Portfolio Construction, Asset Allocation & Trading Strategies

18—21 January, 2016

Time: 17:00—20:30

London

Objectives: Scope and Purpose

The workshop first introduces the well-established portfolio theory of Markowitz. Derivation and definition of a number of performance measures are then presented; these are often used by quant fund managers and highlight aspects of asset allocation. The mathematics underpinning the design of trading strategies are described and attendees learn to implement their own strategies using the statistical software R.

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Learning Outcomes

After successful completion of the workshop, the participants will
- be able to:
    - ◊ utilize R to produce or import time series of financial assets and analyse them statistically,
    - ◊ apply concepts of portfolio theory and asset allocation,
    - ◊ construct and implement trading strategies.
- have acquired a good knowledge of modern portfolio theory as well as its pitfalls,

Workshop Format

Theory and Practice

The workshop is well balanced between Theory and Practical Sessions. Attendee numbers are limited to ensure that personalised interaction can take place. The workshop includes eight sessions which are spread over four evenings.

Practical sessions

In the practical sessions, the basic concepts of the software R are introduced and the delegates will learn how to either create time series manually or import data into the software. Working prototypes for scenario generation and the Kelly strategy are developed and exemplary trading strategies are implemented using statistical key figures.

Target Audience

The workshop is designed to provide insight for a wide range of individuals such as financial quantitative analysts, risk analysts, consultants, and academics.

Presenters:

Prof Gautam Mitra: Prof Mitra is an internationally renowned research scientist in the field of Operational Research in general and computational optimisation and modelling in particular. He has developed a world class research group in his area of specialisation with researchers from Europe, UK, USA and India. He has published five books and over hundred and fifty research articles. He is an alumni of UCL and currently a Visiting Professor of UCL. In 2004 he was awarded the title of 'distinguished professor' by Brunel University in recognition of his contributions in the domain of computational optimisation, risk analytics and modelling. In OptiRisk Systems he directs research and actively pursues the development of the company as a leader in the domain of financial analytics. Professor Mitra is also the founder and chairman of the sister company UNICOM seminars. OptiRisk systems and UNICOM Seminars also have subsidiaries in India. In India and Southeast Asia both the companies are going through a period of organic growth.

Dr Tilman Sayer: Dr Sayer has joined OptiRisk in 2015 as a visiting researcher working on the topic of financial analytics in general and models and tools for daily trade signal generation in particular. Dr Sayer is sponsored under a joint project between OptiRisk Systems and its partner Fraunhofer ITWM in Kaiserslautern, Germany. He completed his Diplom (MSc equiv., 2008) and his PhD (2012) in Financial Mathematics at the University of Kaiserslautern, Germany. Prior to the current assignment Dr Sayer had presented workshops on behalf of OptiRisk at the IIM Calcutta Financial Research and Trading Laboratory in Kolkata, and also in Mumbai. On behalf of Fraunhofer ITWM, Dr Sayer has worked on a risk management project so that the clients' financial tools are UCITS IV compliant. He has also worked on a project to accelerate the hardware performance of the stochastic volatility model of Heston. Dr Sayer is fluent in German (his native language) and in English.

Dr Cristiano Arbex Valle: Dr Valle has a bachelor's degree in Computer Science and an MSc in Operations Research from Universidade Federal de Minas Gerais (UFMG), Belo Horizonte, Brazil. In 2011 Dr Valle joined OptiRisk as a software engineer and a researcher. In the year 2014 Dr Valle obtained his PhD in the department of Mathematical Sciences at Brunel University (UK) on the topic of optimisation techniques and financial modelling. In OptiRisk, Dr Valle contributes in two areas: (i) development and enhancement of FortSP which is acknowledged as the best of breed (Integer) Stochastic Programming solver. He is also (ii) in charge of developing financial analytics products [a] SA-Toolkit and [b] SSD Signals. SAToolkit captures the research results acquired by OptiRisk in the domain of Sentiment Analysis and SSD Signals is based on the company's research in the domain of Stochastic Dominance. Dr Valle is fluent in Portuguese (his native language) as well as in English; he also has advanced knowledge in Spanish and French.

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Date & Time	TOPIC
18 Jan 17:00—17:15	Registration
Session 1 17:15—18:45	Portfolio Construction – Now and Then • Introduction to classical portfolio theory according to Markowitz • Introduction of Post Modern Portfolio Theory from the consideration of downside risk
18:45—19:00	Comfort Break
Session 2 19:00—20:30	Portfolio Construction – Now and Then • Performance evaluation using Sharpe, Sortino and Treynor ratio • Minimizing VaR and CVaR of a portfolio • Hands-on session (I): Prototype: Variance and CVaR of a portfolio
19 Jan 17:00—17:15	Registration
Session 3 17:15—18:45	Scenario Generation and Asset Allocation • Role and function of discrete scenarios • Alternative approaches to scenario generation
18:45—19:00	Comfort Break
Session 4 19:00—20:30	Scenario Generation and Asset Allocation • Desirable properties of scenario generation • Alternative methods of choice: min risk, max utility, SSD • Hands-on session (II): Prototype: Variance and CVaR of a portfolio
	End

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Date & Time	TOPIC
20 January **17:00—17:15**	**Registration**
Session 5 **17:15– 18:45**	**Trading Strategies** • **Trading strategies and utility functions** • **Log utility function and log optimal growth**
18:45—19:00	**Comfort Break**
Session 6 **19:00—20:30**	**Trading Strategies** • **Optimal investing, volatility pumping and the Kelly criterion** • **Hands-on session (III)**
21 January **17:00—17:15**	**Registration**
Session 7 **17:15– 18:45**	**Asset Allocation** • **Connection of log optimal growth and the Kelly criterion** • **Critique of Kelly for trading strategies: Full and Partial Kelly**
18:45—19:00	**Comfort Break**
Session 8 **19:00—20:30**	**Asset Allocation** • **Constraining Kelly strategies to meet quant fund requirements** • **Hands-on session (IV): Prototype: Asset allocation using Kelly**
	End

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1st Delegate
Dr/Mr/Ms/Mrs………First Name……………...
Surname…………………………………………
Position……………………………………………
Email………………………………………………
Phone/Mobile……………………………………
Head of Department …………………………………

2nd Delegate
Dr/Mr/Ms/Mrs………First Name……………...
Surname…………………………………………
Position……………………………………………
Email………………………………………………
Phone/Mobile……………………………………
Head of Department ……………………………

Contact Details

Organisation………………………………………
Address……………………………………………
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Post Code…………………………………
Tel…………………………………
Fax…………………………………………………

INVOICE TOTAL

I enclose a cheque made payable to UNICOM
    Seminars
Please charge my: Visa/MasterCard/Amex/Switch

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Expiry Date: /

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Please invoice (include invoice address)

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Organisation……………………………………………

Address……………………………………………………

……………………………………………………………

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Post code…………………………………………………

Tel…………………………………Mobile……………………

Signature……………………………………………

Date ……………………..

Registration Fees:
£500 + VAT (attending in person)
£300 + VAT (online attendance)
This workshop will be streamed live online to delegates all around the world. Discounted rates for group bookings can be also arranged on request.

WHAT THE REGISTRATON FEE INCLUDES:
The registration fee for the training course or the event covers the following: attendance, copy of the documentation and materials, examinations where applicable and light refreshments. Accommodation is not included unless otherwise specified.
Joining instructions will be sent to you approximately one week before the event (if for any reason these are not received, please contact UNICOM).

PAYMENT TERMS:
Payment is required in advance of the event or at the latest, paid at the event.
All invoices carry a 10% surcharge, which is payable if the fee remains unpaid on the day of the event and 30 days thereafter; should the invoice remain unpaid beyond 30 days and up to 45 days the surcharge increases to 15% and if unpaid after 45 days the surcharge increases to 20%. For credit card payments a 2.5% fee amount is charged or for American Express cards the fee is 3% of the total amount.

CANCELLATION AND SUBSTITUTION TERMS:
What happens if I have to cancel? If you confirm your **CANCELLATION** in writing up to fifteen (15) working days before the event or training start date and if the invoice has already been paid you will receive a refund less a 10% + VAT service charge; if the invoice has not been paid at that point a credit note for the existing invoice will be raised and a new invoice raised for the 10% +VAT service charge – the service charge invoice is due for payment by the original event / training start date. Regrettably, no refunds can be made for cancellations received less than 15 working days prior to the event and the invoice will remain due. **SUBSTITUTIONS** are welcome at any time – there is no fee for sending a substitute delegate on any event or training. If it is more than 15 working days but less than 5 working days before the course or training start date, you may TRANSFER your registration to a future date within a 6 month period. If it is less than 15 working days to the event /training start date you can still TRANSFER your booking to a future event date within 6 months but an additional transfer fee of £125+VAT per person per event day will be charged (e.g. the transfer fee for a 2 day training is £250+VAT), invoices for transfer fees are due for payment within 7 days of the invoice date.
As we cannot guarantee that exactly the same event or training will be available, the transfer will be open to any other UNICOM event taking place within six months from the date of the original event. **TRANSFERS** are not accepted less than five (5) working days before the event or training unless there are exceptional circumstances and the acceptance of the transfer is at the discretion of UNICOM.
Where a transfer has been made and a future date selected, the standard cancellation terms and conditions apply to the transferred booking just as if it were a new booking.
UNICOM reserves the right to amend the event / training content programme if necessary and cannot guarantee repeats of the same event or training. All transfers and cancellations must be made in writing either by email or letter and are only valid when confirmed by email or in writing by UNICOM. Transfers and cancellations are not accepted by telephone.

INDEMNITY:
Should for any reason outside the control of UNICOM Seminars Ltd, the venue or the presenters change, or the event be cancelled due to but not exclusively to industrial action, adverse weather conditions, an act of terrorism, presenter illness or other reasons beyond its control UNICOM Seminars Ltd will make reasonable endeavour to reschedule, but the client hereby indemnifies and holds UNICOM Seminars Ltd harmless from and against any and all costs, damages and expenses, including attorneys fees, which are incurred by the client as a consequence beyond the attendance fee due to UNICOM. The construction validity and performance of this Agreement shall be governed by all aspects by the laws of England to the exclusive jurisdiction of whose court the Parties hereby agree to submit.