



TO: Carrie Mears, Chair, Valuation of Securities (E) Task Force
Members of the Valuation of Securities (E) Task Force

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CC: Eric Kolchinsky, Director, NAIC Structured Securities Group (SSG) and Capital Markets Bureau

RE: Additional Market Data Fields for Bond Investments

DATE: February 25, 2022

The SVO proposes adding additional market-data fields for bond investments to the annual statement instructions based on 2010 adopted recommendations of the Rating Agency (E) Working Group (RAWG) and the IAO staff's findings regarding the discrepancies between ratings, presented in its Nov. 2021 memo.

The RAWG was formed after the Financial Crisis of 2008 and was charged with gathering and assessing information on:

1. *The problems inherent in reliance on ratings, including impact on the filing exempt ("FE") process and Risk-Based Capital ("RBC");*
2. *The reasons for recent rating shortcomings, including but not limited to structured security and municipal ratings;*
3. *The current and potential future impact of ratings on state insurance financial solvency regulation; and*
4. *The effect of the use of NRSRO ratings on public confidence and public perception of regulatory oversight of the quality of insurance.*

The RAWG made the following summary recommendations in their Apr. 28, 2010, report that was adopted by the Financial Condition (E) Committee (emphasis added):

1. **Regulators explore how reliance on ARO (Approved Ratings Organization) ratings can be reduced when evaluating new, structured, or alternative asset classes, particularly by introducing additional or alternative ways to measure risk;**
2. **Consider alternatives for regulators' assessment of insurers' investment risk, including expanding the role of the NAIC Securities Valuation Office ("SVO"); and**

3. *When considering continuing the use of ratings in insurance regulation, the **steps taken by the NRSROs in correcting the causes that led to recent rating shortfalls**, including the NRSROs' efforts in implementing the recommended structural reforms, should be taken into account.*

As the IAO staff demonstrated with the analysis in its Nov. 29, 2021, memo regarding ratings discrepancies, not all credit rating provider (CRP) ratings reflect a reasonable assessment of a security's risk, indicating that rating shortfalls persist today. The NAIC has not made additional progress in reducing reliance on CRPs and the IAO proposed several steps in its memo to accomplish that objective. As noted by the RAWG and reflected in the IAO's memo, there persists a situation where "... ratings are neither consistent nor uniform for individual securities, nor across different types and classes of securities..." However, the role of the SVO has not been expanded to include "... evaluating credit and other risks of securities."¹

One step towards introducing alternative ways to measure a security's risk would be to require insurers to report various analytical measures about each security including metrics such as its current market yield, interest rate sensitivity, spread relative to risk-free securities such as United States Treasuries and average remaining life. The more a security's market yield and spread differ from similarly rated securities, the more likely it is that the implied market-perceived risk of that security differs from the risk indicated by the credit rating assigned to it. The yield difference or spread in basis points can potentially help identify securities whose risk assessment warrants further review by the SVO, examiners or other regulatory groups, for example, a AAA rated security with a yield of 5%. Other fields that measure a security's price sensitivity to interest rate movements may also help to identify market-perceived risk inconsistent with the assigned credit rating. These additional market data fields would align with the RAWG's referral to the Task Force and SVO Initiatives (EX) Working Group, as noted in their following detailed recommendations (emphasis added):

1. *Referral to the NAIC Valuation of Securities (E) Task Force: VOS should continue to **develop independent analytical processes to assess investment risks**. These mechanisms can be tailored to address unique regulatory concerns and should be developed for **use either as supplements or alternatives to ratings**, depending on the specific regulatory process under consideration.*
2. *Referral to the NAIC Valuation of Securities (E) Task Force: ARO ratings have a role in regulation; however, since **ratings cannot be used to measure all the risks that a single investment or a mix of investments may represent in an insurer's portfolio**, NAIC policy on the use of ARO ratings should be **highly selective and incorporate both supplemental and alternative risk assessment benchmarks**.*
3. *Referral to the NAIC's SVO Initiatives (EX) Working Group: NAIC should evaluate whether to **expand the use of SVO and increase regulator reliance on the SVO for evaluating credit and other risks of securities**.*

Recommendation: The SVO recommends the following market data fields and related descriptions be added to all the annual statement instructions, through a referral to the Blanks (E) Working Group, for all bonds reported on Schedule D, Part 1 (those within scope of SSAP No. 26R – Bonds and SSAP No. 43R – Loan-Backed and Structured Securities). To allow sufficient time for insurers to update their systems, the SVO further recommends that the changes be implemented as electronic only fields effective beginning with the reporting year ending December 31, 2023.

- Market Yield – The Market Yield is the internal rate of return discount rate that makes the net present value (NPV) of all expected cash flows equal to zero in a discounted cash flow analysis. Therefore, Fair

¹ Evaluating the Risks Associated with NAIC Reliance on NRSRO Credit Ratings – Final Report of the RAWG to the Financial Conditions (E) Committee, April 28, 2010

Value, which is already reported, is the present value (PV) of all expected cash flows discounted at the Market Yield.

- Market Price – The Market Price per unit of Par Value, which is already reported, is reflected in the Fair Value as of the financial statement date. The Market Price, which excludes accrued interest, when multiplied by Par Value and divided by 100 will be equal to the Fair Value.
- Purchase Yield – The Purchase Yield is the internal rate of return discount rate that makes the net present value (NPV) of all expected cash flows equal to zero in a discounted cash flow analysis as of the Acquired Date. Therefore, Actual Cost is the present value (PV) of all expected cash flows discounted at the Purchase Yield as of the Acquired Date.
- Weighted Average Life – The Weighted Average Life is the average length of time that each dollar of unpaid principal remains outstanding. The time weightings used in weighted average life calculations are based on payments to the principal. The calculation is "weighted" because it considers when the payments to the principal are made—if, for example, nearly all of the principal payments are made in five years, WAL will be close to five years. Weighted average life does not consider payments to interest on the loan. This value is recalculated at each statement date for the remaining principal payments.
- Spread to Average Life UST - The spread is the difference between the interpolated U.S. Treasury bond yield that matches the reported debt security's Weighted Average Life. Spreads between interpolated U.S. Treasuries and other bond issuances are measured in basis points, with a 1% difference in yield equal to a spread of 100 basis points.
- Option Adjusted Spread - The option-adjusted spread (OAS) is the measurement of the spread of a fixed-income security rate and the risk-free rate of return (typically U.S. Treasury yield), which is then adjusted to take into account an embedded option and expressed in basis points. The spread is added to the fixed-income security price to make the risk-free bond price the same as the bond. The option-adjusted spread considers historical data such as the variability of interest rates and prepayment rates. These calculations are complex since they attempt to model future changes in interest rates, prepayment behavior of mortgage borrowers, and the probability of early redemption.
- Effective Duration - This is a duration calculation for bonds that have embedded options. This measure of duration takes into account the fact that expected cash flows will fluctuate as interest rates change and is, therefore, a measure of risk given the security's Fair Value. As a formula, Effective Duration = $(P(1) - P(2)) / (2 \times P(0) \times Y)$, where $P(0)$ = the bond's Market Price per \$100 worth of par value, $P(1)$ = the price of the bond if the yield were to decrease by Y percent, $P(2)$ = the price of the bond if the yield were to increase by Y percent, and Y = the estimated change in yield used to calculate $P(1)$ and $P(2)$.
- Convexity - This is a measure of the curvature, or the degree of the curve, in the relationship between bond prices and bond yields. Convexity demonstrates how the duration of a bond changes as the interest rate changes.
- VISION ISSUE ID: The NAIC VISION system security ID reported in AVS+.

<https://naiconline.sharepoint.com/teams/SVOVOSTaskForce/Shared Documents/Meetings/2022/2022-06-09 - Interim Meeting/02 - Blanks Referral Analytical Risk Measures/2021-053.01 Blanks Market Data Disclosure v2.docx>