

Fixed Income Math

Relationship Between Price and Yield

Summary

This course provides an overview of the core mathematical practices and Excel functions needed to calculate fixed income prices and yields.

Participants will use exercises to examine the inter-relationship between interest rate changes and the pricing of debt securities. An overview of the tools in Excel to calculate key price sensitivity measures will also be covered.



Prerequisites

None.



Timing

This course requires 4 hours.

Learning Topics

1. Understand Fixed Income Price Determinates

- ✓ Understand Yield to Maturity and the time value of money
- ✓ Review the impact of changes of coupon, term and Yield to Maturity on bond prices
- ✓ Examine the sensitivity of bond prices to changes in rates using Duration and Convexity
- ✓ Review different measures of Yield to Maturity such as Yield to Worst
- ✓ Understand and calculate the impact of call provisions in bonds

2. Learn Critical Excel Functions for Fixed Income

- ✓ Review and employ several Excel Functions for Fixed Income Analysis:
 - ✓ PRICE
 - ✓ YIELD
 - ✓ Various Date Functions
 - ✓ DURATION and MDURATION

3. Review Interest Rate Curves

- ✓ Discuss the importance of interest rate curves to value fixed income
- ✓ Use financial formulas to bootstrap an interest rate curve