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The Valuation of PAC Bonds Without Complex Models

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Simply considering static yields on mortgage securities is insufficient to make good investment choices. Alternatives such as option-adjusted spread (OAS) models can be useful, but they are effectively impractical for investors who do not have internally developed OAS models or large staffs to simultaneously evaluate 20 to 25 similar CMO securities that fit desired investment parameters.

Time constraints alone make estimation of the OAS on all these securities difficult given the possibility of the most valuable bonds trading away. Finally, estimation of OAS requires "reverse engineering" a CMO structure, which can also be time-consuming.

It would be useful to have a valuation tool or model that could identify in a few moments a small subset of potential investments as having the highest relative value. The portfolio manager could then focus attention on and resources (including OAS) on this subset.

Such an analytic tool becomes increasingly difficult to design, the more sensitive a CMO bond is to factors such as prepayments, yield curve reshaping or volatility. A simple model, however, can be extremely useful in identifying value across at least one popular class of CMO securities: the Planned Amortization Class (PAC) bond.

We propose a zero-volatility option-adjusted spread (ZOAS) model that can be computed for any Planned Amortization Class (PAC) bond in a matter of moments on a simple spreadsheet. The approximate ZOAS technique quickly quantifies relative value across similar PAC bonds and shows the trade-off available to investors in deciding on, for example, different prepayment protection bands or dollar prices (e.g., premiums versus discounts).

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