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Handbook: Thrift Activities
Subject: Structured Notes

Section: 420
TB 65

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RESCINDED

Structured Notes

Summary: This Bulletin provides a description of structured notes, a relatively new type of investment vehicle, and presents prudential guidelines to be followed by savings associations that invest in these instruments.

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Thrift Bulletin 65

Background

Structured notes are debt securities with derivative-like characteristics that are issued by corporations and government-sponsored enterprises ("GSEs"), including the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation, and the Federal Home Loans Banks. Structured notes take various forms and often contain complex rate-adjustment formulas and embedded options (e.g., calls, caps, and collars).

Structured notes may be customized to meet the needs of a particular investor, or they may be issued in a more generic form to meet the needs of a broader range of investors. With a customized transaction, an investor will work with an investment banker to design a security with the desired features. The investment banker will then approach potential issuers to determine whether, and under what terms, they would be willing to issue such a security.

With a generic transaction, an investment banker will work with potential issuers to market those types of structured notes that are likely to appeal to many investors. Some of the more common types of structured notes are described below. They include step-up bonds, index amortizing notes, dual index notes, de-leveraged bonds, range bonds, and inverse floaters.

The risks — credit risk, liquidity risk, and market risk — of structured notes vary considerably, as they are issued in many different forms. An evaluation of the risk and return characteristics of certain types of structured notes can be difficult if they contain complex rate adjustment formulas or embedded options. For this reason, certain types of structured notes may be appropriate investments for only the most sophisticated investors.

Whether a particular security is an appropriate investment for a savings association depends on several factors, including: (1) the institution's ability to understand, measure, and monitor the risk/reward characteristics of the instrument, (2) the institution's capacity to absorb risk, and (3) the incremental effect of the investment on the institution's overall risk exposure.

Investment Guidelines

While structured notes can be useful investment vehicles, certain notes may expose an institution to considerable risk. Savings associations that are considering investments in structured notes should evaluate carefully the risk/reward characteristics of the notes and should adhere to the following guidelines.

- *Investment Policy.* Institutions are required to have a comprehensive business plan detailing their overall interest rate risk management and investment strategy, pursuant to 12 CFR Sections 563.176 and 571.3. Management should ensure that purchases of structured notes are consistent with their business plan and investment strategy.

- *Understand the Terms and Provisions of the Notes.* Prior to purchase, an investor should review carefully the terms and provisions of the notes under consideration. For structured notes that contain rate adjustment formulas or embedded options, the investor should have a full understanding of those formulas and options.

- *Conduct a Sensitivity Analysis (Stress Testing).* To evaluate the risk/return characteristics of structured notes properly, an investor should be able to assess how changes in interest rates (including non-parallel shifts in the yield curve) and changes in expectations about future interest rate volatility may affect their value. Accordingly, prior to making an investment decision, savings associations

should conduct a sensitivity or simulation analysis that shows how the notes are likely to perform under different market conditions.

More specifically, the analysis should demonstrate the effect of the proposed investment on the institution's net portfolio value and earnings under various interest-rate scenarios. The analysis should encompass a wide range of interest rate scenarios, including parallel and non-parallel changes in the yield curve, and, where applicable (e.g., for dual index notes), changes in the relationship between relevant interest rate indexes.

Subsequent to purchase, a sensitivity analysis of the notes should be conducted each quarter. At a minimum, the analysis should provide an estimate of the market value of the structured notes at the end of each quarter, and estimates of value assuming instantaneous changes in interest rates of plus and minus 100, 200, 300, and 400 basis points.

Saving associations should retain the documentation relating to the pre- and post-purchase analyses and should make it available to examiners and supervisory personnel upon request.

- *Evaluate Pricing to Ensure Fair Value.* Investors in structured notes should independently assess the value of structured notes at the time of purchase. An independent valuation is particularly important with respect to structured notes since they are not actively traded in the secondary market and market prices are not quoted in the financial press. Price quotes for comparable instruments should also be obtained from several dealers prior to purchase.

- *Evaluate Liquidity Risk.* Because structured notes often contain unusual or customized features, they are less liquid than standard fixed-income securities. Consequently, an investor needing to dispose of a structured note prior to its maturity may find that it trades at a wide bid-asked spread in the secondary market. Investors should be fully aware of, and evaluate carefully, the liquidity risk of these instruments prior to purchase.

- *Evaluate Credit Risk.* Investors should have a clear understanding of the credit risk of any security prior to purchase. Although most structured notes are issued by borrowers with triple-A or double-A ratings or by government-sponsored agencies where credit risk is minimal, investors should analyze the credit quality of the issuers.

Failure to comply with the above guidelines may be deemed to be an unsafe and unsound practice.

Descriptions of the Most Common Types of Structured Notes

The following is a description of the most common types of structured notes.

Step-up Bonds: Bonds that initially pay the investor an above-market yield for a short non-call period and then, if not called, "step up" to a higher coupon rate (which will likely be at or below market rates, otherwise the bond would be called). For example, the initial rate may be 5 percent, increasing to 6 percent after two years, and 7 percent after four years. The bonds are callable on the specified step-up dates. A multi-step bond has a series of fixed and successively higher coupons over its life. At each call date, if the bond is not called, the coupon rate increases.

Index Amortizing Notes (IANs): Bonds that repay principal according to a predetermined amortization schedule that is linked to the level of a specific index (usually LIBOR). As the index rate changes, the maturity of the IAN extends or shortens.

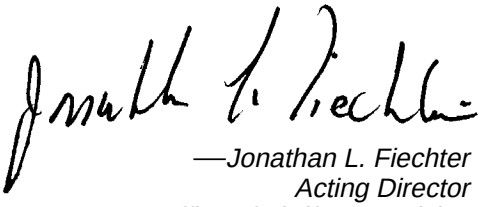
Dual Index Notes: Bonds that have coupon rates that are determined by the difference between two market indices, typically the Constant Maturity Treasury (CMT) rate and LIBOR. These bonds usually have a fixed rate for a brief period, followed by a longer period of variable rates. For example, the coupon might be 8 percent for two years, then change to the 10-year CMT rate plus 300 basis points, minus 3-month LIBOR.

De-leveraged Bonds: Bonds that pay investors according to a formula that is based upon a fraction of the increase or decrease in a specified index, such as CMT or the prime rate. For example, the coupon might be 0.5 x 10-year CMT + 150 basis points. The "de-leverage multiplier," (0.5), causes the coupon to lag overall movements in market yields.

Range Bonds: Bonds that pay the investor an above-market coupon rate

as long as the reference rate is between levels established at issue. For each day that the reference rate is outside this range, the bonds earn no interest. For example, if LIBOR is the reference rate, a bond might pay LIBOR + 75 basis points when LIBOR is between 3.5 percent and 5.0 percent. When LIBOR is less than 3.5 percent or more than 5.0 percent, the bond accrues no interest.

Inverse Floaters: A type of floating rate security in which the coupon moves inversely with a specified interest rate index. The coupon is quoted as a relationship between a constant interest rate and a specified interest rate index (e.g., 14% - LIBOR). As LIBOR increases, the coupon payment decreases and vice versa.



—Jonathan L. Fiechter
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