



Yield Curves & SWAP Curves: Interpolation, Interpretation & Analysis.

Overview

This course is intended for practitioners in the financial markets who already have an understanding of the Bond Market and would like to learn more about Yield Curves in extensive detail. The course covers everything from the different types of curves (including SWAP Curves and Blended curves), yield curve construction using different interpolation techniques as well as yield curve analysis. This is a **"hands on"** Course and delegates will bootstrap and construct the different curves themselves using Excel. Furthermore, the concept of bond spreads and swap spreads is discussed in detail. It is strongly recommended that delegates bring their own laptops. Please note that laptops are encouraged but are not compulsory - delegates who don't bring their own laptops will be able to follow along quite easily as all spreadsheets and data are provided on a DVD.



Hey, I love your curves!

Thanks, that's because I am a smooth and continuous polynomial function.

$$f(t) = a_i + b_i t + c_i t^2 + d_i t^3 + e_i t^4$$

Hey, no flirting.



We discuss all of the details of curves including:

- Decomposing yield into spreads.
- Understanding par curves and their weaknesses.
- The Zero /spot curve.
- The forward curve.
- Bootstrapping the zero curve in reality using Excel
- Interpolation methods using Excel (no VBA required).
- Interpolation methods such as linear, cubic, Hermite, Quartic (and others are discussed).
- Strengths and weaknesses of the different interpolation methods.
- Explanation of Swaps and FRAs.
- The relationship between SWAPS, FRAs and Bonds.
- Why the SWAP curve is a PAR curve.
- Putting together a blended curve.
- Yield Curve interpretation.
- The SWAP curve anomaly.
- Spread trading.
- Spread trading quotes.
- Swap spreads and the "Z" spread.

Please refer to the agenda for more info.

Geometric Progression is accredited as a provider of education and training by BANKSETA. Accreditation number: 557066.

We are a B-BBEE level four contributor. We have a B-BBEE procurement recognition level of 100%. The rating was performed by the Department of Trade and Industry (the DTI).

Contact Sandra at:
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Emergency Cell: 082 872 3812
Reg No: 2005\020493\23





Geometric Progression

Cutting thru complexity



Level: From Intermediate to Advanced

Duration: 3 Days. (8h45 - 16h30)

Prerequisites

Please note, this course assumes delegates know the features and characteristics of bonds already. Please refer to the "Comprehensive Introduction to Bonds Course" for more details of the introductory bonds course offered by Geometric Progression.

Furthermore this course assumes you understand:

- The Basics of the Time value of money (FV, PV);
- Fundamental aspects of pricing spot bonds and spot money markets instruments. (Please refer to the "Comprehensive Introduction to Bonds" course for more information).
- The concepts of trading e.g. bid, offer, yours, mine etc.
- The basics of matrices and solving simultaneous equations;
- The basics of how to use Excel;



All of the above pre-requisites will be made available in the form of pdf notes or Elearning before the course for those that are a bit rusty on these topics or want some pre-course reading. A CD of these topics will also be provided at the course.

Suitable for

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

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

A certificate is available on request

Cost

Early Bird: R5,500+ vat = R6,270

Normal Cost: R5,800 + vat = R6,612

Early bird prices apply to any booking made more than 2 weeks before the course start date.

Group Booking Discounts: 3rd delegate & more gets 5% discount . Available for delegates from one organisation attending the same course.

When: (JHB): 17th,18th,19th August 2011

Venue (JHB): Glenhove Conference Centre, Melrose, JHB

A Cape Town course will be made available subject to demand. Please contact us for more info.

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Agenda

1. A decomposition of Yield to Maturity

- Understanding Yield To maturity and how it is made up.
- Credit spreads & Rating agency anomalies.



2. Understanding PAR curves

- The Par curve.
- Yield curve shapes & movements.
- Traditional Yield curve theory from pure expectations theory to preferred habitat.
- Par curve weaknesses.

This section will include examples using Excel.

3. Understanding Zero / Spot curves

- The zero curve
- Bootstrapping the Zero curve.
- Why bootstrapping is not as simple as it looks.

Delegates will perform a bootstrapping themselves, using Excel.

4. Understanding the forward curve

- Deriving the forward curve.
- "Jumps" in the forward curve.

Again, delegates will derive the forward curve themselves, using Excel. As mentioned, it is strongly recommended that delegates bring their own laptops. Please note that laptops are encouraged but are not compulsory - delegates who don't bring their own laptops will be able to follow along quite easily as all spreadsheets and data are provided on a DVD.

5. Interpolation

- Bootstrapping in reality
- Linear Interpolation
- Quadratic splines.
- Cubic Splines including the Hermite spline
- Quartic Splines and other techniques.
- A discussion of the weaknesses and strengths of the fitting techniques.

Delegates will fit a curve using Excel and the interpolation techniques above. Please note that this section requires the use of matrices. Pre-reading and video will be made available before the course to help delegates recap the basics of Linear algebra that they need to know.



6. Understanding SWAPS & FRAs and how they relate to the Bond Market

- Explanation of Swaps and FRAs.
- The relationship between SWAPS, FRAs and Bonds.
- Why the SWAP curve is a PAR curve.
- The framework of SWAP and FRA valuation. Please note that this section is used to provide the framework for the SWAP curve. For a more detailed look at pricing interest rate swaps please refer to the "Interest rate derivatives" course.

Delegates will price SWAPS and FRA's using Excel.

7. The SWAP Curve and Blended curves

- The credit curve.
- The chicken or the Egg
- Using spot rates, FRA's and SWAPS to blend a credit JIBAR / LIBOR curve

Delegates will create a linear blended curve using current data.

8. Yield curve interpretation

- Looking at the yield curve across time.
- How good is the yield curve at predicting future rates?

Video and animation will be used to look at the curves.



9. Spread trading

- Bond Spread trading.
- Quote conventions.
- Matching the Rand per basis point.
- The Swap spread and what influences it.
- The negative swap spread and current anomaly i.e. how banks can seriously benefit from the negative relationship between the Treasury curve and Swap curve.
- The Z spread.

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Tutor: Mark Raffaelli CFA,FRM

Mark graduated with a Bachelor of Commerce from the University of Natal, South Africa in 1990. He is a CFA Charterholder and a member of the CFA Institute. He is also a fellow member of the Global Association of Risk Professionals (GARP) and has the Financial Risk Manager (FRM) qualification. Mark's extensive experience ranges from trading in Spot & Derivative Products and Consulting to the development of Risk Models, Pricing Software and Trading Systems. Those who have been to Mark's courses will know about his passion for the financial markets and ability to cut through jargon, simplify technical issues and provide real life examples. He has been nicknamed the "Steve Irwin of the financial markets".



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 look at how the products are used by the professionals and how you could use them yourselves to make money.
- We are one of the few providers globally that also runs courses on the more intricate aspects of the financial markets e.g. stochastic mathematics, matrices etc.
- We love multimedia and include video and film in our courses.

We also offer practical training e.g. we teach people how to trade as if they were on the desk so that they get a turn to find out what it is like. Excel and computer examples are used where required.



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Terms and Conditions

Customer Information:

Fees include all the tuition, course file, lunches and refreshments for the duration of the course. Geometric Progression is not responsible for covering airfares or other travel costs incurred by registrants. Delegates will be responsible for their own accommodation and transport.

Disclaimer:

Geometric Progression reserves the right to change or cancel any part of the training courses due to unforeseen circumstances.

Cancellations:

If you cancel more than 10 working days before the course date, there is no cancellation fee. If you cancel between 2 and 10 days before the course date, a cancellation fee of 50% will be charged. Any cancellation less than 2 days before the course date will result in the full fee being charged.

Substitutions:

Registered delegates may be substituted at any time prior to the seminar without incurring any additional fee. Please inform Geometric Progression of the change.

Payments:

Payments must be made prior to the running of the event unless otherwise agreed with Geometric Progression.

Confirmation:

All registrations will be deemed confirmed and subject to these Terms and Conditions. Any disabled individual desiring auxiliary aid for this conference should notify Geometric Progression at least one week prior to the conference in writing, fax or email.

PLEASE NOTE:

Geometric Progression reserves the right to refuse admission where evidence of full payment cannot be shown. Should you require an original VAT INVOICE to requisition payment, please contact us on (0861) 000 615.

Geometric Progression reserves the right to cancel the course. Registered delegates will be notified and a full refund will be made.



Booking Form

Course: _____ Date of Course: _____

DELEGATE 1

First & Last Name: _____

Designation: _____

Company: _____ Department: _____

Tel: _____ Fax: _____ Cell phone: _____

Email: _____ VAT Registration No: _____

Postal Address _____

Special Dietary requirements (pls circle) None Kosher Halaal Vegetarian

DELEGATE 2

First & Last Name: _____

Designation: _____

Company: _____ Department: _____

Tel: _____ Fax: _____ Cell phone: _____

Email: _____ VAT Registration No: _____

Postal Address _____

Special Dietary requirements (pls circle) None Kosher Halaal Vegetarian

DELEGATE 3

First & Last Name: _____

Designation: _____

Company: _____ Department: _____

Tel: _____ Fax: _____ Cell phone: _____

Email: _____ VAT Registration No: _____

Postal Address _____

Special Dietary requirements (pls circle) None Kosher Halaal Vegetarian

Authorised By: Date:.....

Signature: