

## PHOCION INVESTMENT SERVICES INC. | Customize Your Fixed Income Attribution Model to Your Audience

Fixed Income Attribution is a mechanism used to identify whether the fixed income manager achieved excess return relative to a predetermined benchmark in a manner that was consistent with ex-ante positioning. This article provides an introduction to fixed income attribution and is heavily based on the findings of Giguère and Kophamel (2014). These authors identified three approaches with each serving a purpose depending on the audience. We look into each.



### Exposure Decomposition Method

The exposure decomposition (ED) fixed income attribution model represents the lowest common denominator requiring the simplest form of data. For those that are not well-versed in quantitative analysis this method is most useful. Its findings are ideally used in marketing pitch book presentations because the method's easy-to-grasp simplicity lends itself for discussions to take place amongst various stakeholders. Conceptually, the model categorizes top-down factors into buckets, which include: portfolio duration, yield curve and sector bets, and bond selection.

### Yield Curve Decomposition Method

The yield curve decomposition (YCD) model is technically more complex and well-suited to be a tool that is utilized by investment professionals, such as portfolio managers and analysts. Compared to the ED Method more data points are required thus enhancing transparency. The process is applied by focusing on top-down bucket or security level decisions. Both portfolios and their related benchmarks benefit from granularity in identifying their contributions to total and relative returns. This method puts heavy reliance on the relationship between bond prices and modified duration. The sensitivity to changes to yields to maturity is also taken into consideration.

### Full Repricing

Full repricing is the third fixed income attribution method introduced by Giguère and Kophamel. It is a bottom-up approach that utilizes a series of zero-coupon bonds and relates them to certain factor changes, such as: interest rates, spreads and specific bond attributes. This method displays all single bond contributions and then aggregates them for both portfolios and their benchmarks. Of the three introduced, this method is the most complex and costly to operate. Its outputs also require a high-degree of sophistication in understanding. As such, large institutional models are built around this method as it offers the most accurate attribution. It can serve as an excellent tool for both ex-ante and ex-post analysis.

### Concluding Remarks

So which method to use? Well, it depends on the purpose and the level of sophistication that your firm wants to culturally adopt. Budget can also influence decision-making. The ED Method is likely best suited in making presentations to prospective clients, in-house c-level executives and investment committees. Within fixed income departments, however, the FR Method is an exceptional tool for knowledgeable professionals. It would behoove all large investment funds to have their performance departments provide fixed income departments with the related feedback from these reports. Otherwise, one may argue the failure fully recognize their fiduciary duty to the sponsor and its beneficiaries.

### Bibliography

*Introduction to Fixed Income Attribution*, Claude Giguère, BScA, Andrew Kophamel, FRM, CFA, CIPM; 2014 CFA Institute.

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