



Emad A. Zikry, President and Chief Executive Officer

OPTION ADJUSTED SPREAD (OAS)

- ❖ OAS is the average yield spread of a security, adjusted for the value of its embedded options.
- ❖ We use OAS as a “robust” measure of value for mortgage securities. Mortgages have uncertain cash flows due to prepayments. Simple static spread assumes a fixed series of cash flows, while OAS incorporates varying levels of prepayments.
- ❖ The two quantitative components needed to calculate OAS are: an interest rate path model and a prepayment model.
- ❖ Most interest rate models use forward rates as a base case scenario. Numerous paths of rates are then generated. The final result is an interest rate “tree” with many interconnected “branches” that represent the paths that rates can follow over time.
- ❖ A prepayment model is then used to assign different sets of cash flows to each one of these interest rate paths. The primary inputs to the prepayment model are refinancing incentive/sensitivity and housing activity.
- ❖ OAS is the weighted average spread over the various interest rate paths that discounts the cash flows back to the security’s price. The weightings given to each interest rate path are statistically determined by volatility assumptions. In general, paths that more closely follow forward rates are assigned higher probabilities than more extreme scenarios.
- ❖ In conclusion, unlike static spread, OAS dynamically takes into account:
 - 1) possible interest rate movements over time
 - 2) the probabilities of each interest rate path occurring
 - 3) a series of cash flows for each path based on a prepayment modelOAS is the single weighted average spread that ties all these factors together.

Emad A. Zikry
Chief Executive Officer
Vanderbilt Avenue Asset Management

Emad is the Managing Partner and Chief Executive Officer of Vanderbilt Avenue Asset Management LLC. Vanderbilt's client base includes Multi-national Corporations, Public Funds, Foundations/Endowments, and Taft Hartley accounts.

Previously, Emad was Chairman of Institutional Business at Pioneer Investments. Pioneer investments has more than \$300 Billion in assets under management. The parent of Pioneer, UniCredit S.p.A., is the largest bank in Italy and the second largest bank in Europe. Pioneer had purchased Vanderbilt Capital Advisors, of which Emad was the founder and Chief Executive Officer.

Emad has had numerous articles published in professional and academic journals such as The Journal of Forecasting, The American Economist and The Journal of Fixed Income. He is a Board member of The National Investment Company. Emad was a member of the Board of Advisors of the Pacific Institute, The Advisory Committee of Fulcrum Global Partners, The Chief Executive Officers Club and formerly a board member of The Foreign Policy Association. He also served on the Board of Directors of the University of Albany Foundation, NextGen Healthcare Inc., The Park Avenue Bank, AA Bank and The New Providence Fund and Associates LP.

Emad is an FINRA Arbitrator. He is also a member of the National Association for Business Economists and The Economic Club of New York. Emad served as an adjunct professor at the University of Kansas and St. John's University.

Emad holds a Bachelor of Science from the University of Albany, and a M.A. and Ph.D. in Economics from the University of Kansas.