 - To provide grandfathering for existing funds, with prominent disclosure that the fund operates under pre-Rule 18f-4 rules and guidance.
 - To permit a fund to exceed notional exposure limits if the fund has low VaR.
 - To provide for specific exemptive authority.
- We continue to believe that all four proposals would enhance investor protection and investor choice.
- Retail investors face unattractive investment choices. Traditional long-only equity strategies are very risky – the S&P 500 has experienced a drop of over 50% in the past 10 years, and has experienced a drop of over 80% in the Great Depression. Traditional fixed income is very low-yielding, and faces high duration risk if interest rates rise. And equity and fixed income markets around the world are highly correlated with each other, so diversification is difficult.
- As written, the Rule will limit investor choice and push retail investors into riskier strategies, such as “vanilla” (i.e. unhedged long-only) equity strategies, while reserving less risky, less correlated strategies for wealthy investors and institutions.
- We support the ICI’s recent proposal for an alternative VaR test. We propose to expand on that proposal to flesh out further our third proposal above.

Our Proposal for an Additional Alternative VaR test:

- We support the use of the VaR test that the ICI proposed in their September 27, 2016 supplementary comment letter. Specifically, we support:
 - Daily *ex ante* testing using a 10-day horizon and a 95% percent confidence level as common parameters for *ex ante* VaR estimation.¹
 - The requirement for rigorous daily *ex post* back-testing.
 - The requirement for robust recordkeeping and reporting.
- Under our proposed additional alternative VaR test, a fund would not be subject to limits on the notional amount of derivatives employed IF:
 - The *ex ante* 10-day, 95% confident-level VaR of the fund does not exceed 5% of the fund’s net assets (vs. 10% under the ICI test).²

¹ We would not object to different common parameters than those proposed by the ICI.

- The fund follows the *ex post* backtesting, recordkeeping and reporting requirements recommended by the ICI.
- In addition, the fund periodically conducts a rigorous, comprehensive and risk-adequate stress testing program, the results of which are reported to the fund's board of directors in connection with their oversight of the fund's derivatives risk management program.

Our Argument:

- Section 18 of the 1940 was intended to address three concerns expressed by Congress, as outlined in the Rule 18f-4 Proposing Release:
 - excessive borrowing and the issuance of excessive amounts of senior securities by funds which increased unduly the speculative character of their junior securities;
 - funds operating without adequate assets and reserves; and
 - potential abuse of the purchasers of senior securities.
- Rule 18f-4 attempts to address the first two concerns. It does not attempt to address the third.
- The asset segregation requirements in Rule 18f-4 address the second concern.
- The portfolio limitations in Rule 18f-4 are intended to address the first concern.
- However, portfolio limits on the total notional amount of derivatives in a fund are not an effective way to address the first concern because these limits are both over-inclusive and under-inclusive:
 - The proposed portfolio limits would prohibit strategies that use high notional amounts of derivatives but do not make a fund “unduly . . . speculative”, such as the strategies used by AVRPX;³ and
 - The proposed portfolio limits would allow strategies that could make a fund very “speculative” (i.e. risky).

This is because the notional amount of a derivative does not measure its riskiness – there are very low-risk derivatives with high notional amounts (e.g. interest rate swaps), and there are very risky derivatives with low notional amounts (e.g. unhedged out-of-the-money options).⁴

² Alternatively, we would support requiring the VaR to be less than that of a common investible benchmark, such as the S&P 500 (which has a historical 10-day, 95% confidence-level VaR of less than 5%) – i.e. a “relative VaR” test instead of an “absolute VaR” test.

³ Funds that rely heavily on derivatives can be less risky than the S&P 500. We have attached data for certain funds that are less risky than the S&P 500, and others that are more risky than the S&P 500, measure by historical VaR. The Rule 18f-4 Proposing Release, and the earlier DERA white paper, do not make the empirical case that funds that use high notional amounts of derivatives are “unduly speculative.”

⁴ The Committee of European Securities Regulators recognized this in adopting UCITS risk guidelines in 2010. Those guidelines require a UCITS to rely on a “an advanced risk measurement methodology (supported by a stress testing program) such as Value-at-Risk” if “it engages in complex investment strategies which represent more than a negligible part of the UCITS’ investment policy” or “the commitment approach doesn’t adequately capture the market risk of the portfolio.” The Guidelines note:

“Additionally there are investment strategies that can be pursued by UCITS through the use of financial derivatives instruments for which the commitment approach does not adequately capture the related risks (for instance non-directional risks like volatility risk, gamma risk or basis risk) and/or for which it does not give, with regard to the complexity of the strategy, and adequate and risk sensitive view of the related risks (for instance hedge fund-like strategies). Illustrative examples (non-exhaustive list) of such investment strategies might be:

- Option strategies (e.g. delta-neutral or volatility strategies)

- VaR, unlike notional amount, is a direct measure of risk. It better addresses the “speculative character” of a fund.
- Admittedly, VaR is an imperfect test, for two principal reasons:
 - Estimating VaR *ex ante* is model-driven and requires making assumptions about probability and correlation. [There may be a range of assumptions that are reasonable and intellectually honest. And a dishonest actor could try to game those assumptions to achieve a particular result.
 - VaR does not measure maximum possible loss – it measures loss to a specific confidence level. No matter the confidence level chosen, there is a “tail risk” with higher potential losses..
- Our proposed VaR test tackles both of these critiques head-on.
 - Historical VaR, unlike estimated *ex ante* VaR, is just math – it cannot be gamed. Our proposal, like the ICI’s, requires *ex post* backtesting to confirm that actual results are consistent with *ex ante* VaR modeling, and recordkeeping and reporting of discrepancies.
 - Also, like the ICI proposal, our proposal would require a fund’s board to formally approve its VaR model as part of the fund’s derivatives risk management program. The model, and the process arounds its approval, would be available for audit upon SEC exam, which would discourage the use of unreasonable or intellectually dishonest assumptions.
 - Periodic stress testing will help ensure that “tail risk” scenarios are captured. We propose that a fund’s specific stress testing program also be formally approved by the fund’s board as part of the fund’s derivatives risk management program, and available upon SEC exam.
- Funds that produce a daily NAV already have the valuation infrastructure to test this daily in a transparent, verifiable way.
- VaR is also a better complement to asset segregation to address the “adequate assets and reserves” concern. Asset coverage requirements alone may not completely address that concern because asset coverage looks to current exposures. Although the asset coverage requirements of Rule 18f-4 include a risk-based coverage amount, if market movements cause exposures to increase quickly and unexpectedly, a fund that is fully covered with respect to its current obligations could find itself under-covered in the future. Portfolio limits on the total notional amount of derivatives do not fully address this shortcoming of asset coverage alone because notional amounts do not correlate to risk in the portfolio, as noted above. VaR is a direct measure of risk, so constraining VaR better addresses this risk than constraining notional amount. Our proposal does not conflict with asset coverage requirements, which we support generally with changes suggested by numerous other commenters.
- Even with its imperfections, VaR addresses both the “speculative” concern and the “adequate assets and reserves” concern better than notional amount. The superiority of the VaR approach to meeting the goals of Section 18 should not be discarded simply because of worries regarding administrability or the possibility of “gaming” the system. Rather those worries should be addressed head-on.

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- Arbitrage strategies (e.g. arbitrage on the interest rate curve, convertible bond arbitrage etc.)
 - Complex long/short and/or market neutral strategies.”

We would not object to a similar requirement under 18f-4.

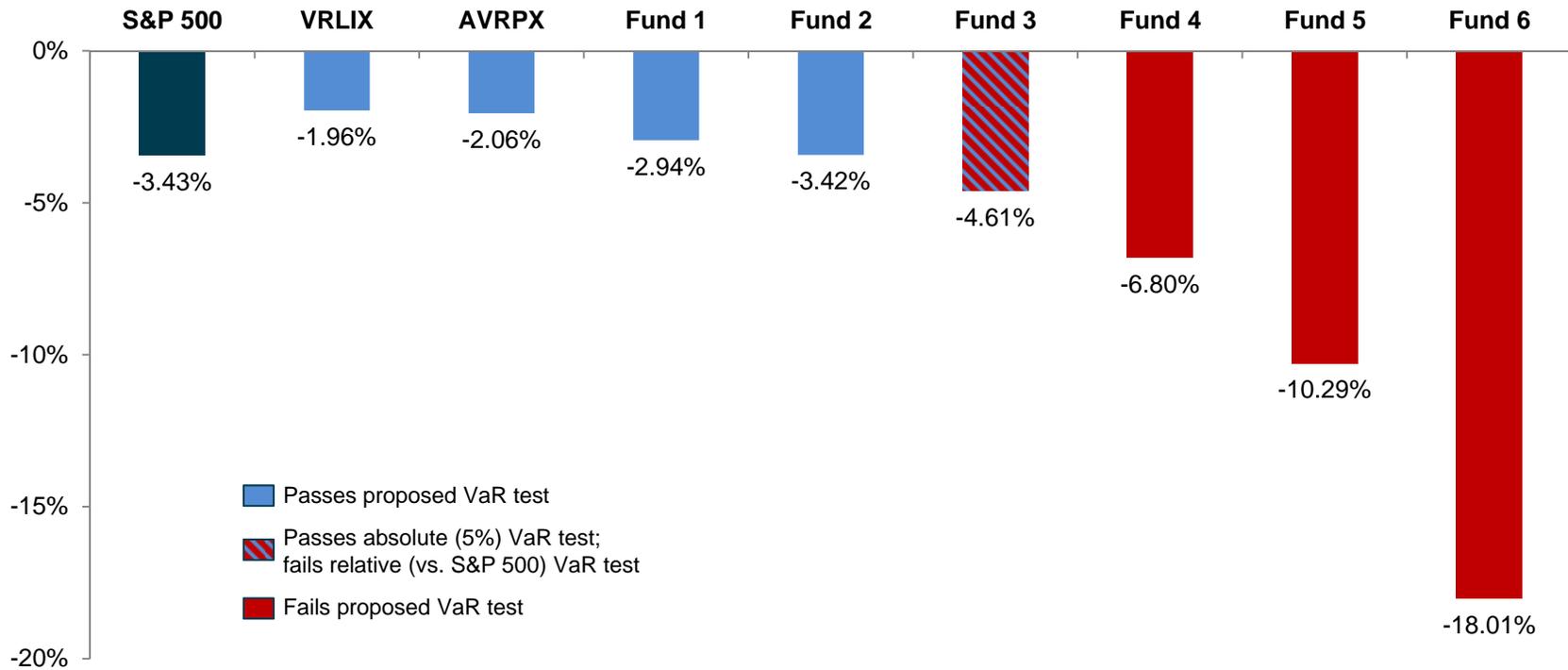
About Stone Ridge and AVRPX:

- Stone Ridge manages registered investment companies with approximately \$8 billion in total assets under management, in three principal investment strategies – reinsurance risk premium, alternative lending risk premium, and variance risk premium.
- Our investors understand that investment returns are earned for taking risk. The word “Risk” appears in the name of each of our funds. We offer investment funds that allow investors to gain exposure to diversifying, uncorrelated and hard-to-access risks.
- The Stone Ridge All Asset Variance Risk Premium Fund (“AVRPX”) earns investment returns by collecting option premium for selling options across asset classes. AVRPX hedges market risk by entering into offsetting transactions in the underlying assets, so AVRPX is generally not exposed to the direction of markets movements – rather, AVRPX is exposed to the speed and magnitude of market movements. If the markets for the underlying assets move sharply, AVRPX can lose money because it may be required to pay out more money on the options it sold than the money that it collected in premium. If those markets are relatively steady, AVRPX will make money because it will keep the option premium, and will be required to pay out less money on the options that it sold. Essentially, AVRPX collects “insurance premium” for insuring counterparties against financial risks.
- As outlined in our March 28 comment letter, AVRPX is designed to be, and since inception has been, less risky than a traditional investment in the S&P 500.
- AVRPX currently has approximately \$1bn of net assets.
- Because the option strategies in AVRPX are hedged using offsetting options and futures contracts, the total notional amount of derivatives in AVRPX exceeds 300% of net assets.



10-Day VaR

10-Day VaR (95% Confidence Level)



Fund Descriptions

Fund 1	\$14B Multi-Asset Managed Futures Fund	Fund 4	\$400M Multi-Asset Managed Futures Fund
Fund 2	\$4B Multi-Asset Managed Futures Fund	Fund 5	\$600M 3x Leveraged S&P Index ETF
Fund 3	\$200M Multi-Asset Managed Futures Fund	Fund 6	\$500M Leveraged Volatility ETF

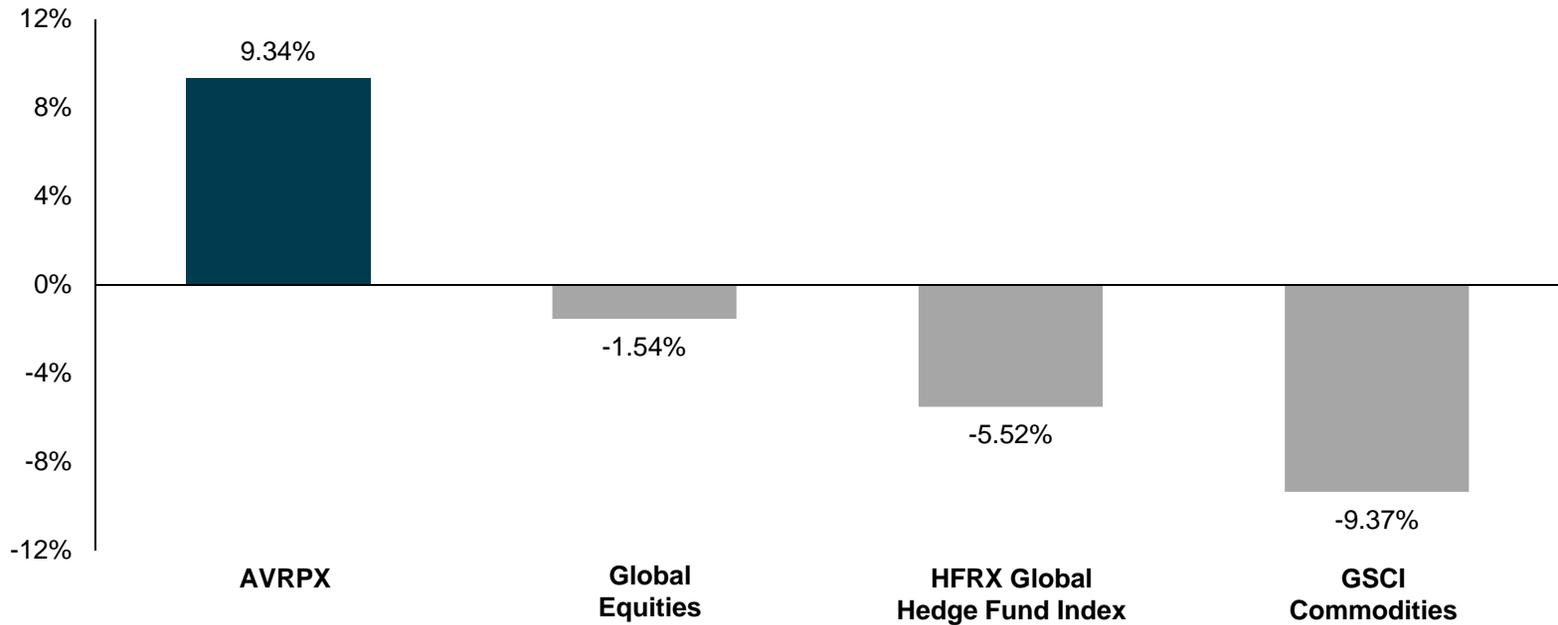
Note: As of 10/21/2016. The start of the measurement period is 10/11/2011 for all funds except those launched after that date. For such funds the measurement start dates are as follows: VRLIX (4/30/2013), AVRPX (4/13/2015), Fund 3 (4/30/2013).

Materials prepared exclusively for meeting between Stone Ridge and Commission Staff discussing proposed Rule 18f-4. Past performance is not indicative of future results.



AVRPX Performance

Performance of AVRPX Relative to Broad Market Indices Since Inception (4/13/2015-10/27/2016)



Annualized Volatility	9.9%	13.7%	3.9%	23.7%
Maximum Drawdown	6.6%	18.9%	11.3%	39.8%
10-Day VaR (95%)	-2.1%	-4.8%	-1.8%	-7.2%
Correlation to AVRPX	1.0	0.11	0.14	-0.18

Note: Global Equities refers to MSCI ACWI. HFRX Global Hedge Fund Index data is shown through 10/26/2016, the most recent data available.

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