



OCC ADVISORY LETTER

Comptroller of the Currency
Administrator of National Banks

Subject: Purchases of Structured Notes

To: Chief Executive Officers of all National Banks, OCC Department and Division Heads,
and all Examining Personnel.

Purpose

The OCC is concerned that some national banks, particularly community banks, have purchased structured notes without fully understanding the market, liquidity, and cash flow risks they have assumed. Structured notes are debt securities whose cash flow characteristics (coupon, redemption amount, or stated maturity) depend upon one or more indices and/or that have embedded forwards or options. Such embedded forwards and options in the structure of the notes allow underwriters to create an unlimited number of risk/reward profiles and to customize risk characteristics to fit an investor's desired risk exposure.

The presence of embedded forwards and options in the structure of these securities also makes their price and cash flow characteristics more difficult to evaluate than those of other more traditional investments. In addition, some of these securities have "teaser" rates—high initial coupons—that can cause investors to overlook future risks in pursuit of short-term yields.

Because of the embedded forwards and options, structured notes are defined as derivatives in Banking Circular 277. Banks are reminded that if they invest in structured notes, they must comply with the guidelines set forth in BC-277. In particular, bank management should understand the risks of structured notes and be able to explain how such securities accomplish strategic portfolio objectives.

Background

U.S. government-sponsored enterprises (GSEs) such as the Federal Home Loan Banks, Federal National Mortgage Association, Student Loan Marketing Association, Federal Farm Credit Bank, and Federal Home Loan Mortgage Corporation have issued most of the structured notes. Multilateral development banks, some foreign banks, and private corporations, however, also issue structured notes. Many banks have increased their acquisitions of these structured securities for the following reasons: (1) such securities usually receive strong credit ratings, (2) they are often designated and marketed as floating rate issues, and (3) no "high-risk" tests (such as those applicable to mortgage derivative securities under OCC Banking Circular 228) currently exist to evaluate them.

Most structured notes allow investors to make assumptions about implied forward rates. Implied forward rates are the market's estimates of where interest rates will be in the future and are

derived from the current yield curve. A steep yield curve, for example, implies that interest rates will increase. Notes can be structured to enhance returns from any anticipated investment climate; however, most notes currently outstanding are designed to yield higher returns if the yield curve does not accurately predict future interest rates. ***Therefore, banks should recognize that when they purchase structured notes, in most instances they are taking a market view that interest rates will not rise as fast as predicted by the current yield curve.***

Although banks also make assumptions about future interest rates when they purchase Treasury and other fixed-rate noncallable securities, the cash flows from structured notes are more difficult to estimate. This cash flow uncertainty causes structured notes generally to have more price risk than many other types of securities.

Because of the recent increase in interest rates, many structured notes have depreciated significantly in value, particularly dual index notes and inverse floaters (see definitions below). The prices of some of these securities with longer maturities have declined more than 30 percent since last fall. Prices of these structures have suffered not only because of the actual interest rate increases that have already occurred, but also because of implied future interest rate increases projected by the shape of the current yield curve.

Bank management should also recognize that, although some structured notes have variable coupon rates and are often called “floaters,” their market prices can and do fluctuate significantly. ***As with collateralized mortgage obligations (CMOs), it is the cash flow characteristics of a bond that ultimately determine its risk, not the name of the structure.***

Common Structured Notes

The following summarizes the most common structures and indicates how interest coupons are determined:

Step-up Bonds. Step-up securities initially pay the investor an above-market yield for a short noncall period and then, if not called, “step-up” to a higher coupon rate (which will be below current market rates). The investor initially receives a higher yield because of having implicitly sold a call option. A **multistep** 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). IANS repay principal according to a predetermined amortization schedule that is linked to the level of a specific index (usually the London Interbank Offered Rate—LIBOR—or a specified prepayment rate). As market interest rates increase (or prepayment rates decrease), the maturity of an IAN extends, similar to that of a collateralized mortgage obligation.

Dual Index Notes. These bonds have coupon rates that are determined by the difference between two market indices, typically the Constant Maturity Treasury rate (CMT) and LIBOR. These bonds often have a fixed coupon rate for a brief period, followed by a longer period of variable rates—e.g., 8 percent fixed for two years, then 10-year CMT + 300 basis points—three-month LIBOR.

De-leveraged Bonds. These bonds 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 $0.5 \times 10\text{-year CMT} + 150$ basis points. The de-leveraging multiplier (0.5) causes the coupon to lag overall movements in market yields. A **leveraged** bond would involve a multiplier greater than 1.

Range Bonds. Range bonds (or accrual bonds) 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 for each day that LIBOR is between 3.5 percent and 5.0 percent. When LIBOR is less than 3.5 percent or more than 5 percent, the bond would accrue no interest.

Inverse Floaters. These bonds have coupons that increase as rates decline and decrease as rates rise. The coupon is based upon a formula, such as 12 percent minus three-month LIBOR.

OCC Policy

Because of the complexities associated with determining cash flows and option costs for structured notes, many pricing services do not value them, and investors may not otherwise have access to accurate current prices or reliable measures of price sensitivity. Investors thus may not fully appreciate the degree of risk assumed when purchasing notes with complicated structures. Liquidity (measured by the spread between bid and offer prices) for structured notes generally, and complicated structures particularly, ranges from fair to poor.

Because of the risks involved and the difficulty in assessing those risks, some types of structured securities are inappropriate investments for most national banks. The determination of whether a particular instrument is appropriate depends on the bank's ability to understand, measure, monitor, and control that instrument's risks consistent with Banking Circular 277.

To comply with the sound risk management principles outlined in BC-277, banks should have risk measurement systems that evaluate the possible impact from adverse changes in market conditions on the bank's earnings and/or capital. Banks should be able to evaluate how market values of structured notes will change as rates change, by performing their own "stress tests." Banks may rely on similar data supplied by an outside party if management understands the assumptions used and can explain the results.

National banks should review their investment portfolios to determine that all structured notes are identified, accurate market prices are known, and any appropriate write-downs are taken on securities carried at market value. Banks should establish limits for the degree of price risk acceptable for investment securities generally and structured notes specifically.

Banks contemplating the generally higher risk strategy of purchasing structured notes whose principal redemption amount is based upon an index (i.e., where redemption may not be at par)

or that contain leverage should specifically authorize such investments in policy. Given the potential for severe price swings inherent in some types of structured investment products, bank investment policies should not simply consist of blanket authorization to invest in securities issued by a highly rated institution, such as a GSE.

In addition, banks should be especially careful about secondary market (i.e., after original issue) purchases of structured notes; notes with complex structures have very poor liquidity, which can lead to significant pricing discrepancies in secondary market transaction. To obtain the fairest possible prices, banks should have several investment firms provide competitive price quotations.

The OCC considers it an unsafe and unsound practice for a bank to purchase material amounts of structured notes, or any other bank asset, without a full appreciation of the risks involved.

_____/signed/
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