

# 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 0.5 days.

### 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