Mortgage-backed securities have received a lot of coverage in this column over the last 15 years, and for good reason: They have proven to be a nice, predictable, safe and high-yielding alternative to bullets, callables or corporates.

And, since they have the additional characteristic of an amortizing balance, they have the element of periodic cash flow to soften the landing in a rising rate environment. No wonder that fixed-rate mortgage-backed securities comprised about 17 percent of the average high-performing community bank portfolio as of Sept. 30, 2005.

However, it is time to revisit some safety checks that should be in place for mortgage-backed securities, to be used either when considering a purchase or as a portfolio review. While most of this is simply sound fundamentals, we often see offerings from members of the broker/dealer community that are based on some specious or simply incorrect variables. The following present the most common potholes.

**Look Out for Speeders**

Some of you may recall that the September 2005 column attempted to explain the Public Securities Association (PSA)/Constant Prepayment Rates (CPR) relationship as it pertains to future prepayment speeds. That section really boiled down to two suggestions: Require your broker to make offerings using the CPR basis (and PSAs if you choose), and review actual history for the generic collateral using CPRs as well.

Here are the reasons:

- PSAs in the early stages of a pool’s life will almost always overstate the future PSA speeds if used as a proxy. This is due to the “ramping” effect of the calculation. In spite of this, many regulators will want to see that your files include yield tables and price volatility tables using PSAs, because that was the standard for many years. It seems to be a sound practice to require CPRs as well.

- When the term “generic collateral” is used here, it refers to the population of pools that exist with homogeneous coupon rates and maturities. This data will be available from your broker at the time of the offering. By reviewing how the like-kind pools have performed, an investor will have a better feel for what may happen in the future.

Why the fuss about “speeds” and...
prepayment methodology? Because an offering could be made to look much better, or worse, by adopting a certain method. And where variables can be introduced lurks the possibility of, shall we say, misstatement. An example follows in the tables on pages 103 and 104:

Notice how the first yield table, which is presented using PSAs based on “historical” speeds, looks much better than the second, which uses CPRs. Since the pool has a big discount price, it will look much better under faster prepay scenarios. And PSAs, especially in the early stages of a pool’s life, will tend to overstate future patterns.

To summarize: 1) Require CPR-based offerings. 2) Review historical speeds from generic collateral based on CPRs. And 3) Be wary of PSA-based yield and price volatility tables.

Problems with Cash Flows
There has been considerable energy spent over the years extolling the virtues of cash flow from amortizing securities. These range from the ability to gradually reinvest at higher rates should rates rise, to asset-liability management, to duration stabilization. And while all of these are absolutely true, it bears mentioning that, if the cash flows are not reinvested at same or higher rates, the overall portfolio yield will actually fall.

That is the reason that the Reinvestment field in ICBA Securities’ Yield Forecaster model is so prominent. Portfolios with a duration of around two, which encompass many community banks’ portfolios, will have a lot of cash flow in the next two years whether that is desirable or not (and at the present time it is).

Just the same, for proprietary yield models, especially total return models, the reinvestment yield needs to be noticed and considered. If it isn’t immediately obvious when considering a purchase, ask your broker to show the effects on yield.
you the assumption. A rule of thumb is that a reinvestment yield slightly lower than or equal to purchase yield should be defensible to an examiner or auditor. This may appear conservative, but realistically accounts for the minor inefficiencies of receipt and disbursement of available funds.

Another reasonable assumption is to use Prime floating, under the theory that the cash flows will make their way back into the loan portfolio. Yield tables extracted from the Bloomberg system automatically assume a reinvestment yield at the bond-equivalent yield at the purchase price.

Fannie Versus Freddie
One may have noticed that a mortgage security purchased at par yields less than the coupon. The answer to this mystery is that mortgage-backed securities have a built-in delay each month to the receipt of cash flows. (As an aside, if the term “parity price” is being bandied about, that is the level at which the yield is equal to the coupon, and is usually a small discount to par.) In going through the conversion of yield to a bond-equivalent basis, the amount of delay can have a significant impact on yield, especially for shorter average life issues. Here is a quick rundown of more popular mortgage-backed securities delay days:

<table>
<thead>
<tr>
<th>Security</th>
<th>Delay Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>FNMA</td>
<td>55</td>
</tr>
<tr>
<td>FHLMC Gold</td>
<td>45</td>
</tr>
<tr>
<td>FHLMC ARMs</td>
<td>75</td>
</tr>
<tr>
<td>GNMA fixed</td>
<td>45</td>
</tr>
<tr>
<td>GNMA ARMs</td>
<td>50</td>
</tr>
</tbody>
</table>

Let us now examine a Fannie Mae seven-year 4 percent balloon, which is virtually identical to the offering (table 3), except for the delay days. Notice that its price is 4/32nds lower than the FHLMC’s, but the yield is the same. This is completely the result of the extra 10 days each month an investor waits for his or her payments; FHLMC pays on the 15th of each month, and Fannie Mae on the 25th.

So, if your broker calls you to confirm an order, and proudly announces that the price has gone down by 4/32nds, you may want to also confirm that you bought the Freddie you ordered, and not the Fannie you didn’t.

Ongoing Analysis
Bond accounting systems and other financial analysis models such as the ICBA Securities’ Performance Profile have become more consistent in their assumptions over the last decade, and yield and average life calculations on a portfolio-wide basis have become much more reliable as a result. This doesn’t mean that the manager shouldn’t review and challenge that data received from third parties.

Speaking again about ICBA Securities’ capabilities, a portfolio manager can request each month a report (the Portfolio Value at Risk) which line-by-line will detail the estimated price change in a number of rate scenarios. This report can easily identify any outliers from a price risk standpoint, and also will summarize the overall price risk in the portfolio as well as its relationship to capital ratios.

Another report of value is the Summary Report which line-by-line quantifies the gain or loss in the bond as well as its book yield. This again can identify any suspi-
cious-looking positions or attractive swap candidates (see last month’s column).

Finally, there is a wealth of data about a mortgage-backed security pool on the Bloomberg system, which can be useful in digging out the good and bad

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about a pool, relative to generic securities. Factors such as geographic dispersion, borrowers’ rates, loan age, and average loan size can each affect a pool’s price, and performance. Your broker should be able to discuss the impact of these on an offering, and show you how it compares to universal averages.

If you would like to have ICBA Securities review your portfolio for propriety or create any of these management reports mentioned herein, please contact your account representative or call (800) 422-6442.

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