

# Geometric Progression

Creative Disruption

## Comprehensive Introduction to Money Markets and Bonds

### Overview

This course is intended for anyone who wants to learn about the Bond Market and Money Market in extensive detail. The course covers all of the fundamental aspects of bonds from both a local and international perspective.



The course starts by explaining where the interest rate market fits into the big picture of the financial markets and then moves on to explain the jargon you need to understand how the interest rate market works. We discuss all of the details of interest rates from:

- NCDs, JIBAR, SONIA, SOFR, Bills and Promissory Notes.
- Discount versus Yield
- Coupons, principal & yield to maturity;
- Credit spreads, Real yields, inflation and ratings;
- Covenants, the indenture, call and put provisions etc;
- Discount instruments versus yield traded instruments
- The jargon of bond prices including the "All in price", Clean Price and accrued interest;
- Different types of bonds including Vanilla, FRNs, inflation linkers, Securitisation, Retail Bonds, Corporate bonds, STRIPS etc;
- The Global debt Crisis.
- Yield curves including the Par curve, the zero curve and forward curve;
- Rolling down the curve;
- Repos, GC, special, Buy Sellbacks;
- Duration & convexity;
- Delta and Rand Per Basis Point;
- Trading in bonds and all the trading jargon;
- Bond Indices and Bond Portfolios

Please refer to the agenda attached for more info. *Note, this course explains much of the "tough" mathematics in plain English without diving into the detail. For a detailed look at the math and calculus of the bond market, check out the "Interest Rate Bootcamp".*

**Delegates who attend this course will receive detailed notes with exclusive links to our private website containing extra material and some video.**

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**Level:** From Introductory to Intermediate

**Prerequisites**

It is recommended that delegates attend the "Understanding Financial Markets course" first or a similar "Introduction" to the financial markets course.

**Duration:**

2 Days. (8h30 - 16h30)

**Suitable for:**

All Treasury staff from Back Office through to Front Office including:

- Business analysts
- Professionals
- Investors
- Traders
- Regulators & Compliance Staff
- Risk Managers
- Fund Managers & Trustees
- Graduates and interns.
- Delegates registered to write CFA® exam, FRM® exam, PRM® exam or RPE.
- Anyone seeking a greater insight into the Fixed Income Market.

A certificate is available on request



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## **Agenda**

### **1. The fundamentals of the interest rate markets**

- Brief overview of funding through Debt vs Equity;
- Features and characteristics of interest rate markets;
- Jargon of the Money Market and Bond Market;
- Primary Bond Issuance and Road Shows;
- Coupons and coupon setting;
- Sinking Provisions;
- Subordination & Covenants etc;
- Rating Agencies;
- Understanding Yield to maturity;
- Discount versus Yield;
- Credit spreads and real yield.

This section will include a general Question and answer discussion session.

### **2. The jargon we use for pricing bonds and a very high level (without the detailed Math).**

- Broken Periods;
- Books Closed Dates, Cum Interest and Ex-Interest;
- All in Price, Clean Price, Accrued Interest;
- The Accrued Interest Anomaly;

### **3. Types of Money Market Instruments & Bonds**

- NCDs, Jibar & Libor, Sonia, Sofr etc;
- Commercial Paper & Promissory notes;
- Some global Government Bonds;
- South African Government Bonds;
- Zero Coupon Bonds and why they are different;
- STRIPS;
- Amortising Bonds;
- Floating Rate Notes (FRNs);
- Inflation Linked Bonds;
- Asset Backed Securities & Securitisations;
- Eurobonds etc.

### **4. Trading in Bonds**

- The Trading environment,
- IDBs & Primary Dealers,
- Liquidity & Depth,
- Yield Quoting Convention,
- Jargon such as "Yours", "Mine", "Double", Arbitrage, long \ short etc.

### **5. An Introduction to Yield Curves**

- The problems of joining the dots together of YTM's;
- The Par curve;
- The zero curve – why it is different, why it is so important and how it works;
- The forward Curve and a simple bootstrapping example;
- Yield Curve shifts.
- Which curves to use.

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Numerous videos will be shown on the yield curve and exercises are included.

## **6. The REPO market**

- Definition and explanation of REPOS, Buy Sell backs and Carries;
- General Collateral vs Trading Special;
- Securities Lending
- ICMA;
- Accounting for the Coupon in Buy Sellbacks;
- Using Buy Sellbacks to trade in Bonds without any cash.

This section will include video to ensure delegates understand the concepts.

## **7. Introduction to Measuring Interest rate risk**

- Full Valuation approach;
- Understanding approximation;
- Delta;
- Understanding Duration and its uses;
- PV01 / Rand per Basis Point;
- Understanding convexity and its implications;

This section will include video to ensure delegates understand the concepts as well as exercises.

## **8. Introduction to Bond Indices and Bond Portfolios**

- Introduction to Bond Portfolio Management.
- Duration Matching and matching Primary risk factors
- Semi active management.
- Immunisation and Asset Liability Matching with bonds
- Inflation indices and Credit indices;
- Explanation of the BEASSA total Return indices (ALBI, GOVI etc)
- Tracking the index and it's challenges.

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## Tutor: Mark Raffaelli CFA,FRM

Mark is a practising CFA Charterholder and fellow member of the Global Association of Risk Professionals (FRM). Mark's extensive experience includes:

- Development of quantitative financial models for surveillance, performance attribution, price validation, price models, risk and automation.
- Developments of Apps for the investment and insurance industry.
- Machine Learning and Deep Learning with Sklearn and Tensorflow in the Financial Markets for Banks, Asset Managers and general business.
- Trading in Spot & Derivative Products professionally.
- Fund & Bank consulting regarding valuations, curves, Var, surveillance and market abuse.
- Mark programs in: Python, Javascript (including Angular and Ionic), Php, Excel VBA, JAVA & ".net".



Those who have attended Mark's courses will know about his passion and ability to cut through jargon, simplify technical issues and provide real life examples.



## What makes Geometric Progression different from other providers:

- We don't regurgitate traditional textbooks; instead we share real life experiences.
- We explain all the products as they relate to your own lives in plain English.
- We practice what we preach.
- We love multimedia and include video and film in all our courses.
- We are one of the few providers that offer advanced courses relating to the financial markets, modelling and implementation.

## Things delegates have said about this course:

- "Mark is really a guru when it comes to bonds. Thanks for the excellent course."
- "I did not realise how different SA is compared to the rest of the world. Thanks for clearing up the SA bond market anomalies for me."
- "Mark, you have inspired me to be a bond trader."
- "I did not realise how detailed bonds are. Your energy and enthusiasm is great. Keep it up".
- "Once again, Mark explained the markets in terms that I could relate to."
- "Now I finally understand bonds and why our systems keep showing the wrong values. More importantly I know how to fix them! Thanks for the brilliant course."
- "Thanks, I can't wait to go on the Intermediate Bonds Course."
- "This course will help me to do my job better. Thank-you!"