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Contact:

Leigh Kendall Leigh.Kendall@informa.com



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DEAR COLLEAGUE

ALTHOUGH THE LANDSCAPE HAS CHANGED – THE NEED FOR QUALITY TRAINING HASN'T

IFF has a global reputation for delivering training that immediately impacts the way the delegates work. Our courses are very practice-based. We want students to leave the course feeling that they have all the key skills necessary to function as a useful deal-team member. We want them t feel enthused and empowered and to have absorbed a skillset which would take many years of on-the-job training. We do that by employing trainers who have many years of experience in their chosen field and who will share their wealth of experience with you.

TRAINING THE BEST IN THE BUSINESS FOR 30 YEARS

In this new volatile market order, skills and knowledge are going to be the essential assets that every financial institution needs to possess in abundance. You need to ensure that any investment in the development of your staff delivers a tangible return on investment. For 30 years, IFF has been providing our international clients with the cutting edge training solutions they need to bring their business goals to fruition. Our reputation for quality is unsurpassed in the industry and many of the world's leading financial institutions continually rely on IFF to help develop their employees skills and knowledge to be able to face whatever challenges the market throws at them.

TRAINING WITH IFF IS THE ULTIMATE RISK FREE SOLUTION

Now is the time that every organisation should be looking at heavily investing in training that will ensure that their employees are better skilled and equipped than any of your competition. Budgets might well be tighter, so it's essential you invest wisely: you need a training partner that represents a truly risk-free option that you can trust to deliver outstanding results. IFF is that risk-free option. We never aim to just meet our clients' expectations, we strive to exceed them in every area which is something we've been doing successfully for over 25 years!

CPD CERTIFIED

IFF is recognised by the CPD Certification Service and have been approved to award CPD points towards professional development certifications.

BREAKING NEW BOUNDARIES IN TRAINING

Constant improvement and innovation form the backbone of IFF's operations. We continually strive to bring invaluable new products and services to the market. As an example our world leading distance learning programmes have proven to be extremely popular and carry accreditation from Middlesex University Business School (the only courses of their kind to be awarded such accreditation) and are utilised by some of the leading organisations in the finance world to train staff across geographical dispersed locations.

CHANGING MARKETS REQUIRE NEW SOLUTIONS TAILORED TO YOUR NEEDS

Our in-company training programmes continue to grow in popularity and it's not surprising when you consider we can tailor the course content to your exact requirements, bring the training to your location anywhere around the globe and even more importantly, train groups of staff at a fraction of the cost of conventional training. So whatever needs you have or challenges you face, you can rest assured that IFF will be able to develop a solution that can meet the toughest of requirements. You can find out more about in-company training on page 4 or visit our website for more details.

IFF sees their courses as a work-in-progress because nothing stands still in this sector. By choosing IFF, you are choosing the most up-to-date, risk-free training available.

Please contact the IFF team with any questions at cs@iff-training.com or email me directly at Leigh.Kendall@informa.com

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IN-COMPANY TRAINING

The International Faculty of Finance has been the world leader in specialist in-company training for 30 years. We excel at designing and providing customised training solutions which meet your organisational and departmental goals, objectives and business challenges, whilst delivering an outstanding return on investment.

Our international faculty of expert trainers will create the perfect programme for your needs – including tailored digital solutions that can include an academic award where appropriate.

IFF delivers in-company training to clients all over the world, at all levels within an organisation across every sector of banking and finance. This is what makes us so successful in meeting the diverse business needs of our clients.

Contact us to discuss further

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WHY CHOOSE IFF IN-COMPANY TRAINING?

- ★ Cost-efficient
- ★ Customised content
- ★ Convenient
- ★ Specially selected trainer
- ★ Consistent quality
- ★ Post-course evaluation
- ★ Dedicated account manager
- ★ Tailored course materials
- ★ Interactive & practical (can include tailored and business specific case studies)
- ★ Opportunity for small or large digital solutions with the option of academic qualifications





BESPOKE DIGITAL LEARNING SOLUTIONS

SCALABLE LEARNING SOLUTIONS FOR BANKS AND FINANCIAL INSTITUTIONS. VALIDATED BY MIDDLESEX UNIVERSITY

As the scope of regulatory focus continues, the need for robust product and corporate finance training across your organisation increases. Yet those who adapt best may enjoy a distinct competitive advantage. If you are looking for a structured approach that will allow you to effectively and efficiently manage your risk-and-control frameworks to make them more robust and sustainable over time we have the answer.

IFF has successfully devised a bespoke, scalable, fully supported and university validated digital solution to help banks find a new way to mitigate this risk. In just 16 weeks and with no office downtime delegates work at their own pace whenever and wherever they like to cover topics that are pertinent to you. Our digital solutions are being utilised by banks and financial institutions throughout the world.

Unlike other online courses, your employees will receive a specialist qualification at the end of the programme from a leading UK University.

If you have a number of staff across different locations or functions requiring the same knowledge, we would welcome the opportunity to give you a demo of how you too could benefit from our solutions.

GET IN TOUCH TO REQUEST A FREE TRIAL MODULE

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ADVANCED CREDIT DOCUMENTATION

Master the latest techniques to control and manage credit documentation

Introduction to the Firm and LMA Precedents

- Introduction to the legal structure key debt products
 - loans and bonds
 - why is the documentation different?



Comparing loan and bond documentation as prepared by a City firm

- where do the products overlap?
- introducing the High Yield Bond

Role and Influence of LMA Documentation

- Key finance documents
- Senior Facility Agreement (SFA)
- Security Documents
- Mandate Letter

General Approach to the Loan Agreement

- The concepts behind subordination and intercreditor arrangements:
 - what is an Intercreditor Agreement/Deed?
 - Intercreditor Deeds vs. Deeds of Priority
 - parties to the Intercreditor Agreement
 - what do Intercreditor Deeds contain?



Analysing permitted payments and undertakings from mezzanine creditors

- · Practical tips on how to read the SFA and identify the key areas
- The concepts behind subordination and intercreditor
 - arrangements
 - controlling cash flows
- rights of enforcement and recovery
- what is pari passu and does it matter?
- The impact of the search for liquidity on debt structures
 The facility agent & security agent key lessons from the
- Stabilus case

Key Contractual Provisions in Credit Protection

- Methods used
 - credit insurance and credit derivatives
 - tightening
 - diversification
 - risk-based pricing
- Getting the credit risk right in the documentation
- Equality amongst investors – secured vs. unsecured lenders
- is your initial credit position protected against new investors?

EXERCISE	

Analysing various clauses found in documents produced by Magic Circle City firms

- Types of security
- General approach
 - The main covenants per the LMA
 - Use and application; pros and cons of the various financial covenants

Protecting Against Value Leakage

- Financial covenants
 - what are Financial Covenants?
 - maintenance covenants
 - incurrence covenants
 - Financial ratios
 - balance sheet gearing
 - leverage ratio
 - interest cover
 - fixed charge cover ratio and minimum net worth
- Operational covenants
 - insurance
 - notification on default
 - consents
 - licences
 - laws
 - information
- · Dangers to avoid when considering amendments and waivers



Involving reviewing clauses pertaining to the topics covered above

- Events of default
 - what an Event of Default is
- why these provisions are essential
- how Events of Default differ from Breaches
- consequences of default
- key drafting points
- key negotiation points
- Material Adverse Effect (MAE)
- Cross default clauses
- Equity cures
- What to look out for when considering amendments and waivers



Analysing key clauses to protect your organisation

The LMA Primary Loan Senior Facility Agreements

- Scope of the Loan
- "The Restricted Group" where and why it matters
- · "Permitted baskets" what they are and why they matter

Interest & Fees

- Arrangement fees
- Commitment fees
- Use and interaction with hedging (SWAPS)
- · Default vs. events of default and cross default

Covenants Generally (in the Context of LMA)

- Information
- General undertakings (the negative pledge & guarantor coverage test)
- Financial Convenants

MAC/MAE

• Impact of the Urvasco Case

ASSET SECURITISATION

Your practical guide to the current market environment

Introduction: The State of Play and What Went Wrong

- The history and growth of securitisation
- Leveraged structures and inappropriate . asset classes
- Modelling problems
- Examples of distressed deals
- Recent developments and trends in the market
 - who's issuing what, for whom, and how - how the application of securitisation technology is changing
 - range of new asset classes and structures
- Standard deal technology

Review of Securitised Products

- Amortising loans
- mortgage-related products (RMBS and CMOs)
- automobile loans
- commercial mortgages (CMBS)
- student loans
- Revolving receivables
 - credit cards
 - lease receivables
 - trade receivables
- Royalties and annuity-type cash flows
- Payment structure of ABS deals
- impact of pre-payments
- revolving structures
- early amortisation triggers - clean-up calls
- CDOs
- cashflow CLO structures
- synthetic CDOs
- ABS CDOs

The Players, Their Contributions and **Commitments**

- Originator
- Issuer
- Arranger
- Lead manager
- Credit enhancement providers
- Legal advisors .
- Trustees
- Paying agents
- Reference banks
- Liquidity provider
- Guaranteed investment contract provider
- Servicer •
- SPV management Swap provider
- •
- Rating agencies

Rationale for Securitisation: Benefits for Originator

- Maintenance of capital requirements
- Improving the balance sheet •
- Asset/liability management .
- Diversification of funding
- Credit risk management

- Reduced cost of funding straightforward savings
 - gains from specialisation
 - benefits from tradable credit risk
 - Liquidity
 - Receivables management

Preparing for First-Time Securitisation: Creating the Right Internal Environment

- Effectively reviewing contracts for possible constraints
- Conducting a comprehensive analysis of systems
 - hardware and software capacity
 - backup and disaster recovery
 - manual systems
- Review of procedures for administration of arrears management and provisioning
- Developing ongoing policies for collateral
- Cashflow modelling and analysis of the asset pool
 - historical data required
 - correlation with economic cycles and receivables characteristics
- Managing customer relations in a securitisation programme

Servicing Requirements

- Servicing agreements
- Third party and back-up servicing
- The importance of segregating cashflows
- The importance of managing cashflows
- Reporting on the performance of securitised assets to investors and credit enhancers
- Potential benefits from servicing charges

Funding the Assets: The Most Common **Routes**

- FRNs
- Conduit funding
- Asset Backed Commercial Paper (ABCP)
- Private placements
- Bank loans
- Combinations
- Cross border funding opportunities

Identification and Mitigation of Risks for The Various Parties Involved

- Forms of risk
- credit risk
- liquidity risk
- interest rate risk
- re-investment risk
- currency risk
- market risk
- Risk management techniques available
- Execution strategy

Credit Enhancement

- . Reasons behind credit enhancement
- External sources with examples

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guarantees and letters of credit

- pool insurance

- subordination

- excess spread

account

- cost

- over-collateralisation

- investor preferences

- moral hazard

their performance

since the credit crisis

- quality of assets

Structuring the SPV

- equitable assignment

- subparticipation

Ongoing involvement

Profit extraction

warehouse model

migration

contracts - novation

- systems and procedures

The Rating Process

requirements

are

bring

Issues

- monoline insurers: surety bonds Internal sources with examples

- cash and capital constraints

Using the originator's own credit standing

Analysis of credit enhancement decisions

The role of rating agencies and who they

Rating criteria and how this has changed

The benefits each different agency can

Compliance with the rating agencies'

How to manage the rating process

Regulatory, Legal, Accounting and Tax

European and US regulatory issues

Basle III impact for issuers and investors

Effectively transferring or assigning the

Accounting objectives to be achieved

Cashflow Modelling of Transactions

- the on or off balance sheet decision

· Impact of IFRS on securitisation structures

What can be modelled and what cannot

Collateral pool modelling - building the

Assessing default rates and rating

Correlation assumptions and using

Moody's diversity score technique

Delegates will use Excel to build a

Question and answer discussion

cashflow waterfall model for a CDO

Modelling the cashflow waterfall

structure

session

in recent deals - the logic behind them and

Choosing the optimum: factors to take into

CORPORATE FINANCE

Learn the latest developments, strategies & techniques over this three day practical corporate finance course

The Role of the Participants in Corporate Finance

- · What they do and how they're paid
- Investment banks
- Stockbrokers
- Solicitors
- Reporting accountants
- · Financial PR consultants
- Other

Proposing terms for a sell-side and a buy-side mandate

Corporate Valuation Techniques

- Understanding price vs. value
- Understanding multiple drivers risk, growth and reinvestment rates
- · Understanding the link between multiples and the discounted cash flow approach
- · Understanding the value drivers of the company
- Using PE, EV/EBITDA, PBV, PS, PCF and other multiples • DCF framework model and variants including EVA and CFROI/CFROC
- Fade rates on long-term cash flows
- Problems with calculating terminal value and long-term growth rates
- Estimating asset life
- Evaluating the stable growth period
- · Handling problems of research expenditure and operating lease payments
- · Effective and actual tax rates
- The concept of normalised earnings flows to avoid abnormal cash flow patterns
- Using multi-period terminal value models
- Methods of valuing intangible assets
- · Valuing on a stand-alone basis and valuing with synergies
- Control premium

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- Liquidity discounts
- · Evaluating price premium in relation to sector

Valuing an MBO opportunity

Weighted Average Cost of Capital (WACC) and the **Discount Rate**

- Review of Capital Asset Pricing Model (CAPM)
- · How to derive equity risk premiums in different countries
- · How betas are derived regressing company and market returns
- · De-leveraging betas to produce asset betas
- A bottom-up method of calculating beta reflecting business mix and leverage
- Which beta to choose for company valuation?

- Problems with CAPM is it really still a valid concept?
- WACC calculation
- Optimal capital structure and gearing risk
- Is WACC dead given the capital raising ability of modern firms?

Preparations for Flotation

- Rationale for flotation
- · Reasons for and against
- Alternatives
- · Official list or aim
- Suitability
- · Sponsor's role and responsibilities
- **Re-organisations**
- **Taxation implications**
- Timing
- Underwriting policies and issues

Identify the rationale for flotation ₩

Equity Issue Methods

- Types of equity
 - Ordinary shares
 - Preference shares
- Convertibles and warrants
- Pricing
 - Fixed price or tender/auction process
- Bookbuilding
- Oversubscription and greenshoes
- Allocation
- Issue methods for flotation
 - Offers for subscription/sale
 - Placings
 - Introductions
- Allocation of shares in the flotation of a company



Evaluating a recent IPO

Subsequent ("Secondary") Issues

- Type of issues
 - Rights issues
 - Calculation of TERP
 - Bonus issues
 - Open offers
 - Vendor placings



Analysing a recent rights issues of a PLC

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Reasons for and Types of Acquisitions (Including Effect of Synergies)

- Type of deals
- Types of synergies
- Problems with synergies
- Role of PMI



Identification of synergies

Private Acquisitions in Practice: Step-by-Step Approach

- · Investigation into the target
- The long form report
- · Legal considerations
- Negotiations
- Documents required
- · Profit forecasts and earn-outs

Understanding vendors' motivations

Private Equity, LBOs and MBOs

- The role of the venture capitalist
- Private equity involvement
- The development and rationale for different types of buyouts
 - MBOs
 - MBIs (Management Buy-Ins)
 - BIMBOs (Buy-In Management Buy-Outs)
 - JUMBOs (Joint Venture Management Buy-Outs)
 - VIMBOs (Vendor Initiated Management Buy-Outs)
 - IBOs (Institutional Buy-Outs)
- Key features of a successful MBO
 - Management, business
 - Market momentum
 - Capex requirements
 - Lack of cyclicality
 - Cash flow
- Structure of an MBO
 - Senior debt: features, alternatives and the use of securitisation
 - Mezzanine finance: features, equity warrants and high yield bond alternatives
 - Increasing use of PIK alternatives
 - Institutional equity: latest trends, problems and how they are overcome
 - Methods of participation for the vendor and their rationale
 - Management equity, ratchets and structuring the ratchet mechanism: linking the IRR with the rewards for management
- Initiating the MBO: problems for management and vendors
- The equity investment and loan arrangements: contents of

key legal agreements in buy-outs

- Financial assistance and how to overcome the problem if the target is private ("whitewash" procedures)
 - Exit routes
 - Trade sales
 - IPO
 - Second/third round buy-outs
 - Leveraged recapitalisation

A recent private equity deal

Financial Structuring

- · Overview and rationale of types of corporate funding
- · Debt short and long-term funding instruments
- Quasi debt instruments second lien, mezzanine finance, warrantless mezzanine and warranted mezzanine, PIK, PAYC, toggles
- Bank loan structures alphabet notes, syndications
- Corporate financing decisions and use of debt finance
- The role of high yield bonds in corporate financing activity
- High yield debt pricing
- Use of credit derivatives in the debt markets
- Cash flow modelling debt instruments; DSCR, interest cover and EBITDA multiples



Structuring an LBO deal

Public Take-Overs and Mergers

- Role of take-over panel
- · Review of key rules of the code and general principles
- Substantial acquisition rules
- Role of the competition commission
- European merger regulations
- Relevance of Companies Act
- Practical aspects of UK public take-overs, including timetables



Participants analyse a competitive bid situation and recommend to shareholders which offer to accept

Hostile Public Take-Overs

- Strategies and tactics
- Bidder only
- Target only
- Both bidder and target



Participants analyse a hostile take-over bid and suggest the strategy and tactics to be used by the bidder and the target

CORPORATE VALUATION TECHNIQUES

Focuses on the core skills required for the successful application of corporate valuation techniques

DAY 1

Foundation Principles

- Price vs.value
- Sharemarket fashions growth vs. value
- What are the valuation and the pricing techniques strengths and weaknesses of each
- Perspective of techniques
- Why markets are not perfect
- The central importance of 'risk'
- Company dynamics cashflow volatility
- Free Cash Flow
- The relationship of FCF. ROC and IRR
- · Limitations of accounting-based data
- Return on Capital vs. Cost of Capital

The Pricing of Risk & DCF

In discounting cashflow methodologies, the derivation of discount rates is laden with theory. This is an area where an analyst needs to beware of mechanically applying steps, but adapt the approach as necessary with a solid understanding of the issues those theoretical concepts are seeking to apply.

- Cost of debt and the implications of tax and currency issues
- Minimum required return to
- shareholders derivation
- The complications of a multiplicity of theoretical approaches – which of these make sense?
- Cashflow volatility, avoiding betas rationalising the approach
- The mathematics of cashflow discounting – the 'problems' with IRR and NPV functions
- The correct calculation of IRR and NPV
- The alternative methodologies
- Sensitivity analysis to determine the Value Range
- The interface of the valuation and practical decision-making
- Presentation of a valuation model for a CCGT plant

Frequently Encountered Errors in Valuation Models

The analyst must avoid being too mechanical in applying the principles of valuation. Experience reveals that many valuation models produce erroneous valuation outputs because of rigidity in the approach.

- The misuse of proxies
- Consistency of time horizons in the Modelling and the discounting
- The modelling of currencies, inflation and capex
- Deriving the correct risk free rate
- The risk premia
- The blended discount rate

DAY 2

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COMPREHENSIVE CASE STUDY

Participants will implement a DCF valuation of a listed company

Pricing

All management decisions are price vs. value assessment – so the understanding of a market's appetite is equally as important an understanding of the valuation of the asset. Valuation is what the price should be. Price is what the price actually is. How do we gauge the market appetite? To do pricing badly is easy – simply apply the market multiples to our situation. To do it well requires considerable skill and care.

- Hazards in cross-border comparative analysis
- Enterprise value
- The multiples EBIT, EBITDA, earnings, assets, sales, cash, etc
- Dealing with accounting inconsistencies
- Normalising the data
- Adjusting the source data and deriving the sectoral benchmarks
- Relating the comparative data for the Sector to the prospects for the Company being analysed
- Presentation of a pricing model

The Influence of Financing Decisions

A controversial area of asset valuation is the influence that the financing decision can have on the value of an acquisition or investment to the company controlling the asset. One of the main controversies is the clash of academic theory and the actual behaviour of markets.

- The theoretical position if only markets were perfect
 - the effect of leverage on value contrasting schools of thought
- the fallacy of optimal capital structure How markets are influenced by financing
- decisions in practice
- · The "investment rule"
- How project financing is an exception to the investment rule
- The valuation approach for limited recourse financed investments
- · Project IRR vs. Sponsor IRR

Adaptations to Approach

Valuation in the earlier sessions did not deal with complexities that are commonly encountered in reality.

- Private Equity and LBOs
- why PE do not use DCF
- why PE can commonly outbid trade buyers
- Project Appraisal
- differential cashflows
 decision-making framework
- Emerging Markets and Private Companies - the adjustments to valuation approach required

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Joint Ventures

- why DCF does not work effectively
- alternative valuation approach.
- Acquisitions
- the 10 step analytical process
- Other
- adjusted Present Value methodology
 the role for real options in project and investment appraisal

DAY 3

Strategies & Shareholder Value

The creation of value. The weakness of equity markets is that they prioritise growth and the analysis of financial statements (e.g. EPS). Growth without value is not worth having. This session introduces a different way at looking at the drivers of value, and how it can be used to identify the required strategy to reposition a company's business (as opposed to vetting investments for value-creation in isolation).

- Evaluation of managerial performance
- The calculations for Economic Value Added
- The analytical approach
- How EVATM aids strategy formation
- Market Value Added

The Correct Calculation of IRR and NPV

One of the worst taught areas in the whole of finance. 95% of models received by the writer calculate IRR incorrectly.

- A reminder of what IRR is
- What is wrong with the IRR, MIRR and the XIRR functions in excel
- Illustration of the correct calculational method
- What is wrong with the NPV function in excel
- The correct use of the EXP and XNPV ---functions
- Practical exercises

Forecasting Corporate Performance

Valuation models differ greatly from financing models. This session captures the differences.

- The 4 types of financial modelling
- The architecture of a valuation model
 Modelling supply-side businesses vs. demand-side businesses
- The design of the Analysis worksheet

Take-Aways

Throughout the course, various models will be presented:

These models together with the practical

content - will be supplied to participants

• DCF

Pricing

LBO

.

Dividend valuationAPV

Project financing

Acquisition consolidation

exercises and additional reading

by means of a USB thumb drive

materials - totalling some 800MB of

FINANCIAL MODELLING USING EXCEL

Modelling Best Practice

There are eight principles of modelling best practice. The different principles will be addressed progressively throughout the programme as opposed to a formal session, with illustrations of the problems if the principles are not respected.

- · Consistent timelines how to protect
- Consistent formulae across rows
- · Hard coding in formulae
- Usability
- organisation and accessibility of model inputs
- organisation of summary outputs
- the use of flags and masks to simplify formulae
- naming conventions, formatting conventions
- the Status worksheet
- NW to SE workflow
- Modelling efficiency
 - organisation of worksheets within a workbook
 - maintaining a log version control
 - maintaining a data book
- Circular references
 - which are permissible and which not
 - work-arounds if the model needs to be audited
- Macros
 - the dangers and the precautions that should be taken
 - editing, to minimise complications
 - implementing macros for common purposes
 - looping macros

Model Design and Planning

This session gives an overview of the all-important model planning process.

- Identifying the purpose and mode of use of the model
- · Designing the Analysis worksheet
- Planning the logic flow and the interface of the worksheets
- Determining the flexibilities required and the variable inputs
- · What causes models to be slow
- · Actions to speed up models that are unacceptably slow

Different Model Types

An overview of how the modelling approaches alter in different analytical contexts.

- · The four types of financial modelling
 - valuation
 - transaction structuring
 - statistical probability
 - data manipulation

The Analysis Worksheet

Models are built to be subjected to analysis. The precise detail and nature of the analysis will change from transaction to transaction. A well-built model has sitting on top of it a single worksheet where the analyst spends all of their time, controlling the inputs, observing the outputs and driving the functionality – scenarios, sensitivities or break-evens. If the analyst ever leaves the Analysis worksheet the model hasn't been built properly. The explanation is near the beginning of the course, the practical implementation of them at the end of the course.

- Demonstration of:
 - sensitivity analysis
 - scenario analysis
 - break-even analysis



Practical Exercise 1 – Setting up the Model

An exercise to group worksheets for formatting purposes, establishing a master timeline, deploying it across all worksheets to block insertion of columns and changes, the creation of flags and masks.

- Worksheet grouping
- Data validation
- Index match
- Array functions
- DateEOMonth

Models for Valuation & Appraisal Purposes

This is the simpler form of modelling as we are not interested in capturing the volatility of the cashflows. Some pre-existing knowledge of DCF valuation is presumed (otherwise request precourse reading notes). However it starts with a brief confirmation of the 'moving parts'. It then demonstrates the errors that are frequently encountered in valuation models. The main focus is on the applicable Analysis worksheet.

- Risk and Free Cash Flow (FCF)
- · Frequent errors in implementing valuation models
 - the impact of the inflation rate
 - matching time horizons of numerator and denominator
 - dealing with currency exposures
 - the derivation of the risk free rate
 - modelling of capital expenditures
 - tax calculations
 - the continuing period
 - obsolescence



Practical Exercise 2 – Creating the Forecast of Financial Statements & Cashflows

The implementation of the projection of P&L and Balance Sheet. Accompanied by a written set of stepby-step instructions and explanations.

- Revenue with volume and pricing drivers
- Operating costs
- Working investment
- Capital expenditures
- Depreciation
- Tax
- Financing
- · Dividends and distributions



Practical Exercise 3 – Modelling Currency Exposures Macroeconomic risk is one of the main risk elements. This will illustrate how currency exposures should be captured in the base case and then subjected to the analysis of both schism risk and divergence risk.

Visual Basic Introduction

The assumption is that the majority of participants will be encountering VBA for the first time. So we start with a familiarisation of the features.

- The Project Explorer, properties and code windows
- VBA best practice rules
- Declarations and variables
- Understanding procedures
- Using objects

FINANCIAL MODELLING USING EXCEL



Practical Exercise 4 – Breakeven Analysis

A practical implementation of an analysis worksheet that identifies the breakeven power tariff to deliver a target Debt Service Cover covenant (using VBA coding).

- Use of VBA to automate breakeven calculations
- VBA IF statements
- · Pasting results automatically through VBA

Volatility Modelling

In highly-stressed financings where there is little margin for error (e.g. project finance, leveraged finance, large scale M&A) the 'killer' is the volatility of the cashflow. The Base Case never kills, but then the Base Case never happens – something else does. Volatility models have to be built a certain way in order to accurately quantify that volatility under a range of possible scenarios.

- Project dynamics
- Modelling of cost structures
- Quantification of risk

Practical Exercise 5 – Modelling of Operating Costs

Procedures Upon Receiving a Model

Any analysis performed on a model is nonsense if the model itself is nonsense or if it has material errors. There is no shortcut to model audit - to ensure that there are no errors at all - every unique formula in the model would have to be checked. But Model Review is a procedure that allows a recipient to discover if the model has credibility within a maximum time-frame of 30-40 minutes.

- The recommended layout and inter-relationship of worksheets for a typical structured finance model
- · Shortcuts to determine a received model's architecture
- The use of audit software

 detecting breach of excel best practice rules
- listing of formulae and cell references that need checking
- Tracing the logic flow

IRR and NPV

A majority of models implement NPV and IRR calculations in an erroneous way. This session explains the errors made and then illustrates the correct calculation for the various types of model being prepared.

- A review of what IRR represents
- What's wrong with NPV, IRR and XIRR functions
- Correct calculation of IRR



Practical Exercise 6 – IRR and NPV Calculations A couple of practicals to implement IRR and NPV derivation on a model.

Financing

There are a number of different financing methodologies which involve a different modelling approach for the calculations of interest expense and loan amortisation. A series of practicals address the majority of structures encountered.

- Financier worksheets in
- valuation models

- leveraged finance
- project financing infrastructure
- project financing extractive industries



Practical Exercise 7 – Annuity-based Amortisation A short practical to illustrate the functions used to populate cashflow, income statement and balance sheet for the amortisation of debt structured on annuity basis.



Practical Exercise 8 – Straightline Amortisation A more involved practical to demonstrate a worksheet which is fully responsive when any of the terms of the financing are altered.



Practical Exercise 9 – Cash Sweep Introducing a cash sweep to the previous exercise.



Practical Exercise 10 – Sculpting Loan Amortisations – to ADSCR Implementation of a loan amortisation that matches the cash available for debt service on a dynamic basis.



Practical Exercise 11 – Sculpting Loan Amortisations – to LLCR Implementation of a loan amortisation that matches the cash available for debt service on a dynamic basis.



Practical Exercise 12 – Cashflow Waterfall For limited recourse and leveraged financings – an implementation of a cashflow waterfall with lockups.

Analysis Worksheets

A practical for breakeven was covered previously. We conclude with the development of worksheets to process each of sensitivity analysis and scenario analysis.



Practical Exercise 13 – Sensitivity Analysis An extensive practical for building an analysis worksheet based on Sensitivity analysis, allowing remote control of the inputs worksheet and instant output presentation of all KPIs. This practical is estimated to take approx 4 hours.



Practical Exercise 14 – Scenario Analysis Implementation of various alternative methodologies for controlling and exhibiting the outputs of scenario analysis.



Practical Exercise 15 – Model Administration Practicals to implement a Status Check worksheet to debug models and the creation of a model log.

FINANCIAL STATEMENT ANALYSIS & VALUATION

The dynamics of financial analysis from a theoretical & practical perspective

INTRODUCTION

- Corporate, business unit and operational strategy compared with strategic vs. business planning
- Establishing the reporting entity vs. legal entity
- Review of reporting standards: domestic (GAAP) vs. international (IFRS)
- Transactional accounting vs. economic perception worlds
- A structured approach for analysis (accounting analysis, financial analysis and prospective analysis)
- Types and purpose of financial reports and statements
- A structure for effective initial reading of the annual report/audited accounts
- The importance of strategic analysis for understanding life cycle context of financial statements
- Business model used to understand the 'business'

ACCOUNTING ANALYSIS

Review of fundamental accounting principles, concepts and mechanics underlying financial statements. Introduction to the structure and format of 'core' financial statements including consolidated or group accounts.



Financial statement building blocks

Statement of financial position

- Tangible non-current assets (fixed)
- level required to support the business
- basis of valuation
- real value they add to the business
- held off-balance sheet
- charges/prior claims
- Intangibles/goodwill
- valuation
- liquidity
- 'void in bankruptcy' issues
- how funded
- Investments
- type
- liquidity
- valuation
- Working capital
- quality and efficiency
- seasonality
- distortions
- when is cash not really cash
- Liabilities
 - relative level
 - maturity profile
 - structure, terms and conditions of debt facilities
- Capital
 - quality and types
 - access to further capital
 - types of reserves

Income Statement

- Revenue volatility
- Operational costs and leverage
- Finance costs
- Sustainable vs. comprehensive incomeItems picked up by comprehensive
- income
- Movements on reserves
 Cleaning the numbers: restructuring costs, profit/loss on sale of assets, non operational income or expenses

Statement of Cash Flow:

- Direct vs. indirect methods
- Source and application of funds
- preparing a cash flow statement for valuations



The Dangers & Distortions of Creative Accounting

Management Accounts

- Difference between financial and management accounts
- Advantages and disadvantages
- How they fit with the business model and with the audited accounts
- What to look out for
- Assessing reliability

FINANCIAL ANALYSIS

Ratio Analysis

- Purpose and uses of ratios
- Key functional areas:
- operating management
 - investment management
 - financing decisions
 - dividend policy
- Benchmarking/peer group analysis
- Identifying sustainable growth rate
- The impact of financial gearing and leverage on equity returns
- Different industry characteristics/profiles
- The tendencies of ratios over the long term
- Identifying the weak/moderate/strong/very strong companies



Cashflow Analysis

- Review of the cash flow statement structure
- Identifying the primary cash drivers

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- EBITDA in perspective
- Calculating free cash flow
- Specific cashflow ratios
- · Establishing cash flow sustainability
- Calculating debt capacity
- Debt Service Cover Ratio ('DSCR')

Liquidity Analysis

- Definition
- Credit Risk
- Operational liquidity
- Non-operational sources of liquidity
- Liquidity reserves
- External factors impacting a company's liquidity



PROSPECTIVE ANALYSIS

Financial Statement Forecasting

Accounting returns vs. investment

Constructing financial forecasts

The importance of intrinsic fundamental

Valuation techniques requiring or nor

techniques and the central concepts

techniques such as Free Cash Flow

The use of Discounted Cash Flow (DCF)

The Investment horizon and competitive

Discussions around top down or bottom

up Weighted Average Cost of Capital

(WACC) for company and project

Using relative multiples to value or

check the reasonableness of DCF

Introduction to Strategic Value Added

(SVA) and the principles of economic

Using previous financial

forecasts for indicative

valuation

returns vs. cashflow returns

An Introduction to Valuation

Brief introduction to valuation

valuation price vs. value

requiring forecasting

advantage period

valuation

profit

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Monitoring and control

- Budgets vs. forecasts
- Preparation approachPeriod of preparation

Assumption setting

Sensitivity analysis

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INTERNATIONAL TRADE FINANCE

A cutting-edge & highly practical three-day course that explores all the main risks in contemporary trade finance products & structures

LETTERS OF CREDIT AND THEIR VARIANTS

The Evolution of Letters of Credit in the Trade Cycle

- Collections and international documentation
- Payment, acceptance and negotiation modes of funding
- A closer look at negotiation under new ICC 600 rules
- Deferred payment letters of credit (L/C)



Who takes the main risk? An L/C is put under the risk spotlight to highlight the risk

stances of applicant (buyer), beneficiary (seller), issuing bank and intermediary paying or negotiating banks

- Confirmations silent/straight and soft
- Red clause L/Cs their mechanics and risks
- The utilisation of non-operative clauses as a risk mitigation technique
- Deferred payment L/Cs in oil trading
- High risk countries and the red clause transferable bulk L/C

Group Workshop 1: The ICC 600 In-Tray Exercises

Delegates, armed only with a copy of the UCP ICC 600, solve international documentation and discrepancy issues.

Back to Back Issues

The mechanics of back to back letters of credit



Case studies in back to back financing

- Securities and pitfalls
- Long horn back to backs
- Counter L/Cs
- Back to back variations

Group Workshop 2:

Delegates in groups utilise L/Cs and guarantees to structure a workable solution for a client in an emerging market country buying an oil by-product



Group Workshop 3: Reading material for tripartite oil for coffee "back to back" style financing. This is overnight reading material for a structured, multi-country and multicommodity L/C based deal where the delegates, in groups will be asked to

The Essential Differences Between Guarantees and Standby L/Cs

Guarantees in trade finance

mitigation techniques

Case studies and examples of performance bonds, bid bonds, retention money guarantees and advanced payment guarantees

highlight the main risks and risk

- The mechanics of standby Letters of Credit and their "hybrids"
- Guarantee and standby contemporary issues

Defining the products by example



THE HYBRID: A practical case study reviewing the risks inherent in the conditional guarantee and standby being utilised as

payment mechanisms

Forfaiting and Factoring

- Single receivable forfaiting market
- Mechanics of forfaiting
- The political risk reality of forfaiting
- Forfaiting deferred payment L/Cs
- Contemporary models
- Forfaiting and factoring compared
- Forfaiting interest calculations .
- Jumbo L/C risk sharing, sales and distribution
- Structured single export receivable financing



Group Workshop 4: Bondtrade

Delegates evaluate the risk and present their findings

Group Workshop 5: Product Innovation, Making the Market Delegates in groups solve the

problem of an international contractbased deal between two majors who do not wish to utilise Letters of Credit but DO seek their bank to confirm a payment undertaking by drafting and selling a simple payment agreement



Group Workshop 6: **The Internal Presentation**

Presenting transactional deals to credit committees looking towards balance sheets for traditional assessment has been one of the communication problems besetting the industry. This core group workshop critically analyses a deal, mitigates risks and produces the first, Microsoft Excel solution to the problem clearly indicating in one page all the issues of bank and country line utilisation and risk garaging techniques to ensure that delegates get more deals through credit committee whilst protecting themselves and the bank's risk position

Warehouse Financing and Fraud Avoidance

- Contemporary warehouse financing techniques and risks
- Warehouse receipt/warrant financing
- Demonstration of political risk impact on pre-finance and insuring off-take prices
- Fraud avoidance techniques. How NOT to lose \$300million in one day!
- Due diligence with banks' securities
- Middle office functions
- What to do if things do start to go wrong!



Spotting and avoiding fraud in trade finance: five generic case studies

Structured Pre-Export Finance

- The fundamental principles of "tolling" finance deals
- Timing and an introduction to option financing



Securitisation and pre-export finance structures



Question and answer session and a look at the future via Energy Structured Export Notes

Turn to page 114 to read about the distance learning course

The Mechanics of **International Trade Finance**

LOAN DOCUMENTATION

Three days of intensive practical training on the legal issues surrounding loan documentation

Delegates will be guided step-by-step through the various components of loan documentation from indicative offer

letters, loan agreements, guarantees, letters of comfort, mortgage debentures (fixed and floating charges) to security over other forms of asset, including property, shares and insurance assignments.

Law & Jurisdiction

Common law differs substantially from Civil law. This first session addresses the operation of the law itself.

- When to use local law and when to use English or New York law (i.e. common law)
- How common law works
- Non-exclusive jurisdiction
- Enforcement of Lender rights and legal opinions
- Alternative Dispute Resolution provisions
- Conflict of laws

Pre-requisites to Contract

This second session introduces how contract law works and the circumstances where the law can declare the loan is unenforceable because there is no contract (i.e. the lender

loses the money).

- Contracts don't have to be in writing
- When is the lender bound conditions of binding contract formation
- The concept of ostensible authority
- Inadmissibility of pre-contractual negotiations in contractual dispute resolution
- Ways in which lenders can lose money under English law
 - ultra vires
 - absence of consideration and solutions thereto
 - absence of consent
 - illegality and severance clauses
 - uncertainty

Key Clauses in Loan Agreements

- Negative pledge
- Material adverse change
- Set-off
- Market disruption
- Novations and assignments
- Law, jurisdiction and enforcement

The Loan Agreement

Walking through the agreement, including:

- The structure of a loan agreement
 layout of the clauses
- Clauses raising important commercial issues and their implications
 - representations and warranties
 - removal of participants
 - snooze 'n' lose, yank the bank
 - conditions precedent
 - default, covenant breach and grace periods
 - reversing waivers of default
 - implications of a financier non-performance
 - the undertakings that are 'missing'
 - appropriations rule
 - increased costs, carve-outs
 - FATCA
 - confidentiality
 - implications of financier non-performance
 - severance
 - know your customer
 - change of control
 - increased costs
 - intercreditor transactions

The Agency Role – Syndicated Loans

When financiers lose money there is a focus on the behaviour (and potential liability) of Agent lenders. This subject is relevant not only to the Agent lenders, but the participant lenders also. The subject of negligence and disclaimers is also relevant for legal opinions, asset valuations and other consulting reports on which reliance has been placed.

- Powers of the agent bank and the agency clause
- · Implications of agent exceeding powers
- Information memorandum, ongoing information and reporting
- Disclaimers and their effectiveness
- Unfair Contract Terms Act 1977
- Negligence, gross negligence and wilful misconduct
- Vicarious liability
- Defaults and majority voting rights

Guarantees

English law guarantees are very technical documents – they are laden with words and phrases that have

LOAN DOCUMENTATION

continued ...

special legal effect – so negotiating the wording of a guarantee can have the effect of changing the legal meaning if the lender is not careful. We go through a guarantee and identify each of those issues.

- The common law position
- All-monies guarantees: potential dangers
- Post facto guarantees
- Termination of guarantees
- Multiple guarantors: implications, several vs. jointand-several, right of contribution
- Reviewing specific clauses contained in a standard guarantee document
 - variations clause
 - security held on trust clause
 - continuing security and the problem with the rule in Clayton's Case
 - ruling off
 - no competition clause, rights of subrogation
 - conclusive evidence clause
 - indemnity clause
 - survivorship clause

Letters of Support

Some letters of support are contractually enforceable and some are not. This session enables the participants to understand how the courts interpret them and the ingredients

that need to be present for them to have enforceability.

- Circumstances where guarantees are unavailable
- · Letters of support vs. letters of acknowledgement
- · Ingredients for contractual enforceability
- Determining intention of the parties through forensic analysis of the language used
- · A review of the case precedents
- · Group discussion on several draft letters

Security Agreements

- Security types reviewed
 - mortgages statutory, common law, equitable
 - pledges
 - liens
 - fixed and floating charge
 - hypothecations
- · Circumstances, security over:
 - land and buildings
 - shares
 - insurance policies

Principles of Insolvency Law

Whilst insolvency is jurisdictionally-specific, the general principle of pari passu treatment of unsecured creditors is fairly universal.

- The primacy of statute law (insolvency) over common law (contract)
- Guiding principles of insolvency
- A framework for handling nonperforming loans
- Antecedent transactions
 - transactions at undervalue
 - voidable preferences
 - extortionate credit transactions
 - floating charges of no new value
- Voluntary Rescue Frameworks
 - the advantages of voluntary workouts over formal insolvency
 - the loan workout options available
 - factors affecting the success of workouts
 - shadow directors

MASTERING MERGERS & ACQUISITIONS

Learn the practical strategies, tools and techniques for successful mergers and acquisitions

COMMERCIAL EVALUATION OF ACQUISITION OPPORTUNITIES

Overview of the Planning Process

We start by looking at the 'big picture' – the objectives of the acquirer, the rights of access to the cashflows and assets of the target company, and the 'affordability' of the acquisition

- Projection and valuation of both companies
- Quantifying and valuing synergies
- Estimating the potential cashflow volatility
- Financial assistance laws
- Method and quantum of cash extraction from the target company
- Debt capacity calculation
- Accounting consolidation

The Key Analytical Issues

A coherent analytical process is essential. Understanding the balance of cash/accounting implications, risk/return and price/value is central for both purchaser and vendor

- · Cashflow vs. accounting issues
- Earnings dilution and earnings accretion
- Price vs. value
- Risk and return
- Quantification and pricing of risk
- Free cash flow
- Return on capital and hurdle rates

Overview of DCF Valuation

A walk-through of the valuation of a prospective target company

- Time horizons
- Minimum required returns
- Risk free rate selection
- Approaches to the share market premium
- Problems in the use of betas
- XNPV and EXP discounting
- Valuation of perpetuity and appropriate adjustments
- Subjecting the valuation to sensitivity
- Practical application and decision-making
- · Frequently encountered errors in valuation models

Illustrations of completed valuations

Pricing

""

Where the target company is not listed, it is an important analysis for both purchaser and vendor to assess the market's appetite for such acquisitions

- Frequently encountered errors in practical implementation
- · The adjustments necessary
- Assessing the control premium
- · When pricing models or analysis are not applicable

Illustrations of pricing analyses

Private Equity

A major factor in M&A markets is the role of private equity and the use of leveraged finance. Financial buyers, with modest levels of synergy can frequently outbid trade buyers with substantial synergy. We need to delve into the reasons why this is so

- Structure of private equity funds
- The implications and constraints of the investment period and the fund maturity
- The forms of exit
- The 5 drivers of the private equity fund's IRR
- Why private equity can outbid synergistic acquirers
- The consequences of the current market turmoil for PE portfolios
- The likely changes in future regulation
- MBOs
 - the negotiation and documentation process
 - the manager's ratchet
 - vendor loan notes
 - PIK instruments

EXERC/

Illustrations of leveraged buyout

THE ACQUISITION PROCESS

Processing the Sale

The organisation of the sale, and a review of the regulatory framework, not only in the EU, but also highlighting areas where they vary from those applying in the USA, Asia and elsewhere

- The different forms of M&A activity
- The importance of gaining the recommendation of the incumbent board
- Schemes of arrangement under corporate law special resolutions
- The role of investment banks, reporting accountants, lawyers, PR firms, stockbrokers
- · The fiduciary duties of the vendor's directors
- Managing the negotiation overview of the process and the timetable
- Sale mechanics open tender, closed tender, dual track, parallel sale, exclusive one-by-one
- · Mandate letter and confidentiality agreements
- · Selling memoranda, provision of information and confidentiality
- Competitive tension
- Winner's curse
- European Takeovers Directive
 - historical evolution and compromises
 - applicable law
 - rules for protection of minority shareholders
 - dissemination of information
 - timetable
 - the opt-outs defensive actions of incumbent board, break-through rights
 - squeeze-out rights
 - administration
- · Antitrust, monopolies and competition law

MASTERING MERGERS & ACQUISITIONS

Learn the practical strategies, tools and techniques for successful mergers and acquisitions

Recommended Offers

An agreed and recommended offer, primarily comes down to the negotiation of the terms and conditions as set in the Sale & Purchase Agreement – particularly on issues such as warranties, contingencies and exclusions. We carefully identify the key factors in that negotiation

- Exclusivity agreements and break fees
- The due diligence procedure the issues, timing, and team work
- Purchase the shares or the assets? pros and cons
- The structure of the offer cash and other forms of consideration
- Restrictions on vendor competition
- · Review of a Sale and Purchase agreement
 - conditions precedent
 - warranties
 - indemnities
 - carve-outs and exclusions
 - price adjustments, deferred payments, escrow
 - payment profile
 - restriction of rights
 - confidentiality, public communications
 - material adverse change
- Post-acquisition integration

Contested and Hostile Bids

Many initially hostile approaches end up as recommended offers after successful negotiations are concluded post-bid. But if the bid continues in the absence of agreement, the battle is one of strategy and tactics

- Defensive structures
 - constitutional provision
 - poison pills
 - shark repellents
 - crown jewel lock-ups
 - leveraged restructuring
 - Pac man
 - white knight, white squire
 - greenmail
 - parachutes
- Implementation
 - announcements
 - role of advisors
 - the documents required and the timetable
 - pros and cons of launchpad holdings
 - mandatory offers and whitewashes
 - pitching the price
 - significance of Day 46the form and structure of the offer
 - arbitrageurs and the arbitrage spread
 - multiple offers
 - offer conditions
 - vendor placings
- Market activity
 - implications of share purchase and sale ahead of bid announcement

- permissible transactions during offer period
- the treatment of contingent rights to shares
- concert parties
- offences related to transactions in shares

FINANCING ISSUES Financing Structures

The financing can take many forms. We create a decision framework that correlates the characteristics of the particular transaction to the most suitable financing approach

- Forms of consideration
- The structure of the bid merits of cash, paper, or mixed offers
- Implications of the various financing sources
- Does the financing depend on target company cashflows?
- Debt capacity analysis
- Tailoring of amortisations to cashflow generation
- Workarounds to the financial assistance laws
- Cash sweeps and their effect on the IRR
- The effect of leverage on the risk/return equation
- Second lien financing
- Mezzanine finance vs. high yield bonds
- Two-phase financing, bridge financing
- Vendor notes
- Convertible debt
- Warrants
- Forms of equity raising
- Deferred consideration
- Dividend implications, special dividends
- Asset strips
- Leverage:
 - characteristics of A, B, C and revolving credit tranches
 - multi-tiered holding companies
 - inter-creditor issues, priority deed
- LMA standard form leveraged finance documentation

Specialised Topics

We conclude with some examples of specialised situations

- Joint ventures
 - rights of pre-emption
 - matching rights
 - put options are is contingent deferred consideration (earnouts)
 - venturer's agreement
- Earnouts
 - control issues
 - audit of performance data
 - protective clauses

A MASTERCLASS IN CORPORATE FINANCE

All you ever wanted to know about corporate finance in just five days

DAY 1

The Central Role of Valuation in Corporate Management

- The analysis of price vs. value
- What are the valuation techniques
- Are pricing techniques different?
- Why markets are not perfect
- The implications for evaluation of transactions
- Sharemarket fashion growth vs. value
- Accounting measures of performance vs. economic accruals

The Basic Building Blocks

- Risk and the pricing of risk
- Distinguishing solvency and volatility
- · What are the drivers of corporate cashflow volatility?
- The key importance of Free Cash Flow
- The relationship of FCF, ROC and IRR
- The relationship of Return on Capital and the Cost of Capital
- Different ways of structuring the valuation analysis to suit the context of the decision
- · Limitations of accounting-based data

The Pricing of Risk, Required Returns, and Discounted Cashflow Valuation

- Cost of debt and the implications of tax and currency issues
- Minimimu required return to shareholders derivation
- Common errors in deriving risk free rates
- The complications of a multiplicity of theoretical approaches which of these make sense?
- Cashflow volatility, shareprice volatility and betas $\,$ rationalising the approach
- What time horizons to adopt
- The mathematics of cashflow discounting the 'problems' with IRR and NPV functions
- The alternative methodologies
- Dealing with the value beyond the selected horizon period
- · Sensitivity analysis of the valuation
- The interface of the valuation and practical decisionmaking

A valuation case study

DAY 2

Dividend Growth Valuation

- Arguments in favour of dividend valuation
- Why it is infreequently used in practice
- When it ought to be adopted as the preferred approach

- Comparison to DCF
- Sensitivity

The Approach to Pricing

- Determining appropriate comparative businesses
- Hazards in cross-border comparative analysis
- Enterprise value
- The multiples EBIT, EBITDA, earnings, assets, sales, cash, SHF, etc
- · Dealing with accounting inconsistencies
- Normalising the data
- Manipulating the source data and deriving the sectoral benchmarks
- Relating the comparative data for the sector to the prospects for the company being analysed

Capital Structuring

- The effect of leverage on value contrasting schools of thought
- The danger of optimal capital structure theory
- Company dynamics and the origins of cashflow volatility
- Currencies balance sheet hedging, cash hedging or value hedging – which way to go?



Evaluation of a company's financial strategy

Leveraged Buyouts

- The structure and objectives of private equity funds
- The analysis of a business in the context of a leveraged buyout
- The financing structures typical to LBOs
- Coverage requirements of senior financiers
- Adaptations for MBOs management ratchets
- Platform MBOs
- The range of exit options, the impact on IRR, sensitising the analysis
- Modelling LBOs
- Why traditional valuation approaches are nonapplicable for LBOs

DAY 3

Project Financings

- Why the normal investment rule is non-applicable
- Evaluation methodology for limited recourse investments
- The five drivers of the Sponsor IRR

Adapting Valuation Techniques to Other Specialised Situations

- Assessing capital expenditure proposals
- APV contrasted with DCF

A MASTERCLASS IN CORPORATE FINANCE

continued ...

- · Complications in valuing conglomerates
- The changes implied when the subject company is privately owned – investment liquidity issues
- What adaptations are necessary when techniques are applied in emerging markets
- What to do when companies invest outside their traditional business or geography
- Joint ventures and shareholder agreements



Developing a solution to corporate problems

Shareholder Value

- · Traditional methods of assessing shareholder value
- The shortcomings of such approaches
- Value-based management residual value and EVA
- Economic Value Added the underlying logic
- Economic accruals adjustments to the accounting data
- · How the analysis assists in strategy formulation
- Do companies really emphasise value criteria in decision making? the evidence

An EVA case study

DAY 4

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Frequently Encountered Errors in Quantitative Analysis

- The correct calculation of IRR
- The correct calculation of NPV
- Adjusting for inflation
- · The modelling of capital expenditures
- Consistent horizons
- Incorrect use of proxies

Forecasting Corporate Performance

- Different modelling approaches
- · When to model value and when to model volatility
- The implications of that choice
- The modelling of currency exposures
- · Sensitivity, scenario and break even analysis illustrated
- Designing an analysis worksheet

Negotiated Acquisitions – Private Treaty Sales

- The different forms of M&A activity
- Winner's curse
- The different motivations for business acquisition
- The due diligence procedure the issues, timing, and team work
- The data room
- · Valuation in the context of acquisitions
- The structure of the offer cash and other forms of consideration

- The importance of gaining the recommendation of the incumbent board
- The role of investment banks, reporting accountants, lawyers, pr firms, stockbrokers
- · The fiduciary duties of the vendor's directors
- The Sales & Purchase Agreement
- Managing the negotiation process
- Exclusivity agreements and break fees
- Purchase the shares or the assets? pros and cons
- Warranties and indemnities
- Post-acquistion integration
- Complications in cross-border acquisitions
- · Antitrust, monopolies and competition law

DAY 5

Overview of M&A Regulations

- · Applicable law
- · Rules for protection of minority shareholders
- Dissemination of information
- Timetable
- Squeeze-out rights
- Implications of share purchase and sale ahead of bid
 announcement
- · Permissible transactions during offer period
- The treatment of contingent rights to shares
- Concert parties
- Offences related to transactions in shares

Contested and Hostile Bids

- Defensive structures
 - constitutional provisions
 - poison pills
 - shark repellants
 - crown jewel lock-ups
 - leveraged restructuring
 - pac man
 - white knight, white squire
 - greenmail
 - parachutes
- Implementation
 - announcements
 - role of advisors
 - the documents required and the timetable
 - launchpad holdings
 - mandatory offers
 - pitching the price
 - the form and structure of the offer
 - arbitrageurs and the arbitrage spread
 - multiple offers
 - offer conditions
 - vendor placings



Participant groups plan a contested bid, and then react to developments as the bid unfolds

VALUING TECHNOLOGY BUSINESSES

A practical guide to contemporary valuation techniques

GENERAL PRINCIPLES OF TECHNOLOGY COMPANY VALUATION

Introduction

- What is a technology company?
- Different interpretations of technology
- Companies and the corporate life cycle relevance to technology businesses
- Why value technology companies?
 - equity positions
 - fund growth from external parties
 - exit
 - remuneration base

Overview of Valuation Approaches

- Intrinsic valuation traditional Discounted Cash Flow (DCF) techniques
- Relative valuation multiple based analysis revenue, profit, cash, asset
- Venture capital method
- Probabilistic valuation sensitivity analysis, scenario analysis, decision trees and simulations
- Real options valuation potential value created from additional options

Other Valuation Issues

- Assessing and treatment of different risks systematic and the cost of equity, discount rates and required rates of return, and unsystematic (specific) risks
- The economic cycle treatment of macro-economic factors in a valuation

Understanding the Challenge with Technology Companies

- Differences between traditional corporate valuation and technology company valuation
- Understanding and handling data problems that emerge with technology companies
- Importance of lifecycles upon corporate cash flows
- Challenges of DCF valuation techniques and their applications to technology businesses

Applying the DCF Model to Technology Company Valuation

- Challenges in estimating cash flows and expenditure patterns
- Issues in evaluating the expected growth rate
- Links to corporate strategy
- Estimating the appropriate discount rate and its variance over time
- Evaluating the stable growth stage and how to calculate the terminal value
- Challenges in using the DCF model to value technology companies

Using Multiples in Technology Company Valuation

- Importance of using EBITDA, if possible
- · Using revenue and other multiples
- Understand the broad range of possible results and their potential resolution intrinsic multiples
- Potential use of statistical analysis to improve a multiple comparison
- Challenges in using multiple approach to value technology companies

Using the Real Options Approach

- The problems inherent in using the DCF approach to valuation
- Identifying potential real options patents/copyright, expansion, abandonment
- Why real options are more relevant to technology company valuation and their use to improve the understanding of technology valuations
- Challenges in using real options approach to value technology companies

VALUING START-UP TECHNOLOGY COMPANIES

Introduction

- · A life cycle view of start-up companies
- Start-up companies in context
- Characteristics of young companies and sectors
- The key challenges with start-up companies
- no visibility a key valuation challenge
- understanding intrinsic value
- how to value existing assets
- understanding cash burn
- assessing the future of the business and potential growth rates
- understanding and quantifying risk for small fast growing businesses
- estimation of discount rates for pure equity financed businesses
- how and when to calculate terminal value
- dependence on terminal value and its reduction
- assessing equity claims

Valuation of a Technology Start-Up Company

- Valuation issues relative valuation
 - problems with start-up multiple analysis
 - determining the starting point revenue multiples
 vs. profitability multiples



Excel based valuation of a startup technology company based upon the trainer's experience

- identifying potential stability for multiple calculation

VALUING TECHNOLOGY BUSINESSES

continued...

- · Valuing a start-up or early stage business in practice
 - primary errors made in valuing early stage businesses
 - undertaking macro and micro analysis
 - assessing potential product success and achievable market share
 - top down vs. bottom up approaches
 - bottom up approach to a valuation
 - estimating and using different discount rates theoretical vs. practical perspective
- · Single vs. phased discount rates
- Discount rates as maturity approaches and mean reversion
 - ensuring consistency in a valuation
 - intrinsic and extrinsic multiples
 - real options and their potential impact on valuation

VALUING PRE-IPO TECHNOLOGY COMPANIES

Introduction

- Characteristics of growth companies and sectors and how growth companies are different
- How does a pre-IPO valuation differ from a startup?
- A life cycle view of pre-IPO rapid growth companies and the characteristics of the rapid growth company

Key Valuation Considerations

- Valuation issues facing the estimation of intrinsic value
 - historic numbers can be misleading, or may not be available
 - how assets differ in a rapid growth business
 - most value is created by a rapid growth company in the growth phase
 - challenges of potential capital intensity in the rapid growth business
 - the importance of understanding risk during the growth phase
 - terminal value for a rapid growth business preparing for IPO
 - how to estimate
- Importance of equity claims
 - understanding the differing equity claims in a rapid growth business
 - participation by different equity holders
- Valuation issues relative valuation
 - peer groups criteria for selection
 - finding similar growth businesses use of different sectors
 - adapting a multiple analysis for risk

Valuation in Practice

- · Valuing a growth business in practice
 - main errors made in valuing growth businesses
 - dealing with immature markets
 - assessing product cycles
 - ability to execute the key driver
- Valuing the operating assets through the growth of the business
 - how operating asset lives develop in the high growth phase
 - ensuring consistency in a valuation
 - reinvestment and growth
 - assessing investment requirements the returns and reinvestment equation
 - completing the valuation combining returns and risk in a model



Practical exercises and cases will be integrated to support the presentation and engage participants.

PRIVATE DEBT MASTERCLASS

The course will combine presentations, business cases, and interactive Q&A sessions. Active participation is encouraged, and practical exercises will be used.

Private Debt in Context

- What is private debt?
- Historical perspective and the emergence of a distinct asset class
- Who are the participants in the private debt market?
 - pension plans
 - foundations
 - insurance companies
 - fund of funds
 - endowments
 - asset managers
 - family offices
 - wealth managers
 - government agencies
 - others

•

- Why private debt? Issues include
- 2008 credit crisis and bank regulation
- quantitative easing
- track record
- diversification appeal
- defensive nature of private debt
- leveraged lending guidance
- developments in alternative assets
- pressure on PE management fees
- not all private debt is illiquid

Structuring Issues for Private Debt Funds

- Private limited partners and general partners
- Partnership structuring issues
- General partner's key activities
- Remuneration and compensation
- management fees
- carried interest
- Differences from private equity structures
 investment allocation
 - hybrid features
 - leverage and fees

Private Debt Investment Process

- Programme design
 - strategic asset allocation process
 - portfolio construction and investment platform structuring
 - cash flow planning
- Implementation
- fund sourcing
- due diligence
- Ongoing tasks
 - monitoring
 - reporting

Classifying Private Debt

- Senior
 - infrastructure
 - senior real estate
 - senior direct
 - unitranche
- Junior
 - subordinated real estate
 - syndicated mezzanine
 - mezzanine
 - high yield
- Equity and equity linked – private equity co-investments – warrants

Private Debt Investment Strategies

· Why ESG factors are important in private

Key ESG considerations for private debt

- review of LBO history, importance and

- challenges with LBO private debt funding

when problems arise, the case of IHeart

Distressed debt, using a case relating to an

- valuing distressed debt and financial

- developing scenarios for a distressed

- sale of business based on its enterprise

- importance of cash flow analysis and

debt leverage and interest coverage

- analysing the recovery value of the

ratios in relation to financial covenants

Calculation of the yield to

- private debt or fixed income instruments

why impact investing, including evidence

are the largest asset class in impact

- indirect investment via intermediaries

- different types of financial instrument -

Real-life examples of impact

Real-life examples of venture

to treat cancer

debt, e.g. EIB funding new ways

investment initiatives, e.g.

Energy Access Debt Fund

maturity for different scenarios

to assess the implications and

- full recovery outside bankruptcy

- LBOs and private debt structuring

- requirements for LBO success

- areas for improvement

- pressure to implement

Commercial Applications

rationale

Media

energy business

company, e.q.

asset liquidation

distressed debt

Development Initiatives

of performance

- direct investment

mezzanine finance

- impact investing strategies:

Impact investing

investing

Venture debt

- why venture debt

potential

liquidity constraints

modelling

value

- challenges in implementation

Leveraged Buy Outs – LBOs

debt

- Direct lending
- Mezzanine
- Infrastructure debt
- Venture debt
- Distressed debt
- Credit special situations
- Bridge financing
- Other e.g. active over all phases of the credit cycle
- Speciality finance

Private Debt Financial Instruments

- Bank loans, first lien
- Second lien
- Unsecured notes
- Subordinated debt
- Preferred shares
- Mezzanine finance
- debt types of instruments
- characteristics PIK etc.
- equity types of instruments
- vendor debt

Valuation

- Why valuation is important in private debt – governance and capital attraction – regulation
- Comparison of private debt and public debt valuation
 - methodologies
 - data availability
- The private debt approach to valuation payoff, timing and risk
 - payon, unning and risk
 determining credit spread
 - determining credit sp
 - what affects risk
 - applicable regulations, standards, policies and guidelines to consider
 - discount rate analysis to determine the cost of debt
 - using the discount rate to determine value
 - valuation challenges
- Guidelines on private equity valuations International Private Equity and Venture Capital Valuation (IPEV) Guidelines

Private Debt Regulation

- Europe AFIMD
- purpose
- scope

- scope

ILPA

- requirements

Governance and ESG

- purpose and implications

(corporate) Governance

What are ESG factors

- requirements
- US The Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank) and the Volcker Rule – purpose

- its role and trade association 'regulation'

What is ESG - Environmental, Social and

PRIVATE EQUITY & VENTURE CAPITAL

A practitioner's guide to state-of-the-art strategies & techniques

INTRODUCTION

A Brief History

- The different stages of investment From start-ups to listed equity
- Seed
- Start-up
- Expansion
- Replacement Capital
- Buy-out
- Listed

VENTURE CAPITAL – DEFINING CHARACTERISTICS

Market Participants

- Investors
 - angel investors
 - institutional funds
 - banks and other financial institutions
- Intermediaries
- Issuers

INVESTMENT STRUCTURES

Investment Funds

- Different roles in the partnership structure
- general partners
- limited partners
- The life cycle of a fund, from launch to return of capital
- The costs of investing
- management fees
- carried interest

Investment Strategies Explained and Illustrated

- Stage of investment
- Geography
- Sector
- Distressed/special situations
- Secondaries
- Fund-of-funds
- Mezzanine

Buy-Outs

- Leveraged buy-outs
- Management buy-outs
- Management buy-ins

A PE fund and a VC fund

INVESTMENT PROCESS

Investment Origination

- Finding investments: deal sourcing
- Choosing investments: the screening process

Analysis and Due Diligence

- · Financial analysis
 - an overview of modelling identifying potential pitfalls
 - use and calculation of Internal Rate of Return (IRR)
- Commercial analysis
- verifying the opportunity
- evaluating ability to execute
- Legal considerations

Understanding and Mitigating Different Types of Risk

- Operational risk
- Management risk
- Political risk
- Currency risk

Valuation and Pricing

- The International Private Equity and Venture Capital (IPEV) guidelines
- Market, income and replacement cost approaches to valuation
- · Art vs. science: Identifying and understanding valuation pitfalls
- · Bridging the expectation gap between investor and issuer



Valuing an investment proposal

Structuring an Investment

- Structuring for optimised returns:
 - equity
 - debt
- mezzanine
- Advanced forms of structuringThe use of holding companies
- Domicile and tax optimisation

The Approval and Execution Process

- · Non-binding indications and term sheets
- The role of the Investment Committee (IC)

Documenting a Transaction

- Key documents and their functions
- Terms and conditions:
 - warranties
 - covenants
 - conditions precedent

Managing the Investment

- · The life-cycle of an investment
- · Mechanisms of control
- When things go wrong



Managing a crisis

Realising the Investment - Exit Strategies

- Planning for exit
- The different exit routes:
- trade sales
- IPOs
- alternative exit options

REAL ESTATE INVESTMENT, DEVELOPMENT AND STRATEGY

Gain in-depth practical insights into the current real estate market and learn how to maximise the opportunities it presents

REAL ESTATE: CHANGE AND CONTINUITY

Real Estate – The Changing Landscape

Land and Evolving Asset Classes

- · Land values and construction costs
- Land Banking, development and investment
- Sectoral analysis of real estate
- Differences between markets

Thternational comparisons of prices, yields and other key data

· Evolving developer and investor strategies

The Role of Proptech in Real Estate Value Creation

- Smart Construction (robotics, 3D printing and other new building techniques)
- Artificial Intelligence (AI) and real estate
- Solar and other renewable energy

The impact of solar energy on property values

Valuation and GIS software

The role of drones and 5D mapping

- Land registration, conveyancing and the blockchain
 - Distributed Ledger technology in emerging markets
- Marketing and sales applications

Key proptech companies and their international strategies

Risk Analysis

• Political risk and how to manage it

Risk consultancy and its value

• Economic cycles and their impact

Conversions, greenfield developments and demand

- Climate change effect on real estate
- Cultural and social issues

Successful and failed developments and investments

Residential Property

- Why buy residential real estate?
- · Does rental income matter for residential property?
- What are the main problems?
- Measurement criteria for residential real estate hedonic approaches
- · Qualitative issues, competition, style and marketing

Using proptech for valuation

Market Analysis Considerations

- Comparables and how to analyse them
- Regression models and how they work



Comparable analysis for accurate valuation

Property Analytics

- Gross and net income
- Differences in calculating NOI
- Overall capitalisation rate
- Capital expenditure issues
- Differences between property types
- Approaches to the cap rate
- Assessing Net Present Value (NPV) for properties
- Ratio analysis and its value
- Land values in NPV
- The terminal value issue

NPV and IRR calculations for real estate

Forecasting

· Methods of forecasting and their application

Application of the Delphi Method to qualitative real estate forecasting

FUNDING REAL ESTATE DEVELOPMENT AND INVESTMENT

Mortgages and Bank Finance

- Concepts and applicability of the mortgage
- Calculating mortgages and impact on value
- Global statistics
- Available types of mortgage
- Syndication and the mortgage market
- Lending practice and pitfalls
- Mezzanine finance and deal structuring
- Chast STUD
 - How financial waterfalls work for real estate development
- Logic and use of Special Purpose Vehicles
- Relative returns for structured real estate finance
- Recent funding developments and the role of proptech

Crowdfunding and its application to real estate investment and development

- How to model real estate finance
- Islamic finance for real estate



Real estate investment and financing models

Cost of Capital Issues for Real Estate Companies

- · Costs, taxes and inflation
- CAPM and corporate leverage (equity/asset betas)
- Capital budgeting and real estate

REAL ESTATE INVESTMENT, DEVELOPMENT AND STRATEGY

continued...

Commercial Property - Assessing Income

- Appraisal of income property RICS Valuation Practices and international comparisons
- Comparison with corporate finance valuation
- Reporting according to IFRS standards

Important aspects of the RICS Valuation Standards (including valuer independence)

Cost approaches to valuation ("J°

Financial Aspects of Development

- Analysing Highest and Best Use studies and models
- Feasibility Studies: do's and don'ts

Working through feasibility studies ____

Leasing Analysis

- Why developers and investors alike need to study leases .
- Nature and creation of leases
- Differences between types of commercial property leases
- Commercial leases and statutory control
- Residential tenancies and statutory control
- Structure of leases e.g. length of the lease period; including options for tenant alterations and expansion
- Sinking funds
- Lease calculations (with worked examples and exercises)
- Rent reviews and lease renewal options
- Covenants to leases e.g. repairing liability, occupancy conditions, sub-leases, termination, service charge provision

Lease calculations

Lease valuations

40%

Valuing commercial leases

Financial Management Principles

- Accounting theory and methods
- Asset and liability valuations
- Development vs. Investment property in IFRS
- Reporting procedures in the management of different kinds of properties
- Preparing profit-and-loss statements
- Tax implications; tax records
- Cash flows; depreciation; investment tax credits; after-tax cash flow;
- Presentation to clients and management of client's accounts

Financial management - outlining a property's sources of If income and types of expenses and how they are accounted and reported

Managing Risks

- Modelling and evaluating comparative risks
- Risk management strategies (including derivatives)
- Available risk management instruments
- Costs and benefits of risk management
- Modelling risk management



Scenario Analysis in Excel

REAL ESTATE FUNDS AND REITS

Measuring Property Performance

- Applicable concepts and methodologies
- Problems and issues with performance evaluation
- Sources of data
- Evolution of data measurement
- International comparisons of performance .
- Current issues in performance measurement

What are the MSCI real estate indices and why are they not in emerging markets?

Investment Portfolio Analysis

- Comparison of risk-return profiles of real estate and financial investment assets
- Measuring investment performance
- Principles of portfolio diversification
- The case for active portfolio management
- Application of property within a larger non-property investment market.
- The nature of risk and return from property compared with bonds and equities.

Portfolio management and property investment - how much property should a fund hold?

Ownership Vehicles

- Listed vs. unlisted (private equity) property investment vehicles
- Investment funds, trusts and other legal and tax structures



Comparing tax structures for property and funds in Western and emerging market jurisdictions

International property investment, diversification and portfolio management

Investment in high-yield real estate debt ₩)

Securitisation of Real Estate

- Securitisation mechanics
- Sukuks and their relationship to securitisation
- Securitising mortgages
- The future of securitisation

Quoted Real Estate Investment Trusts (REITs)

- . What is a REIT?
 - Size and structure of the global REIT market
 - Benefits and risks of REIT investment
 - Comparison with direct and private equity investment
 - Examples of new REIT sub-classes



Prospects for the REITs market



A MASTERCLASS IN PRIVATE EQUITY

A dynamic practitioner's guide to the tools, strategies & applications of successful private equity investing

DAY 1

Private Equity – the Context and Value Creation

- Introduction
- History
- What is private equity?
- The pros and cons of being private
- Credit crisis: impact and consequences on private equity
- Private equity investment strategies
 - leveraged buyouts
 - venture capital (early vs. late stage)
 - special situations (i.e. distressed)
 - mezzanine
 - secondary purchases
 - fund of funds
- · How are PE funds structured?
 - private limited partners and general partners
 - partnership structuring issues
 - general partner's key activities
- Selecting investments
- · Structuring investments
- Monitoring investments
- Exiting investments
 - private equity partnerships and fundraising
 private equity market
- Investors
- Intermediaries
- Issuers
 - partnership covenants
 - evaluating general partners
- Transaction origination
 - deal flow
 - origination
 - screening of deals
 - non-binding indications of interest

DAY 2 Venture Capital

- The venture capital industry and other sources of funds for financing new ventures (including angel investors, banks and other institutions)
- Venture fundraising and characteristics of venture capital firms:
 - limited partnerships
 - corporate venture capital
- Characteristics of entrepreneurial ventures at different stages of development:
 - seed
 - start-up
 - expansion
 - mezzanine
 - buyout
 - turnaround
 - privately owned firm
 - newly listed firms
 - The structure of financial contracts:
 - staging
 - syndication
 - forms of finance (debt, convertible debt, preferred equity, convertible preferred equity, common equity, warrants

and combinations of these instruments) – board representation

- restrictive covenants and confidentiality agreements
- legal and institutional barriers to efficient venture capital financial contracting
- Exiting investments
- Venture capital and private equity investments in an international context

DAY 3 Valuation, Capital Structure and Debt Capacity

- The private equity approach to valuation
 - comparison of public equity and private equity valuation
 importance of the exit driven perspective
 - relation between active private equity management and valuation
 - guidelines on private equity valuations International Private Equity and Venture Capital Valuation (IPEV) Guidelines
- Value creation in private equity and how do private equity firms create value?
 - minimise purchase price
 - maximise leverage
 - minimise liabilities purchased
 - manage transaction costs
 - improve business operations
 - maximise tax efficiency
 - optimise exit
- Valuation and what kind of value issues need to be considered;
 - absolute value
- What is the value of the business/opportunity
- What is driving the value can the value drivers be identified and quantified
- The importance of understanding the underlying business and how to build this around fundamental analysis

 relative value
- · What is the potential that can be extracted at exit
- How does this value differ from absolute value
- How can it be measured learning from merger and acquisition best practice - analysing operational, financial and other (e.g. taxation) effects
- Importance of understanding Incremental Value Effect (IVE) – valuation architecture - analysing the business/opportunity by building according to desires and needs rather than using the 'standard' model
- Complete overview of valuation theory
 discounted cash flow valuation
- Weighted average cost of capital
- Risk premiums and Beta
- Terminal value estimation
 - multiples based valuation
 - dividend discount and other models



Developing relative valuation models to assess IVE

A MASTERCLASS IN PRIVATE EQUITY

continued...

- · Capital structure and debt capacity
- Traditional approaches
- Contemporary approaches
 - link with cost of capital minimisation
 - link with issues re DCF analysis methodology
- FCF to enterprise vs. equity and importance of
- understanding equity cash flows
- Sensitivities and identification of key value drivers
- Identifying the discount rate
- Debt maturity and repayment issues
- Terminal value challenges
- Assessing and challenging growth assumptions

 triangulating value using alternative methodologies



Calculating debt capacity of a company

DAY 4 – Private Equity, Buy-Out Structures and Sourcing Funds

- Leveraged buyouts (LBOs)
 - what is an LBO?
 - typical LBO structure
 - sources of financing
 - review of types of buyouts
- Management buyouts
- Management buy-ins
- Leveraged buyouts
 - evaluating a buyout candidate
 - financing a buyout candidate
 - key practical issues



Evaluating a buyout

- · Sources of funds
 - equity
 - debt
- Bank debt
- Revolving credit facilities
- Term loans
- Bridge financing
- High yield bond debt
- mezzanine financing instruments
- The valuation impact of different investment structures

DAY 5 – Due Diligence, Transaction Origination, Structuring, Documentation and Exit Strategies

- Due diligence
- Objective
 - validate business concept
 - verify market
 - appraise management
 - validate forecasts

- What is the due diligence process?
- The phases of due diligence
- Key topics for due diligence
 - business concept, opportunity
 - market
 - competition
 - customers
 - products
 - management and HR
 - financials
 - legal
 - regulatory
 - intellectual property
- IT

The main challenges of due diligence



Review: due diligence horror stories

- Transaction structuring and documentation
- Term sheets and purchase agreement
- Key sections of term sheets and purchase agreements
- Representations and warranties
- Covenants
- Closing conditions
- Deal process inside the PE firm
 - initial screening of deals
 - "heads up" memorandum
 - non-binding indications/term sheets
 - detailed due diligence and evaluation
 - formal and detailed presentation to the investment committee
 - final approval and funding
- Mechanisms of control
- board representation
- allocation of voting rights
- control of access to additional financing
- best practices
- Exit strategies
- exit planning
- review of Issues and Methods
- Sale
- Advantages and disadvantages
 - The process
- Key success factors
- Estimating synergies valuing existing businesses on a stand-alone basis and comparing them with the value of the combined businesses
- Importance of understanding different perspectives control premium, valuation of synergies and perspective
- Valuing the acquisition target with synergies
- IPO
- Advantages and disadvantages
- Process
- Valuation challenges
- Pricing and allocation
- AftermarketRecapitalisation
- Review

VENTURE CAPITAL

A practitioners guide to this exciting asset class

Venture Capital and Private Equity

- History
- Relationship with private equity and how it differs from private equity – VC as an asset class

Venture Capital as an Investment Opportunity

- The pros (and cons) of being private
- Opportunities in the market, including:
 - low interest rates
 - networking Silicon Valley Model
- Credit crises, impact and consequences for venture capital, including:

- cheap money

opportunity to 'seek alpha'

VC and the Financing Life Cycle

- Understanding different types of VC investment – risks, rewards and challenges:
 - seed
 - start-up
 - early stage
 - late stage
- The J Curve
 - significance
 - recent developments

The VC Market Place

- · Locations and characteristics:
 - USA
 - Europe
 - China
 - developing markets
- Participants
 - entrepreneurs
 - angel investors and early stage:
 - role
 - characteristics
 - developments e.g. crowd funding
 - venture capital funds:
 - importance
 - rationale
 - management of a private equity fund
 - role of limited liability partnerships
 - limited and general partners
 - structuring and rewards
 - fundraising
 - key issues
 - process overview, early process and deep process
 - partner meetings
 - term sheets
 - post-term sheet diligence
 - close

- importance of ESG
- corporate venture capitalists
 - importance
 - rationale
 - characteristics
 - structuring
- Development finance institutions (DFIs), Sovereign wealth funds (SWFs) and development banks
 - Importance
 Detionals
 - Rationale
 - Beyond just for profit
 - Illustrative important initiatives, e.g. impact investing

Venture Capital as a Joint Venture Investment Decision

- Screening of venture capitalist by the entrepreneur
 - approach of the venture capitalist
 - terms and conditions
 - exit policy
 - availability of funds
 - past history of the venture capitalist
- Screening of entrepreneur and the proposal by the venture capitalists
 - fundamental analysis
 - financial analysis
 - portfolio analysis
- · Criteria for investment:
 - technical feasibility
- commercial viability
- technical and managerial competence
- long run competitive advantage
- future prospects
- availability of inputs
- legality of the proposal

VC Finance Options – Choices and Reasons

- Preferred equity
- Convertible preferred equity
- Common equity
- Warrants
- Debt
- Convertible debt
- Mezzanine finance
 - definition
 - types
 - advantages and disadvantages

Value Creation From a Venture Capital Investment

• Traditional three stage view exit focus view – buy low, grow, sell high

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- Meeting the challenges of value creation in venture capital:
- excellence in due diligence
- minimise purchase price

- maximise leverage
- minimise liabilities purchased
- manage transaction costs
- achieve growth

Considerations Include:

1

Businesses

no visibility

rates:

terminal value

• Due diligence

viability, e.g.

PESTEL

industry analysis

Significance of valuation

and its structuring

analysis

approaches

- assessing equity claims

improve business operations

CASE ILLUSTRATION

Changing characteristics of the

traditional buy, hold and sell model

lengthening the J curve and unicorns

Game changers in venture capital –

Seed, Start-up and Very Early Stage

Understanding and managing the

- understanding intrinsic value

- how to value existing assets

- understanding cash burn

- assessing the future of the

business and potential growth

- estimation of discount rates for

how and when to calculate any

- importance of commercial due

diligence of the business plan

- tools for challenging commercial

critical differentiator analysis

environmental analysis –

business analysis – SWOT

and illustration of application

- deferred valuation, venture debt

Issues in valuing a start-up or early

- primary errors made in valuing

- undertaking macro and micro

assessing potential product

early stage businesses

- top down vs. bottom up

stage business in practice, including:

- venture capital method - principles

pure equity financed businesses

- understanding and quantifying risk

for small fast growing businesses

key challenges, including:

Failing to meet the value

creation challenge - Theranos

maximise tax efficiency
optimise exit

VENTURE CAPITAL

continued...

success and achievable market share

- Relevance and application of DCF valuation method:
 - value drivers
 - analysing value drivers
 - developing a 'scratchpad model'
 ensuring consistency in a
 - valuation
 - intrinsic and extrinsic multiples
 real options and their potential impact on valuation

MINI CASE ILLUSTRATIONS Seed, start-up and very early stage businesses

- PAL-V Flying car -Netherlands
- ILI Education Technology UK
- Relogistics Netherlands
- DW Spas Germany, Hong Kong, Macau
- Reiseido Luxury Spas Spain
- Premchit Spa Cosmetics Thailand
- · Caribestate.com Caribbean

Later Stage VC Businesses

- Companies and the corporate life cycle – relevance to late stage VCbusinesses
- Importance of valuation to later stage VC businesses
 - equity positions
- fund growth from external parties
 exit
- How does a pre IPO valuation differ from a start-up?
- Valuation issues
 - historic numbers can be misleading, or may not be available
 - how assets differ in a rapid growth business
 - most value is created by a rapid growth company in the growth phase
 - challenges of potential capital intensity in the rapid growth business
 - the importance of understanding risk during the growth phase
 - terminal value for a rapid growth business preparing for IPO – how to estimate
 - relative valuation challenges
 peer groups criteria for selection

- finding similar growth businesses – use of different sectors
- Valuation issues in in practice
 main errors made in valuing growth businesses
- dealing with immature markets
- assessing product cycles
- valuing the operating assets through the growth of the business
- how operating asset lives develop in the high growth phase
- ensuring consistency in a valuation
- reinvestment and growth
- assessing investment requirements – the returns and reinvestment equation
- completing the valuation combining returns and risk in a model

. Later stage VC - Uber

Structuring Venture Capital – Legal and Negotiation Issues

- Recognising and managing potential conflicts of interest arise between entrepreneurs
 - split of the financial return of the company
 - liquidation of the company
 control of the company
- Rights and protections allow the VCs to gain liquidity and maximise the return for their investors
 - liquidation rights
 - management participation and control
 - exit rights
- Venture capital documentation
- key documentation to map the process by which a venture capital deal will be negotiated and ultimately agreed
 - the term sheet
 - subscription agreement
 - shareholders' or investors' rights agreement
 - articles of association
- Minority protections
 - negative covenants
 - positive covenants
 - board representation
 - control triggers
 - tag along clause
 - share transfers
 - pre-emption rights
 - leavers

Exit Strategies

- The importance of exit planning timing and structuring
- Review of methods
 - secondary sale (buyout)
- trade sale
- strategic sale
- entrepreneur sale
- floatation/IPO method
- Review of issues
 - advantages and disadvantagesthe process
 - key success factors
 - importance of understanding different perspectives
 - relevance of understanding synergies/control benefits and their inclusion in analysis



CASE ILLUSTRATIONS

- Start-up to exit
- Systems Union
- Marketo

ADVANCED SWAPS

A practical guide to the strategies & techniques necessary to understand, analyse, assess and utilise the swaps market fully



Calculating Forward/Forward Prices and Zero Coupon Rates

- Single discount rates
- · The compound interest formula
- Forward/forward rates
- Par cash flows
- Calculating forward prices
- Calculating zero coupon rates

Portfolio Management

- Investment policies
- Sensitivity to a 1% parallel shift in the curve
- PV01s & DV01s
- Analysing the portfolio
- Estimating the modified duration of the portfolio
- Hedging the portfolio in the swap market
- Calculating the delta vector
- Modified duration of the swap
- Stack hedging the portfolio
- Strip hedging the portfolio
- Implied yield curve views
- Stress testing the hedge
- Managing interest rate risk

Asset Swaps

- Mechanics of a par asset swap
- · Cashflows of a typical par asset swap
- Credit considerations
- Asset swap on a discount bond
- · Asset swap on a premium bond
- Interest rate risk of an asset swap
- PV01 sensitivities
- Cashflow matching risk
- Swap rate and LIBOR spread sensitivity
- Market asset swap
- Variations on asset swaps

ALM Hedging Simulation

- ALM hedging and market making simulation
- ALCO meeting
- Hedging, trading and market making session
- Protecting the bank's earnings
- Defining a strategy
- Managing interest rate risk
- Calculating the impact on net interest income

Amortising, Accreting and Roller-Coaster Swaps

- Amortising swaps
- Accreting swaps
- Roller-coaster swaps
- Hedging amortising, accreting and

rollercoaster swaps

- Calculating the break-even swap rate in amortising structures
- Principles employed in hedging amortising, accreting and roller-coaster swaps

Valuing Interest Rate Swaps

- Zero coupon equivalent rates
- Discount factors
- Spot curves and implied forward rates
- The present value of the floating leg of the swap
- The present value of the fixed leg of the swap
- OIS vs. LIBOR
- Pricing and hedging Overnight Index Swaps - two possible approaches

Market Dynamics Leading to OIS Discounting

- Swap discounting & pricing using the OIS curve
- · Credit and liquidity premiums
- CVAs and CSAs
- Netting under ISDA
- Move to the OIS Curve

Rationale for OIS Discounting

- Creating the OIS curve
- Bootstrapping LIBOR curves in an OIS world
- LIBOR curves
- Generation of an OIS curve when collateral is posted in a different currency
- · Discounting of cross currency swaps
- Interest rate derivative pricing in the absence of a collateralised CSA

Building the OIS Curve

- Pricing and valuing interest rate swaps using LIBOR and OIS discounting
- The traditional method to price and value interest rate swaps
- Pricing and valuing interest rate swaps using OIS discounting

Different Types of Swap

- Basis swaps
- Constant Maturity Swap (CMS) or Constant Maturity Treasury swap (CMT swap)
- Amortising, accreting and rollercoaster swaps
- Index amortising swaps
- Diff swaps or qunato swaps
- Swaptions
- · Extendible and puttable swaps

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Complex Swaps

- First generation structured assets
- Second generation structured assets
- Callable fixed floater
- Capped, floored and collared FRNs
- Cliquet notes and bonds
- Corridor FRN
- Credit linked notes
- Currency protected note
- De-leveraged FRNs
- Dual currency notes and bonds
- Extendible floaters

Ratchet floaters

Resettable FRN

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Credit risk

- Index amortising notes
- Interest rate differemntial notes
- Inverse/reverse prinicipal (coupon) indexed note

Prinicipal (coupon) indexed note

Rainbow notes and bonds

Total return (indexed) notes

Credit Default Swaps

Bond and loan prices

Negative basis trade

Positive basis trade

First to default protection

• The benchmark for correlation

Measuring current exposure

Measuring potential exposure

Maximum potential exposures

Hedged derivative trading books

CDS potential future exposure

ISDA Master Agreement and Credit

Correlation of the market risk to the

Wrong-way risk and cross currency

· Counterparty Credit Risk and CVA

Organisational and operational

requirements for Active Management

Paying and receiving the CDS premium

Measuring expected exposure

Assessing credit risk

Counterparty credit risk

Credit value adjustment

credit risk of the client

Support Annex

Wrong-way risk

swaps

of CVA

CVA

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protection

Credit Exposures

Single name credit default swaps

Comparing buying a bond with selling

Leveraged floaters and super-floaters

Prinicpal protected/guaranteed notes

Repackaged securities/repackaging

ADVANCED SWAPS

continued...

- Implications of using CVA to value CCR within derivatives
- Quantifying and integrating CVA
- DVA and CVA
- Tackling wrong-way risk
- Setting up a CVA desk
- Managing the balance between risk taking and active hedging
- Systems considerations for an evolving risk culture

CVA, DVA & Bank Earnings

- Calculating CVA for derivatives
- DVA as a source of earnings volatility
- Bank credit spreads and DVA
- Earnings Implications

EIB Par/Par to NOK

- Swap driven bond issues
- Calculating the cost of funds on a floating rate basis
- The mechanics of par/par structures
- General principles for structures
- Using the swap rate when calculating the net proceeds of deals in par/par structures
- Optimal discount rates

Hedging an Equity Portfolio

- Identifying, measuring and managing the underlying exposures
- · Long and short positions
- Creating a hedge
- Alternative hedges
- Settlement
- Advantages of the swap market over the cash market
- Advantages of futures over swaps
- OTC and exchange traded derivatives

Contract Specifications

- Underlying instruments
- Price quotes
- Contract months
- Tick sizes
- Settlement procedures
- Position limits
- Block minimums
- All or none minimums
- Rulebook chapters
- Trading hours

Hedging Duration Gaps

- The economic value of equity
- Positive and negative gaps
- Estimating changes in the economic value of equity
- Durations of assets and liabilities
- Leverage adjusted duration gaps
- Hedging with forward contractsHedging with futures contracts

- Hedging with swaps
- Stress testing hedges
- EVE and duration gaps

Hedging Pitfalls

- Status quo
- Taking a view
- Engaging with business partners
- Attitude to losses
- Balance sheet forecasting
- Volatility and liquidity management
- Spreadsheets
- The costs of FX trading
- ISDA and counterparty risk
- managementTiming of FX results

How Global Investors Turn Negative Japan Yields into Big Returns

- Record-low negative yields
- Discount offered to dollar holders to borrow yen
- Fixed coupon equivalent for owning five-year JGBs
- Foreign demand for Japan's two- and five year bonds
- Cross-currency basis swaps
- Demand for dollars
- IFRS 9 3/3 * 2
- IFRS 13

Interest Rate Options for ALCOs

- Put and call options on bonds
- Using call and put options on T-bonds to generate positive cash flows as interest rates decline
- Balance sheet conditions for hedging assets and/or liabilities against interest rate declines
- Hedging against declines in interest rates with long calls or short puts

Interest Rate Risk Vodafone

JPMorgan's \$6.2bn Lesson in Organisational Failings

- Mystery teams
- Covert emails
- Spreadsheet risk
- Cognitive dissonance

Multi-Currency Debt Management

- Identifying the exposure
- Cash market alternatives
- Forward outrights, FX swaps and currency swaps

Nordic Export Credit's Currency

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• Fees and expenses

- Establishing the cash flows
- Plumbing diagrams
- All in fixed rate costs
- All in floating rate costs
- · Initial payments and receipts
- Annual payments and receipts
- Dynamics of basis swap prices
- Hedging with basis swaps
- Cross default, pari passu and negative pledges

Portuguese Train Company Can't Escape Snowballs

Laying off risks with customers

Legal and moral significance of

VaR as a risk measurement and

Trading limits and diversification

Putting VaR and limits in a historical

Variations of VaR and P&Ls through

The Rules of Risk Management

Adding liquidity into VaR limits

Known unknowns and unknown

Fraud, mismanagement, greed and

Bank/customer relationships Setting

Snowball interest rate swaps

Calculating downside risks

The view of the courts

hedging and trying

VaR Based Limits

management tool

perspective

Return and risk

Communication

Diversification

Common sense

Transparency

Experience

unknowns

Discipline

corruption

time

- Managing financial risks
- · Laying off risks with banks

FINANCIAL PRODUCTS & DERIVATIVES

The rationale, the mechanics & risks vs. rewards

FIXED INCOME SECURITIES

Characteristics of Sovereign and Government Bonds

• US Treasury market, UK gilt market, Japanese government bond market and principal EU markets

Characteristics of Corporate Debt

• Eurobonds, floating rate notes (FRNs), subordinated, asset backed (ABS) etc.

Issuance of Fixed Income Securities

- · Pricing and role of underwriters/syndicates
- · Methods of issuance/origination

Fixed income markets and trade execution

- Inter-dealer (IDB) price-driven electronic trading platforms
- OTC inter-dealer voice trading

Valuation of Fixed Income Securities

- Time value of money/discounting
- Bond sensitivity modified duration and convexity
- Fixed and floating charge securities



UK gilt market, types of gilts, index linked gilts, role of GEMM's, role of Debt Management Office, nature and trading of STRIPS

EQUITIES

Characteristics of Equities

- Ordinary, bearer and registered shares
- Ranking for dividends and liquidation

Issuing Equity Securities

• Structure and stages of an initial public offering (IPO)

Equity Markets and Trade Execution

- Order driven/quote driven platforms
- Alternative Trading Venues, Dark Pools

Warrants and Covered warrants

- Behaviour and relative risks of warrants and covered warrants
- **Contracts for Difference (CFDs)**
- Mechanics of a CFD
- Market, liquidation and counterparty risks

Growth of alternative trading venues in US and Europe Dark Pools, BATS, Multilateral Trading Facilities

MONEY MARKET SECURITIES, FOREIGN EXCHANGE AND SETTLEMENT

Cash Instruments and Markets

- Treasury bills, commercial paper, money market funds etc.
- · Deposit insurance and default compensation schemes

Foreign Exchange Instruments and Markets

- FX Spot contracts, FX Forwards, FX Futures
- Kinds of currency swaps
- · Interest rate parity and pricing of forwards

Clearing, Settlement and Safe Custody

- Prime brokerage and equity finance
- · Details in share register, legal ownership/beneficial ownership

Purpose, Requirements and Implications of Securities Lending

- · Benefits and risks for borrowers and lenders
- · Function of SBLIs, market makers, intermediaries and custodians

The UK Crest System and characteristics of a fully automated settlement and clearing system

COLLECTIVE INVESTMENT SCHEMES

Characteristics of Collective Investment Schemes

- OEICs, Unit trusts, Investment trusts, Real Estate Investment Trusts (REITs)
- · Life Assurance Investment Bonds, Endowment policies, Annuities
- Total expense and turnover ratios

Exchange-Traded Funds

- · Continuous trading, low expenses, tracking error, popularity
- Examination of MSCI geographical indices which many ETFs track
- Features of inverse ETFs, leveraged funds

Structured Products

- · Risks, valuation and yield characteristics of structured products hedge funds
- Capital protection
- Prospects for capital growth and income



Global Macro hedge fund strategy, macro-economic themes and analysis of asset class correlations

SECURITIES ANALYSIS

Financial Statement Analysis

· Purpose, structure and use of balance sheets, income statements and cash flow statements

Financial ratios

· Profitability, liquidity, asset turnover, gearing

Key Investor Ratios

- Earnings per share, P/E Ratios (historic and prospective), PEG ratio
- · Dividend yield, dividend/interest cover

Accounting for Corporate Actions

- Stock capitalisation or consolidation
- Rights issues, open offers, offers for subscription and offers for sale



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- Examination of P/E ratios for major US indices and corporations
- · Contrast investor ratios for fast growing and mature companies

GLOBAL SECURITIES MARKETS/INDICES

- · Structure and characteristics of government bond markets in UK, Germany, USA and Japan
- · Equity markets of major developed and BRIC nations
- · Regulatory and supervisory environment

London Stock Exchange (LSE)

FTSE 100 components, FTSE 250, listing requirements, role of UKLA/FCA, trade reporting systems and infrastructure

DERIVATIVES: FUNDAMENTALS AND THE UNDERLYING MARKETS

Contractual Assets

- Forward and futures contracts, CFDs
- · Puts and calls perspectives of buyer and writer

• American, European, Asian style

- **Risk Elements of Derivatives**
- Counterparty risk, basis risk, liquidity risk
- · Risks to buyer/writers of options

FINANCIAL PRODUCTS & DERIVATIVES

continued...

Foreign Exchange Contracts

- Currency forward contract, non-deliverable Forwards
- Effect of interest rates differentials

Bond/Money Market Contracts

- US t bond futures market and LIFFE gilt futures market
- Eurodollar futures market
- LIBOR, OIS, EURIBOR, EONIA etc

Equity Markets

· Equity warrants vs. equity options

Soft Commodities, Agricultural

· Coffee, cocoa, white sugar, soya bean, grains, livestock

Base and Precious Metals

· Copper, nickel, aluminium, zinc, tin, lead, gold and silver

Energy

Changes in demand, production, marginal costs of exploration



- The Chicago Mercantile Exchange and the IMM
- History and development of the financial futures markets in 1970s
- SPAN technique for modeling maximum probable intraday risk

EXCHANGE-TRADED FUTURES

Exchanges/Platforms

- NYSE Liffe™, LME, ICE Futures, Eurex™, CME Group, PHLX, CBOE, ICE, NYMEX
- Membership structures capacity as broker/dealer/clearing member

Principal Futures Contracts

- Eurodollar, Treasury bond futures,
- · Index futures on S&P 500, FTSE 100, DAX, Nikkei,
- FX futures at IMM, WTI Crude Oil, Brent Crude

Contract Specifications

- Tick size, contract size, delivery dates
- Calculation of fair value

Trading Platforms

• Open outcry, telephone and electronic platforms, Globex™

Clearing Mechanisms

- · Novation and the role of central counterparty (CCP)
- Cash settlement/physical delivery

EXCHANGE-TRADED OPTIONS

Exchanges, CCPs and Clearing

- NYSE.Liffe LCH Clearnet, CBOE
- · Role of the central clearing party contrast with OTC options

Key Futures Contracts Characteristics

• Options on equities, FX, options on futures

Contrast with OTC Options

· Counter party risk, Liquidity

Factors of Options Pricing

- Option premium
- Understanding of main characteristics of the "Greeks"
- Time value
- Intrinsic value

KEY ELEMENTS OF SWAPS

Principles/Mechanics in the Development of Swaps

- Hedging interest rate risk
- Off Balance sheet
- OTC vs. exchange cleared instruments

ISDA Documentation

Master Agreements and Protocols

Interest Rate Swaps

- Plain vanilla and more complex
- Fixed/floating interest rate swaps

Currency Swaps

· Foreign exchange swaps, currency basis swaps

Credit Default Swaps

· How they work and how they are quoted



The re-structuring/default of Greek government debts in 2012 and the impact on the sovereign CDS market and subsequent fall out for Cyprus in 2013

TRADING DERIVATIVES, HEDGING AND INVESTMENT STRATEGIES

Derivatives Users

· Roles of hedgers, speculators, arbitrageurs

Futures Spread Trading

- · Intra-market spreads and inter-market spreads
- Long and short straddles: and strangles
- Bull call and bear call spreads

Basics of Hedging

- Overview of the "Greeks" delta and gamma, volatility
- · Options pricing theory Black Scholes, binomial tree methods

Motivations for Strategies

- Motivation for the writer of a covered call
- Motivation for the buyer of a protective put
- Hedging: covered calls and protective puts



Hedging an equity portfolio with US and UK equities using S&P 500, FTSE 100 futures and calculating portfolio beta and hedge ratio

MANAGING SECURITIES RISK AND PORTFOLIO CONSTRUCTION

- Modern Portfolio Theory (MPT), Capital Asset Pricing Model (CAPM)
- · Standard deviation, covariance and correlation, Sharpe Ratio
- Systemic risk, sovereign risk, credit risk
- Market risk asset price volatility, currency, interest rates etc
- Active and passive strategies index tracking, stock picking etc
- · Use of derivatives in risk management



Question and answer discussion session

FUNDAMENTALS OF SWAPS

A comprehensive & practical guide to the mechanics of pricing, hedging & trading swaps

Origins of the Swaps Market

- Parallel loans
- Back to back loans
- Single legal agreements
- ISDA and the BCBS
- Market growth
- BIS statistics
- Comparative advantage
- Credit arbitrage

Rabobank and Deutsche Bank

Types of Swap Transaction

- · Equity swaps
- Equity index swaps
- Total return swaps
- Credit default swaps
- Commodity swaps
- Interest rate swaps
- Asset swaps
- Overnight index swaps
- · Zero coupon and reverse zero coupon swaps
- Currency swaps and FX swaps
- · Cross currency interest rate swaps
- Basis swaps
- Volatility swaps
- Inflation swaps
- Energy swaps

The dynamics of total return swaps, Fidelity and JP Morgan

Applications of Swaps

- Portfolio management
- Hedging

- · Multi-currency debt management
- Translation exposure management
- Asset and liability management
- Credit arbitrage
- New issue arbitrage
- Trading

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- · Creating or hedging structured notes
- Benchmarking
- · Currency overlay

Swap driven bond issues, IBRD

Benchmarking, FMC Corporation

FRAs, Futures and Interest

Rate Swaps

- Strips of FRAs
- · Strips of futures
- · Arbitrage free markets

Interest rate hedging with FRAs, futures and swaps (🌒)

Understanding Basic Swap Mathematics

- Interest rate quotations
- Interest rate calculations
- Present and future values
- · Introduction to discounted cash flow
- Discount factors
- Using maturity rates
- Calculating yields
- Calculating par, zero and forward rates
- Zero coupon discount factors

Creating a zero coupon curve and zero coupon discount factors

Swap Valuation

- Valuing the fixed leg
- · Valuing the floating leg



Marking swaps to market

- Ð Valuing an interest rate swap in Excel
- Swaps as a portfolio management tool
- Ð Using swaps in asset and liability management

Interest Rate Options

- Caps
- · Floors
- Collars
- Corridors
- Swaptions

Vodafone: interest rate hedging

Hedge Effectiveness

- IAS 39
- Qualifying and non-gualifying hedges
- Accounting treatment
- Retrospective and prospective testing
- · Effect on banks and corporations
- IFRS 9



Documentation

- ISDA terms
- · Trade, effective and termination dates
- Calculation periods
- · Business day conventions
- Credit Support Agreements

FUNDAMENTALS OF SWAPS

continued...

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Portfolio management

- Investment policies
- Sensitivity to a 1% parallel shift in the curve
- PV01s & DV01s
- Analysing the portfolio
- · Estimating the modified duration of the portfolio
- · Hedging the portfolio in the swap market
- Calculating the delta vector
- Modified duration of the swap
- Stack hedging the portfolio
- Strip hedging the portfolio
- Implied yield curve views
- Stress testing the hedge
- Manging interest rate risk

Wells Fargo and MWRA

Swap Discounting and Pricing Using the OIS Curve

- · Market dynamics leading to OIS discounting
- Move to the OIS curve
- Rationale for OIS discounting
- Creating the OIS curve
- Bootstrapping LIBOR curves in an OIS world
- LIBOR curves
- Generation of an OIS curve when collateral is posted in a different currency
- · Discounting of cross currency swaps
- Interest rate derivative pricing in the absence of a collateralised CSA

Discounting swaps using the OIS curve

Currency Swaps

- Initial exchange of principal
- Final exchange of principal
- Relationship with FX swaps
- Currency swaps and long term forward foreign exchange
- Currency basis swaps
- Arbitrage free markets

Currency swaps and forward foreign exchange

Cross currency swap driven bond issue

Cross currency basis swaps

Structuring Swaps

- Par/par structures
- Asset swap structures
- Forward starting swaps

- Delayed start swaps
- · Amortising, accreting and roller coaster swaps
- · Diff and quanto swaps
- Range accrual notes
- TARNs Target Redemption Notes
- Sticky floaters
- Snowballs



Calculating Credit Exposures

- Current exposures
- Potential exposures
- Expected exposures
- Maximum potential exposures
- CVA and CVA desks

Calculating credit exposures

Regulation

- Netting and insolvency
- · Solo, duo, multi and third party multilateral compression
- Exchange traded and OTC derivatives
- Basel III, Dodd-Frank, EMIR

The Impact of Basel III

Swap Portfolio Risk Management

- · Managing the fixed cash flows
- Managing the floating cash flows
- Delta vectors
- Value-at-risk

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Managing a swap portfolio

How Global Investors Turn Negative Japan Yields into Big Returns

- Record-low negative yields
- Discount offered to dollar holders to borrow yen
- Fixed coupon equivalent for owning five-year JGBs
- Foreign demand for Japan's two- and five-year bonds
- Cross-currency basis swaps
- Demand for dollars

Avoiding hedging pitfalls

- Portuguese train companies and snowball swaps
- Managing financial risks
- Laying off risks with banks
- Laying off risks with customers
- Snowball interest rate swapsCalculating downside risks
- Daiculating downside fis
 The view of the counter
- The view of the courts
PRICING & TRADING OPTIONS

The practicalities of valuation, hedging & structuring

Options: The Fundamentals

- Definition, conventions and terminology
- price
- quote
- settlement
- Puts and calls and what they mean
- American, European and Bermudian options
- Intrinsic and time value



Understanding 'at', 'in', and 'out' of the money

Basic Option Strategies with a Focus on Currency Options

- · Call and put spreads
- Collars
- Calendar spreads
- Straddles and strangles
- Box spreads
- Other applicable strategies
- · Put and call parity
- Understanding currency options

Delegates will develop a variety of option combinations to understand strategies

Risk Management – Understanding the Greeks and their Interaction

- Delta
- Gamma
- Decay
- Vega
- Rho
- Delta hedging
- Trading a book and seeking Gamma

Delegates will establish a portfolio in Excel and its profit, loss and decay will be monitored as variables change

Delta portfolio management

Rebalancing Delta and understanding Gamma

Volatility

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- · Volatility concept and impact on pricing
- Term structure
- · Smile (straddles, risk reversals and butterflies)
- Forward volatility
- Historical Implied Actual
- Hedging and trading an options book
- Volatility surfaces
- Other mark to market issues



Linking time periods and volatility

Interest Rate Options

- Caps
- Floors

- Collars
 - Swaptions
 - Bond options



Comparing caps, swaps and collars to hedge interest rate risks

Understanding caps and floors

Option Pricing Tools

- Basic probability
- Normal distributions
- Lognormal distributions
- Mean variance analysis of asset returns
- Understanding the Black-Scholes equation
- Problems with Black-ScholesKurtosis



Demonstration of pricing and the Greeks in Excel

More Complex Options

- · Digitals: European options
- Accrual options
- Asian options
 - average rate
 - average strike
 - one touch no touch
 - single and double
- Barrier options:
- European and American
- single and double
- knock-in and knock-out
- · Discrete and window options
- Binary options
- Basket options



Delegates will work on using digital and barrier options for hedging currency risk to understand how range accruals and basket options enhance yields for MTNs

Exotic Options and their Pricing Features

- Basket options
- Quanto options
- Pricing using Binomial trees

Structuring Bonds and MTNs Using Options

- Equity Linked Transactions
- Convertibles
- FX linked notes
- · Credit Linked Notes (CLNs) with an option element



A variety of Structured Products will be dissected, a Convertible will be analysed

Reverse Convertibles

A MASTERCLASS IN BONDS & FIXED INCOME

All you ever wanted to know about bonds & fixed income in just five days

DAY 1

Participants on the course will work in groups on the exercises and case studies. Please bring a laptop with Excel for the case studies and exercises. The first day of the program will provide you with a complete overview of bond pricing: you will learn how to approximate both prices and yields at a glance, before exploring the bond maths functionality in Excel

How the Bond Markets Work

- Differentiating bonds and loans
- Standard clauses: pari passu . provisions, negative pledges and cross default clauses
- Mark to market and accrual accounting
- How bond pricing works

Participants will examine a new international bond issue from the perspectives of the issuer, the arrangers and investors

Pricing Principles

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- · Approximate and precise NPVs of trades
- The role of the bid/offer spread
- · Intrinsic values, in-, out- and at-themoney prices
- Identifying the winner and the loser in a trade: symmetrical risk and asymmetrical risk products
- Day count conventions, accrued interest, clean and dirty prices
- Brealey & Myers: the things we know and don't know about finance



Estimating bond prices

Bonds and Fixed Income Mechanics

- Discounted cash flow
- Money market maths and capital markets maths
- Market conventions
- Calculating present and future values
- · Implied reporates and the cheapestto-deliver bond
- · Yield curve assumptions and their implications for bond pricing
- Calculating bond prices and yields in excel
- Annual, semi-annual and quarterly rates
- Market conventions and conversions



Estimating the difference between semi-annual and annual rates at a glance

Archer Daniel Midland Company 6.75% December 2027

Practical Bond Pricing Techniques

- What moves interest rates
- What influences yield curves
- A macro approach to pricing fixed rate bonds
- The value of one basis point for different maturities: PV01s and DV01s
- Inverse proportionality: prices and yields

Haliburton 6.875% January 2028 (Excel)

Yield Curves

- · Discounting with a single discount rate
- Assumptions inherent in interest compounding
- Calculating and interpreting internal rates of return
- All-in-costs and yields to maturity
- icma's rules 803.1 and 803.2
- Multiple discount rates
- · Forward/forward rates and zero coupon curves
- Market expectations
- Liquidity preferences •
- Market segmentation

Straight line interpolations of the US Treasury curve

The Use of Benchmarks in Bond Pricing

- Relative prices
- Government benchmarks
 - Libor benchmarks .
 - Mid-swaps
 - Sector benchmarks

Benchmarking corporate bonds to an interpolated curve

Benchmarking Apple and Ŵ Verizon

Investment Skills

- Margins of safety
- The four most dangerous words in finance
- The role of patience

- The importance of contrariness
- Risk and the permanent loss of capital
- Leverage
- Understanding the detail of investment opportunities



Seven immutable laws of investing & nine rules of risk management

An Introduction to Curve Trading

- How traders exploit changes in the shape of the yield curve
- How traders establish strategic curve trades
- Curve steepening trades
- Curve flattening trades
- Factors that influence the P&L of strategic curve trades
- Advanced strategic curve trades



Curve flattening trades and curve steepening trades



Pricing a corporate bond

- The price and the yield of fixed rate bonds
- Liquidity risk
- The spread to governments
- The spread to the
- interpolated swap curve
- The asset swap spread
- The Z-spread
- The option adjusted spread

DAY 2

The second day of the course starts with a focus on the topical issues faced by participants in today's bond markets: examining the impact of regulation and its effect on the liquidity in the market; high yield and emerging market bonds and floating rate note pricing. We examine the forces pushing the bond markets towards electronic trading and then the emphasis switches to bond portfolio management, repos and reverses and an overview of the impact of CoCos on the fixed income markets.

The Bond Markets Today

- An update on bond market liquidity
- The new issue market: global investment grade bonds
- The new issue market: high yield and emerging market bonds

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Credit risk

A MASTERCLASS IN BONDS & FIXED INCOME

continued...

- Basel III, the Dodd-Frank Act and the Volcker Rule
- Electronic trading: an update

Chise STUD

Republic of Turkey 4.875% October 2026

Pricing Floating Rate Notes

- · Parallels with fixed rate bonds
- Discount margins, IRRS and yields to maturity
- Changes in the market
- · Changes in the credit
- Using bloomberg to price floaters
- Using a single discount rate
- Using multiple discount rates
- Forward rates and zero curves
 The relationship between sweeps
- The relationship between swaps and floaters
- High yield floaters

FRN pricing - Pernod Ricard

Bond Portfolio Management

- · Measuring the risk in a portfolio
- Guaging the hedge
- Interest rate risk management principles
- Adjusting portfolio duration
- Asset and liability management



Dynamically hedging a portfolio

Getting to Grips with Repos and Reverses

- Mechanics of repos and reverses
- Classic, buy/sell-back, securities lending
- Parallels with FX swaps
- General collateral, specific repo, specials
- Current market developments in tri-party repo



The repo market

Contingent Convertible Capital Instruments

- Structure and design of CoCos
- Triggers and loss absorption mechanisms
- CoCo issuance and investors in CoCos
- Factors influencing the size of the CoCo investor base
- Primary market pricing and secondary market trading of CoCos



Understanding the CoCo market

- How global investors turn negative Japan yields into big returns
 - Record-low negative yieldsDiscount offered to dollar
 - holders to borrow yenFixed coupon equivalent for
 - owning five-year JGBs • Foreign demand for Japan's
- two- and five- year bonds
- Cross-currency basis swaps
- Demand for dollars

DAY 3

The third day of the course analyses the practical application of duration as a hedging tool while simultaneously building on the second day's bond portfolio management case study. There is an Excel case study which summarises the major ideas covered in the course so far.

The second half of the day will start with an overview of the vital capital adequacy requirement for banks and then will provide a detailed practical guide to swaps linking them to futures, options and other derivatives.

Using Duration as a Hedging or Trading Technique

- Risk and interest rate sensitivity
- Calculating the present value of one basis point
- Using Macaulay's duration
- Using modified duration
- The relationship between duration and the PV01
- The additivity of duration

Using duration to calculate hedge ratios; curve trading

Managing Interest Rate Risk

- The importance of risk management
- Measuring interest rate risk: subjective and objective risk measures
- Fixed and floating rate interest rate risk

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- Delta and the first derivative
- Gamma and the second derivative
 Macaulay duration and modified duration
- Interest rate movements: capital losses and income gains
- Break-even analysis and time-

weighted average of discounted cashflows

- Sensitivity of duration for different bonds to maturity, coupon and yield
- Time decay of duration
- Price-yield relationship and approximation of price changes
- Convexity, gamma and the second derivative
- Estimating convexity and measuring convexity
- Static and dynamic hedging



Using duration as a hedging tool



Interest Rate Derivatives

- Basel regulation
- The balance sheet
- · Capital adequacy requirement
- The Basel accord, Basel II and Basel
 III
- Off -balance sheet instruments and interest rate derivatives
- Credit risk
- Market risk
- Liquidity ratios
- Leverage ratio
- Interest Rate, Currency and Credit
 Default Swaps
- The Swap Mechanism
- The uses of swaps and other derivatives
 - speculation
 - hedging and asset & liability management
 - market making
 - risk management
 - arbitrage
 - debt origination
- asset swaps
- benchmarking

Swaps and futures

Swaps and FRAs

• Interest rate risk management with swaps compared to other interest rate derivatives

Swaps caps, floors and collars

Asset management

and shareholders

Blackrock and Blackstone

· Active and passive fund

management, leverage

Influencing the markets

· Wealth creation for clients

A MASTERCLASS IN BONDS & FIXED INCOME

continued...

DAY 4

Day four sees the course moving into other essential areas in the bonds and fixed income field, beginning with strips and asset backed securities the course will then move on to provide in-depth coverage of yield curves and swaps. During the case study in the afternoon we will go through debt origination and pricing bond including all the issuance fees. The importance of swaps in the issuing procedure will be finally highlighted. We will wrap up the session with an overview on Asset-Backed Securities.

Use Strips as a Benchmark for Pricing Non-Standard Bonds

- Pricing Bonds revisited
- UST STRIPS (POs and IOs)
- Stripping and reconstituting bonds
- Pricing examples

Term Structure of Interest Rates

- The yield curve
- The par curve
- The zero curve
- Bootstrapping
- Calculating the zero rates
- The forward curve
- Three approaches for calculating the implied forward rates
- Creating a term structure of interest rates
- The use of par rates

Working out the term structure

- of interest rates
- Selecting the yield curve
- Bootstrapping
- Building a zero-coupon curve
- Implying the forward rates
- Summarising the forward
- rates

Debt origination

- Issuing bonds under fixed price re-offer
 Syndication
- Book building
- Pot deals
- Setting the re-offer spread
- Finding the re-offer yield
- Issue price
- All-in-costs to borrower
- Spread over treasuries
- Adding the swap and reaching sub-libor funding

Liability Swaps and the Bond Markets

- Debt origination
- Fixed Rate Bonds vs. Floating Rate Notes (FRNs)
- Arbitrage possibilities
- The benefit of swaps
- The swap window of opportunity
- Sub-libor funding for prime borrowers

Asset-Backed Securities

- Collateralised Mortgage Obligations (CMO)
- Receivables (CARDs), (CARs) etc
- Credit-linked Notes (CLN)
- Re-securitisation
- Asset-Backed Commercial Paper (ABCP)
- Wrapped bonds
- Covered bonds

DAY 5

The final day of the programme is also one of the most intensive. Starting with the uses and applications of asset swaps. You will master the complexities of swap pricing and valuation. This day also includes comprehensive case study covering the pricing of asset swaps before we summarise the entire programme.

Asset Swaps and Bond Markets

- The drivers of the asset swap market
- The different asset swap structures

Swap Pricing

- The cash flow
- Determining the value of the variable cash flow
- The swap pricing condition
- Determining the rate of the fixed cash flow

Swap Valuation

- Valuation of the floating rate leg
- · Valuation of the fixed rate leg
- Determining the net present value (NPV)

Asset swap pricing and valuation

- Pricing an asset swap for par bonds
 - Pricing an asset swap for premium bonds
- Pricing an asset swap for discounted bonds
- Comparing asset swap spread to z-spread

Credit Curves, Benchmarking and Corporate Bond Spreads

- The swap rate as key part of the term structure of interest rates
- How it all fits together
- Spread over Government Bonds
- Spread over (interpolated) Swaps
 curve
- CDS spread
- Coupon spread
- LIBOR spread
- Asset swap spread
- Asset swap margin
- Z-spread

Value Adjustments to Swaps Pricing

- Monte Carlo simulation of future swap values
- Credit value adjustment
- XVA: value adjustments for credit, funding, margin and capital
- Collateral posting

THREE THINGS HAPPENING IN THE MARKETS AND WHAT PARTICIPANTS WILL LEARN:

- Interest rates going up

 How to manage a fixed income portfolio from losing money
 How to lock in funding rates
- Corporations and property developers are looking to issue bonds now
 - a. How to issue bonds
 - b. How to benefit from the still low funding levels
 - c. Compare funding of the loan and bond markets across currencies
- 3. Sovereign debt risk is continuously deteriorating.

Summary / Review

"A swap is not a swap"

A MASTERCLASS IN DERIVATIVES

Valuation frameworks, derivatives tools, techniques & implementation mechanics

YIELD CURVES, SWAPS AND INTEREST RATE DERIVATIVES

Yield Curve Derivatives: Hedging/Arbitraging Taxonomy, Markets Linkage and Overview

- Risk measures, concept of volatility and model-specific valuations
- Decomposition into simpler (fixed, floating, contingent) cash flows

Forward Rate Agreements (FRAs)

• FRAs, swaps and futures: convexity bias adjustment



FRAs cash flows

Fundamentals of Yield Curve Construction, Interest Rate Swaps and Micro-Structure



Swap fixed leg cash flows

Stochastic Floating Cash Flow Valuation (Some Key Results)

- Valuing unknown LIBOR cash flowsKey strategic (static) replicating
- portfolio and exit strategies
- Forward rate method and spotforward parity
- Principal (FRN, Synthetic Bond)
 method

Swap Yield Curves and Zero-Coupon Valuation

- Par money market (spot LIBOR) and swaps (forward LIBOR) rates
- "Stripping" par-rates curve
- "Bootstrapping" zero-coupon bond price curve
- Audit checks: profit and loss and principal and forward rate methods
- Effective yield-to-maturity, zerocoupon bond yield curve
- Stripping "special" one-year semiannual equivalent par rate



Constructing annual swap



Off-Market Swap Points

• Linear, geometric (log-linear), exponential and spline interpolations



Interest Rate Futures

- Forward rate, futures price/rate, convexity adjustment
- First futures stub rate, futures strip zero-coupon bond prices
- Integrating money, swap and futures curves

Bootstrapping futures strip zeros

Incorporating futures strip prices

Principal Component Analysis (PCA) and Swap Pricing

- Yield curves dynamics: Shifts, tilts and turns
- Correlation, factor components and volatility (cone) surface

FX Currency Swaps

Equivalent bond positionsEquivalent forward exchange



Non-Standard and Off-Market Swaps

- Amortising swaps, accreting swaps and rollercoaster swaps
- Pricing LIBOR-in-arrears (DRS) interest rate swaps
- Limitations of forward rate method and volatility model



OPTIONALITIES: EQUITY, FX AND INTEREST RATE OPTIONS

Derivatives Contracts: Fundamental Building Blocks, Arbitrage Boundaries, Synthetics and Strategies

- Arbitrage boundaries and properties of option pricing
- Determinants of an option's value
- Option strategies and payoffs
- Covered call writing PERCS, DECS – M-KMV structural model of credit risk

 Mertonian structural model of credit risk

- Protective puts: Portfolio insurance
- Put-call parity
 - accounting, tax and regulatory arbitrage
 - locking in unrealised speculative profits
 - zero-cost collars
 - capital structure arbitrage
 - securitisation and CDOs



- Bank loan decisions (embedding options)
- Real estate and credit risk analysis (embedded options)
- Zero-cost collar
- Creative Security design
 embedded options
 - explore creation of hybrid securities and contingent forms of payment and embedded optionalities
 - tax, accounting and
 - regulatory arbitrage

Derivatives Valuation: Concepts and Insights

- Overview of valuation models
- Intuitive concepts: Binomial option pricing model
 - portfolio duplication (replication) approach
 - self-financing strategy approach
 - risk-neutral (martingale) probability approach
- Black–Scholes option pricing model
- Options insights of valuation and risk management



Binomial option pricing model



Black–Scholes option pricing model

Understanding Options Risk: Stock Exposure (Delta)

- Delta hedging/replication as cost of option
- Monte-Carlo simulation: Delta-neutral hedging strategy

A MASTERCLASS IN DERIVATIVES

continued...



Delta-neutral exit strategy cost

Volatility (Convexity) Risk Mechanics

- · Delta-neutral long volatility trade and hedged portfolio
- Mechanics and essence of buying volatilities (long gamma)
- Time-decay (Theta) effects of delta and gamma



Long volatility (Gamma) trading

FX Currency Options

- Arbitrage bounds, zero-cost collars, risk reversals, butterflies
- · Structured products and implications for corporate treasurers
- Binomial and Black–Scholes
- (Garman-Kolhagen) valuation Exotic currency options



Pricing FX options

Interest Rate, Yield Curve Volatilities and Options: Portfolio of Options on **FRAs**

- Interest rate options: Caps/floors
 - valuation of caps: Black's (1976) market model
 - valuation of interest rate floors: Cap/floor-swap parity



Pricing interest rate caps and floors

Using flat brokers' (market's) volatilities and using termstructure of volatilities (volatility surface)

Option on Portfolio of FRAs (Swaps)

- · Options on interest rate swaps: Swaptions
 - black (1976) market model valuation of payers/receiver swaptions



Pricing swaptions Hedging cap with swaptions

Volatility Surface Asymptotics

- Volatility skews, volatility smile effects
- Stochastic Alpha Beta Rho (SABR) Black (1976) model

Yield Curve Models: Motivation

- Inconsistencies in applying Black-Scholes/Black (1976) models
- Black (1976) cap/floor pricing bias and convexity adjustment
- Effects of interest rate volatility on bond prices



convexity adjustment

Derivatives Pricing Tools: Fundamental Theorem

- Applied to interest rates and fixedincome options
- Arrow-debreu state primitive prices (stochastic discount function)
- State prices, risk-neutral and martingale probabilities

Yield Curves Models

- Equilibrium and fitting no-arbitrage models
 - Vasicek, Cox-Ingersoll-Ross (CIR), Ho-Lee, Hull-White, Black-Derman – Toy (BDT) and HJM/BGM LIBOR Market Model (LMM)

Implementing and Calibrating Yield **Curve Models: One-Factor Models**

Black-Derman-Toy (BDT) Model: Implementation

- Main features of BDT model
- Term structures of interest rates and volatilities

Black-Derman-Toy (BDT) Model: **Applications**

- Valuing interest rate options: Caps/floors
- Valuing European coupon bond options
- Valuing Bermudan coupon bond options
- Valuing payer/receiver swaptions
- Valuing swaps and bonds with BDT model



Constructing Black-Derman-Toy (BDT) yield curve model

- · Valuing interest rate caps, bond options, swaptions, futures
- Valuing Bermudan options, interest rate swaps
- Comparison of BDT and Black (market) models -Convexity adjustment

CREDIT RISK DERIVATIVES MODELS

Credit Default Swaps (CDS): Structure, Pricing and Hedging

- Decomposing defaultable risky bond
- . Isolating underlying default (credit) risk using swap/CDS
- Adding swap floating LIBOR-based payments
- Pricing the CDS premium leg and protection leg



Main Uses of Credit Derivatives

Mertonian/KMV Structural Model (Firm Assets) Approach

- · Embedded complexities of interim cash flows
 - effects of dividends on default risk effects of capital structure on
 - default risk
- effects of investments on default risk Recapitalisation effects



Mertonian/KMV Binomial Models

Credit (default) risk measurement spreadsheet based on the mertonian option pricing methodology, and study the effects of dividend, capital structure and investment policies on default risk

Jarrow-Turnbull (JT) Reduced-Form (Intensity-Based) Model: Applying **Term Structure Models**

- · Stochastic term structure of defaultfree interest rates
- The Markov process for credit ratings
- Stochastic maturity specific credit-risk spread
- Implementing a discrete-time Markov model
 - pricing credit risky bonds
 - pricing options on credit risky bonds
- pricing vulnerable derivatives
- credit Default Swaps (CDS)



Jarrow-Turnbull Reduced-Form Model



Question and answer discussion session

A MASTERCLASS IN INTERNATIONAL CAPITAL MARKETS

All you ever wanted to know about capital markets in just five days

DAY 1 – Understanding the Markets

Financing a Business

- Angel investors, seed funding firms and venture capitalists
- First, second and third round finance
- Selling a business
- IPOs and private equity



Green & Blacks

Asset Allocation

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- Active and passive fund management
- tactical and strategic asset allocation
- time horizons and key drivers
- Hedge fund strategies
- Stock exchanges, 'dark pools'
- · ETFs, options on ETFs, flexibility, diversification, hedging and trading, contract specifications



Constructing an asset allocation strategy

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Morgan Stanley's Global Investment Committee

Leverage

- Debt and equity funding
- Leveraged buy outs
- Banks and leverage
- Basel III and leverage ratios



Contrasting debt and equity finance

Capital Structure: What it is and Why it Matters

- · What is capital structure?
- Senior debt
- Subordinated debt
- Mezzanine debt
- Hybrid financing
- Convertible debt
- · Convertible equity
- Preferred equity
- Common equity

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Why capital structure matters

Mezzanine Finance

- Mezzanine debt
- Mezzanine capital structures
- Lowering the cost of capital and improving equity returns
- Mezzanine terms
- Mezzanine exit

Mezzanine finance

Exploring the Seven Immutable Laws of Investing

DAY 2 – Equity Markets & Equity **Derivatives**

Equity Capital Markets

- · Ordinary shares, preference shares and warrants
- Quote driven and order driven markets and order types

- Market indices
 - Block trading
 - Equity valuation
 - · Discounted cash flows
 - Dividend valuations
 - · Price to earnings, price to sales and price to book valuations
 - Forecasting earnings
 - EBITDA and free cash flow
 - Sum of the parts valuations
 - IPOs
 - Underwriting and public/private placements
 - Bookbuilding and accelerated bookbuilding
 - Rights issues, pre-emption rights and placements
 - Secondary offerings
 - Share buy backs
 - Bonus issues



VA Linux **U**

National Grid's rights issue

LinkedIn/ Facebook

Equity Derivatives

- Contracts for differences
- Long and short positions: hedging
- Dynamics of a short position
- · IFRS 9 and hedge accounting



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Fidelity/JP Morgan - equity index swap

Equity Options

- · Puts, calls, leverage and margin
- · Protective puts and covered calls
- · Equity collars and cash secured puts



Using equity options in portfolio management

Private Equity

- Public and private equity
- General partners and limited partners
- Carried interest, hurdle rates and clawback provisions

Baskin Robbins _____

Day 3 – Fixed Income, Currencies & Commodities

Bond Pricing

- · What moves interest rates
- What influences yield curves
- Practical bond pricing techniques
- · Clean and dirty prices and accrued interest
- · A macro approach to pricing fixed rate bonds
- ICMAs rules 803.1 & 803.2
- Duration and convexity, delta and gamma
- PV01s and DV01s

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· Inverse proportionality: prices and yields

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continued ...





Money Markets

- Government finance
- Auctions: Treasury bills, notes and bonds
- Discounted bills, coupon bearing and zero coupon instruments
- · Government deficits and sovereign wealth funds
- Simple and compound interest and day count conventions
- Money market and bond equivalent yields, nominal and effective rates
- Certificates of deposit
- · Bankers' acceptances
- Commercial paper
- Interbank lending
- Corporate funding
- Rolling commercial paper programs
- Bank loans and facilities
- Committed and uncommitted funds
- · Bilateral loans, syndicated loans and club deals
- Term loans and revolving facilities
- Loan documentation Repos and reverses

- Classic and buv/sell-backs
- The Global Master Repurchase Agreement
- Securities lending
- General collateral and specials
- · Haircuts and margins
- Bilateral and tri-party repo
- Economic similarities to FX swaps
- FRAs and futures
- Exchange traded and OTC derivatives
- · Contracts for differences and cash settlement
- Trading and hedging with FRAs and futures

Hedging floating rate debt with FRAs, swaps and interest rate futures

FRAs, Futures and Interest Rate Swaps

- Buying and selling FRAs
- Selling and buying futures
- Paying and receiving fixed rates in the swap markets
- Perfect hedges and basis risk
- Contrasting exchange traded and OTC derivatives

Yield Curves

- Market expectations, market segmentation, preferred habitats and liquidity preferences
- Bootstrapping, forward/forward rates, zero coupon curves and discount factors
- Valuing a trade, a book and a portfolio
- Riding the yield curve and asset and liability management

Valuing fixed and floating rate cash flows

Valuing Interest Rate Swaps Traditional

Interest rate swap valuation

- Zero coupon equivalent rates
- Discount factors
- Spot curves and implied forward rates
- The present value of the floating leg of the swap
- The present value of the fixed leg of the swap



Asset and liability management

- Recent trends in ALM
- · Yield curve analysis
- Gap analysis
- Net interest income
- Duration gaps Economic value of equity
- Value-at-risk
- Setting and monitoring tolerance limits
- Optimising income and managing risk
- Typical practices in funds transfer pricing
- Managing liquidity risk
- Likely developments in ALM

Foreign Exchange

- · Variable and base currencies, direct and indirect guotes
- · Premiums and discounts: calculating forward prices and forward points
- The carry trade: covered and uncovered interest rate parity
- · Hedging with outrights, foreign exchange swaps and currency swaps

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Ford Motor Credit

- Bank funding and liquidity

A MASTERCLASS IN INTERNATIONAL CAPITAL MARKETS

continued...



Day 4 – Interest Rate & Currency Swaps & **Swaptions & Structured Products**

Swaps & Swaptions

- Pricing principles: interest rate swaps and swaptions
- Pricing principles: currency swaps and cross-currency interest rate swaps
- Interest rate and currency basis swaps
- Structuring swaps: matching cash flows
- Motives for payers and receivers
- Swap driven bond issues and credit arbitrage
- Rationale for structures
- Uses of swaptions
- · Pricing swaptions

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Interest rate risk management

European Investment Bank

- Swap driven bond issues
- · Calculating the cost of funds on a floating rate basis
- The mechanics of par/par structures
- General principles for structures
- Using the swap rate when calculating the net proceeds of deals in par/par structures
- Optimal discount rates

Interest Rate Options

- · Caps and caplets, floors, and floorlets
- Collars, step-up caps, cap corridors

Hedging interest rate risk with interest rate options

Currency Options

- Profit/loss profiles and pay off diagrams
- Delta hedging and the importance of gamma
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Trading currency options

Hedging currency receivables

ITM and OTM options

Aligning market views with currency option strategies

Asset & Liability Management

- · Positive and negative interest rate gaps
- Delta, duration, PV01s and DV01s

- PV01s of FRAs futures and swaps
- Hedging interest rate risk



Managing duration while hedging the interest rate risk in a portfolio

- U) Lehman Brothers

Day 5 – Credit Derivatives, Risk Management & Regulation

Credit Derivatives, Structured Products & Risk Management

- Total return swaps
- Credit default swaps
- Single name, baskets and indices
- Credit default swaps, asset swaps and bond prices
- Structured products: pricing principles
- · Motives for issuers, investors and arrangers



Analysing the risks in a structured product by examining how it is hedged

Commodity Hedging

- Positive and negative carry
- · Contangos and backwardations
- Physical delivery and cash settled contracts
- Commodity futures, options and swaps



Mexico's oil hedge - buying OTC put options

Risk Management

- Identifying risk
- Measuring risk
- RAROC
- Value at risk
- Historical
- Analytical Monte-Carlo
- Using VaR to set limits
- Managing risk
- Risk management policies and corporate strategy



Braeburn Capital – managing Apple's interest rate risk

Regulatory Environment

- Basel I, II & III •
- Dodd-Frank, EMIR & MiFID II
- Wall Street transparency and accountability
- · Payment clearing and settlement supervision
- Financial stability
- Role of the central banks and the regulators
- · Political impact
- Impact on the banks
- Impact on the economy
- The outlook for the capital markets



Time for real change in capital markets and investment banking

- ROE
- global full-service players
- focused global players
- national and regional commercial banks
- non-bank competitors

UNDERSTANDING COMMODITY MARKETS AND COMMODITY TRADING

Your definitive guide to all the major commodity markets & their trading applications

Introduction to the Commodity Markets

- Overview of the commodity markets the top down
- Common market terms
- Major supply/demand price drivers
- · Investment fund managers and commodity investment
- Correlations to other asset classes
- The principal markets
 - energy
 - base metals
 - precious metals
 - agriculturals (Ags)
- Spot and forward markets

 contango and backwardation
- Futures and options
- Trading options
- Trading on margin

The Energy Markets

- Understanding energy
- Macroeconomic events
- Geopolitical risk
- Transportation risk
- Global oil production
- The energy products/exchanges
 - ICE
 - CME Group
 - TOCOM
- Energy products
 - Brent and WTI
 - BrentWTI spread
 - heating oil / ULSD / diesel
 - unleaded fuel
 - LNG
- Trading and hedging strategies
 - spread trades
 - energy futures
 - forward curve
 - energy swaps
 - hedging

Understanding the Base Metals

- Price drivers
- The exchanges
 - the ICE
 - ICE/LME system
 - CME
- other exchanges
- The '6' base metals
- Other metals
- Rare Earth elements
- Steel
- Iron ore
- Trading and trading strategies
- the cycle (miner/producer/consumer)
- spot and forward trades

The Mechanics of Gold and Precious Metals

- Inside the gold market
 - production, consumption and storage
 - pricing and the forward gold market
 - ETFs and derivatives
 - gold mines index
 - IMF and central banks
- Silver and PGMs
- industrial uses
- supply/demand

Getting to Grips with Agricultural Products

- Overview of Ags
 - grains and oil seeds
- softs
- meat and livestock
- · Price drivers, seasonality and weather
- Tariffs, trade associations and government controls
- The products
 - grains and oil seeds
 - ~ wheat
 - ~ corn
 - ~ maize
 - ~ oats
 - ~ soya bean
 - softs
 - ~ coffee
 - ~ cocoa
 - ~ cotton
 - ~ sugar
 - orange juice
 - meat and livestock
 - ~ lean hogs
 - ~ live cattle
 - ~ feeder cattle
 - dairy products
- Market reports
- Price drivers
- Producer/retail hedging

Trading Commodities on Fundamentals

- A review of global supply and demand
- Natural and manmade disasters
- Producer data and inventories

Trading Commodities with Charts - Technical Analysis

The key to trading commodities and sensible money

will influence commodity trading in the future.

An in depth review of the future of the energy markets, supply and demand factors, price trends, together with how blockchain

• Why does anyone use charts?

- moving averages and xovers

- stochastics and oscillators

- Understanding your data and chart types
- Analysis techniques

 support/resistance

management

FUNDAMENTALS OF FUND ADMINISTRATION

Gain insight into the latest developments in managing controls & processes & learn how to apply them in practice

Understanding Investment Funds

- Investment management
 - objectives
 - styles
- use of products and strategies
- Off-shore vs. domestic funds
- Background, structures and types of funds
 - investment companies
 - trusts
- partnerships · Regulation of funds and the implications on fund administration
- Overview of fund set up and launch
 - offering documents
 - applications
 - appointments
- stages in the process to actual launch
- Operational risks

Roles and Responsibilities

- · Defining the responsibilities of various parties in the overall administration of the fund
- Fund operations
 - trade capture
 - settlement
 - reconciliation
- · Fund valuation and accounting
 - pricing
 - valuations
 - accounting records
 - financials
 - > reports
 - > statutory accounts
 - > cash management
- Transfer agency
 - subscriptions
 - redemptions _
 - fund register
 - KYC/AML
 - customer and investor relationships
- · Managing your relationship with:
 - investment managers
 - brokers
 - custodians
 - _ fund sponsors
 - trustees
 - investors
- Secretarial function
 - director meetings _ investment management meetings
 - minutes
 - regulatory administration _
 - _ AGM

 - correspondence operational risks

Role of fund operations

The Process of Trade Capture, Record Keeping and Reconciliation

- Portfolio trade capture
- Clearing and settlement
- Managers records to prime broker and custodian records
- · Corporate actions management
- Asset verification and control
 - asset reconciliation _
 - securities lending and borrowing margin calls
 - collateral
 - cash flow

Operational Risks

Road map of the valuation and pricing Ø of investment funds

> OTC derivatives

communications

human resources

· Identifying sources of risk in fund

published information

completeness, deadlines

statutory deadlines

documentation compliance

their report on

What has happened

· Lessons to be learned

Compliance in Fund Administration

the risk management function

• Possible reasons

Legal compliance

tracking errors

equilisation

AML and KYC checks?

operation of a new fund

session

restrictions

sensitive calculations

Performance measurement

Risk relationships:

client/counterparty/bank

analyse two situations and make

How the compliance function differs from

Monitoring of investment policy compliance

performance fee basis and calculations

Adhering to regulatory and client investment

Compliance with tax and regulatory rules

Wrap up exercise -

Fund set up, launch and

know about the setting up, launch and

overview of what a fund sponsor needs to

Question and answer discussion

administration - preparing a detailed

comparison to internal and external

benchmarks or model portfolios

over and underperformance

exceptions

function

valuations: price sources (including off-

exchange pricing), NAV calculation and

timing, accuracy and completeness of

settlement: mis-settlements/failures.

reporting: reporting period, accuracy,

information: timely flow, signatories,

trading: excessive dealing and turnover

standing instructions, client and

Identifying risk situations in the workflow

Managing day-to-day risk and dealing with

Legal requirements for the risk management

Divided in two teams, delegates will

How can you control these risks: latest

techniques and industry standards

Monitoring of mandates and offering

handling of buy-ins and interest claims

Compliance

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assets

liquidity

systems

administration

fraud

- Purpose of book-keeping for portfolio transactions
 - positions
 - accruals
- Posting of G/L entries
- Calculation of all management fees, performance fees and any related expenses
- Calculation of accrued income e.g. coupon income, interest on cash balances, dividends, etc.
- Computation of the value of the fund's asset
- identifying appropriate pricing sources valuing securities
- > listed and unlisted securities
- valuing derivatives > on and off exchange
- other assets
- > property
- > alternative investments
- when and which prices should be used for international funds with holdings in different time zones
- FX rates for conversion of FX amounts what procedures should be used for the
- valuation of illiquid instruments? Daily calculation of the Net Asset Value
- (NAV)
- Procédures & controls
 - reasonableness and consistency
 - pricing policy
 - operational risks

Registrar and transfer agency services

- · Maintenance of the shareholders' register for the fund
 - KYC & AML
 - the fund register
 - subscription and redemption road maps > issuing certificates and electronic records
 - amendments to investor details > arrangements on death of shareholder and powers of attorney
- · Subscriptions and redemptions via agents
- Reporting

Defining risks

Managing Regulation and Risk in Fund

Servicing

 Relevance and implications of the regulatory environment

> investment management agreements

> fund administrations agreements

> property management and rental

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European directives jurisdiction regulation

documentation

agreements

> purpose of agreements

> custody agreements

> prime broker agreements

> stock lending agreements

> service level agreements

THE ESSENTIALS OF FUND MANAGEMENT

Gain a thorough & practical understanding of fund management

The Basics of Portfolio Theory

- What is a portfolio
- What are the objectives and how does risk figure
- Portfolio Theory explained
- Diversification in a portfolio
- Importance of correlation

Correlation impact on a portfolio

Understanding Investor Investment Objectives

- Investor types Institutional, HNWI, Private Investor, Trader
- Their requirements and objectives
- Examining investment returns
 - characteristics
 - historical returns
- expected (future) returns
- Age profile considerations

Overview of Asset Classes

- · Equities domestic and overseas
- Bonds domestic and overseas
- Property
- Commodities
- Cash and currency
- Derivatives
- More 'exotic' investments

CASE STUD

Performance comparisons of the major asset classes

Fund Management – The Administration of a Fund

- Roles and responsibilities within a fund management operation
- Planning for optimal portfolio returns from a fund manager
 - setting investment objectives
 - constraints on the fund manager
 - investment management agreement and prospectuses

Chie Strug

A look at Board & Management responsibilities

Examining the Types of Investment Fund

- Pension funds, assurance funds
- Insurance funds
- Collective investment schemes
 - a comparison
 - tracker & index funds explained
- a review of Exchange Traded Funds (ETFs)
- Short term money market funds
- Hedge funds, VC and PE funds

Equity Investment Styles

- · Specific (thematic) funds
- Sector rotation style
- Geographic investment funds
- Top down/bottom up investing style
- Small cap investing
- Growth investing
- Value investing
- Index and tracker funds
- Momentum investing
- Impacting Investing
- ESR and 'green' Investing



Bond Investment Styles

- Interest rate expectation strategies
- Yield curve strategies
- Index matching
- Liability matching
- Bond types and credit spreads
- Bond switching/swapping
- Leverage strategies
- Risk management & hedging bond portfolios



Portfolio Construction – The Mix that Matters

- Key investment decisions
- active or passive investment strategy
- domestic or international diversification
- Strategic and tactical investment decisions
- Portfolio structures set the risk profile

 conservative
 - income
 - growth
 - moderate risk
 - aggressive risk
- Private client portfolios
- High net worth Investors and the structural differences in their portfolio construction

What Drives Financial Markets

- Macro-economic indicators that move the market
- Key drivers of investing
- Business cycles to investment cycles
- Volatility and extreme market moves explained
- Regulators response to market disfunction

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Prioritising economic indicators for the current market

Equity Investment Analysis

- Balance sheets and financial statements
- Key accounting and valuation ratios
- Why focus on earnings
- Evaluation of earnings forecasts



Evaluating a quoted company from a balance sheet report

Bond Investment Analysis

- Bond pricing & bond yields
- Yield curve shifts

real estate

venture capital

- commodities

decisions

allocation

Model

Regulation

alpha

scene

()

- Bull/Bear funds

- unlisted securities

· Currencies and countries

· Sectors and stocks

• Duration & convexity factors



Yield curve shifts on a bond portfolio

Other Types of Investment Styles

Exchange Traded Funds (ETFs)

Alternative investment classes

The Process of Investment Allocation

· Strategic and tactical asset allocation

Using MPT and Post-MPT in asset

Understanding the Capital Asset Pricing

Evaluation of Investment Performance and

· Understanding investment returns and

Decomposition of investment returns

MiFID II impact on the current investment

Risk adjusted performance

· Benchmarks and benchmarking

Risk-adjusted returns

• GIPS and changes for 2020

Client/performance reports

Future regulation initiatives

analytics

· Attribution analysis

· Money market & cash funds

HEDGE FUNDS & LIQUID ALTERNATIVES

A comprehensive overview of the fundamentals of hedge fund markets

Why Hedge Funds?

Delegates will be able to define an alternative investment vehicle as well as discuss why and how they have become such an important part of the investment universe

- The rise of "hedge funds" and "liquid alternative" funds
- · Hedge funds defined and compared to traditional stock and bond funds
- The allocators view: Benefits of adding hedge funds to traditional portfolios
- Hedge fund /alternatives terminology and benchmarking
- · Special difficulties in running a "hedged, downside protected" portfolio
- · An overview of the recent evolution of the hedge fund industry

Structure and Service Providers

Delegates will be able to identify the different types of service providers and their roles in providing services to hedge funds

- The investment manager of a hedge fund or liquid alternative fund
- Administrators and Custodians
- The role of the prime broker
- · Outsourced providers and hedge funds
- · Regulatory issues for hedge fund and liquid alternative managers

The Hedge Fund Investor Base and its **Ongoing Evolution**

- The paradigm shift to "absolute return" - style investing
- Different hedge fund styles for different portfolio purposes
- · Understanding the hedge fund selection process
- Hedge fund products from a product sponsor viewpoint
- · Historical and future evolution of the hedge fund Investor base

Introducing Hedge Fund Strategies

- Typology of hedge fund styles and hedge fund indices
- · Directional vs. arbitrage investment strategies
- · Market neutrality vs. market tracking error investment strategies

Directional and Hedged Equity Strategies

The Long Short Trading Style

- Long short portfolio construction
- · Shorting stocks vs going long stocks
- Style bets inherent in long short investment strategies



Dissecting a long short fund trading style, leverage,

concentration and securities selection process. Delegates will work through examples of these strategies and will be able to explain how they operate in practice

- Global macro
- Managed futures
- Emerging markets
- Behavioural finance and trading strategies

Fixed Interest Hedge Funds

- Credit and capital structure arbitrage
- Fixed income bond arbitrage
- Mortgage backed securities
- Other fixed income hedge fund styles



Delegates will work through examples of these hedge fund styles and be able to explain their

Arbitrage Styles

- Convertible bond arbitrage
- Risk and merger arbitrage
- Capital structure arbitrage



Delegates will work through examples of these hedge fund styles and be able to explain their use in performance and diversification

Derivative Based Hedge Fund Trading

- Managed futures and trending/countertrending strategies
- Commodity strategies
- Volatility arbitrage

Fund of Hedge Funds, Managed Accounts, or Running Individual Hedge **Fund Portfolios**

- · Best methods to obtain hedge fund exposure
- The buy or build portfolio decision of an institutional investor
- The pros and cons of obtaining investment exposure via a funds of hedge funds
- Negotiating a managed account via a platform
- Running an internal portfolio of hedge funds



Delegates will be able to recognise the advantages in the fund of funds model and contrast and compare them against managed accounts and other

methods of obtaining exposure

The Growth of the Liquid Alternative Industry

- Alt 40 funds and UCITS hedge funds
- Regulations on alternative funds
- Which trading strategies fit the liquid alternative model
- · Liquid alternatives structures: Pros and cons

The Hedge Fund Manager Selection Process

- The investment due diligence process on hedge fund managers
- Fund documentation and manager meetings
- Ongoing monitoring of a portfolio of hedge funds
- · Style-based analysis of funds

Understanding Risk in Hedge Funds

- Understanding the drivers of investment market risk in hedge funds
- Risk measuring a hedge fund portfolio via statistical tools
- Industry approaches to standardizing hedge fund risk reports
- Understanding shortfalls of statistical tools as applied to hedge funds
- Risk managing a hedge fund portfolio • The role of the risk manager within a hedge fund



Hedge fund performance and market meltdowns: Mini-case study of hedge fund

performance of during previous global financial market crises

Getting a Handle on Operational Risk

- Understanding and controlling hedge fund operational risk
- Understanding hedge fund liquidity risk
- Understanding hedge fund leverage
- Understanding hedge fund concentration • Understanding margin and short market
- risk · Understanding investors' reactions in
- crisis: Behaviour finance imperative
- A review of some of the major hedge fund failures
- Regulatory control of hedge funds The SEC and FCA: Regulatory issues and opportunities & threats
- The comfort level: Defining a solid well risk managed institutional quality hedge fund



The Benefits of Hindsight -Delegates will be able to analyse and understand the recent developments in markets and the impact market declines might have on the hedge funds and liquid alternatives industry

PERFORMANCE MEASUREMENT & ATTRIBUTION

This course provides key information to improve your decision making strategies

SUCCESSFULLY MEASURING **RETURNS: THE METHODOLOGIES** AND INDUSTRY PRACTICES

What is Performance Measurement?

- What?
- . Why?
- How?
- The performance measurement process

Money or Time-Weighted Returns

- Simple returns
- Modified Dietz
- Internal rate of return
- True-time weighted
- Impact of large cash flows
- The evolution of return methodologies
- . Annualised returns
- Errors and typical problems
- Timing of cash flow
- Impact of large cash flows



Calculate a range of timeweighted and money-weighted returns. Discuss the

implications and requirements of large cash flows

BENCHMARKS

What is a Good Benchmark?

- Calculation methods
- Customised indexes
- Peer groups: medians, percentile ranks pros and cons
- Random portfolios

Excess Returns

- Arguments to use geometric or arithmetic methodologies
- Convertibility
- Proportionality
- Compoundability
- Performance fees (good or bad?)



Calculate a range of customised indices

Attribution Analysis and its Importance to Ensure Effective Measurement Control

- Understanding the breakdown of the portfolio into its constituencies
- Analyse and interpret the contribution of the stock selection and asset allocation from your total return
- The evolution of attribution methodologies
- The Brinson Model

- Interaction
- Arithmetic or geometric



effects. Discuss the impact of investment decisions. Debate typical attribution problems

Calculate basic attribution

GLOBALISATION OF PRESENTATION STANDARDS

The Most Recent Developments and their Impact on Performance Measurement

- Global Investment Performance Standards (historical background)
- Standards update (GIPS 20/20)
- . Principles
- Objectives
- Verification .
- Governance structure
- . Pitfalls
- . Why do it?



Debate and resolve firm definition, composite allocation and discretion issues for a fictitious large global asset management firm

Risk-Adjusted Performance Measurement

- Types of risk in asset management
- Risk control
- The four dimensions of performance
- Simple risk measures
- standard deviation
 - variability
 - tracking error
- Understanding the ratios and their implications in the performance measurement process
 - Sharpe
 - Treynor
 - Information
 - Jensen's Alpha, Beta, correlation, R2
- Appraisal
- **Return distributions**
- Skewness
- Kurtosis
- Bera-Jacque test
- Hurst Index
- Bias Ratio
- Adjusted Sharpe ratio
- Upper and lower partial moments – Downside risk

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- Sortino ratio
- Upside potential ratio
- Omega
- Variabilty skewness
- Prospect ratio

- Drawdown ratios
- Calmar
- Sterling
- Burke
- Calmar-Sterling Pain and Ulcer indices
- Pain ratio
- Martin ratio
- Value-at-Risk
- Return to VaR
 Expected shortfall
- Conditional Sharpe ratio
- Modified Sharpe ratio
- A "periodic table" of risk measures



Calculate a range of riskadjusted performance measures and use them to evaluate and rank the performance of five portfolios

Further Attribution Multi-currency

- Geometic

Carino

- GRAP

- Menchero – Frongrello

- security level

holding based

credit spreads

KERCISA

strategies

- the "Greeks"

- market neutral

- leverage & overlay

alternative assets

– multi-level

balanced

•

Naïve effects

- Karnosky and Singer

Smoothing algorithms

Other attribution issues

Fixed income attribution

– The Campisi framework

- shift, twist and butterfly

- yield curve decomposition

- why is fixed income different?

- weighted duration (van Breukelen)

Analyse and interpret fixed

Van Breukelen method

Attribution for derivatives and alternative

- futures, swaps and options

associated economic exposure

income attribution using the

interest rate differentials

A MASTERCLASS IN INVESTMENT MANAGEMENT

All you ever wanted to know about investment management in just five days

DAY 1

Introducing the Investment Markets and Investment Fundamentals

- · Reviewing the investment risk return paradigm
- Investment asset classes and their return drivers
- Historical markets returns and market cycles
- Investor typology: Liability driven investors vs. return driven investors
- · Asset liability models used by institutional investors
- The Prudent Man Rule and fiduciary responsibility of looking after other people's money

Sources of Investment Return Drivers

- Key drivers in financial markets
- · Cyclical approach to investment management
- Quantifying market direction and investment return
- Market liquidity: Size as determinate of returns
- Irrational exuberance: Booms, bubbles, crashes
- · Behavioural finance, market excess and market crashes

Great stock bond market collapses: 2009 and 2011

2016 and historical equity level indications

Understanding Investment Statistics

- · Alpha, Beta and an introduction to investment statistics
- Market volatility measures and understanding return distributions
- Global investment benchmarks review
- Adding tracking error, information ratio and performance/risk measurement
- Correlation and correlation roll
- Fat tails and extreme events and their prediction
- Major investment management measurement ratios most commonly used

Investment Performance Measurement

- Introducing performance measurement and performance attribution
- Investment fund performance persistence
- Reviewing GIPS (Global Investment Performance Standards)
- Fiduciary responsibility investor constraints and what is an appropriate benchmark
- The Investment Management process and Investment Performance: several keys to discipline and returns

Economic Impact on the Financial markets

- Investment returns and economic cycles
- Governmental economic intervention and the impact on investment markets
- Economic drivers of market return
- · Economic aspects of forecasting of investment markets

DAY 2

Drivers of Global Bond Returns

- Bonds, credit spreads and interest rates
- Yield Curve Evolution
- Fixed income risk measures: Duration
- Understanding credit rating and the rating agencies
- Bond portfolio management and fixed income trading
- Constructing bond portfolios
- Introducing fixed income hedging
- Swaps, swap spreads and other interest rate hedging products used
- · Credit spreads and credit hedging
- The evolution of the loan market as an investment tool
- Structured Credit: The rise of securitisation, CDOs, CBOs, CLOs, and the bond market
- Leverage and fixed income
- · Constructing fixed income arbitrage portfolios

The bond market meltdown of 2008/9 and the bond market rally of 2011

Equity Valuation and Stock Selection

- · Forecasting drivers of the equity market
- · Valuation of stocks, methods and results
- Understanding the corporate lifecycle and its relationship to equity valuation
- Market efficiency theory and active vs. passive equity strategies
- Momentum vs. convergence equity strategies
- Selecting equity benchmarks
- Investors use of index exposure, ETFs and trackers and their pitfalls

Equity Style Bets in the Markets

- Growth vs. value: Style indicators
- Market capitalisation and size indicators
- Style factors and the business cycle
- Top down vs. bottom up stock selection
- Geographical diversification

Equity Market Analysis

- Equity analysis and stock selection
- Reading/writing investment research: Best practices
- The process of stock selection
- Creating equity valuation models and their shortcomings
- Valuation example using model
- The art in stock selection

Equity Portfolio Construction Methods

- · Benchmarked or absolute return portfolio construction
- Tracking error, information ratios and active portfolio management
- The long only traditional equity investing model
- Short selling and leveraged equity investment
- Equity based asymmetric return strategies
- Constructing long short equity portfolios

A MASTERCLASS IN INVESTMENT MANAGEMENT

continued ...



Warren Buffet and his investment style

The HerbaLife Short

DAY 3

1

Derivatives and Investment Management

- · Derivative markets as investment and hedging tools
- Exchange traded derivatives: single stop options and the futures markets
- Derivative payout structures: Example of stock option
 portfolio
- · Long volatility and short volatility derivatives trading
- Trade sizing and inherent leverage of derivatives
- Reviewing stock index futures
- Putting on a derivatives hedge on an equity portfolio
- · Reviewing volatility derivatives
- Interest rate swaps and other fixed income derivatives
- Reviewing credit default swaps and credit derivatives
- · Derivatives disasters in the past
- Implementing portfolio strategies via derivatives
- · Implementing hedging strategies via derivatives

Option Strategy with Microsoft and Facebook

Traditional and New Paradigms in Asset Allocation

- Asset allocation: The source of the majority of investment returns?
- · Investor constraints and asset allocation:
- · Liability modelling and its impact on asset allocation
- · Asset class diversification and portfolio impact
- The inputs of Modern Portfolio Theory (MPT)
- · Reviewing "expected returns" and volatility as MPT inputs
- · The volatility of correlations and MPT
- Optimising portfolios via industry "Best Practice"
- · Benchmark selection for asset allocation
- · Adapting asset allocation to liability driven investment
- · Asset liability models and asset allocation styles
- Post Modern Portfolio Theory and newer asset allocation approaches
- Downside risk revisited and Sortino Ratio measures
- The equilibrium market approach and Black Litterman asset allocation models
- The process of portfolio rebalancing
- Practical issues in asset allocation
- Some examples of typical asset allocations: Pensions, endowment and private banking

Asset allocation exercise using a mean variance optimiser



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Where institutional investors are going with their asset allocation

The Process of Tactical Asset Allocation

- Core/satellite investment strategies
- · Internal tactical asset allocation programs
- Portable alpha strategies
- · Global tactical asset allocation models and investor use



The endowment style asset allocation: Yale Investment Office Annual Report

CASE STUD

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The Canadian Pension Plan Investment Board rethinks asset allocation

DAY 4

Understanding Investment Risk

- · Risk measurement and risk management
- · The evolving role of the investment risk manager
- Fixed income risk vs. equity market risk
- · Credit risk and credit models
- · Understanding risk profiles of different asset allocations
- · Market liquidity and investment risk
- Some risk measurement models, Value at Risk (VaR) models
- · Conditional VaR and VaR derivatives
- Conducting stress testing on portfolios
- Process of Monte-Carlo simulation in investment risk
 management

Multifactor Models and Investment Risk

- Multifactor models use by institutional investors
- · Defining risk models via multifactor models
- Building portfolios on multifactor models



 Indicating future investment risk –
 Running a multifactor model on an intermediate term bond fund

Risk Management Concerns on Global Liability Driven Investors

- Global pension management and other global investors
- · Measuring and modelling assets and liabilities
- Dynamic portfolio analysis for assets and liabilities
- Developing a strategic benchmark
- · Liabilities, liability hedging and funding strategies
- Liability matching and duration matching
- · Analysing the cost of risk mitigation and hedging strategies

The Risk Budgeting Process

- Investment portfolios via risk budgets
- Understanding the measurement of investment risk
- Risk adjusted measure to optimise portfolio allocation strategy
- Risk managing the equity book
- Risk managing the long short book
- Practical risk concerns: The hedging decision
- Hedge ratio calculations

A MASTERCLASS IN INVESTMENT MANAGEMENT

continued ...

- · Hedge cost and benefit analysis
- · Implementing hedging decisions: The fixed income portfolio

DAY 5

Where the Industry is Heading:

New Trends in Investment Management

- What are the benefits of alternative strategies, private equity, hedge funds, real estate and commodities to traditional portfolios
- Regulating alternatives, UCITS and NEWCITS alternative funds
- · Return analysis of alternative strategies
- Alternative asset alpha vs. beta exposure and return drivers
- Asymmetric returns: Downside protection

Hedge Fund Strategies Overview

- · The hedge theory of asymmetric return strategies
- Hedged funds or hedge funds
- Drivers of hedge fund returns: Hedge fund strategy review
- Directional hedge fund strategies
- Event driven hedge fund strategies
- Arbitrage style strategies
- Style multitudes of hedge funds, weather bonds, cats, quantitative trading and CTAs
- Quantitative risk management of hedge funds vs. long only funds

The Other Alternative Assets - The Commodity Markets

- The commodity indexes and enhanced indexing
- Drivers of commodity returns
- Commodity roll calculations
- Passive commodity exposure
- Investment strategies using commodities
- · Leverage inherent in commodities derivatives

Real Estate and Real Assets

- The property market and institutional investors
- Historical property market returns and the economic cycle
- Direct property vs. property funds
- · Obtaining property exposure via listed property: REITS
- · Historical view of property cycles
- Geographical diversification of property
- Valuation and liquidity problematic
- Alternative real estate: Timber portfolios
- The evolving market of property derivatives

Private Equity

- Types of private equity investments
- Private equity exposure and private equity funds
- Venture capital statistics,
- LBO and MBO debt models
- Mezzanine finance
- The J Curve of investment returns
- · Liquidity in the private equity market, secondary markets

Obtaining Alternative Investment Exposure

- Benchmarking alternative investments
- Those great correlation arguments

- Evaluating funds of funds and the gatekeepers
- Building dedicated alternative fund portfolios
- Alternative fund manager selection and due diligence
- Investment risk management of alternative investments
 funds
- Reviewing Liquid Alternatives: Promises or Problems
- Can UCITS and liquid fund structures provide alternative like returns?

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 Outsourcing alternative exposure – Due diligence and manager monitoring of external managers

The Major Trends in the Investment Management

Industry

- Where we are going over the next decade
- Will there be renewed emphasis on capital protection?
- What are the likely impact of quantitative easing on the financial markets
- Economic direction revisited and market changes
- · In the seat of a major institutional investor currently
- Operational changes, job descriptions and further changes in the industry

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Effects of current political uncertainty in Europe and the US on the financial markets – in particular the significance of Brexit and the US election

Or why not study online for a Post Graduate Certificate with Middlesex University

The Mechanics of Investment Management

Delivered via distance learning over 16 weeks

- 1. Current themes in institutional investment management
- 2. Stock markets and equity investing
- 3. Fixed income portfolios and the art of lending
- 4. Introducing derivatives
- 5. Modern asset allocation strategies
- 6. Risk management of the institutional portfolio
- 7. Exploration of alternative assets: Progressive adoption of hedge funds, private equity and real estate by institutional investors
- 8. Further exploration in institutional asset management: Current topics of liquidity, asset allocation, risk management, alternative investments and fiduciary responsibility

Improve both your technical and theoretical investment management knowledge from the comfort of your own home!

Turn to page 116 for more details

SECURITIES SETTLEMENT, CLEARING & GLOBAL CUSTODY

Become familiar with controls to manage securities settlement operations effectively

Introduction to Settlement

- · Principles of securities and derivatives settlement
- Demystifying the jargon
- The regulatory environment
- Describing the steps in a typical trade cycle
- Industry initiatives driving change in the market
- Role of payment systems
- Target 2 Securities
- Role of Central Securities Depositories and CCPs

The Role of the Exchanges and Clearing Houses

- · What is the role of the exchanges?
- What is the role and function of the clearing house?
- Assessing the impact of the consolidation of exchanges and clearing houses across markets
- Member and end user relationship including segregation

The Role of the Settlements Department

- Importance of settlement
- Relationships and responsibilities with key internal and external parties
- Front Office/Middle Office/Back Office interaction
- Management information: management reports and how to use them

Road Maps 1

Explaining the relationships with the counterparties dealt with in the settlement of a typical trades on and off exchange: equities, debt, derivatives

Settlement Conventions

• What are they and how do they differ by security class in major markets?



Road Maps 2

Explaining the high level process flow from trade to settlement for: equities, bonds, derivatives

Describing the margin call process and understanding the basics of collateral management

Settlement Processes in Detail

- Pre-settlement
 - input of settlement instructions
 - input scenarios
 - matching
 - monitoring transactions
 - amending transactions
- asset and cash position management
- Settlement
 - priorities and queues
 - circle processing
 - monitoring transaction settlement
- Settlement fails
 - why they happen
 - managing the process
- claims
- The importance of securities timing
- Overcoming obstacles
- Cash management and FX timing and importance
- The importance of reconciliation between the customer and the custodian
- · Overview of distributed ledger developments

Introduction to Global Custody and Derivatives Clearing

- Users and providers
- The role of the derivatives clearing broker
- Context of global custody and primary functions
- Sub custodian/payment systems overview
- Life cycle of a trade the phases of processing and the role of custodians, agents and brokers
- The communications chain ICSDs, CSDs, custodians, middle
 and back office
- · Demystifying the jargon
- Market practice: cut-off and value dates
- Custody agreements
- · Centralised clearing and the role of the CCP and Trade Repository

Global Custody – Core Services

- Explaining what services a global custodian and derivative clearer needs to offer its clients
 - settlement
 - safekeeping of securities
 - income collection
 - corporate actions management
 - cash management
 - funding
 - tax management
 - reporting the information chain eg. SWIFT
- banking facilities
- The impact of regulation and the role of the Depositary

Global Custody – Value-Added Services

- Investment accounting
- Record-keeping
- Securities lending and collateral

 describing how securities lending operates in simple terms
- Trustee services
- Portfolio valuation
- Collateral management

Corporate Actions

- What are they?
- Why do they occur?
- Common types of corporate actions and examples
- Impact of corporate actions on derivative products
- The growing importance of proxy voting
- Importance of timing

Industry initiatives

Overview of Operational Risk

- · Definition of settlement risk
- · Examples of what can go wrong
- Emerging markets risk
- Industry recommendations: G30 and ISSA
- Understand the impact of shorter settlement times, why real time settlement reduces risk
- Industry trends and the future

Discuss and review

- Developments in Blockchain & DLT
 - Exploring the impact of developments on the

Delegates will produce a detailed overview of the

clearing and settlement environment including key

players, processes and issues for a new hire in the audit

- infrastructure and players • ASX replacement of CHESS

Wrap-up Workshop

department.

INFRASTRUCTURE PROJECT FINANCE

Get to grips with the practical financial & structural issues surrounding infrastructure & other PPP/PFI projects

BOT, PFI & PPP

This session explains the workings of BOT, PFI and PPP projects - the relationship of the parties, the tendering and procurement process, and a summary of the arguments in favour of and against procuring public works projects through the PPP method.

- Explanation of BOT, PFI and PPP
- Motivations of the commissioning authority
- The procurement process OBC, VFM, PSC, ITN, BFO, FBC
- Critique of PPP pros and cons
- The perceived weaknesses of PF1
- The new rules and structures introduced by 'PF2'
- Differences between PPP and other forms of project finance
- · The administration of PPP
- · The implications of refinancing
- Political risk and political risk insurances

Assessment and Appraisal

A summary of the analytical approach and the structuring of risks. This will be further developed in the subsequent sessions.

- Economic assessment
- The difference of approach for projects with a contractual revenue stream vs market-based revenue
- Due diligence technical, market assessment, financial, legal
- Modelling and quantifying risk
- · Range of techniques for laying off risk
- Alternative dispute resolution in contract law
- Tax optimisation issues in structuring the project

Railway

A detailed consideration of risk analysis and risk structuring.

Concession Agreements

This session captures the relationship between the government procurement agency and the private sector consortium. We will go through the components of the Concession Agreement - sample provided and discuss the alternative structures that can be adopted and the merits of each.

- Standard form contracts, service agreements, toll-based contracts
- Revenue basis cost plus, unitary charge, tolls, hybrids
- Legal issues pertinent to PPP
- The consortium vs commissioning authority relationship
- The components of a Concession Agreement

- Tariff setting, tariff resets
- Benchmarking, market testing and resetting of revenue drivers, basis risk
- Currency exposures and mismatches
- Political force majeure, contract frustration
- Frustration and termination
- Compensation clauses and financier
 exposure
- Direct agreements
- Step-in rights
- Collateral works
- Partial recourse structures
- Resumption of project assets and operations
- · Performance incentives

Toll Roads

An in-depth look at several different toll road projects that were structured in different ways, some more successfully than others. Also, we look at a failed toll road project.

The Development

As with other forms of project financing, getting the infrastructure built and getting it working, is often the critical challenge. If a PPP project goes wrong, it is likely to be in the development or commissioning phase. This session takes a careful look at how the allocation of risks and responsibilities is structured and the contractual protections that are put in place.

- Risk identification, cost overrun, delays, performance
- The importance of functional specifications
- Structure of insurances
- Environmental impact analysis and environmental liability
- The management of scope, cost, time
- Project quality performance
- The FIDIC turnkey EPC contract
- Liquidated damages, performance bonds, retentions
- Variation and change orders
- Completion guarantees
- Credit guarantee facility
- The six 'killers' of project finance

Hospital

A PPP hospital project which illustrates the complex issues of various operational sub-contractors, measuring performance and adjusting the revenue drivers during the life of the concession.

Financing

When there is only a single source of cashflow, debt financiers not surprisingly become very attentive to the structuring of how that cashflow is managed and assessed. These sessions examine the techniques and structures that are applied and how effective they are. It includes an assessment how members of the sponsor consortium should undertake their evaluation of the project.

- Free Cash Flow, CFADS importance and derivation
- · Debt sizing with cover ratios
- ADSCR, LLCR, PLCR
- Cashflow waterfall
- Control and reserve accounts purpose and derivation
- Lock-up covenants, cash sweep mechanisms
- 'Trapped' cash, minimum capitalisation laws
- Implications of default
- Embedded recourse
- Market risk vs. performance risk
- Sponsor evaluation process
- Sponsor IRR vs. project IRR
- The five drivers of a Sponsor IRR

Dealing With Risk

A classification of the various ways to deal with risks – i.e. cashflow volatility contingencies

- The three step analytical approach
- Putting suspension on the Special Purpose Vehicle (SPV)
- · The six methods for dealing with volatility
- The ingredients of volatility modeling
- Illustration of the implementation of scenario analysis

Airport

A detailed investigation into some very complicated interfaces that ultimately defeated what would otherwise have been a good project.

OIL & GAS PROJECT FINANCE

Develop your knowledge of project financing along the hydrocarbon

Industry Overview/Qualitative and Quantitative Risk Analysis

- Structure of the international petroleum industry:
 - from upstream to downstream the hydrocarbon value chain
 - upstream exploration, development and production
 - refining from raw material to endproduct
 - pipelines transmission and distribution
 - liquefied natural gas a fuel of the future
- petchem beyond the burner-tip
- Different risk/reward objectives of
- sponsors and lenders Structural and pricing drivers in oil and gas
- lending: – country/political risk
- sponsors
- reservoir/reserves
- technology and construction/ completion
- sales/offtake
- operation and maintenance
- abandonment/decommissioning
- environmental/regulatory
- Quantitative risk analysis:
 - key ratios loan life and project life covers
 - balancing equity and debt
 - features and design of oil and gas models
 - developing an appropriate base case setting "price decks" and other economic/technical parameters
 - sensitivity analysis:
 - > choosing/calibrating sensitivities
 - > getting to loan value

Understanding Upstream Oil and Gas Financing

- Reservoirs and reserves a technical grounding
- from exploration through appraisal to development and production
- nature of hydrocarbon reservoirs
- estimating volumes
- reserve classification –
- proven/probable/possible: 1P/2P/3P
- reserves for banking purposes
- due diligence and consultants' reports
 Field development finance in the early
- days of the North Sea
- Growth of the independent sector
- Emergence of the borrowing base as the tool of choice
- European and North American borrowing bases
- Structural features of the European borrowing base, especially:
 - balancing development and producing assets
 - redetermination practices setting technical and economic parameters
 - balancing OECD and emerging market assets
 - adding/removing assets
 - hedging as revenue protection and debt support

- Treatment of abandonment/letters of credit for abandonment
- Payment waterfalls/account structures
- Typical and variant distribution controls, reps and warranties, undertakings, events of default
- The "War Stories" in North Sea single-field finance – examination of the deals that failed
- Recent trends in North Sea finance:
 - the "new wave" of independents
 - the move by larger independents to corporate borrowing
 - the new independents' needs and the banks' response:
 - single-field financing returns
 - stretched" borrowing bases
 - subordinated/mezzanine products
 - ------

Getting to Grips with Refinery Finance

- Refinery operations from topping refineries to complex crackers
- Greenfield or expansion financing?
 Cash flow volatility the key risk for lenders
- Operational mitigation of volatility risk:
 "geographical" margin protection
- "geographical" margin protec
 tolling-based structures
- hedging to reduce volatility
- Debt structuring to mitigate lender risk, including:
 - debt/equity balancing
 - repayment profile optimisation
 - cash sweeps
 - distribution controls and information/other covenants
- Refinery market analysis for lenders:
 choosing consultants
- scope of work for due diligence studies
 Modelling/sizing debt for refineries
- "Where has it gone wrong?" a somewhat chequered history

Oil and Gas Transmission and Distribution Lending

- Trunk pipelines and distribution networks

 very different animals
- Oil and gas transmission pipelines high fixed cost/multi-partner undertakings:
- key risk factors especially upstream supply issues, construction contracts and sale/offtake contracts
- balancing the interests of private and public sector players
- environmental/social issues a "make-or-break" factor
- analysis of recent oil/gas pipeline financings
- Gas storage and distribution finance: – liberalised/regulated gas distribution has increased financing needs
- gas storage in depleted fields and salt caverns – developing tailored financing packages
- funding the acquisition and build-out of gas distribution networks
- financing gas metering
- the role of regulation and its impact on financing

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Liquefied Natural Gas Finance

- The growth of the LNG debt market
- LNG liquefaction finance:
 - risk profile of liquefaction projects, especially:
 - > sponsor/equity issues
 - > construction contracts structure and risk allocation
 > LNG sale contracts
 - Arabian Gulf LNG projects a detailed comparison:
 - > typical debt structures
 - > development of structures over time
- LNG regas finance:
 - structural drivers especially supply, market, regulatory and regulatory issues
 - features of recent regas financings in:

structural drivers in project-based LNG

comparison of project debt structures

financing of integrated LNG chains

changing downstream markets and

increasing flexibility in LNG sales and

> UK and Europe

- the lng shipping industry

vessel financing

trading patterns

financing contracts

Other Downstream Finance –

Petchem and Gas-to-Liquids

The Petchem "flowchart" - from

gas/naphtha-based feedstocks to

The Middle-Eastern petrochemical wave -

risk profile of petrochemical projects -

adding value to domestic gas resources:

technology - bankability and

> feedstocks - volume, price and

sales/offtake - agency/licensing

financing gas separation and treatment

polyolefin projects - financing crackers

increasing sophistication - aromatics

Two major case studies will be used -

one in the upstream sector and one in the

downstream - to reinforce the principles

Gas-to-Liquids - financing clean diesel

taught on the course and to allow projects to be

examined with greater granularity

> construction - issues and

contractual structures

corporate vs. project debt

- > USA
- IndiaLNG ship finance:

Recent trends:

end-products

especially:

licensing

issues

and beyond

projects

quality factors

plants - the first step

and PE/PP plants

>

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POWER PROJECT FINANCE

A cutting edge guide to the intricacies of financing power projects

THE PROJECT FINANCE "TOOLKIT"

Project Finance Essentials

- What is project finance? Definition
- Differences between corporate and project lending
- The cashflow "envelope"; Cashflow Available for Debt Service (CFADS)
- Why do sponsors choose project finance?
- The risk-reward relationship with the project sponsors and lenders

The Toolbox (1) - Qualitative Risk Analysis

- Sponsor risk
- Country limits / country risk mitigation
- · Construction / completion risk
- Technology risk
- Supply issues
- Offtake factors
- · Operation and maintenance risk and structures
- Insurance issues
- · Consents and approval matters / regulatory hazard
- Environmental and social issues

The Toolbox (2) - Debt Sizing and Sculpting

- CFADS the starting point
- Cover ratios
 - Ousing the ADSCR
 - using the LLCR / PLCR as a "sense-check"
 - cover ratios in debt sizing and stress testing
- Base case design control of inputs and macroeconomic parameters
- · Sensitivity running what does the banker test?
- The IRR/cover ratio interface
- Impact of control accounts on sponsor return
- Getting to the optimum debt level

The Toolbox (3) - Project Finance Loan Documentation

- Control accounts and the cashflow "Waterfall"
 - types of control account disbursement, revenue, compensation, debt service reserve and maintenance reserve accounts
 - the cashflow waterfall purpose, typical priority ranking and variations
 - the documentation process
 - > keeping it tight and focused
 - > the lender / borrower / counsel interface
 - > different approaches to the term sheet
 - > designing the term-sheet for economy while covering the key commercial issues
- Documentary terms and conditions
 - the "boiler-plate" understanding the jargon
 - the key "command and control" mechanisms in project finance agreements
 - > conditions precedent
 - > reps and warranties
 - > covenants
 - > events of default

- Borrower/sponsor needs and "hot-buttons"
 - what does everybody argue about most?
 - accessing the loan facility
 - pricing issues
 - operating flexibility and control
 - cash-traps and "IRR-killers"

POWER PROJECT FINANCE – SECTOR PRACTICE

Who are the Key Players in Power Project Finance?

The Industry Structure and how Power Project Finance has Evolved

- Outline of Industry structure and variations.
- Early Power Purchase agreements and associated fuel supply contracts
- The emergence of selling power generation capacity rather the power. The capacity charge and energy charge structure
- · CHP and the implications of continual heat demand
- Merchant power plants what are they and how it went wrong for sponsors and Lenders
- Gradual emergence of highly subsidised renewable energy projects
- FIT, green certificates and contracts for differences
- Assessing the resource risk
- Rapid evolution of large scale renewables, subsidy reduction and eliminations, auctions and the development of zero subsidy off shore wind
- How Project Finance has become the key currency in renewable energy - why renewables have driven the growth in Power Project Finance

Changes Likely to Occur Over Next 20 Years

- Must run generation technologies zero short run marginal costs, pushing out thermal plant and destroying the economics of major electrical utilities
- Decarbonisation policies/ taxes
- Distributed generation behind the meter
- Demand Response
- Storage how, when & cost.
- Technology where will solar PV and technologies be in 5-10 years

The Offtaker

- · Assessing the long-term credit risk of the Offtaker
- Assessing the cashflow of the offtaker and the regulatory position
 that underpins it
- · Political and Credit support for offtakers in emerging markets
- · Risk assessment of Offtaker and the drivers of their cashflow
- Risk Mitigation in emerging markets

The Role of the Regulator and the Political Climate

- · Classic role & powers of the regulator
- Role of the regulator in encouraging renewables
- · Power policies are highly political and highly localised

POWER PROJECT FINANCE

A cutting edge guide to the intricacies of financing power projects

Risk Features of Power Project Finance – Key Drivers for Debt Structure & Pricing

- Offtake regime PPA/tolling /merchant/feed-in tariff/renewable certificates
- Technology issues
- Operation & maintenance regime

POWER PROJECT FINANCE METHODOLOGIES

Debt Structures for Conventional Power (PPA, Tolling & Merchant) & Renewable Power (Feed-In Tariffs & Renewable **Generation Certificates) Compared & Contrasted**

- Debt/equity ratios and structures
- . **Risk allocation patterns**
- Debt maturity
- Debt pricing levels

KEY POWER PROJECT FINANCING CONTRACTS - THE POWER SALE ARRANGEMENTS

The way in which power is sold (PPA, merchant, tolling, feed-in tariff with preferential despatch etc.) is arguably the most important determinant of project debt structure and therefore these agreements are worthy of particular attention. During the course the key features of different power sales agreements are discussed in depth, in particular which risks are allocated and how this affects the amount and cost of the debt which can be raised.

KEY POWER PROJECT FINANCING CONTRACTS – OPERATION AND MAINTENANCE AGREEMENTS

Because the predictability of stable cashflow is critical in determining the risk appetite of a lender, the operation & maintenance regime to be applied in a power project is analysed very carefully by its debt providers. During the course the key risk transfer provisions of O&M agreements - and their limitations - are reviewed in detail.



PUTTING IT INTO PRACTICE -

The course has a strong practical emphasis throughout and case studies are used, particularly to reinforce learning. There are three basic types of case study:



Mini-Cases - Shorter Class-Based Sessions - the pros and cons of a project from a bankability perspective and also to set out requirements for additional due diligence.



Peer Review Committee Sessions – more intensive cases where the Course Faculty acts as presenter and four participants are selected to act as a committee to screen new transactions before they go to full Credit Committee.

Term Sheet Case Studies - exercises

where the course participants are required to review a project financing term-sheet for completeness and acceptability from the perspective of either the Lender or the Borrower.

The sector focus of the cases used will depend in part on the particular interests of each trainee group. When this course has been delivered on an in-house basis, case study topics have included combinedcycle gas, power & desalination, windpower, biomass, CHP and photovoltaic projects.

PROJECT FINANCE

Designed for professionals who wish to obtain a thorough grounding in the techniques of limited-recourse project financing when applied to a range of capital-intensive industries

What is Project Finance?

- Definition "Project Finance" and a comparison of the key differences between project finance and corporate finance
- Origins of project finance
- Who uses project finance and why?
 Review of the market size, industry
- sectors, geography and trends
- Defaults and recovery statistics
 What is the downside? slow, complex,
- expensive etc.
 Core learning themes sponsor cash &
- Core learning themes sponsor, cash & IMAAA

Sponsors and Lenders/The Lender's Risk Analysis

- Different risk/reward objectives of sponsors and lenders – who gets the upside when a project goes well
- Balancing equity and debt

Qualitative Risk Assessment and Mitigation

- The Sponsor competence, creditworthiness & potential conflicts of interest
- The country and the institutional framework
- Construction & technology risk how financiers manage construction risk
- Offtake the nature of the offtake contract and the impact of volatility and the impacts on debt structuring
- The risk position and cashflow security of the offtaker.
- Supply and resource availability
- Operation and maintenance regimesEnvironmental provisions and the overall
- regulatory regime.
- Insurance & Force Majeure provisions

Risk identification and using IMAAA

Quantitative Risk Assessment and Debt Structuring

- How the cashflow models are developed and the range of inputs
- The use of Lenders Advisors in finalising the inputs and the financial model
- How debt capacity is used as a risk mitigation tool for lenders
- The measurement tools used by Lenders
- ADSCR, LLCR & PLCR
- The repayment schedule Straight line or annuity or a sculpted profile
- How the cashflow is used to

 size the debt capacity of the project
- the repayment profiles
- the amount of equity required to fully fund the project
- sensitivity analysis
- · choosing/calibrating sensitivities
- Financing risks Interest, inflation, foreign exchange

 Funding risks – certainty of funding – equity & debt

Prepare your Bid

This exercise requires participants consider the inputs into a project and how a sponsor can make changes to its approach and bid the lowest price to win an auction/bid process.

Project Financing Documentation

- The term-sheet purpose, legal status, binding/non-binding aspects
- Term-sheet/documentation provisions – purpose clause
- interest/fees
- repayment/prepayment
- representations and warranties
- covenants/undertakings
- conditions precedent
- security
- control accounts/waterfalls
- events of default
- Legal opinions



The Project Finance Process

- The players and their interests
- Role of advisers
- financial advisers
- technical advisers/consultants
- legal counsel
- The financial feasibility study/debt structuring
- The information memorandum
- Debt underwriting/syndication
- Financial close
- Post-close monitoring

Other Sources of Debt Finance and Risk Mitigation

- The bond markets
- Credit enhancement through guarantees
- Private political risk insurance market
- Export credit agencies
- Multilateral agencies/development banks
- Sponsor co-financing

Sustainable Lending – The Equator Principles

- Origins and purpose of the equator principles
- Development and current adherents
- Purpose and scope
 - best practice in sustainable lending
 bank obligations
 - project classification under the equator principles
- Practical application using examples

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Power Project Finance

Industry background and the role of the System Operator, matching the supply of electrical energy and the demand

Must-Run Technologies – Wind & Solar Power

- How the contracts are structured FIT, contracts for differences, fixed price & auctions
- · The impact of priority despatch
- Assessing the resource risk
- Operation and Maintenance

Thermal Power Plants

- How the contracts are structured capacity charge and energy charge
- Fuel supply issues
- · Operation and maintenance

Offtaker

- Risk assessment of offtaker and the drivers of their cashflow
- Risk mitigation in emerging markets

Merchant Power Markets

• A brief history and an assessment of the return of merchant power price risk

Infrastructure Project Finance

- Roads, Airports, Light Rail Schemes & Ports
- Comparing the "availability" model to the traffic/volume risk model



Project types – hospitals

- schools

- housing

- prisons

pipelines

₩)

Oil and Gas Financing

Social Infrastructure/PFI/PPP Projects

Regulatory/public sector oversight

Overview of the oil and gas chain

Midstream finance - refineries and

Downstream finance - Liquefied

greater granularity.

Upstream finance - single-field finance

Natural Gas (LNG) and petrochemicals

Several real-world examples and

case studies will be used, in a

projects to be examined with

group study/interactive setting.

This will reinforce the principles

taught on the course and to allow

Upstream to downstream

and "borrowing bases"

Rationale for public to private projects
The PFI/PPP process

PROJECT FINANCE DOCUMENTATION

A unique new programme specifically designed to help practitioners gain a deeper insight into the mechanics of project finance documentation

Risk & its Management

- The distinguishing features of project finance
- The objective of managing risk
- The six ways in which risk can be managed
- The project finance structure overview, relationship of the parties

Governing Law & Enforcement of Rights

- Conflicts of law
- Two requisites of project finance contracts

 reversal of plaintiff/defendant positions
- avoidance of litigation to enforce rights
- Alternative Dispute Resolution Procedure

Pre-Completion – Construction Contracts

- FIDIC and other standards
- Liquidated damages
- Performance bonds and retentions
- EPC and functional specification
- · Fixed price, lump sum, control of variations
- · Completion guarantees
- Two-phase financing
- Force majeure

Concession & Offtake Agreements

- The origins of PPP and BOT
- The pricing basis
- The treatment of performance shortfalls
- Termination, step-in rights
- Direct agreements
- Compensation
- Volume risk take-and-pay; take-or-pay; marketing agreements
- Exclusion clauses



Addressing the Risks, Protecting the IRR

Negotiating the protection for the financiers, defending the IRR of the Sponsors

Financing Agreements

- The loan syndication process
- The term sheet
- · Particular features of project financings
 - the cashflow waterfall
 - the role of the project cashflow model
 - LLCR and ADSCR
 - cash sweeps
 - distribution lockups
- The layout of the loan agreement
- key issues for Lenders:
- material adverse change
 - drawdown stops
 - waivers and rectification
 - market disruption, increased costs
 - negligence of Agent bank or consultants
 - disclaimers
 - legal opinions
 - non-exclusive jurisdiction

- loan liquidity, sell-down, novation, assignments
- enforcement implications
- environmental liability
- Key issues for Sponsors
 - conditions precedent to distributions to Sponsors
 - the potential to 'hide' recourse, how and why
 - the trigger for recourse
 - the quantum of recourse
 - 3-dimensional leverage, incl. maturity, grace, sculpting
- majority lenders, snooze 'n' lose
 romoving individual financiar part
- removing individual financier participants, 'yank the bank', super majorities
- Other key issues:
 - reps and warranties, repeating reps
 - sponsor lock-ins, change of control
 - sponsor insolvency
 - appropriations, partial payments
 - illegality and severance
 - the effects of Basel 3 and Solvency 2
- Lender rights upon default
- Reschedulings, restructurings



Dealing with Defaults

Illustrating the limited options when the facility is fully drawn, the assets are immovable, and the loan is in default

Security

- A classification of security:
 - mortgages
 - fixed and floating charge
 - liens and pledges
 - hypothecation
- assignments
 The limitations of security in project financings
- I ne limitations of se
- Avoiding security:
 - use of the unincorporated joint venture
 - use of the bankruptcy remote vehicle
- The role of a security trustee
- Guarantees:
 - the common law treatment
 - variations, additionality, on-trust, continuing security, termination, ruling off, joint and several, conclusive evidence, indemnity, liability post-insolvency

ASE STUD

Designing the Security Structure

Negotiations for the optimisation of the security structure from the divergent perspectives of Lenders and Sponsors

Other Legal Issues

- Insurances CAR, ALOP, Marine, DSU, public liability
- Political risk insurances FX convertibility, insurrection, expropriation
- Monoline insurance, credit enhancement structures
- Security trust vs. security agency
- Intercreditor agreements

RENEWABLE ENERGY PROJECT FINANCE

A practical guide to the wide array of different renewable technologies and their impact on project finance structures

Introduction - What is Project Finance?

A broad financing technique that can be used and adapted to a wide range of capital intensive industries – a technique, not a product.

- The main participants in a project finance deal
- Highlighting the key differences between corporate & project lending
- Why do sponsors choose project finance? Several key drivers
- What is the nature of the underlying economic opportunity?
 - how does this drive the behaviour of sponsors and lenders
 - state led or privately developed?
 - firm price offtake or market risk?
 - negotiated transaction or auction process?
- Understanding the risk-reward of both the sponsors and lenders
 - why do lenders behave as they do?

Project Finance and Renewable Energy

- Background and history
- Why has project finance become the main financing source for renewables

Project Finance - Qualitative Risk Analysis Identify, Mitigate and Allocate

- Sponsor technical competence, ability to inject equity and relationship with other joint venture partners
- Technology risk how lenders address rapidly evolving technology in the renewable energy arena
- Construction risk
 - EPC Contracts, as preferred by lenders or different forms of construction contracting
- Operation and maintenance regimes
 - the importance of the plant availability and performance
 - how to address major replacement / maintenance capital expenditure
- Supply how do lenders assess the risks associated with
 - wind / sun / hydro
 - biomass
 - waste
- Lenders' advisors their role in mitigating project finance risks
- Natural Force Majeure insurance construction all risks and operating insurance - the risk mitigation for natural force majeure
- Institutional infrastructure
 - the regulatory and legal infrastructure of the host country / region
 - electrical power = politics
- Environmental and social issues
- Interest rate and Forex risks



The class will be requested to review a case study and identify the key risk elements in the transaction and how they are allocated and mitigated.

Offtake Regime and Credit Quality

- Traditional offtake regimes Feed-In Tariffs, Green Certificates and Contracts for Differences
- Impact of intermittent capacity has on power systems
- The emergence of "market" price in renewable energy transactions and the potential implications of uncertainty
- Credit quality of offtaker
 - what is more important
 - a strong balance sheet or a regulatory regime that provides the offtaker with sufficient revenue to meet its obligations?
- The emergence of corporate PPAs

Emerging Market Transactions – How are They Different from Developed Markets

- Traditional political risk
 - war, civil war etc.
 - expropriation
 - currency convertibility and transferability
- Weak off-taker credit
- Less competition in construction markets
- Limited skilled resources and logistical issues
- Untested / weak institutional infrastructure

Approaches to Manage Political Risk Issues

- · Risk transfer under Power Purchase Agreements to offtaker
- Credit enhancement for offtaker Government Guarantees or Put/Call Option Agreements
- Political risk insurance MIGA/private insurance
- Widening the range of stakeholders
- Development focused lenders Development Finance Institutions (DFIs) and Export Credit Agencies (ECAs)
- Lower leverage, shorter tenor and higher cover ratios
- Local currency lending

Equator Principals

 How lenders use the Equator Principals in emerging markets as a framework to protect the environment

The Cashflow Model

This section is designed to give participants an understanding of the structure of a project finance model and how it is used to assess the debt capacity of the project. Whilst we are not attempting to teach project finance modelling in this course, we want to demonstrate the function of the model.

- Sources and uses where the money is spent and where it comes from
- The technical, operational and economic assumptions that drive the model, and where they come from

RENEWABLE ENERGY PROJECT FINANCE

continued...

- Simplified model
- CFADS Cashflow Available for Debt Service
- ADSCR the level of "cushion" the lenders have when things go wrong and debt service can still get paid
- Debt capacity determining how much debt the cashflow can support
- Impact on debt capacity of changing the underlying assumptions – the negotiation tension between the sponsors and the lenders
- Cover ratios
 - using the ADSCR
 - using the LLCR / PLCR as a "sense check"
- Sensitivity analysis purpose and impact what does the banker test?
- The IRR/cover ratio interface
- Debt Service Reserve Account and Maintenance Reserve Account - funding sources and impact
- Annuity repayment profile, equal repayments, sculpted repayment profile motivations
- Cash sweeps, hard mini-perm, soft mini-perm an exploration of additional risk management techniques



Renewable Energy Auction

The group will be arranged into small teams and asked to review the assumptions and output of a simplified Cashflow Model. They will be asked to review the imputs with a view to submitting a bid for a renewable Energy Project.

Project Finance Loan Documentation

- Project documents and finance documents an outline of the range and scope
- Loan Agreements the core features
 - conditions precedent
 - reps & warranties
 - covenants
 - events of default and options open to lenders
- Ancillary documents
 - Account Agreement
 - Intercreditor Deed
 - Common Terms Agreement
 - Direct Agreements
- Security and the limitations
 - security agent / trustee
 - physical asset security
 - contract assignment EPC, offtake, O&M
 - bank account security
- Control accounts & the cashflow "Waterfall"
 - types of control account disbursement, revenue, compensation, debt service reserve & maintenance reserve accounts
 - the cashflow waterfall purpose, typical priority ranking and variations

Renewable Energy Technologies

In this section we will review the different renewable energy technologies and their impact on the market appetite and the financial structures that may be available.

The technologies that we will review include onshore wind, offshore wind, solar PV, concentrated solar (parabolic trough and tower), small scale hydro (run of river), large hydro and biomass

- Construction and technology
- Supply wind, solar and biomass
- Operation and maintenance
- Revenue stream volatility and certainty

CASE STUDIES

Three Offshore Wind Farms

Review the evolution of the technology and how lenders have become increasingly comfortable with the construction and operational risks in the sector the technology has developed.

The cases will illustrate the effects of competition (between lenders) in the sector and how structures have changed.

African Hydro Plant

The issues relating to the construction of the plant and then what has happened to the project once the offtaker (government) has seen lower cost new technologies come on-stream.

European Solar PV

This is probably the most accessible sector in renewable energy.

Kramer Wind Farm

This onshore wind farm was developed using a Corporate PPA with a consortium of power buyers in The Netherlands.

A MASTERCLASS IN PROJECT FINANCE

All you ever wanted to know about project finance in just five days

DAY 1

Characteristics of Project Finance

Project finance, or limited recourse financing, has features which render it quite different from 'normal financings' and these differences permeate throughout the structure.

- The limitation of recourse
- The due diligences required
- The choice of entity as the SPV
- The role of the project cash flow model
- The significance of debt risk vs. commercial risk
- The role of contract in limited recourse financings
- The role of security in limited recourse financings
- The rationale for selecting project finance

Contracts and Cross-Border Enforcement

Project financings involve a spider's web of contracts. These contracts are pointless unless there is an ability to enforce rights under them. In crossborder context this is often not straightforward. Litigation is not the answer.

- Why enforcement can be problematic
- The shortcomings of contractual litigation in limited recourse financings
- Dispute resolution typical structure and procedure
- Arbitration and the NY Convention

PPP and Infrastructure Projects

Most PPPs and BOTs have a contractually-based revenue because of this their structure and characteristics are quite different from other project financings.

- PPP projects contrasted with industrial/extractive industry projects
- The motivations and objectives behind PPPs
- The role of the parties and the sequence of implementation
- Public sector procurement
- The structure of concession agreements
- Parallels between PPP and BOT



PPP Transport Project

Pre-Completion

Getting a project built and working as planned is the hardest and therefore the highest risk phase of most projects. Particular care is required in structuring the rights and obligations.

- Standard form contracts eg FIDIC
- Liquidated damages
- Performance bonds and retentions
- Fixed price, lump sum, liquidity
- Variation and change orders
- Turnkey EPC structures
- Completion guarantees, refinancing risk
- Technology, logistics and learning curve risks

DAY 2



· Power Project – Emerging Market

Market and Operating Risks

Most projects have only one revenue source. The cash flow coming into the project needs careful structuring and due diligence.

- Offtake agreements and the errors that often occur
- · Availability risk vs. market risk
- Take-or-pay features
- Hidden recourse structures
- Exclusions
- · Implications of market volatility



Project Cash Flow and Debt Structuring

Total dependence on a single cash flow results in structures and covenants that are not found in other financings.

- Risk solvency risk vs. volatility risk
- Free cash flow why is it fundamental to analysis
- Cash management issues
- Liquidity creating 'suspension' for the special purpose vehicle
- Cash Available for Debt Service (CADS)
- Loan life cover, project life cover, debt service cover (LLCR and ADSCR)
- Surplus cash flows, lock-up, cash sweeps

- Waterfall/cascade, reserve accounts
- Contingency reserves
- Designing structures to match cash flows
- Dealing with default
- Mortgage debentures/fixed and floating charges
- Separating risk-taking and funding
- The implications for limited recourse financings

DAY 3



Emerging Market Infrastructure Project

Project Cash Flow Models

Project cash flow models are exceptionally detailed. There is a need for a clear focus on their objectives and the planning/design process.

- Project dynamics, origins of cash flow volatility
- · Limitations of predictive modelling
- The importance of riskmeasurement or volatility models
- Modelling of cost structures
- Model design and layout
- Organisation of the worksheets
- Allocation of risks/cash flow volatilities
- Scenario testing and break-even analysis
- Summarising the outputs of the model
- Routines for assisting third party negotiations



Merchant Power Project

Demonstration Exercises

Illustration is provided of various aspects of a project finance model and the planning and design process lying behind the various worksheets.

- Pre-completion
- Depreciation
- Amortisation
- Cash sweeps
- Cash flow waterfall
- Currency schism
- Calculation of returns
- · Sensitivity analysis and scenarios
- Break-even analysis

A MASTERCLASS IN PROJECT FINANCE

continued...

Other Modelling Issues

- Best practice
- · Circular references
- Macros



Practical Modelling Masterclass

This session will involve one or more exercises, which are designed to develop skills. Participants will be invited to nominate which part of a model the exercises should focus upon - to address awkward issues that may have been encountered in the past. It may investigate further some of the exercises that are listed above under "Demonstration" exercises.

DAY 4



Telecoms Project

Technical Issues in Limited Recourse Financings

This section deals with a number of topics where project finance changes the conventional treatments

- The proper calculation of IRR
- Insurances pre-completion and operating phase
- Assignment and cut-through agreements
- · The options for dealing with political risk
- Environmental risks the limitations of insurance
- Currency exposures optional approaches to structuring
- · Financings involving multilateral agencies - implications
- Direct agreements
- Step-in rights

Bond Financing

An increasingly important financing option, but having very distinct disadvantages as well as advantages.

- The history of bond finance of limited recourse SPVs
- Cross-border bonds prerequisites
- Rule 144A implications for emerging market projects

- Rating agencies approach to different sectors
- Piercing the sovereign ceiling
- The limited window for high yield bonds
- Why use bond financing advantages and disadvantages
- Domestic bonds
- Credit enhancement monoline insurance



DAY 5

Airport Project



Leisure and Property Project

Sponsor Perspective

Sponsors need to have a disciplined approach to screen projects that are likely to deliver the benchmark IRR. There are number of potential pitfalls in the analytical approach.

- The investment analysis without project finance
- The difference in approach with a limited recourse structure
- Project IRR contrasted with equity/sponsor IRR
- The drivers of sponsor IRR and implications of negotiation of the financing term sheet
- Evaluation of projects in emerging markets

Export Credit Agencies

An explanation of how ECAs and their products work and the pros and cons of getting them involved in the structure. • Buyer credits

- Political and commercial risk cover
- Concessional CIRR finance rates
- Lines of credit
- Advantages/disadvantages of ECA involvement



- PFI transport (rail)
- LNG
- Leisure resort
- PFI hospital
- Pipeline
- IPP Power
- Airport
- Oilfield
- · Merchant power
- Toll-road
- Mining
- Telecoms

Study Online for a Post Graduate Certificate with Middlesex University

The Mechanics of Project Finance

Delivered via distance learning over 16 weeks

Core Units:

- 1. An Introduction to Project Finance
- 2. Qualitative Risk Identification Analysis & Mitigation (part A)
- 3. Qualitative Risk Identification Analysis & Mitigation (part B)
- 4. Quantitative Analysis, Debt Sizing & Structuring
- 5. Documenting the Deal
- 6. Project Finance Time-Line & Project Finance Security

Choose between Elective Path A or Elective Path B:

Elective Units – Path A: 1. Infrastructure Project Finance; 2. PPP/PFI Project Finance

Elective Units - Path B: 1. Oil, Gas & Mining Project Finance; 2. Conventional & Renewable Power Project Finance

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Oil and Pipeline Project

The Golden Rules of Project Finance



"Real Life" Case Studies -**Putting Theory Into Practice** The overall aim of the

programme is to increase and optimise your practical project finance skills and in order to achieve this goal, the programme includes thirteen or more detailed and interactive case-studies covering the following sectors:

ADVANCED RISK MANAGEMENT

Master the latest techniques to control & manage credit risk, market risk & operational risk

MARKET RISK MANAGEMENT

Introduction

- What is risk management?
- Why do we need it?
- Risk management vs. risk
 measurement
- Risk management, regulation and capital
- What is advanced risk management?
- How does regulation view risks and risk management?
- The current risk environment: Brexit, ZIRP, anaemic growth, rising dollar rates and the potential rise of inflation

Market Risk – Methodology

- The origins of market risk
- Sensitivities and The Greeks, DV01, duration, convexity
- Why have limits?
- Value-at-Risk , Expected Shortfall is it any use?
- What else can we do to control risk?



Market risk measures

Market Risk – Stress and Scenarios

- Why do we need stress and scenario testing in addition to VaR?
- How does Expected Short Fall give us a better risk measure?
- How should we do stress and scenario testing?
- Why do the regulators want to see it done?
- Stress and scenario testing and Basel Pillar 2

The Division Between Market and Credit Risk

- The trading vs. banking vs. fund management business model
- The regulatory divide
- Impact of liquidity and funding
- Market type risk in traditional banking activities
- How it all went wrong the credit crunch

Funding and Liquidity Risk Management

- Asset liability mis-matches in the balance sheet
- GAP analysis
- Funding alternatives e.g. securitisation, SIVs and conduits
- Funding, asset/liability liquidity and derivative pricing/hedging how are they all linked?

Market Risk Management for Funds

- Why do Fund Managers need different tools?
- Alpha, Beta, Sharpe Ratio, Information Ratio what is it for?
- The impact of leverage
- Thinking like a Fund Manager's Risk Manager

CREDIT RISK

Introduction

- What is credit risk and how does it fit/overlap with the other risks?
- The key drivers of credit risk
- Market and credit risk together
- Measurement of credit risk
- Credit Valuation Adjustment and the other "VAs" such as DVA, FVA – what are they for?

Portfolio Credit Risk

- Pricing and risk management of loan portfolios
- Estimating probabilities of default, exposure at default and loss given default
- Actuarial approaches, transition matrices
- Market-based approaches, bond spread and Merton (KMV) model
- Building a credit risk model
- Using the models to set limits and monitor risk

Simple portfolio credit risk modelling

Managing Credit Risk

- Traditional techniques
- Securitisation and risk transfer
- Regulatory capital, Basel III and AIRB
- Measuring performance and ROC

Credit Derivatives

- How can credit derivatives be useful in managing credit risk?
- Credit default swaps, single and multiple name
- Tranche CDS
- · Issues with CDS, basis, documentation
- Correlation issues
- N to default type structures
- Pricing and risk issues



Basket credit products

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MANAGING CREDIT RISK COLLECTIVELY



Based on Chief Credit Office role

The Role of Capital and the Relationship to Other Risks

- What is capital for?
- Risk and capital performance measures such as RAROC, economic and regulatory capital
- Allocating and managing capital
 Raising capital and novel capital instruments

Basel III and Further Developments

- The evolution of Basel how did we get here?
- The framework of market, credit and operational risk capital requirements – the three pillars
- Operational risk methods how do we build a model for AMA?
- Overall requirements and best practice
 - Fundamental review of the trading book
 - what changes will that bring?

What Risks Have Been Missed?

- The role of pillars two and three in support of capital requirements
- Liquidity risk the new focus since the credit crunch
- Liquidity Stress Testing NSFR and LCR how do they help manage risk?
- Intra-day and short-term risksReputational and strategic risk
- Reputational and strate
 Whole optomatics risk
- Whole enterprise risk

The demise of Lehman Brothers, MF Global, Amaranth – what went wrong?

Risk Measures and Reporting in Major Banks

- What is done currently?
- · What may have to be done?
- How do we "govern" risk management with a firm?
- What are the major risks going forward?



Q and A discussion session

ANTI-FINANCIAL CRIME & COMPLIANCE

A comprehensive guide to the key issues, legislation and implications

DAY 1 - FRAUD PREVENTION, DETECTION AND REPORTING

Developing a Fraud Risk Analysis for your Organisation

- Mapping your systems for fraud risks
 Mapping for control points
- Mapping for control points
- Looking for compensating controlsCreating employee risk profiles
- Creating employee risk profiles
 Documenting your Fraud risk analysis
- Reviewing the ACFE system

Evaluating your Risks and Assigning Controls

- · Division of responsibilities
- Reconciliations
- Control accounts
- Difference accounts
- Authorisation levels
- Film of GE Capital Fraud and control failures

Fraud Typologies in Banking, Commerce and Industrial Environments

- Employee frauds the facts
- Payroll frauds
- Computer frauds such as ransomware
- Identity theft Film
- Current fraud risk areas

Financial Statement Fraud – Review of the Major Examples

- Olympus Corporation
- Diageo plc
- Satyam Computer Services
- Syntax-Brillian
- Reebok India
- Dell
- Diebold
- Rino International
- WorldCom



An examination of a set of accounts where attendees will highlight areas of risk for investigation for potential fraud and identify the red flags

Detection of Fraud

- Red flags
- Fraud detection software



Actions to Take After Detection

• Interviewing a suspected employee fraudster

- Protecting a computer environment
- Securing data for court purposes
- Email analysis
- · Software for mapping links

The Fraud Act

- Why was it necessary to create a Fraud Act
- · Passive and active fraud
- Potential developments in anti-fraud legislation
- Comparison with the Bribery Act approach FCA Financial Crime Reporting (Rep-Crim)
- Politically Exposed Persons
- Sanction listed countries
- High risk jurisdictions
- When to report a refusal of a customer on the basis of crime risk
- SAR's

Tax Evasion

- Reporting to HMRC
- Failure to prevent facilitation of tax evasion
- Criminal Finances Act 2017



DAY 2: BRIBERY & CORRUPTION

The Bribery Act 2010

- The key provisions
- Criminal offences for company's and employees
- Extraterritorial reach
- The primary defence incorporated in the Act

The Bribery Act Offences

- Active offence
- Passive offence
- Failure to provide training
- Failure to assess risks
- Failure to document assessments and controls

The Foreign Corrupt Practices Act and how it Differs from the Bribery Act

- The limitations of FCPA
- Private to private bribery restrictions
- Limited to Active bribery only
- No strict failure to prevent provision
- Need to demonstrate intent
- Facilitation payments allowed

DOJ Guidance and how it Should be Applied

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• What the guidance is

- How a court will use the guidance
- Has the guidance been modified since being issued

On-Going Compliance and Obligations of the Act

- Training face to face
- Training e-learning
- Risk based assessments
- ChecklistsDocumenting assessments
- · Documenting assessments

Evaluating High Risk Areas of your Business

- Sales agents commission
- Cash transaction
- Credit notes
- Discounts and Rebates
- Entertainment
- Political donations
- Customs duties
- Employment

High Risk Circumstances

Using your Contractual Documents

to Impose your own Anti-bribery

Reducing costs of ABC controls

Publishing your policies on the

Transparency International

• Are there other useful indexes?

• What is a risk based review?

Review questionnaires

How do I set up a team for the

Reports - to whom and when

Practical Business Safeguards

An emphasis on regular training

High level reporting - compliance

Tone at the top

Documentation

Company policies

Whistleblowing

Bribery & Corruption Risk Analysis

customers/suppliers who refuse to

Corruption and Corruption Indicators

What this index means and does not

Joint Ventures

Legal disputes

How do you handle

adopt your policies

company website

AcquisitionsRe-structuring

Policies

•

•

•

mean?

review

Intranet

board

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ANTI-FINANCIAL CRIME & COMPLIANCE

continued...



Creating your own risk scoring system for bribery utilising real loan applications

DAY 3: ANTI-MONEY LAUNDERING

Why Money Laundering is at the Heart of Financial Crime – Money Laundering in the UK

- The banking sector
- Financial services
- Gambling
- Estate Agents
- Jewellery, gold and other precious metals
- Money Exchange Bureaus
- Accountancy service providers
- Lawyers

The Non-Regulated Sector

- Those that can be regulated or nonregulated depending on circumstances
- General insurers
- Energy suppliers
- Shipping

The Money Laundering Legislation 2007

- These regulations operate alongside certain other Acts
- The Proceeds of Crime Act 2002
- The Terrorism Act 2000
- The Terrorism Act 2006
- What the ACT means (concisely)

The Proceeds of Crime Act 2002 Amended 2013

- The purpose of POCA
- How the Act works
- What is the impact on the victim of crime?

The Changes Due Under the EU 4th Directive Effective from 4th June 2017

- Emphasis on ultimate beneficial ownership and enhanced customer due diligence (CDD)
- Expanded definition of a politically exposed person (PEP)
- Expanded to included entire gambling sector beyond just casinos
- Cash payment threshold lowered to €10,000
- Enhanced risk-based approach, requiring evidence-based measures

Impact of the Changes in the UK due to be Announced in June 2017

- Consultation completed in March 2017
- Typically the UK is stricter than Europe and substantially stricter than the USA

The FCA and Other Regulators

- Financial Conduct Authority
- Gambling Commission
- HMRC regulation of Estate Agents, Jewellers and Auction Houses

FATF

- The creation and role of FATF
- The standing of FATF reports
- Why FATF has been so important in progressing AML practice

Terrorist Financing

- FATF reports
- Traditional methods of raising funds
- Traditional methods of distributing funds
- · Lone actors and terrorist cells
- Emerging threats

JMLSG Guidance

- Who are the JMLSG
- · What is their purpose
- Representation of Trade Associations
- Reports on proposed legislation

Customer Due Diligence

- Proving identity
- Software products for high volume due diligence
- Beneficial ownership
- PEPs
- High risk jurisdictions
- Sanctions

Transaction Monitoring

- Stone vs. Natwest Bank
- · Automated monitoring
- What is an unusual transaction?
- Unusual intensity of transactions
- · Unusual destination of transactions
- Higher than normal value transactions etc

Suspicious Activity Reports

- What is a SAR?
- Who submits a SAR
- When can you continue with a transaction
- Shah vs. HSBC

The Risk Based Approach

- Using computer software
- FATF's risk based approach

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- Risk assessment
- Risk mitigation
- Internal controls

Awareness & Training

- The fundamental importance of training
- Methods of ensuring AML awareness
- Annual employment reviews

The MLRO and Reporting

- The status and importance of the MLRO
- How and when the MLRO reports
- Once a report is submitted what happens next
- Reporting and private clients

Record Keeping

- How long should records be kept?
- Why is it important to keep records?
- In what form should the records be held
- Disaster recovery

HMRC

KERCIS

Criminal Finances Act 2017

• Corporate offence of failure to prevent the facilitation of tax evasion

Information sharing and "super SAR's"

Extension of POCA powers to FCA and

Customer due diligence

- Unexplained wealth orders
- Disclosure orders for money laundering investigations

ANTI-MONEY LAUNDERING

A comprehensive, practical analysis of anti-money laundering legislation & implementation

Introduction to Money Laundering and Terrorist Financing

- The meaning of money laundering
- The meaning of terrorist financing
- Why is money laundering such an important issue?
- Exploring and discussing the impact of money laundering on both developed and developing countries
- The damage that money laundering and terrorist financing can cause to your organisation
- International initiatives and requirements

Role of the Financial Action Task Force (FATF)

- 40 recommendations
- · Nine special recommendations
- Proposed amendments and extensions
- Mutual reviews
- · Non co-operative countries and territories

EU Directives

- 1st and 2nd Directives and how they set the stage for the 3rd Directive
- 3rd Directive
- Understanding the concerns about the loopholes brought about by new technologies
- Other EU Directives which impinge on or supplement the requirements in respect of money laundering

The US and its Effect Internationally

- History of the fight against money laundering
- US Patriot Act
- OFAC

UK Legal and Regulatory Requirements

- Proceeds of Crime Act 2002
- · Serious Organised Crime and Police Act
- Terrorism Act 2000
- Serious Crime Act 2007
- Counter Terrorism Act 2008
- Money Laundering Regulations 2007
- · Financial Services Authority Rules
- Rules of other regulators

Customer Due Diligence

- CDD requirements
- Individuals
- Legal entities
- Beneficial owners
- Risk based approach
- How best to achieve
- Face to face
- Electronically
- Remotely

Ongoing Monitoring

· For CDD reviews

- Transaction monitoring
- Risk indicators

Record Keeping

- · What records must be kept
- How do you keep them and for how long
- CDD records
- Transaction records

Suspicions and Reporting

- What is a suspicion?
- · How do you identify them?
- · What internal reporting systems do you need?
- · What must you report to the authorities?
- How do you report?
- What records do you need?
- When do you need consent?
- How do you deal with customer whilst awaiting it?
- How do you handle customer after a report has been made?

Tipping Off

- What is tipping off?
- · How can we commit it?
- · How do you avoid it?

Money Laundering Reporting Officer (MLRO)

- What are the duties?
- What are the obligations?
- How do you meet them?
- Annual report

Senior Management Responsibility

- Setting an AML policy
- Audit of AML compliance

Training and Awareness

- Who and when to train
- Level of training
- · Methods of training
- Assessing competence
- Training records
- Maintaining awareness

Sanctions

- · HM consolidated sanctions list
- · How do you apply it
- Licence and records

Interrelationship Between Financial Crime/Fraud And Money Laundering

- Where does money laundering end and other financial crimes begin?
- Bribery Act 2010

ASSET & LIABILITY MANAGEMENT FOR BANKS & FINANCIAL INSTITUTIONS

Learn how to increase profitability & increase shareholder value



McKinsey - An Introduction to Asset and Liability Management

- Recent trends in ALM
- Yield curve analysis
- Gap analysis
- Net interest income
- Duration gaps
- Economic value of equity
- Value at risk
- Setting and monitoring tolerance limits
- Optimising income and managing risk
- Typical practices in funds transfer pricing
- Managing liquidity risk
- Likely developments in ALM

🕒 HSBC - ALM Gaps

Goldman Sachs - ALM

Contract Specifications

- Underlying instruments
- Price quotes
- Contract months
- Tick sizes
- Settlement procedures
- Position limits
- Block minimums
- All or none minimums
- Rulebook chapters
- Trading hours

Hedging an Equity Portfolio

- Identifying, measuring and managing the underlying exposures
- · Long and short positions
- Creating a hedge
- Alternative hedges
- Settlement
- Advantages of the swap market over the cash market
- Advantages of futures over swaps
- OTC and exchange traded derivatives

The Regulatory Environment

- Background: Basel I & Basel II
- Basel III
- liquidity
- capital
- leverage
- systemic risk
- Basel IV

The Rules of Risk Management

- Return and risk
- Transparency
- Experience
- Known unknowns and unknown
 unknowns
- Communication

- Diversification
- Discipline
- Fraud, mismanagement, greed and corruption
- Common sense

Bank Bosses Must Ensure Honesty is Best Policy

The Laws of Investing

- Margins of safety
- This time is different
- Patience
- Contrarian views
- Risk and the permanent loss of capital
- Leverage
- Knowledge

Swap Driven Bond Issues

- Motives for borrowers
- Motives for arrangers
- Motives for investors
- The advantages of par/par structures
- Discount rates: a discussion

FRA Hedging

- · Dynamics of the forward market
- Upside and downside risks
- Basis point values
- Settlement
- Tick values
- Futures equivalents

JP Morgan Swaps

- Intraday trading
- Directional risks
- Taking a view
- Realising gains and losses
- Marking to market
- Sensitivity

FRAs, Futures and Interest Rate Swaps

- Buying and selling FRAs
- Selling and buying futures
- Paying and receiving fixed rates in the swap markets
- Perfect hedges and basis risk
- Contrasting exchange traded and OTC derivatives

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How Hedging Works

- · Measuring interest rate risk
- Duration weighted hedging
- Balancing the hedge
- Hedge ratios
- Testing the hedge

Asset & Liability Management - Key Themes

• Role of the senior ALM committee

The forward-looking nature of, and

committee

Issues for ALCOs

risk

decisions made by the senior ALM

The degree of challenge observed at

Asset & Liability Management - Key

Key issues an ALCO should coverHow 'good firms' analyse interest rate

Areas in which interest rate risk

How ALCOs test liquidity risk

OCBC & UOB - ALM

Management

management at firms is weakest

Key Issues in Asset & Liability

Asset & Liability Management -

Key Observations for ALCOs

• Business lines and control function s

Compliance with limits and planned

Accepting recommendations without

Reviewing the Effectiveness of

the Senior ALM Committee

Current positions, limits and forecasts

Forecast indicators and risk appetite

Contradictions between EVE and NII

Known unknowns and unknown

· Are high impact scenarios sufficiently

The Rules of Risk Management

Key liquidity and funding metricsUnderstanding the EVE and NII results

• Role of economic forecasts

and strategy

future actions

Covering IRRBB

remote?

Return and risk

Transparency

Experience

unknowns

debate or challenge

Managing the agenda

Liquidity and funding risks

Product pricing and mix

Under utilisation of limits

Key Themes in Asset & Liability

the senior ALM committee

Management

• Composition and authority of the senior ALM committee

ASSET & LIABILITY MANAGEMENT FOR BANKS & FINANCIAL INSTITUTIONS

continued...

- Communication
- Diversification
- Discipline
- Fraud, mismanagement, greed and corruption
- Common sense

Managing Interest Rate Risk - 1

- Time value of money
- · Future value and present value
- Implied repo rates
- Discount factors and compound factors
- · Simple interest and compound interest
- Yield and return
- Act/act, act/360 and 30/360
- Interpreting the yield curve
- A guide to money market products
- Duration, PV01s and DV01s

Using Duration as a Hedging and an ALM Risk Management Tool

Managing Interest Rate Risk - 2

- The mechanism of FRAs
- Calculating FRA rates
- Hedging and trading with FRAs
- · Calculating the settlement amount
- FRAs and FX swaps
- Pricing forwards from FRAs
- FRAs and futures

Managing Interest Rate Risk in the Banking Book

- Defining IRRBB
- CSRBB
- Economic value and earnings based measures
- Structure and components of the standardised framework
- Treatment of NMDs
- Behavioural options
- EVE

Contrasting the Use of FRAs and Futures in Asset & Liability Management

EVE and Hedging

- Relating EVE to earnings
- EVE and estimated actual reported earnings
- What does EVE really reveal about future earnings
- Managing EVE
- Using EVE to alter future earnings
- Managing EVE when portfolios are not marketable
- Causes of sensitivity in EVE
- · Hedging the risk in the sensitivity to EVE



EVE and Hedging



Simulation Asset and Liability Management -EVE and Interest Rate Sensitivity

Liquidity Coverage Ratios

- LCR calculation
- Stock of high quality liquid assets/buffer
- levels one assets
- level two assets
- Operational requirements
- Calculation of net cash outflows

HSBC Liquidity Risk

Challenges of Liquidity Risk Management and the LCR

Simulation

Hedging Duration Gaps

- The economic value of equity
- Positive and negative gaps
- Estimating changes in the economic value of equity
- Durations of assets and liabilities
- Leverage adjusted duration gaps
- Hedging with forward contracts
- Hedging withe futures contracts
- Hedging with swaps
- Stress testing hedges
- EVE and duration gaps

Hedging Pitfalls

- Status quo
- Taking a view
- Engaging with business partners
- Attitude to losses
- Balance sheet forecasting
- Volatility and liquidity management
- Spreadsheets
- The costs of FX trading
- ISDA and counterparty risk
 management
- Timing of FX results

HSBC - Market Risk

- Simulation
- Interest Rate Hedging and Market-Making
- ALM hedging and market making simulation
- ALCO meeting
- Hedging, trading and market making session

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- Protecting the bank's earnings
- Defining a strategy

- Managing interest rate risk
- Calculating the impact on net interest income

ALM Lehman Brothers

- Weaknesses in checks and balances
- Valukas Report
- Vulnerability to collapse
- Shadow banking systems
- Fundamental regulatory failure
- Flight risk

Risk limits

Key lessons

Liquidity profiles

complete CFP

The value of a CFP

Crisis

Management

currency swaps

Identifying the exposureCash market alternatives

· Forward outrights, FX swaps and

HSBC - Net Interest Income

1

- Derivative exposures and market turmoil
- · Significant exposures

Other contributory factors

Contingency Funding Plans

· Liquidity crisis management

Response plans and scenario planning

• Roles, responsibilities and action plans

McKinsey: Anatomy of a Liquidity

Multi-Currency Asset & Liability

Contingency funding plans in action

· The qualitative components of a

· Quantitative analysis and support

Updating and maintaining a CFP

CORPORATE CREDIT RISK ANALYSIS

A practitioner's guide to analysing corporate credit risks in today's volatile markets

QUALITATIVE RISK ANALYSIS

Overview of the Credit Analysis Process

- Risk and return dimensions .
- Country and corporate risk issues
- Credit default rates and risk grading
- Fundamental principles of credit risk analysis
- Balancing the quantitative and qualitative aspects of risk •
- A structured analysis framework for credit
- Rating processes

Щ

- External rating agencies Moodys, S&P, Fitch
- Internal ratings applications

Syndicate Case Study: Understanding the principles of credit risk analysing a typical credit application

Current State of the Credit Market

- Current issues regarding structured finance and credit
- Review of changes in light of recent problems

Analysing Business Risks

- Macro-environmental risk analysis; cyclical/mature/growing
- Strategic evaluation using stakeholder analysis, Four Gods of
- Management, PESTI, Porter 5 Forces model
- Assessing competitive position
- Resource audit using 7Ms •

Video Case Study of a UK Corporate: Identifying the credit problems

- Company/product portfolio evaluation and diversification using the product portfolio BCG matrix
- Market environment analysis
- Generic competitive strategies
- Strategic options using Ansoff matrix
- Market/product lifecycle and the 4Ps of marketing
- Value chain and peer group assessment
- Internal operational and management assessment .
- Track record, attitude to risk, relationship with shareholders
- Force field analysis and understanding change management issues
- Combining the analysis using a SWOT matrix
- Developing a qualitative analysis framework



Syndicate Case Study: Identifying the business risk issues which caused the problems at Yell

QUANTITATIVE RISK ANALYSIS

Cashflow Risk Evaluation

- The dynamic cashflow cycle in a company
- Untangling the cashflow statement
- Linking cashflow and historic ratios
- Evaluating repayment ability on a cashflow basis
- Cashflow cover ratios and repayment risk, EBITDA cover, DSCR and other metrics
- Moody's and S&P calculation of FFO and use of cashflow analysis
- Calculating cashflows when there is no cashflow statement
- Understanding the cashflow statements of other countries .
- Cashflow and corporate capital structure
- Debt vs. equity decisions in the capital structure and cashflow impacts • •
- Developing a model for cashflow projections
- Cashflow sensitivity analysis identifying the key cashflow drivers
- Linking cashflow generation to strategy and investment decisions
- Key cashflow financial performance indicators



Syndicate Case Study: Analysing corporate cashflow of a corporate credit case and modelling projections using Excel

The Current Corporate Restructuring Climate

- Review of the current problem sectors
- What are the recurrent themes?
- Identifying both the qualitative and quantitative warning signs of corporate failure
- Separating the causes from the symptoms
- Sector specific problems involving restructuring
- Restructuring framework
- Proactive
- Defensive •

•

- Distress
- Legal options
- Differences across different regimes
- Legal reorganisation in court or out of court solution?
- Stakeholders with special interests suppliers, pension trustees, leaseholders
- Liquidation, sale or debt restructure
- Role of vulture funds/hedge funds
- Review of the key issues in corporate restructuring
- Liquidity or viability problem? •
- Identification of key stakeholders
- Leveraging and deleveraging
- Optimising the leverage structure
- Adjusting the cost of debt and equity for leverage
- Recaps, debt and equity buybacks



Group Exercise: Calculating the optimum leverage and debt capacity of a company



Identifying what went wrong in a recent corporate distress case study

Corporate Capital Structure

- Structuring the junior/senior debt
- Hybrid debt and equity issues in capital structure
- Mezzanine debt structures
- Use of PIK structures
- Warrants and equity ratchets
- Understanding the term structure of risk
- Using asset securitisation structures to obtain off balance finance
- . Understanding credit enhancement structures and risk transfer
- Project finance structures
- Acquisition finance



Syndicate Case Study: Analysing the credit risk of a proposed acquisition

Turn to page 108 to read about our **Distance Learning course**

The Mechanics of Credit Risk Analysis

CREDIT RISK

Three days of practical training on the best market focused strategies & techniques for effective credit risk management

Introduction to Fundamental Credit Risk and Analysis

- What is credit risk and how does it arise?
- Regulatory distinctions in credit risk specific and counterparty / banking vs. trading book
- The credit crunch and its origins how has this affected our approach to credit risk?
- Definitions of default, failure to pay and other credit events
- Simple models of corporate structure, subordination and default processes
- Merton's enterprise model and default risk KMV model
- Credit risk as default probability, recovery rates / LGD and exposure
- Relationship to balance sheet and cash flow statements
- Relationships to debt and equity prices
- Ratings agents approach to credit risk – has it failed?
- Lessons to be learned from the credit crunch and sub-prime debacle
- How did Lehman's collapse? relationships to liquidity and other risk

Portfolio Credit Risk

- Probability of default, loss given
 default and correlation of default
- Credit risk of portfolios compared with single positions
- Loss distributions and relationship to expected loss, worst credit loss, economic and regulatory capital definitions
- Introduction to portfolio credit risk
 models
 - creditrisk+
 - creditMetrics
 - McKinsey
- Optimising portfolios for best risk/return
- Tail risk



Spreadsheet exercises using simple portfolio credit model

Overview of Basic Statistics

- Some elementary statistics standard deviation, Pearson correlation, skewness
 - volatility of market factors



Estimation of market factor volatilities

 covariance and correlation, correlation matrix



Estimation of market factor correlations

- problems with real-world data
- Monte Carlo simulation methodology – overview of monte carlo technique
 - cholesky decomposition
 problems with the
 - variance/covariance matrix

Performing Cholesky decomposition

Modelling Credit Exposure of OTC Derivative Products

- Loans, bonds and derivatives
- Transaction-based models
- Foreign exchange transactions
- Interest rate swap transactions
- CEF calculationsEffect of CMTM
- Market factor-based models
- Market factor-based models
 Counterparty exposure simulation
- models
- Handling credit exposure limits
- Integration of netting
- Integration of margin/collateral
- Integration of liquidity risk
- Stress testing
- incremental transactions
 market discontinuities
- What lessons have we learned from the credit crunch with regard to stress testing?

Evaluating the Credit Risk of Derivatives

- · Expected and unexpected credit loss
- Default only vs. economic loss
- Credit loss profile
- Simulation approach to economic capital
- Risk rating model
- Rating migration matrix
- Loss given default

Managing Credit Risk: Securitisation and Risk Transformation

- Concepts of regulatory capital for credit risk and return on assets
- Techniques for moving risk off balance sheet
- securitisation and synthetic securitisation
- CDOs and other tranche products

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- Pros and cons of securitisation for origination firms and investors
- The role of rating agents
- The roots and effects of sub-prime meltdown

- How has the model broken down in the credit crunch?
- What is going to replace it?



Analysis of a CDO in the sub-prime meltdown

Managing Credit Risk: Credit Derivatives and Risk Transfer

- What are credit derivatives and why are they used?
- Single name credit derivatives (unfunded and funded structures)
 – Credit Default Swap (CDS)
 - Total Return Swap (TRS)
 - first-to-default basket note
- Pricing and risk of single obligor credit derivatives
- Basket and Tranche CDS, index based CDS
- Regulatory capital impacts of credit derivatives
- Documentation and legal issues



Spreadsheet exercises with single name credit derivatives

Regulatory Capital - Requirements for Credit Risk

- Regulatory capital under Basel I
- Regulatory capital under Basel II
- Changes under Basel III
- Standardised approach
- Foundation internal ratings based approach
- Advanced internal ratings based approach
- Basel II / III risk weight functions
- Basel trading book issues
 - counterparty credit exposure
 - double default effects
 - short-term maturity adjustment
 unsettled trades

CVA, FVA and DVA – what are they

What changes can we expect in the

future as a result of the credit crunch?

Credit risk management

paradigm? How will

new high cost, low leverage world?

post credit crunch – a new

and how do they affect us?

we make money in the

Wrong way risk
UNDERSTANDING FINTECH

Demistyfing the next paradigm shift in global financial services

ENABLERS AND DISRUPTORS

The 4th Industrial Revolution

- From mechanisation to digitalisation
- Automation
- Internet
- Artificial Intelligence (AI)
- Cloud computing
- The Internet of things

Examples of Changing Business Models with Big Data

- Online shopping
- Personalisation
- The sharing economy
- Education (video)
- Neurotechnology (video)
- Medicine and hygiene
- 3-D printing
- Transportation
- Recruitment
- Internet of everything (IoT)

EXERC

Banking The Future – The Digitally

Big Data in Banking & Finance

- Enabled Bank
- The Bank of the Future 24/7/365
- Banking Millennials (Gen Y)
- The payments technology arms race
 Electronic money and cashless payment
- systems
- Removal of cash
- BitCoin and the future of currency
- Cash, digital and virtual money
- Currencies without a central bank
- The bank is an app
- The rise of the robo private banker
- Peer-to-peer lending & crowd funding

FinTech: Technological change

- Trading speed
- Blockchain technology
- Digitalisation of currencies vs. virtual currencies
- The power of big data
- Streaming money

How FinTech Disrupts Banking and Financial Services

- Retail banking
- Credit assessment
- Payments and correspondent
- banking
- Commercial and corporate banking
- Trading and investment banking
- Corporate finance and M&A
- Asset and investment management
- Private banking and wealth management
- Research and analysis
- Insurance (InsurTech)
- Regulation and compliance (RegTech)

Digitalisation of Banking Services

Opening an account

- KYC and due diligence
- Credit assessment
- Money transfers
- Payment and settlements
- Investing
- Lending
- Saving
- Risk managementAsset and liability management
- Trading and electronic trade execution

How Does the Blockchain Work?

The transaction chain

The blockchain

Bitcoin generation

Transaction speed

Transaction fees

Blockchain Demo

The blockchain

The distributed blockchain

Managing more than 50% of CPU's

The Programmable Nature of the Blockchain

Regulated vs. unregulated cryptocurrencies

What can be programmed into the

Coinbase transactions

Cryptographic hash

End of chain instability

Double spending

Time to transact

Practical Issues

Rewards

Benefits

Challenges

blockchain

Cryptocurrencies

Hash

Technology

Types

Services

Examples

Capital base

Payments

How this can be done

List of cryptocurrencies

Types of cryptocurrencies

Encryption and decryptions

Private and public keys

Digital signature

Cryptography and digital signatures

Symmetric and asymmetric keys

Applications of the Digital Ledger

Storage of purchasing power

Setting up your own cryptocurrency account

Hands-on session testing some of

fintech's new technologies in a

Digitalisation of assets

Choosing the currency

Choosing the type of wallet

Choosing the wallet provider

real-life scenario

Companies to Watch

Digitalisation of contracts

Deflationary nature

The hash

The block

The tokens

Security Issues

- Automated hedging
- Liquidity management
- Debt collection
- Reporting and regulation
- Advisory
- Research
- Use of social media

Disruption of Incumbents

- Incumbent plavers
- Purely online banks and insurances
 Different competitors
- Different competitors (Competitors where you don't expect them)
 Start-ups
- Shadow banks

FinTech Start-Ups

- Understanding the different types of start ups
- What unique services do they provide?
- Capital base requirements

Shadow Banking

- Definition of a shadow banking entity
- Size of the shadow banking sector
- Shadow banking examples

How to Regulate the Industry

- How to protect the users
- How to tax the business
- · How to protect employees

FinTalk - Watch this Space

- Gamification
- Instant gratification
- New developments in cloud-based platforms
- Availability and affordability of augmented reality

BLOCKCHAIN AND CRYPTOCURRENCIES

The whitepaper of Satoshi Nakamoto

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- Beacons
 MEMEs
- MEMEs Talk of the day

Implications for the Banks

Overview of Blockchain and

History of the blockchain

Back to basics: the ledger

The overall principles

- Savings
- Investments

Profitability

Cryptocurrencies

How to respond

Jobs

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FUNDAMENTALS OF RISK MANAGEMENT

Intensive training & case study analysis to ensure you are at the forefront of today's risk management processes

An Introduction to Risk Management

- The risk management framework
- · Overview of different types of risk
- Current trends and future issues in risk management



Identifying the risk issues facing an asset management company

Credit Risk Management

- · Defining credit risk
- counterparty risk
- default risk
- settlement risk
- Evaluating netting agreements
- · How collateral management can help reduce credit risk
- · Describing the credit rating process
- Credit spread analysis
- Measuring credit risk using
 - VaR
 - CreditMetrics
- Use of credit derivatives in risk management
- Credit enhancement techniques



Assessing corporate credit risk for a large corporate

Market Risk Management

- Defining market risk
- · Identifying market risk sensitivity
 - liquidity
 - volatility
 - foreign exchange
 - term structure
- · Measuring and managing market risk using
 - various approaches to VaR
 - stress testing



Learning the hard lessons of market volatility in a hedge fund

Operational Risk Management

- Defining operational risk
- Developing methodologies to monitor and control operational risk
- Assessing the various approaches to quantifying operational risk
- Overcoming data limitation when measuring operational risk
- How to integrate operational risk into the organisation's risk
 management framework



Understanding the problems of developing a risk culture in an organisation

Analysing Other Types of Risks

- Political and economic risk
- Legal risk

- Liquidity risk
- Accounting risk
- Tax risk
- Model risk
- Other risks

Risk Measurement Tools

- · Explaining the most commonly used risk measurement tools
- historical simulation
- scenario analysis
- variance, covariance and correlation
- Monte Carlo simulation
- RAPM
- VaR
- duration and convexity
- risk parameters the Greeks
- yield curve modelling
- stress testing
- other tools
- Understanding the basic maths behind them
- Learning when each model should be used

Use of Derivatives in Risk Management

- When to use derivatives and why
 - options
 - futures
- swaps
- Hedging using derivatives



Deciding which hedging strategy to use

Developing Risk Standards

- · Does your board truly understand its risks?
- Risk standards for investment managers
- Finding the right balance between risk and reward for your organisation
- Identifying the essential criteria for implementing risk management controls and procedures
- Identifying and solving communication breakdown between front and back office to maximise risk control



Highlighting possible solutions by assessing what others have successfully done

The Legal Aspects

- Overview of new regulations
 - EU Capital Adequacy Directive
 - BIS regulations
 - Basel III and Solvency 2

Review of Solvency II Rules

- Technical Provisions (TP)
- Solvency Capital Requirement (SCR)
- Solvency Capital Requirement risk categories
- Minimum Capital Requirement (MCR)
- Own Funds (Eligible Capital)
- Own Risk and Solvency Assessment (ORSA)
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MEASURING & MANAGING LIQUIDITY RISK

Learn the best practice methods for measuring & managing liquidity risk in today's turbulent market environment

Introduction

- The universe of investable instruments
- Pools of liquidity and benchmark securities, off the run and illiquids
- · Normal market sizes, bid-offer, block trades
- Repo and the funding of illiquid instruments
- · Liquidation and fire sales
- Liquidity risk in banking, securities trading and insurance
- Introduction to Liquidity Funds Transfer Pricing (LFTP)
 problem
- Key relationships between funding, collateral, ALM and mark to market

Securities Pricing in the Presence of Illiquidity

- Random walks and the assumption of continuous trading
- GAP risk
- · The effect of jumps on the pricing framework
- · Risk premiums and risk neutrality
- · Impact on derivatives pricing and mark to market



The impact of liquidity risk on securities and derivatives prices

Building a Framework for Treasury Liquidity Risk Management

- · Mismatch, duration and other approaches
- Key roles of FTP and funding/pricing curve generation
- · Foreign currency liquidity management
- Internal controls for liquidity risk management: stress testing
- Internal controls for liquidity risk management: scenario analysis
- Double default and the analysis of collateralised transactions
- Basel III and liquidity risk
- New stresses and rules post credit crunch
- · LCR and NSFR stress test minima

Contingent Liquidity Risk

- The need for contingency planning
- Written contingency plans
- Crisis management plans for assets
- Crisis management plans for liabilities
- Internal and external communication

Liquidity Stress Testing

- Why stress test liquidity?
- Empiricism vs. rocket science
- General considerations
- Current stress testing priorities
- Assumption sensitivity
- Additional considerations



Designing Liquidity Stress Tests

Liquidity Risk in the Balance Sheet Framework

- Metrics and measures of liquidity risk
- · Liquidity GAP analysis and the bank's liquidity profile
- · Expected and unexpected loss analysis in the presence
- of illiquidity
- Liquidity-adjusted VaR (LVaR)
- Liquidity Adjusted Expected-Shortfall (LEF)
- Liquidity management policy
- Regulatory requirements for liquidity management
- The use of conduits and other off balance sheet vehicles
- Contingent liquidity using capital market instruments
 and other techniques

Measuring Market Risk: Liquidity-Adjusted Value-at-Risk

- Definitions
- Using liquidity-adjusted VaR to manage risk
- Limitations of standard VaR measures to assess liquidity

Systemic Changes in Liquidity and Volatility

- Risk capital and illiquidity
- The effect of VaR models on liquidity cycles
- Liquidity and volatility
- Predicting volatility changes: GARCH models
- The perspective from implied volatility
- Implied probability distribution and tail risk

Basel III and Liquidity Risk

- How does Basel tackle liquidity risk?
- LCR
- NSFR
- Leverage limits
- Holding periods for VaR / expected shortfall



Liquidity risk in the failure of long-term capital management

 Liquidity risk and Lehman Brothers – how LR brought down a major Wall Street firm

MARKET RISK MANAGEMENT

Managing risk effectively, going beyond the basics of measurement & policy

Introduction

- Overview of current markets and fallout from the credit crunch/GFC and QE
- The basics of risk management What is it? What isn't it?
- · Identification, measurement and management of risk
- Market risk
- Credit risk
- Operational risk
- Other risks
- Valuation, mark to market and accruals, banking book/trading book split
- What do we mean by manage?
- What is risk management trying to achieve?
- Regulation vs. risk management Aren't they trying to do the same thing?

Market Risk in Banking

- Importance of basic control processes
- · Mark to market, mark to model other valuation
- Profit and loss monitoring
- Limits

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- Assets and liability (inventory) control
- Organisational culture and structure
- The tone set by senior management
- Staffing and experience
- The importance of systems
- Banks vs. other corporate entities Why are they different?

Banking Blow-Ups - What went wrong?

Risk Management Tools for Market Risk

- Defining a returns process for a price series
- · Modelling the returns process
- · Asset/liability size and equivalents
- Sensitivities of positions to market moves The concepts of delta and DV01
- Arbitrage principles for pricing and sensitivities Forward pricing and probability

Portfolio Market Risk Tools

- · Aggregation of positions From the many to the few
- Portfolio effects from correlation and diversification
- Composite risk measures
- VaR and other portfolio risk models

VaR and Its Short Comings

- Variance-Covariance
- Historic simulation
- Monte-Carlo
- Limitations of approaches
- Handling specific risk
- Problems with illiquid assets
- Changes in volatility and covariance assumptions
- Why might "Expected Shortfall" be better?
- What might the "Fundamental Review of the Trading Book" bring?

Adjuncts to the VaR Tools

- · Using scenarios to identify "problem" positions
- Stress testing What is it and how does it help?



Developing scenario and stress tests

New Products and New Challenges

- How do we incorporate new products?
- · Breaking down the components of risk
- Use of models
- Incorporating into existing system and not-in-system trades for reporting
- How do we cope with non-modelable risk?
- How do we cope with risks not in VaR?

What Can Derivatives Tell Us About Market Risk?

- Implied volatility, skews and smiles What do they mean?
- · Fat tails and market instabilities
- · What do real returns look like?
- · How should we adjust measures?

Incorporating Derivatives into Market Risk Portfolios

- How non-linear instruments distort returns distributions
- The effect on confidence intervals for VaR estimation
- How Greeks sensitivities are a necessary addition to normal risk measures such as VaR
- Integrating OTC derivatives into combined market and credit risk framework using Monte-Carlo Simulation

Market Risk for Fund Managers

- Why is Fund Management different?
- traditional fund manager vs. hedge funds
- The role of benchmarks and mandates
- Alpha, Beta, Information and Sharpe Ratios What do they tell us?
- Benchmark relative risk
- Non linear beta effects
 - managing liquidity risk for funds how do investors get in and out?
 - why is it easy to be misled by a good track-record?

The Role of Back Testing for VaR

- Explaining the sources and sinks of profit and loss from risk measures
- Back testing process Clean, dirty and hypothetical P&L
- Exceptions How many is too many or too few?
- · Model hypothesis testing
- · Effects of auto correlation
- The role of Extreme Value Theory (EVT) for tail correction

Market Risk Capital

- The evolution of Basel capital requirements for market risk
- The 1996 market risk amendment and introduction of internal models
- · Quantitative and qualitative aspects of model recognition
- Defining market risk capital and qualifying capital types Tiers 1, 2 and 3
- Recent developments such as liquidity risk and leverage limits What is Basel III bringing?
- what will the FRTB (aka Basel IV) bring?

Chase STU2

Looking at market risk disclosures by major banks

What elements are vital for effective risk management? How can you tell if you have them?

MEASURING, MANAGING AND MONITORING INTEREST RATE RISK

DAY 1

Interest Income Metrics

- · Time value of money, zero coupon curves, discount factors
- Pricing options, Black Scholes model, delta hedging techniques
- Bond duration, convexity, Macaulay duration, modified duration
- Optionality and callable bonds pre-payment risk
- Calculating Basis Point Value (BPV)
- Explanation of the term structure of interest rates the yield curve
- Historical examples of different shapes to the yield curve
- Credit spreads over Treasuries, over LIBOR, Z-spread
- Swap spreads which curves to use, OIS, LIBOR
- Fundamental statistical tools for measuring and analysing risk mean, variance
- Expected Shortfall as foundation for Value-at-Risk (VaR)



Excel model which permits the calculation of key bond metrics

Mark to Market Risks for Income Assets and Funding Instruments

- Fair value accounting (IFRS 9 and 13) and mark to market practice
- Trading book exposures levels 1, 2 and 3 exposures
- Impact of interest rate changes on balance sheet AFS, banking book exposures, derivatives
- · Feedback loops between market risk, credit risk and liquidity risk
- Value-at-Risk a single measure of enterprise risk
- Explain the differing methodological principles for calculating VaR
- Benchmark rates distinguish types and suitability for different purposes/objectives
- Market distortions and liquidity issues arising from orchestrated interest rate environment

Interface of Money Markets and Foreign Exchange

- Size of the markets size of outstanding derivatives, FX daily volumes
- Participants commercial banks, central banks, corporates, government agencies
- Treasury bill issuance in different jurisdictions calculating yields etc
- Detailed analysis of the mechanics of repo markets, commercial paper
- LIBOR and EURIBOR rates currencies and maturities
- Eurodollar futures market
- Forward Rate Agreements for interest rate and FX
- Arbitrage and interest rate parity
- Current market conditions policy rates, macro-economic background
- Risk premia, key money markets spreads and currency outlook
- Term structure of interest rates yield curve forecasting



Securitized Banking and the Run on Repo (Paper by Gorton and Metrick, 2010)

Contrasts the traditional notion of a run on banks via depositor withdrawals with the experience in the 2007/8 crisis characterised as a run on repos

Central Banks and Monetary Policy

Overview of FOMC, MPC of BOE, ECB Governing Council, BOJ and PBOC

- Structure of a central bank balance sheet relationship to commercial bank balance sheets
- Summary of Open Market Operations (OMO) NY Fed, BOE and ECB practice
- · Forward guidance and transparency of decision making
- Examination of impact of CB asset purchases on yield curve and short term rates
- Impact of QE on CB balance sheets Fed, BOE, BOJ, ECB
- Overnight market OIS rates Fed funds, EONIA, SONIA
- Overview of money supply monetary base (M0), M1, M2 how measured
- Monetary tools and how they impact money supply
- How is money created in a modern economy role of commercial banks in creating deposits
- · Review of the discredited Phillips Curve hypothesis
- Central bank reserves influence on policy rates and constraints on commercial banks
- · Inflation targeting and discretionary policy vs. rule based



The Taylor rule as an alternative to judgement based monetary policy

DAY 2

Duration GAP Risk Management

- Duration GAP analysis basis for net worth (accounting equity) calculations
- Duration GAP management
 - Economic Capital and Economic Value of Equity (EVE)
- how to modify balance sheet for contrasting duration GAP scenarios
- Learning lessons from lack of liquidity of many structured products in 2008 crisis
- Asset liability mismatches in the balance sheet need for full transparency with contingent liabilities
- Understanding hidden liquidity risks in a portfolio
- Should illiquid assets be eligible for inclusion on a bank's trading book?
- Varying the duration characteristics of portfolios of fixed income securities
- · Characteristics of securitisations, CDOs, SPVs and conduits
- Funding, asset/liability liquidity and derivative pricing/hedging how are they all linked?
- Novel capital instruments contingent capital bail-ins vs. bailouts
- Intra-day liquidity risks emergency liquidity buffers
- Liquidity-adjusted risk measures
- · Derivatives pricing under illiquidity



Excel model illustrating duration GAP measurement and impacts of changing the duration characteristics

Quantitative Easing (QE) and Negative Interest Rates (NIR)

- Unorthodox monetary policy including QE origins, recent history, mechanics
- Economic rationale for QE and NIR
- Efficacy of QE has it achieved its objectives?
- Overview of current policy of the European Central Bank
- Outlook for continuation of QE measures in Eurozone, Japan
- Applying negative inputs to traditional modelling tools

MEASURING, MANAGING AND MONITORING INTEREST RATE RISK

continued...



Risks of prolonged period of ultra-low interest rates in developed economies

Interest Rate Swaps

- · Basic structures and terminology of swaps
- Business case for using interest rate swaps
- Notion of swap as an aggregation of forward rate agreements
- Pricing the fixed leg and interpreting the swap markets
- Counter party risk default, deterioration of creditworthiness, CVA
 Recognition that CVA is integral part of fair value and pricing of
- derivatives and not just a regulatory (Basel) issue
- OTC market vs. SEFs future outlook for mix between different platforms
- · Collateralized OTC trades vs. margin based CCP platforms
- · Netting arrangements explanation of mechanism, close out risks



Excel example illustrating how to model the cash flows of a fixed/floating interest rate swap

Funding Instruments and Hedging

- · Hedging challenges with non-dated liabilities
- BPV of money market instruments
- · IR Forwards vs. futures, convexity adjustments
- Relative value trades and spreads
- Basis swaps segmented forward markets
- Cross currency basis swaps
- Quanto swaps
- Exchange traded and OTC interest rate options
- Using STIR futures for caps and collars
- Dynamic delta hedging

DAY 3

Models for Interest Rate Forecasting

- Drift, stochastic factors and mean reversion tendencies
- · Vasicek and CIR models for modelling evolution of short term rates
- Market volatility as primary risk factor variance forecasting
- Parallel and non-parallel shifts in the yield curve
- Principal Components Analysis for modelling changing shape of term structure
- Volatility modelling EWMA and GARCH techniques



Excel model to illustrate how Fed Funds futures can be used to estimate probabilities of decision by the Federal Open Market Committee (FOMC)

Stress Test Methods for Treasury

- · Sensitivity to interest rate deltas quantification and modelling
- · Stress testing bond or loan portfolio
- · How to generate and calibrate shocks and adverse scenarios
- Worst case approach; threshold approach; base case
- Identification of key risk factors
- Associating probabilities to risk factors quantitative and qualitative approaches
- · Mapping qualitative and descriptive data to numerical values

- · Model based simulations of adverse case scenarios
- Stress testing volatility episodes using weighted approaches to volatility
- Impact of interest rate risk on balance sheet AFS, trading book exposures, derivatives
- · Feedback loops between market risk, credit risk and liquidity risk
- Benchmark rates distinguish types and suitability for different purposes/objectives
- Scenario Based Analysis (SBA) and Risk Control Self-Assessment (RCSA)



Application of actual stress testing techniques applied to duration characteristics of a balance sheet

Funds Transfer Pricing (FTP)

- ALCO as clearing house for providers and users of funds –group and local perspectives
- Different FTP Approaches average cost of funds, pool approaches, matched maturity marginal cost of funds
- Liquidity Term Premium (LTP) how to separate from term premium and credit risk
- Cost of Funds and relationship to the LTP dealing with outflows under stressed conditions
- Liquidity cushions (buffers) best practice, charging business units on basis of expected use of contingent liquidity
- Liquidity Transfer Pricing for trading book, banking book, derivatives – funding of haircuts
- Trading/AFS Portfolio Liquidity Premium



FTP as cornerstone of balance sheet and liquidity risk management

Interest Rate Risk in the Banking Book (IRRBB)

- Distinction between banking and trading books
- Economic Value of Equity (EvE) and Net Interest Income (NII) metrics
- Regulatory arbitrage treatment under Basel III
- · IRRBB link to Basel III capital adequacy requirements
- Implementing Basel's six scenarios specifications and recommended implementation
- ICCAP and the Enhanced Pillar 2 approach
- Defining IRRBB risk appetite
- · IRRBB and enterprise-wide stress testing



Collation of themes

Intuitions regarding the trade-off between maintaining consistent capital base and the matching of variations in operating inflows and outflows

OPERATIONAL RISK

Gain a unique practical insight into mitigating, reducing & avoiding enterprise-wide operational risk in financial institutions

WHAT IS OPERATIONAL RISK?

Factors Influencing the Importance of **Operational Risk**

- Market consolidation and margin squeeze
- · The complexity and sophistication of IT systems
- Regulatory and risk capital allocation pressures
- Hidden risks posed by complex financial products
- Improved communications and reliance upon efficient IT systems and STP

Identifying and Classifying Operational Risk Categories

- Fraud
- · Systems and operations
- Communication
- Documentation

ANALYSING SPECIFIC RISKS

Technology

- Systems failure
- Programming errors
- Telecoms



Delegates analyse the operational risks in project management

People

- Incompetence
- Fraud
- Key person
- Performance
- HR risks



Delegates will be required to

identify and manage operational risk in a personnel issue

Process

- Execution error
- Record keeping errors
- Transaction and mis-matching of trades
- Accounting risk
- Procedure failures



Delegates will be required to identify and manage operational risk in a process issue

Governance and Controls

The market crash and liquidity issues that surfaced in 2008 have focussed attention on the governance and control standards in financial and corporate institutions

It is essential to establish an adequate

structure to meet this requirement for higher standards in operational risk management

Developing an Operational Risk Management Framework

- Objectives of operational risk management
- Responsibilities
- developing a risk awareness culture _ developing operational risk
- management procedures
- · Operational risk management techniques
 - self assessment
- benchmarking effectiveness of controls
- allocating operational risk costs - awareness of the impact of and adherence to directives such as Basel, MiFID. AIFM etc.

Rogue Trading and Fraud



How did some of the key industry events happen and what were the operational risk management failures?

MEASURING OPERATIONAL RISK

Being able to identify the risk and react to a risk event in a controlled and effective way is crucially important.

In this session we look at the methodology used to identify the risk and its characteristics as well as how to manage the risk event and the post event environment.

Understanding the Risk Impact

- What is measured and how
- · What not to measure
- The interpretation of information
- Incident reports
- Capital allocation assumptions
- Lessons learned and taking positives from risk events

Utilising Risk Measurement Techniques

- What type of practical measurement techniques are there?
- How do KRIs and KPIs work?
- Self assessment techniques



Analysing a Major Risk Situation Working in teams delegates will be presented with a scenario that is

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- occurring in:
- 1. A financial institution
- 2. A corporate business

The teams tasks will be:

- 1. Establishing the risks, risk events that have or are about to happen and analysing the risk profile faced by the firm
- 2. Analysing incident reports and management information to establish the creditability of the control process
- 3. Creating a road map of the potential causes of the risk situation
- 4. Creating a road map for the lessons learned from an event
- 5 Creating a set of suggestions for the business to follow to resolve the risk situation
- 6. Prepare a list of the commonalities and differences in the operational risk

Analysing a Situation



- Identifying potential risks
- Identifying killer risks
- Identifying the cause of the
- risk situations
- · Devising the recovery plan

MANAGING AND IMPLEMENTING THE **OPERATIONAL RISK MANAGEMENT POLICY**

Generic Approaches

- Do nothing
- Insurance •
- Risk profiles mapping
- MIS Straight Through Processing (STP)
- Processes and controls
- Overcoming data incompatibility
- Systems reconciliation

Soft Issues

risk reduction

Management Issues

risk solutions

Corporate governance

roles/responsibilities

management control

Implementing effective

Identifying and Tackling Line

· Assessing the level of senior

Building risk awareness culture

Overcoming resistance to change

through communication channels

management buy-in to operational

• Understanding reporting lines and

Empowerment and staff control

and establishing clear, straight-

Building consensus on risk allocation policies Building sense of responsibility for

RISK MANAGEMENT FOR ASSET MANAGERS

An essential guide to practical risk management in a changing asset management world

Introduction

- What do we really mean by risk management in asset management?
- Understanding the roles, responsibilities and goals of the stakeholders in the asset management business
- What can RM deliver and not deliver? Who is going to deliver it?
- What do we mean by market, credit, operation, liquidity, and reputational et. al. risks?
- Who owns the risk? Who has responsibility for the risk? Who can manage the risk?

Chase STUD

When Asset Managers get it wrong

The Risk Framework

- How do we create a risk framework? How do we monitor it is working?
- The IQM process
 - identify risk and its relationships
 - quantify risk and its relationships
 - manage risk and its relationships
- The Risk Management Structure
 - the three Ps
 - ~ Policy
 - ~ Process
 - ~ People
- Risk appetites, limits, boundaries and mandates
- Roles and responsibilities, reporting and action
- How do we deal with non-linearity and complexity?
- How do we deal with interdependence?
- What about the gaps?



Understanding the interdependence of risks

Market Risk Focus

- Understanding traditional asset manager MR metrics and their limitations
 - Sharpe ratio
 - information ratio
 - tracking error
 - benchmark-relative risk
 - Alpha
 - Beta
 - absolute vs. relative measures
- Understanding more comprehensive approaches to MR and their potential shortfalls
- Value-at-Risk (VaR) in its various guises
- Extreme Value Theory (EVT) what does it bring?
- data issues completeness, proxies, accuracy
- forecasting e.g. GARCH is the future like the past?
 stress test, reverse stress testing and scenarios who
- does it? How good can it be? – performance attribution and other risk-return
- performance attribution and other risk-retur measures

Liquidity Risk Focus

- What is liquidity risk and why should we care?
- How is market risk related to liquidity risk?
- volatilities regimes and cycles
- bid-offer
- market impact effects
- implications for valuation and liquidation
- How does liquidity risk manifest itself in market shocks?



With many Government Bonds markets near all time high values, zero interest policies under review and the withdrawal of bank capital from market making, what might happen to the bond market in the near future? What can we do to protect ourselves from the fallout?

Credit and Counterparty Risk Focus

- What kinds of credit and counterparty risk does an Asset Manager run?
- · How are the risks related to market and liquidity risk?
 - Typical situations including
 - collateral agreements
 - repos
 - ISDA Master/Schedule/Confirm
 - OTC derivative transactions
 - cash management
- Credit exposure measurement technology
- Limits structure and potential hedging strategies including credit derivatives



Calculating the "fair-value" for a credit hedge

Operational Risk Focus

- What kinds of operational risk does an Asset Manager run?
- Special attention to client facing activities and servicing:
 - identifying the customer
 - classification and typing of customer
 - regulatory risk warnings, money laundering,
 - appropriateness of products and other considerations
- client money and asset ring fencing
- General operational risks
 - system design and appropriateness
 - security and access
 - STP vs. manual intervention
 - loss databases
- KPIs and KRIs what are they for?
- How can this go wrong? How are the errors related to other risk factors?



Operational risk failures in Asset Managers – the fallout from Lehman

Examples of Other Risk Types

- · Asset liability management in insurance AM
 - mortality
 - inflation
 - guarantees
 - Mandate compliance
 - when does an "undertaking" or "best efforts" become a contractual item?



Merrill Lynch Asset Management

- Reputational Risk
- judging the appropriateness of the product for a customer



Lloyds' precipice bonds



Group discussion and highlighting solutions and potential mitigations – The final session will allow for detailed interactive discussion of topics covered and explicit analysis of a range of techniques and approaches to limit or control the impact of the gaps and short comings in many risk processes. The delegates are encouraged to consider specific examples and situations from their own experience to bring to the discussion.

A MASTERCLASS IN RISK MANAGEMENT

All you ever wanted to know about risk management in just five days

DAY 1 – Introduction

Despite the increased capital and liquidity buffers delivered under the Basel Capital Accord since the sub-prime crisis of 2007-09, the greater resilience of international banks (as revealed by toughened stress tests in many countries) and the rolling-back of the implicit subsidies enjoyed by "Too-Big-To-Fail" institutions, regulators need to remain vigilant in the face of the re-emergence of asset bubbles and the continued popularity of debt finance.

For banks, the need for sound risk management and optimal capital allocation remain as important as ever for their continued survival and prosperity in an increasingly competitive and innovative market place.

- · What is risk and why do we need to manage it?
- · How do we manage or control risk?
- · How do we make money taking risk?
- · How do we avoid losing money when we take risk?

Introduction to the Types of Financial Risk and their Importance in Banking and Finance

- Credit risk
- Market risk
- Operational risk
- Liquidity risk
- Systemic risk
- Other types of risk

Introduction to the Quantitative Risk Management

How do we put a "number" on risk?

- · Duration measures and sensitivities
- PV01/ DV01
- The "Greeks"
- Statistics for risk management
- The significance of Value-at-Risk (VaR) and Expected-Shortfall
- Risk and return in banking and finance

The Importance of Regulation

Why does regulation dominate the Banking industry? How does capital provide a "buffer" for systemic risk?

- The evolution of Basel "rules", from Basel Accord to FRTB
- Regulation by/within the EU

Regulation

- "What is the relationship between risk, capital and profitability?"
- "How does regulation affect this?"

The Evolution of the International 'Rules' for Bank Capital Adequacy Assessment

- The background to Basel I
- The Basel I rules for credit risk and market risk
- The problems with Basel I
- The aims and objectives of Basel II: The 3 'Pillars'
- The evolution of the Basel II [Pillar 1] rules for credit, market
 and operational risk
- The problems with Basel II
- The alternatives to Basel II
- The proposed changes to Basel II in the light of the global

- banking crisis and credit crunch
- Basel 2.5
- Basel III and beyond including FRTB and MiFid II



- Covering market risk-based capital requirements under the standardised measurement methods
- The implementation of Basel I's market risk rules
- Differences between EU and Basel Committee approaches
- The implementation of Basel II and III
- The reforms after the "Credit Crunch" Basel 2.5
- The impact of Basel III and further capital requirements

The application of the Basel I rules for market risk assessment

DAY 2 - Market Risk: An Overview

- Market factors: The main source of market risk, price variability/volatility, trends, gains and losses Characteristics of markets and dynamics.
- Market participants, speculators, hedgers and arbitrageurs
- Marking to market with pricing models, dealing with illiquidity, position size and concentration. Valuation and transparency issues

Factor Sensitivity Analysis for Measuring Market Risk

- Calculating factor sensitivities for
 - foreign exchange (FX or FOREX)
 - equities
 - bonds
 - swaps
 - options and other non-linear derivatives



Calculation of factor sensitivities. Example of managing a swap portfolio using factor sensitivity, duration and DV01 matching

Monte Carlo Simulation

- Overview of the Monte Carlo simulation techniques
- Cholesky decomposition, covariance matrices and factorisation



Performing Cholesky decomposition on covariance matrix and using it for MC risk simulation

Market Value-at-Risk

- Factor sensitivity limits of the approach
- · VaR using variance/covariance method
- VaR using historic simulation
- VaR using Monte Carlo simulation

Value-at-Risk Estimation for a Simple Portfolio

- Value-at-Risk limits
- · Specific risk for equity and debt instruments

A MASTERCLASS IN RISK MANAGEMENT

continued...

Additional Risk Measurement Methods

- Extreme Value Theory (EVT)
- Conditional VaR (CVAR or Expected Shortfall)
- Risks Not in VaR
- Which risks are modelable and which are not?



Conditional VaR (Expected Shortfall)



Component VaR Stress Testing

Economic and Regulatory Capital for Market Risk

- Capital based on VaR and ES methodologies and the relationship to Basel Standard Rules
- Back-testing under Basel
- Basel III proposals, changes in FRTB

Managing Market Risk

- Challenging VaR and ES
- Linear hedges
- Nonlinear hedges

DAY 3

Credit risk is at the heart of all lending and past catastrophic events in financial markets highlighted the problems of a massively dislocated credit market. Credit "bubbles" often lead to financial melt downs.

In this section, we will examine the role of lending and securitisation of that lending in the so called "Credit Crunch" or "Global Financial Crisis" which has its origins in the sub-prime lending markets of the USA and the subsequent securitisation process into the so called "toxic waste" of the CDOs.

Introduction to Credit Risk

- How do banks make and lose money lending?
- How can we do it better?
- · Basic concepts of default on payments
- Settlement risk and pre-settlement risk
- The market drivers of credit risk
- Measurement of credit risk
- Comparing credit with market risk
- Concepts of joint default probability, loss given default and recovery rate
- Diversification and portfolio effects
- Distinguishing between Credit Risk, Counterparty Risk and Specific Risk
- Understanding Credit Valuation Adjustment (CVA) and the other "X"VAs such as DVA and FVA

Default Risk from a Historical/Actuarial Perspective

- Definition of credit events
- Credit ratings
- Basel II/III internal ratings based methods (AIRB)
- · Historical default rates

- · Marginal and cumulative defaults
- Transition probabilities
- Recovery rates
- · Sovereign vs. corporate debt vs. consumer debt

Default Risk from Market Prices of Securities

- · Bond prices, spreads, liquidity and risk premium
- Equity prices
- Merton's model (KMV development)

Credit Risk Exposure

- Exposure by risk type, expected loss, worse loss
- Interest rate swaps, options
- · Effects of margining and marking to market
- · Limits and risk monitoring
- Use of Central Clearing Counterparty (CCP) and collateral

Credit Derivatives

- Fundamental drivers behind the products
- Credit default swaps
- Credit linked notes
- Documentation issues (ISDA)
- · Pricing and hedging examples



What caused the Credit Crunch? Could it happen again?

DAY 4 – Credit Risk

Credit Risk Management

- · Estimating the distribution of credit losses
- Expected loss and unexpected loss, relationship with economic and regulatory capital
- Basel II and Basel III credit risk capital
- · Time and mis-match effects
- Estimating the credit Value-at-Risk
- · Introduction to portfolio credit models
- Management of credit risk
- Use of securitisation to create CDOs



Hands-on calculation of sample credit risk exposures and the theoretical pricing of a credit linked note

Looking Beyond Credit and Market Risk

Risk, Capital and Management

- What is all this measurement of risk for?
- Risk measurement vs. risk management Identify, Quantify, Constrain to Risk Appetite
- · The other uses of risk data
 - performance measurement and optimisation
 - Risk Adjusted Return on Capital (RAROC)
 - risk reconciliation forecast vs. actual P&L, ex-ante and post P&Ls

A MASTERCLASS IN RISK MANAGEMENT

continued...

Management perspectives on capital allocation and types

- Capital, its uses and alternatives
 - hybrids, CoCos, hedging and insurance
 - _ Basel defined capital tiers 1, 2 and 3 and the changes under Basel III

Other Risk Types

- · Basel and the evolution of risk assessment (Pillar 2 and the ICAAP)
- Basel definitions of risk types and classifications
 - operational risk
 - liquidity risk
- reputational, strategic and other risks
- Importance of operational risk
 - examples of OR events
 - Basel principles and definitions
 - menu approach for measurement
- · Basic indicator
- Standardised approach
- Advanced Measurement Approach (AMA)
 - the difficulties of quantifying operational risk

DAY 5 – Operational Risk

- · Review of basic quantification methodologies
 - scorecards
 - loss distributions
 - internal model
 - internal and external loss databases
 - scenarios
 - frequency vs. severity
 - Key Risk Indicators (KRIs)
 - Key Performance Indicators (KPIs)
- · The problems of tail estimation with poor data
 - the uses of EVT for tail estimation
- Basel principles and OR management how does your structure and process compare?
- Practical management of OR
- process analysis and re-engineering
- · Basel criteria and minima for OR capital



Operational risk events and classifications

Asset and Liability Valuation

- · The central role of valuation
- The impact of model values on risk assessment
- FAS 157 and its classification of valuation types based on transparency and liquidity
- · How models can mislead
- What is model risk?

Liquidity Risk

- · Why is liquidity risk so pervasive?
- · The role of LR in the credit crunch
- Solvency vs. liquidity
- Funding liquidity vs. asset liquidity
- · The bank balance sheet
- Funding profiles
- Liquidity gap analysis
- Measuring liquidity risk
 - liquidity adjusted risk measurement, Liquidity Adjusted VaR and ES
- · What is Basel doing about LR? Stress testing and the LCR and the NSFR
- The role of central banks as providers of liquidity



Liquidity risk and the Credit Crunch - how did Lehman fail?

The Future of Risk

- · What lessons have we learnt about risk in the last 20 years?
- · What will the future Basel Accords look like?
- The Fundamental Review of The Trading Book (FRTB) what does it bring to the party?
- A look at some of the impact of current changes including leverage limits, stressed VaR, stressed ES and incremental risk as they are phased in
- Summary and final Q&A

- can OR really be modelled?

A MASTERCLASS IN TREASURY PRODUCTS & RISK MANAGEMENT

A complete one-stop guide to the entire spectrum of treasury products & risk management

DAY ONE

Treasury Risk Management

- Role of the treasurer
- Role of the CFO
- Functions of a treasury
- · Profit centres and cost centres Netting and in-house banks
- · Importance of policies, procedures and risk management controls

Treasury risk management at Lufthansa

> Defining and categorising different types of treasury risk:

- Definitions of risk
- Asymmetrical risks
- Understanding the symmetry of market risks

Testing for long and short positions

Exposure management

Who Uses Treasury Products?

Borrowers

4°?

- Investors and wealth managers
- Commercial, investment and private banks

. Apple

Treasury risk management at

CURRENCY RISK MANAGEMENT MEETING

Treasury Solutions – Currency Risk

- Client exposure management
- · Hedging solutions market
 - spot foreign exchange
 - > base and variable currencies > cross rates

 - forward foreign exchange > forward pricing
 - > forward points
 - foreign exchange swaps
 - currency swaps
 - > exchanges of principal
 - > gross and net settlement of
 - differentials
 - > relationship to forward market
 - > advantages over forward market
 - currency options > comparison with the forward market
- 'Natural' hedging

Charles STUD	StoraEnso – Transaction
	Exposure Management
CASE STUDA	StoraEnso – Translation
	Exposure Management

StoraEnso - Economic Exposure Management

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Corporate Treasury Risk Management

- Hedging analysis: summary
 - selective hedging
- partial hedge/run dynamic position

COMMODITY HEDGING AND TRADING SIMULATION

Hedging

Netflix

- Investment policy
- Interest rate sensitivity • Using the portfolio's modified duration
- Identifying foreign currency
- risk: long and short positions • Currency risk management
- policy considerations Currency risk management
- techniques

DAY TWO

TREASURY RISK MANAGEMENT **MEETING: STORAENSO**

How Hedging Works

- Identifying and analysing risk types of risk
- long and short positions
- Hedging

physical delivery

- contracts for differences
- the importance of carry
- put/call parity
- the role of leverage in derivatives hedges
- OTC and exchange traded products - how initial and variation margins
 - work
 - herstatt risk
- DVP, PVP and CLS Bank
- symmetrical and asymmetrical risk management
- equal and opposite positions
- correlation and partial hedges
- when is a hedge a speculative position?

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Strategies for Using Treasury Products

- · Understanding the client's appetite for risk
 - borrowers
- investors
- Upside/downside and
- downside/upside strategies
- Identifying exposures revisited
- Know your client

Measuring Treasury Performance

- **Defining objectives**
 - Challenges in performance measurement
 - ROE, Modified duration, PV01, VaR ...
 - Banks and corporations: approaches to performance measurement



Evaluating the Benefits of Treasury Management

- Evaluating upside and downside risks
- Advising clients on risk management
- Managing costs

-

Forecasting and treasury risk management

INTEREST RATE HEDGING AND TRADING SIMULATION

How Global Investors Turn Negative Japan Yields into Big Returns Record-low negative yields

· Discount offered to dollar

• Fixed coupon equivalent for

• Foreign demand for Japan's

Cross-currency basis swaps

two- and five-year bonds

holders to borrow yen

owning five-year JGBs

Demand for dollars

Relating market news to

How markets move

currency risk management

• Economic fundamentals

- macro-economic data

- micro-economic data

continued.

DAY THREE

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A MASTERCLASS IN TREASURY PRODUCTS & RISK MANAGEMENT

continued...



Technical analysis trend lines

- support and resistance levels
- moving averages
- Random walks
 - knowns and unknowns
 - efficient markets hypothesis



What we know (and what we don't) about markets

Money Markets and Interest Rate Risk

- TBills, CDs, CP, ABCP
- IBORs, IBIDs, IMEANs and the interbank money markets
- Repos, securities lending and sell/buy backs
- Day count conventions: act/360, 30/360, act/act
- Discounts and yields
- Present values, future values, IRRs, YTMs and AICs
- ICMA 803.1 and 803.2

Understanding Money Market/Swap Market Yield Curves

- Liquidity preferences
- Preferred habitats
- Market expectations
- Market segmentation
- Efficient markets?

The lessons of the credit crisis of 2007-2009

Treasury Solutions – Interest Rate Risk

• Fixed rate and floating rate risk



- Quantifying interest rate risk
- Interest rate sensitivity
- PV01s and DV01s
- Interest rate gaps
- GAP analysis
- Calculating, understanding and using Macaulay's duration
- Calculating, understanding and using modified duration and convexity
- Using duration as a hedging tool
- Interest rate liability
 management
 - fixing floating rate debt in the forward market
 - fixing floating rate debt in the futures market
 - fixing floating rate debt in the swap market



- hedging with interest rate options
- Interest rate asset management

 forwards
 - forwards
 futures
 - interest rate swaps
 - interest rate options
 - interest rate options



Participants will determine the interest rate exposures of multinational corporations

and banks

Hedging Tools

- FRAs or futures?
- Using interest rate swaps
 generic, 'plain vanilla' swaps
 - swap structures
 - par/par structures
 - forward starting swaps
 - amortising, accreting and roller-
- coaster swaps • Caps, floors and collars
 - option pricing
 - importance of delta and gamma in hedging
- Swaptions
 - FRAs, futures and interest rate swaps
 - Buying and selling FRAs
 - Selling and buying futures
 - Paying and receiving fixed rates in the swap markets
 - Perfect hedges and basis riskContrasting exchange traded
 - and OTC derivatives

Multi-Currency Debt Management

- Using forward foreign exchange outrights
 - forward pricing
 - covered interest arbitrage
 - forward points
 - discounts and premia
 - hedging currency debt
- arbitraging the credit spreadUsing FX swaps
 - hedging currency debt
 - arbitraging the credit spread
 - the carry trade
- Using currency swaps
- Using currency options

Participants will use currency derivatives to manage corporate exposure management positions

INTEREST RATE SWAP HEDGING AND TRADING SIMULATION

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DAY FOUR

TREASURY RISK MANAGEMENT MEETING: APPLE/UBS

Interest Rate Risk Management

- Sources of floating rate finance
- Sources of fixed rate finance
- Contracts for differences and physical delivery



Participants will examine the interest rate risk management strategy of Procter and Gamble



Corporate Asset and Liability

- Management
- Gaps

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SIMULATION

- Borrowing short and lending long
- Leverage and structured products
 - McKinsey: an introduction to asset and liability management
 Recent trends in ALM

• Economic value of equity

Setting and monitoring

• Optimising income and

Managing liquidity riskLikely developments in ALM

Typical practices in funds

Participants will suggest the

derivatives can be used to

cover interest rate risk by

CURRENCY HEDGING AND TRADING

Portfolio management

Analysing the portfolioEstimating the modified

duration of the portfolio

Sensitivity to a 1% parallel shift

Investment policies

in the curve

• PV01s & DV01s

corporate treasurers

different ways that interest rate

Yield curve analysis

Net interest income

Gap analysis

Duration gaps

Value at risk

tolerance limits

managing risk

transfer pricing

A MASTERCLASS IN TREASURY PRODUCTS & RISK MANAGEMENT

continued...

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- · Hedging the portfolio in the swap market
- · Calculating the delta vector
- Modified duration of the swap
- Stack hedging the portfolio
- Strip hedging the portfolio
- Implied yield curve views
- Stress testing the hedge
- Manging interest rate risk

DAY FIVE

TREASURY RISK MANAGEMENT **MEETING: LUFTHANSA/SANTANDER**

Medium and Long-Term Financing Strategies Capital Markets – Equity

- ADRs and GDRs
- · Shares and preference shares
- Pricing
- Multiples
- Origination
- Underwriting
- Distribution



Capital Markets – Debt

- Government, corporate and international bond issues
- Fixed rate issues
 - pricing
 - benchmarks
 - AIC, YTM, IRR
 - origination
 - underwriting
 - distribution
- Floating rate notes
 - pricing
 - distribution

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- The term structure of interest rates
 - using zero coupon rates
 - calculating the Z-spread

Vodafone/Goldman Sachs

Liquidity Risk Management

- · Lessons from the crisis
 - stress testing
 - contingency funding plans and asset market liquidity
 - off-balance sheet activity and contingent commitments
 - capital
 - supervision and market information central bank facilities
- · Measurement and management of

liquidity risk

- identifying, measuring and controlling liquidity risk
- managing liquidity across business divisions
- funding strategies
- managing intraday liquidity
- stress testing
- contingency funding plans
- liquidity cushions

Participants will compare and contrast liquidity risk management at HSBC, Goldman Sachs, Apple and Nokia

Asset and Liability Management

- The role of ALCOs
- Hedging strategies in practice
- Market cycles
- Lessons from the crisis
- · Perspectives of banks and companies



Participants will analyse and \bigcirc hedge the risk in a portfolio of assets and liabilities

Debt Management

- · Efficient uses of capital
- Equity finance and debt finance: advantages and disadvantages
- The importance of leverage
- The importance of capital adequacy
- Value-at-Risk

Translating the Training into Action -

Each participant will create a oneweek, one-month and three-month treasury risk management plan for translating the training into action.

Avoiding hedging pitfalls

- · Portuguese train companies and snowball swaps
 - Managing financial risks
- · Laying off risks with banks
- · Laying off risks with customers



- Snowball interest rate swaps
- Calculating downside risks
- The view of the courts
- · Legal and moral significance of hedging and trying
- Bank/customer relationships

VALUE-AT-RISK

Market Risk Governance Analytics & Implementation

VaR: Overview, Risk Capital and Regulatory Developments

- · Motivation Risk profile of derivatives portfolio
- Risk governance measurement Common conceptual framework
- Headline disasters Control and poor risk measurement
- Basel III: Pillars and revisions
- Solvency II
- Scenario analysis and stress testing
- Banking regulators and back testing Tier capital
- Regulatory and economic capital



• Understanding total risk (volatility) measures

VaR Methodologies

- Historical simulation (empirical, non-parametric)
- Variance-Covariance Matrix (parametric)
- Monte Carlo simulation
- Lattice-Tree approach

Historical Simulation (VaR/S)

- Principle assumptions
- Calibrating the empirical model Accuracy, extensions (weights)
- Revaluation issues in portfolio (one-day vs. ten-day VaR)
- Incorporating volatility updating EWMA, GARCH (1,1)
- Bootstrap method
- Extreme Value Theory (EVT) Estimating tails, power law
- Expected Tail Loss (ETL) Fitting Johnson SU distribution
- Expected shortfall
- · Marginal VaR, incremental VaR and component VaR



• Historical simulation – Value-at-Risk reports

Variance-Covariance (Correlation) Matrix (VaR/P)

- Principle assumptions
- Estimate volatilities (EWMA, GARCH) and correlations
- Cash flow mapping (Bucketing, Gridding) algorithm
- Portfolio aggregation
- Advantages and issues



• Variance-Covariance (Riskmetrics) computations

VaR-Measuring Market Risk: Variance-Covariance Analysis

• Equity portfolio, treasury portfolio, derivatives portfolio

- Market risk
- Variance-Covariance matrices
- VaR of equity portfolio
- Effect of correlation on overall risk
- Do VaRs add? Conditional VaR
- VaR of fixed income sector
- VaR of derivatives (options)
- Quadratic model: Delta, Gamma measures
- Cornish-Fisher expansion
- Non-normal assumptions
- Variance-Covariance VaR reports for equity, fixed-income and derivatives trading portfolios

VaR-Monte Carlo Simulation: Cash Market Portfolio

- Underlying principles
- · Modelling equity price process
- Box-Muller transformation
- Polar rejection method



 Monte Carlo simulation – Value-at-Risk reports and time compression issues

VaR-Monte Carlo Simulation: Options Portfolio

- Applied to options portfolio
- Why returns are less than expected
- Risk-neutral (Martingale) insights
- VaR/S vs. VaR/P results



 Monte Carlo simulation applied to options portfolio
 Appropriate use of Black–Scholes/ Merton option pricing model

VaR-Monte Carlo Simulation: Correlated Assets Portfolio

- Multiple assets portfolios
- Modelling correlated stock price processes
- Independent price processes
- Perfectly correlated price processes
- Imperfectly correlated price processes
- Cholesky decomposition



- Modelling correlation
- Cholesky decomposition

VALUE-AT-RISK

Market Risk Governance Analytics & Implementation

Global Description of Risk: VaR

- A framework for implementation
- Key features of VaR system modules
 - review of recent regulatory developments
 - interest rate risk framework
 - market and credit risk
 - BIS Basel system of risk management
 - measuring interest rate risk
 - shortcomings of duration approaches

A Sophisticated Approach to Measuring Interest Rate Risk

- Accounting for movements in (stochastic) yield curves:
 - level (inflation)
 - steepness (monetary policy)
 - curvature (mean reversion)
 - simulation analysis
 - modelling of a wide range of yield curve behaviour

A Two-Factor Approach for Interest Rate Derivatives Flowchart of Risk Management System

- · Stochastic yield curve builder
- Derivative contracts converter
- Valuation module: gridding (mapping) option pricing models
- Risk analyser (PVBP analysis)

Step-by-Step Worked Example - Actual Implementation in a Leading Bank

- Principal Component Analysis (PCA) for extracting two factors
- · Estimating volatility and correlation between factors
- Estimating mean reversion coefficient
- · Generation of stochastic term structures of interest rates
- State-by-state interest rate scenarios analysis
- Valuing books of cash flows/derivatives over holding period
- Valuing interest rate options and swaptions



 Building one-factor stochastic yield curve model
 Effects and implications for VaR analysis and reports

Stochastic Two-Factor Model

- · Inputs Current yield curve
- Interest rate factors Short rate and long rate
- Inputs Volatilities, correlation, mean reversion
- Worked example using real term structure
- VaR toolkit:
 - current yield curve builder mathematics
 - money market
 - swap market
 - futures market
 - linear stripping
 - geometric interpolation
 - Generation of interest rate scenarios
- · State-by-state interest rate scenarios analysis



Building two-factor stochastic yield curve model
Effects and implications for VaR analysis and reports

Value-at-Risk Reports: Swap, Cash, Bond Book

- Worked example using real swap book
- VaR toolkit Swap principal method valuation mathematics
- · VaR toolkit Gridding and bucketing mathematics



• Value-at-Risk for portfolios of linear risk cash flow instruments: cash, bonds and swaps

Value-at-Risk Reports: Interest Rate Options

- Worked example using real interest rate cap book
- VaR toolkit: Black (1976) valuation mathematics



• Value-at-Risk for portfolios of non-linear risk cash flow instruments: interest rate options (caps and floors)

Value-at-Risk, PVBP and Risk Management

· VaR and risk management hedging

LNG COMMERCIAL MANAGEMENT

A masterclass in the commercial and economic dynamics of the LNG industry

Throughout the course numerous examples of actual projects, case histories and situations from gas and LNG developments worldwide will be used for effective learning.

THE GLOBAL LNG COMMERCIAL ENVIRONMENT

Introduction to the LNG Industry

- Exploration, development and LNG production, shipping, importation
- · Cost and value drivers; shareholder expectations
- The value chain: from wellhead to burner tip
- Players: governments, NOCs, IOCs, banks and insurers
 etc

Global Production

- · Where and who are the producers of LNG
- · Projects currently under development

Global Markets

- Where and who are the users of LNG
- Projects currently under development

Why Commercial Aspects are so Important

- Overview of LNG commercial arrangements
- · Project development: upstream to midstream to market

Latest Trends

- Trends in LNG markets
- · Latest changes and movements in LNG trading
- The impact of shale gas
- · Hubs vs. oil for price setting
- · Market shifts in importation and liquefaction
- Mid and small scale LNG
- Floating and niche LNG concepts

UPSTREAM GAS SUPPLY AND LNG PRODUCTION JOINT VENTURES

Upstream Fiscal & License Agreements

- Fiscal and legal regimes worldwide
- Production sharing arrangements
- License agreements

Upstream Joint Venture Agreements

· Joint Venture vs. operating company

LNG Project Structures

- · Shared facilities
- LNG hubs
- Throughput agreements

Gas Sales to an LNG Plant

- Gas sales agreement key terms
- Differences between LNG feedstock and pipeline gas sales



Key technical aspects of LNG operations and their importance for commercial management. Course participants will, in workshop mode, look at a case study that will address the key technical aspects of LNG operations and explore the impact on commercial arrangements.

KEY LNG SALES AGREEMENTS The Essence of the LNG Markets

- Markets for LNG/natural gas
- Regional characteristics

The Essence of the LNG Sales Contract

- · Key terms of the LNG sales agreement
- Quantities
- Take or pay
- Make up, carry forward

Price in the LNG Sales Contract

- LNG contract price
- Price indexation
- S curves
- Alternative fuels
- The market for spot LNG
- Hub indexation

Master Sales Agreement

- Key terms
- Commercial usage

KEY LNG TRANSPORTATION AGREEMENTS AND VALUE CREATION

Shipping Requirements

- Delivery FOB vs. Ex Ship
- Differences in fleet management for buyer or seller
- · Shipping distances and logistical considerations

Flexibility and Value Creation in LNG Transportation

- LNG cargo back haul and swaps
- · LNG arbitrage and ship diversions
- Identifying value in flexibility
- Operational challenges

KEY LNG REGASIFICATION AGREEMENTS, MANAGEMENT AND OPERATIONS

The Latest Developments in LNG Import Terminals

Terminal Use Agreement

- Commercial structures for sharing storage and regasification
- Key terms of terminal usage
- · Ship vetting and terminal compatibility

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g n and liquefaction

LNG COMMERCIAL MANAGEMENT

A masterclass in the commercial and economic dynamics of the LNG industry

Scheduling and Operations

- Planning and modeling ship arrivals, LNG offloading, LNG storage and gas send out
- Operational impacts of delayed arrivals, changes in sendout
- Operational management techniques

LNG ACCESS TO GAS TRANSMISSION NETWORKS, QUALITY ISSUES AND THE FINAL MARKET

Transmission

- · Access to gas transmission networks
- Regulation of third party access
- · Scheduling and balancing requirements

Quality

- · Quality correction commercial considerations
- · Quality correction service tariffs

Power Market Evaluation

- · Electricity as a key market to underpin LNG projects
- Supply of gas to power stations
- · Commercial considerations for LNG in electricity

NEGOTIATING ACCESS AND TARIFFS AT A REGASIFICATION TERMINAL

The course will address a practical example of access to a regasification terminal. Participants, working in workshop mode, will negotiate commercial terms for capacity usage at a hypothetical terminal as well as setting tariffs for capacity reservation and usage.

EFFECTIVE RISK MANAGEMENT: COMMERCIAL, TECHNICAL AND PROJECT RISK MATRIX Key Project Risk and Value Identification

- Understanding the fundamental commercial drivers for
- project successIdentification of key project risks (from a commercial
- perspective) and mitigation strategies
- Reserves definitions and reserves certification
- Completion and cost overrun risks
- · Cost linkages to oil and gas prices

Handling Risks

- · Risk management techniques
- The Risk Matrix

Disputes

- · Causes of disputes
- Dispute resolution

- · Arbitration and expert determination
- Price review

FINANCING LNG PROJECTS LNG Project Financing Essentials

- Financial structures in LNG
- · Investment decision making
- The key value drivers in LNG financing

Overview of LNG Financing Options

- Balance financing
- ECA and multilateral agency funding
- Capital markets
- Asset based financing
- · Project financing and structured recourse financing



THE FINANCE AGREEMENT The Composite LNG Case Study

Course participants will, in workshop mode, look at a composite case study that will address most of the issues seen during the course. This case study will return to the development of a hypothetical offshore oil & gas project. It will lead towards the participants building a typical commercial structure to address the principal contractual arrangements and scheduling (covering the main risks) seen in LNG project development.

The case study project will be a new upstream gas development located in an imaginary country. The study will cover the entire supply chain from gas exploration and field development through gas sales into an expanded LNG plant and LNG sales and transportation to Europe with throughput in a new LNG import terminal. Participants will be asked to build the commercial structure, analysing it from the point of view of all the parties involved, including developers, host governments, financiers, insurers and constructors.

Central to the case study exercise will be a focus on a systematic handling of risk and the design of a commercial structure to ensure full coverage of risks in the LNG chain.

LNG MARKETS, TRADING AND RISK MANAGEMENT

Equip yourself with the knowledge and ability to survive and succeed in this fast moving market

Introduction to the LNG Industry

- More spot and short term trading
- New exports from Australia and USA
- Changing procurement strategies main buyers
- The market situation when will oversupply end?
- New LNG hubs in Asia
- New price benchmarks in Asian LNG market
- Growing importance US Henry Hub pricing index
- New LNG financial instruments

Pricing Dynamics

- Market prices reflect change
- Long term view
 - high level trends
- Investment cycles
- Where is the new supply going?
 - role USA
 - role Japan, South Korea and Taiwan
 - over-contracting
 - Asian growth; China and India
- Emerging demand responding to price
 - new importing countries
 - capacity constraints
 - FSRUs
- Europe market of last resort

Asia LNG Hubs and Pricing

- Asia's gas pricing transition
- Lessons hub development Europe
- Asian gas/LNG trading hubs
 inter-hub competition hub indexation
- Singapore
- Shanghai
- Tokyo
 - destination flexibility
 - SLInG prices
 - take or pay

LNG Shipping

- Shipping terms
 FOB, CIF, DES
- Shipping types and costs
- Cargo routes

Essentials of LNG Trading

- Trading the physical commodity
- OTC vs. exchange trading
- Spot, short term vs. forward trading
- Forward and futures markets and how they function
- Different players and their role in the trading markets

Short-Term Trading Outlook

- Increase due to oversupply
- Change to market liquidity
- Change to number of players
- Key drivers change
 - higher efficiency
 - more standardised contracts for gas sales and spot freight
 - better understanding of operational and performance risks
 - new transparent gas pricing indexes
 - LNG marine fuels price index
 - bigger role price risk management for buyers
- Cross commodity spreads
- No more cost past through to end users

Essential Trading Strategies

- Proprietary trading
- Arbitrage
 - flexibility in contracts
 - diversions and reloading
 - potential players involved in arbitrage deal
 - playing the spread game
 - LNG spread Asia vs. Europe
- Hedging
 - hedging against spot price risk
 - hedging and liquidity risk
 - evaluation of trading and hedging strategies

LNG Derivatives Trading

- Forwards
- Futures
- Swaps
- Options

Hedging LNG Price Exposure

- Oil indexation
 - Brent futures and options
- Henry Hub
 - Henry Hub natural gas futures and options
- LNG spot indices
 - swaps, futures and options

POWER PURCHASE AGREEMENTS

A complete practical guide to the commercial and strategic dynamics of power purchase agreements

Law and the Enforcement of Rights

The one thing that a PPA has in common with O&M, Construction, Interconnection and Financing Agreements is that they are all contracts. There is no point in having a contract unless we have reasonable prospects of enforcing our rights under those agreements - and this may well become an issue where the counterparties are from different jurisdictions.

- The differences between civil law and common law/implications for financing and developing a power project
- If the financing is limited recourse, why litigation of disputes is unacceptable
- Alternative Dispute Resolution procedures expert mediation, arbitration, the 1958 Convention
- The necessity of ensuring the contract involves an SPV defending and not enforcing
- Legal opinions
- Commercial structures that can be considered if legal rights are uncertain of protection
- · Sovereign power vs. contractual rights and obligations

Financing Options – Summary Overview

The requirements of a PPA will defer according to the type of financing involved.

- How a thermal power project works
 - the parties
 - the risks
 - the contractual structures
 - the essential requirements of the PPA
 - the other side of the fence merchant power
- How a renewable power project works
 - the parties
 - the risks
 - the contractual structures
 - the essential requirements of the PPA
- The choice of corporate financing vs. limited recourse financing
- Bridging the viability gap (if any) for renewables
- The involvement of tax investors (if any)

Financial Feasibility

If private sector capital is required (as opposed to grant aid or government funding), then the numbers have to 'stack up' from both the private sector company's viewpoint, and the debt financiers. The PPA effectively defines the revenue stream of the project, which in turn drives the debt serviceability and the IRR. So an overview of how project appraisal is undertaken, and an understanding of the lender perspective, is advisable. It will influence the provisions that will need to be included in the revenuegenerating PPA.

- Risk and its correlation with return
- Why the Free Cash Flow is the most important line in any financial model
- How project financing (i.e. limited recourse financing)
 works
 - investor evaluation if project finance not used
 - the difference in evaluation where a project is implemented through project finance

- errors frequently encountered in investment appraisal
- the fallacy of equity bridge financing
- Lender evaluation of debt serviceability
 - typical terms and conditions for the financing of
 - thermal
 - tolling
 - solar
 - wind
 - hydro
 - debt capacity and debt sculpting
 - cash sweeps
 - the design of a cashflow waterfall on the project SPV
 - the operation of lockup covenants



Negotiating the financing term sheet of an offshore wind project

The Economics of Power Generation

Where power is sold under contract, as opposed to a merchant marketplace, it is useful for the offtaker in a PPA to be aware of the economics of power generation both at the present time and as anticipated in the future.

- Competitiveness the different technologies compared
- Levelised cost analysis
- Selling capacity
- Using derivatives and forward markets to supplement returns
- · The problems with short term contracts

Revenue Drivers

Before we go through the PPA itself in detail, we give special detailed consideration to the factors surrounding the volume of dispatch and the pricing arrangements – given their totally dominant importance.

- Volume component
- thermal
 - drivers of minimum take (if any)
 - capacity charge
- selling forward
- renewable
 - intermittency and the reserve arrangements
 - priority dispatch arrangements
 - take-or-pay structures
 - flexibility elements and options
- weather derivatives hedging volume risk
- Pricing component
 - thermal
 - energy charge fuel costs, interconnection costs
 - selling capacity
 - renewable
 - feed-in tariffs
 - fixed price
 - fixed escalators
 - route to market structures
 - tolling
 - government and regulatory support structures
- Deficiency guarantees

POWER PURCHASE AGREEMENTS

Continued

CASE STUDA

A review of risks in renewable plant development to replace diesel generation

The Power Purchase Agreement

Thus represents the central focus of the course. It is proposed to do a deep dive into several Power Purchase Agreements, discussing the requirements and the flexibilities of each clause. It will give careful consideration to the objectives and perspectives of both the generator (seller) and the distributor (purchaser).

- A profile of the project the parties
- Term
- Conditions subsequent
- Performance guarantees
- · SPV's construction and development obligations
- Completion testing and Third Party Verification
- · Interconnection responsibilities
- · Contracted capacity and energy
- Tariff adjustments
- Metering
- Commissioning and commercial operations
 commencement
- · Representations and warranties
- Purchaser covenants
- price and payment
- avoided peak demand payments
- liquidated damages
- Generator Covenants
- assignments rights
- licences
- metering, measurement and verification
- indemnifications
- Insurances required
- Maintenance and scheduled outages
- · Confidentiality
- · Credit enhancements (if required)
- Flexibility provisions
- · Early Termination rights
- Offtaker Step-in rights
- Force majeure provisions
- Change in Law
- Severance clause
- Transfer of ownership rights, assignments, novations
- Events of Default
- Grace periods

- Liability & Indemnification
- · Disclaimers and Limitations of Liability
- Law and jurisdiction
- Dispute resolution

Project Development

Usually the highest risk component of any power generation project, irrespective of technology, is the ability to get it built and working in accordance with the base case planning. Certain performance issues can often be traced to the pre-completion phase – so this session gives an overview of the consequences of defects encountered during that initial stage of the project.

- Liquidated damages delay and performance
- Performance bonds
- Retentions
- Turnkey EPC structures
- Alternatives when turnkey EPC not available
- · Variation orders and cost overruns
- Standby financing
- · Completion guarantees
- Two-phase financing



A refurbishment of a power generation plant

Other Factors

For certain power projects, various options may be available, or considerations necessary, which will have an effect on the terms of the PPA to meet the requirements of the third parties being inducted into the process.

- · Dealing with political risk
- Dealing with currency exposures
- Involving Export Credit Agencies
 - the Berne Consensus rules
 - how buyer credits work
- Bond financing
 - which projects would be eligible
 - piercing the sovereign ceiling
- Financial modelling (sample files distributed)
 - valuation modelling
 - volatility modelling
 - modelling the construction phase
 - modelling the operating phase
- · Rescheduling or restructuring defaulting projects

THE 5-DAY OIL & GAS MINI-MBA

All you ever wanted to know about risk management in just five days

DAY 1

Industry Context - Working Along the Supply Chains

- · Oil and gas supply and value chains
- Overview of the global oil and gas industry
- Conventional vs. unconventional resources
- Petroleum geology and reservoir engineering
- Resource and reserves categories and calculations
- Drilling, field development and production
- The importance of midstream infrastructure
- Organisations and corporate entities operating upstream, midstream and downstream
- Enhanced Oil Recovery (EOR) technologies and applications
- Petroleum product distribution infrastructure and retailing fuel
- Natural gas to power and competing with alternative fuels
- Emissions issues and their impact on the industry's development



Risking an exploration prospect; calculating field inplace resource and recoverable reserves; sales vs. netback price comparisons

Deep-water field developments West Africa; Unconventional gas and oil in North America; Pipelines in Central Asia

DAY 2

Strategy, Uncertainty and Geopolitics

- A global mind-set: short-term vs. long-term planning in an ever-changing environment
- Scenario planning
- Different perspectives of national (NOCs), international (IOCs) and service companies
- Managing portfolios of assets to achieve balance and diversification
- Effective development and application of business plans and budgets
- Vertical integration and synergies
- OPEC and GECF and the geopolitics of oil and gas supply
- Refinery, petrochemical and Gas-To-Liquids (GTL) technologies
- Evolution of refining and petrochemical sectors
- Regional gas markets pipeline and Liquefied Natural Gas (LNG) competition
- Responding to hostile communities
- · Stranded gas, flaring and strategies to monetise it



Evaluating global change; asset diversification and correlation impacts; SWOT analysis for NOCs, IOCs and independents



Queensland community objections to coal-seam gas; Yemen LNG supplier / customer challenges; Singapore integrated refinery and petrochemical hub; Canadian oil sands and bitumen exploitation; Nord Stream gas pipeline

DAY 3

Petroleum Economics, Finance and Risk for Decision Making

- Multi-year cash flow analysis of an oil / gas field development
- Cash flow components: revenues, costs and fiscal elements
- Income, EBITDA and cash flow: why analysts need to monitor a range of financial indicators
- How funds flow through an oil and gas production company
- Discounting cash flows: future values, present values and discount rates
- Net Present Value (NPV) and other profitability indicators and yardstick
- Simulation and sensitivity models
- Inflation issues: nominal vs. real terms for cash flow analysis
- Decision trees to evaluate optionality
- Cost of capital and project finance options
- · Leveraging assets by combining equity and debt finance
- Credit rating, debt to equity ratios and credit headroom issues
- Financial and non-financial Key Performance Indicators (KPIs) to monitor achievements
- Risk and opportunity (uncertainty) in oil and gas field life cycles
- Analysis of sub-surface and above-ground uncertainties
- Expected Monetary Value (EMV): adjusting cash flows using risk factors
- · Dealing with oil and gas price volatility
- Oil and gas pricing, trading and hedging techniques



Construct a multi-year cash flow profile; calculate a range of profitability indicators to compare and rank projects; calculate the EMV of an exploration prospect.



LNG receiving terminal (UK); Gas storage facility (Netherlands); Options trader buying and selling oil options

DAY 4

Fiscal Designs, Joint Venture Management and Negotiations

- Contrasting objectives of foreign investors and governments for oil and gas investments
- Mineral interest (royalty and tax), production-sharing (PSA) and service agreements

THE 5-DAY OIL & GAS MINI MBA

All you ever wanted to know about risk management in just five days

- Concept of economic rent and fiscal elements used by governments to extract it
- Cost recovery and depreciation of capital costs and their impacts on financial returns
- Progressive and regressive fiscal elements and dealing with cost 'gold plating'
- Obsolescence bargaining and its implication for oil and gas asset holders
- · Asset expropriation risks, fiscal stability and credibility
- Long-term Sale and Purchase Agreements (SPAs) for natural gas
- Joint ventures and joint operating agreements (JOAs)
- Operatorship: roles and liabilities
- · Sole risk and non-consent operations
- Planning and executing negotiations
- Negotiation strategies and tactics applied in different cultures
- Team negotiations and negotiating team dynamics
- Farm out agreements and their role in promoting activity
 and investment
- Assignment, pre-emption and capital gains tax issues

Practical negotiations exercise (drilling operation); evaluate farm out terms; calculate the revenue and profit splits between government and PSA contractor; interpreting body language; competitive bidding.



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Integrated GTL plant (Qatar); Floating gas liquefaction (FLNG-Australia); FPSO development West of Shetlands (UK).

DAY 5

Project Direction, Change Management, Acquisition and Divestment

- Project management: theory and practice as applied to oil and gas developments
- Project feasibility and establishing a project charter
- FEED, FID, EPC and HAZOP sequence
- Planning and modelling to improve on-budget and on-time performance
- Milestone monitoring, earned value and achievement analysis
- Leadership vs. management
- · Auctions and competitive bidding: theory vs. practice
- Post-completion issues: successfully assimilating assets and companies
- Managing large strategic changes
- Applying a balanced scorecard to align performance with strategy
- Safety, environment and security
- Dealing with crises
- Decommissioning, guarantees and tax treatments
- Acquisition and divestment trends in the oil and gas industry
- Structuring effective deals that capture synergies and opportunities



Cost estimating; farm out negotiations; project network analysis.



EOR using CO2 injection with carbon capture and sequestration (CSS) objectives; Malampaya gas plant Philippines; Oman gas liquefaction plant; Responding to the press in cases of crisis, Texas City refinery accident

FOCUS ON ETFs – ONLINE ACADEMY

Cutting edge guide to the mechanics, applications and risks of Exchange Traded Funds

Module 1: The Exchange Traded Product Landscape

Historical Development Of Exchange Traded Products

- Focus on the SPDR Trust[™] created by State Street in 1993
- Review of other collective investment vehicles (CIVs)
- · Fee structure and execution benefits of ETFs
- Use of ETFs as part of a reaction to active management strategies
- Behaviour of ETFs during market stress periods e.g. the Flash Crash of 2010

The original ETF - State Street's SPY

Footprint of ETPs in Global Capital Markets

- Compare availability and range of ETFs traded on US, European and Asian platforms
- Number of funds, assets under management, growth trajectories
- · Regulatory issues for ETF sponsors and investors
- Role of ETFs in institutional investment strategies
- Access to emerging and frontier markets

Compare the performance and AUM of ETFs with hedge funds

ETFs as Structured Products

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- · Contrast features of ETFs to mutual funds and investment trusts
- Primary and secondary market activities
- · Contrast funds which hold "physicals" vs. those which are synthetic
- Nature of counter party risk regarding synthetic ETFs
- Regulatory issues concerning structured products e.g. MiFID II

Module 2: Mechanics of ETFs

Organisational Structure of Etfs

- · Nature of open ended investment vehicles
- Fiduciary/trust architectures
- Role of sponsors and trustees
- Function of Authorised Participants (APs) in the primary market
- Creation and redemption units role of APs



Detailed analysis of the creation and redemption process

Secondary Market Features of ETFs

- Market micro-structure issues for ETF trading
- Secondary market characteristics liquidity issues
- Does the ETF trade at a premium or discount to NAV?
- Treatment of dividends and other income generated in the underlying securities
- Second order trading of ETFs e.g. contracts for difference (CFDs) that reference ETFs



Importance of fees earned from Securities Borrowing and Lending Intermediaries (SBLIs)

Key Investment Metrics of ETFs

- Expense ratio the fee structure and how collected
- Market performance total returns, volatility, correlations
- Replication strategies stratified sampling vs. full replication
- Tracking Error deviation from the performance of the underlying
- Issues connected with leveraged ETFs

Module 3: Equity Based ETFs

Global Equity Indices

- Explanation of the logic and classification of equity indices
- MSCI equity index products
- Review the key US and European index products
- Review of the key ETFs that track emerging market indices
- Review of the key ETFs that track frontier market indices



Examine the significance of SPY as the most widely traded financial instrument in US equity markets

Sector Index Products

- Overall framework for sector-based products industry, style, geography
- Benefits to investors for targeted access to specific sectors

Leveraged and Inverse Equity ETF Products

- The rationale for inverse ETFs facilitates shorting of securities
- Claims made by ETF sponsors regarding such products
- Leveraging mechanics for equity-based ETFs
- The constant leverage trap how does this impact tracking?
- Review of the major inverse and leveraged ETFs available to equity investors



Review the tracking behaviour of some of the main inverse and leveraged ETFs base on US equity markets

Equity Investment Style ETFs

- · Review of asset allocation strategies that are widely used by asset managers
- Value style vs. growth style
- Diversification styles geographical and sector diversity
- Essentials of performance attribution analysis
- · ETFs which are based on smart beta strategies



Examination of ETFs that implement short volatility strategies including a detailed analysis of the demise of the Credit Suisse fund – XIV

Module 4: Fixed Income and Miscellaneous **ETFs**

Total Return Fixed Income Products

- Nature of the yield curve term structure of interest rates
- Total return characteristics coupon plus capital gain/loss
- Review of US Treasury ETFs .
- Special case of zero coupon fixed income instruments
- Explanation of how bond-based ETFs have different behaviour to actual bonds

FOCUS ON ETFs – ONLINE ACADEMY

Cutting edge guide to the mechanics, applications and risks of Exchange Traded Funds



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Using US Treasury based ETFs to trade the US government bond yield curve

Credit Quality Products

- Distinguish between investment grade and sub-investment grade debt instruments
- Explanation of credit quality and credit risk within the fixed income universe
- Contrast between sovereign based bond ETFs and corporate based bond ETFs
- Review of ETFs which track investment grade corporate bond indices
- · Review of ETFs which track high yield corporate bond indices

Liquidity issues with ETFs that are based on underlying high yield debt instruments

Examination of the Features and Performance of HYG and JNK Commodity and Currency ETFs

- Overview of the nature of FX markets and different investment vehicles
- Overview of the nature of the commodity futures market
- Review of ETFs which track foreign currencies how they are constructed
- Review of ETFs which track commodities synthetic replication

Use case for forex hedging with an ETF that tracks a G10 currency

Module 5: Usage and Risks of ETFs in Portfolio Management

Active vs. Passive Investment

- Distinguish between active and passive investment management
- Examine the philosophy advocated by index tracking e.g.
 Vanguard's Bogle
- Contrast the fees typically applied for active management
- Using ETFs for diversification within an actively managed portfolio
- Redemption gates and liquidity constraints within hedge funds



Review of historical performance statistics for returns from active and passive fund managers

Smart Beta Strategies

- Explanation of fundamentals of CAPM, risk and reward and beta
- Review of the logic behind smart beta risk factor asset allocation models
- Examination of the performance of various widely used smart beta ETFs
- · Crowding and herding issues with smart beta strategies
- Are the promises provided by smart beta ETF sponsors warranted?



Examination of the model and performance of Vanguard Dividend Appreciation ETF - VIG

Implementing Global Macro Strategies With ETFs

- ETFs which implement hedge fund strategies
- Merger arbitrage strategies
- Long/Short strategies
- Beta neutral strategies
- Managed futures

Special Risks with ETFs

- Market capacity issues especially the underlying liquidity of ETF constituents
- · Liquidity risks with assets in emerging and frontier markets
- Regulatory risk as policy makers focus on liquidity risk of structed products
- · Transparency risk with structured products e.g. MiFID II
- Capital controls in frontier markets

Examination of the model and performance of iShares MSCI Frontier 100 ETF - FM

ONLINE ACADEMIES - COURSE STRUCTURE

OVER FIVE WEEKS STUDENTS WILL LEARN VIA:

- Five modules, split up into bite-size recorded videos
- Quizzes to test your knowledge
- Revisiting the content you have unlimited access to all the materials for two months
- · Access the discussion forum to interact with other students
- · Direct contact with the trainer through the forum during the course

FOCUS ON ANTI-MONEY LAUNDERING & FINANCIAL CRIME – ONLINE ACADEMY

Delve behind and beyond the regulations with this flexible learning experience

Module 1: The Scale of the Problem, Terminology and Methodology

- A \$2tn industry
- Understanding the terminology from both sides
- Placement, layering & integration
- · Predicate crimes and their audit trails
- Tax evasion/avoidance & the problem with cash
- The role of financial institutions & obliged entities
- Terrorist financing & people trafficking
- Recent typologies

Module 2: The Regulatory Environment

- FATF/Egmont/Wolfsberg and other international bodies
- EU regulators and their scope of influence
- FinCen & other US regulatory players
- OFAC & sanctions bodies
- Asia Pacific Regulators
- BIS/Transparency International and other trade bodies
- 4MLD & its influence

Module 3: Types of Customer & High-Risk Jurisdictions

- PEPs & PEP Associates
- Trusts/Foundations/Offshore Companies/Charities/LLPs
- High risk jurisdictions what do we mean by offshore?
- What do the Panama & Paradise Papers tells us?
- · Sectors/countries that are particularly vulnerable to ML
- Customer & entity 'red flags'

Module 4: Due Diligence

- Identification & verification problems with documents
- · KYC the importance of 'professional scepticism'
- Enhanced Due Diligence when and how
- Beneficial ownership new regulations
- Understanding 'control'
- · Problems with policies & procedures
- The dangers of 'box ticking' in DD
- Remediation
- The 'smell test' and the importance of SARs

Module 5: Sanctions & the Future

- What are sanctions?
- Types of sanction programme
- SDNs & Blocked Persons
- Restricted goods regulations
- Penalties for sanction breaches
- NPPS
- Cryptocurrencies
- · Assessing weaknesses in global AML programmes

FOCUS ON FINTECH – ONLINE ACADEMY

Delve behind and beyond the regulations with this flexible learning experience

Module 1: Evolution of Digital for Banks & Open Banking

- · Understanding how the impact of digital has evolved for banks
 - digital within a multi-channel context
 - the un-bundling and re-bundling of financial services
 - open Banking including Europe's PSD2 regulation
 - future financial services in the context of Digital Lives

Module 2: Key Technology Enablers

- Key technology enablers driving fintech
 - cloud Computing and the API Economy
 - machine Learning and Artificial Intelligence
 - distributed ledgers, blockchain and smart contracts

Module 3: Battlegrounds & Sub-Sectors

- · Framework for understanding the different fintech battlegrounds
- who are the participants, what is the prize and what factors are determining the winners and losers?
 - regional variation
- Examine key fintech sub-sectors including RegTech, Robo, P2P Lending, Digital Identity
 - what is the problem/opportunity
 - what solutions are emerging
 - case studies of some key players
 - key trends and outlook

Module 4: Payments

- For different types of payment, understand:
 - The ecosystem and today's landscape
 - Fintech disruption
 - Case studies of some key players
 - Key trends and outlook

Module 5: Winning Formula

- The challenges and opportunities for different actors in light of the digital disruption of the sector:
 - What legacy issues do incumbents have to contend with
 - Developing new propositions and delivery models
 - Key ways of working for the digital era including Agile, Lean and DevOps
 - Models for driving digital innovation

A complete modular guide to the practicalities of agribusiness



DELIVERED BY DISTANCE LEARNING OVER 16 WEEKS

This intensive course will provide you with a thorough overview of the different components of agribusiness. Comprising of ten intensive modules, it will prove invaluable to all looking to develop their theoretical and practical understanding of agribusiness.

Unit 1 – INTRODUCTION TO AGRIBUSINESS

The History of Farming and Food

- Origin and development of farming and agricultural trade
- Demography and food production
- Production and consumption of major agricultural commodities
- Yield growth, varietal improvements and the effects of the Green Revolution
- Meteorology and climatology
- Resources, scarcity, economic policy and systems, and the impact on agriculture

The Growth of Agribusiness

- Production for trade and export
- · Developing and developed markets
- · Commercial farming and agribusiness operations
- The role of technology in agribusiness (e.g. automation, GPS, drones)
- The agribusiness giants and their contentious roles

Prices and Markets

- The evolution of commodity markets
- What drives commodity volatility?
- Aspects of pricing analysis
- Forecasting commodity prices methodologies, software and institutions
- · The accuracy of forecasts

Specific Agricultural Sectors (with options)

- Horticulture
- Aquaculture
- Forestry
- Fibres
- Animal husbandry

UNIT 2 – AGRICULTURAL SCIENCE

Introduction to Agricultural Science

- · Principles of Agricultural Science and Technology
- The evolving role of agricultural science across the range of agricultural sectors
- Legal, commercial and regulatory aspects of agricultural science
- · Agricultural science, R&D, investment and pricing
- Evaluation of the overall role of agricultural science in commercial agribusiness

Agriculture and the Environment

- Water storage and the hydrologic cycle
- · Sources of pollution and the role of agriculture

- · Water table depletion and conservation methods
- Soil erosion, wetlands and land preservation
- · Hazard and control measures for animal waste
- Fertilizer, growth stimulants, retardants, and rooting hormones
- The politics of environmental control at national level
- · International environmental agencies and organisations

Genetics and Agriculture

- Population genetics
- Agrobiotechnology systems
- · Hormones and antibiotics on animals raised for food
- · Entomology, the use of pesticides and insecticides
- · Improving yields: methods and results
- The GM crops debate

Sustainable Farming

- IPM and farming
- Organic farming
- · Energy conservation at the farm level

UNIT 3 – FARM MANAGEMENT

Structure and Form of Farm Operation

- Size and economic structure: family farms, co-operatives, corporate farming and other mechanisms
- Empirical evidence on farm size and efficiency
- Production functions and profitability
- Decision-making in farm analysis
- Crop and livestock management plans
- Inventory control, budgeting and planning
- Forecasting techniques
- HR management on the farm
- Farm insurance

Animal Husbandry

- Important farm animals: taxonomy
- · Feeding, fencing, transport and working
- Veterinary science
- Breeding, abattoirs, battery farming vs. free range and dairy
- · Wildlife, eco-science and the boundaries of agribusiness

Structure and Plant Management

- Agricultural structures and design
- Relevant power and machinery operation
- · Irrigation/water and soil management
- · Ploughing, sowing, threshing, tilling and harvesting
- Greenhouse technology

Farm Accounting

• Income, expenditure, depreciation, tax and other key

continued ...

accounting variables and their application internationally • Background and objectives of IAS 41/US GAAP

- Other relevant accounting standards across relevant issues including income recognition, leasing, intangible assets, forex, business combinations and grants (e.g. IAS16, 17 and 40, IPSAS27)
- Measurement, composition and depreciation of biological assets (including 'bearer plant' amendments to IAS 2014) and agricultural inventory
- Key accounting ratios (including accrual adjusted income statement)
- Accounting software for farms Income diversification for Agriculture
- · Off-farm income: evidence and significance
- Using the land for alternative income
- Vertical integration
- Contract farming

UNIT 4 – AGRICULTURAL MARKETING AND RISK MANAGEMENT

Agricultural Product Marketing

- Principles of marketing
- · Competitor analysis and pricing strategies
- · Evolution of marketing analysis
- KYC: consumption trends and consumer attitudes
- E-marketing and other recent trends (e.g. social media)
- Sectoral and international differences in agricultural marketing
- · Market research and market segmentation

Marketing and the Value Add Chain

- The marketing of existing products
- · Definition and analysis of the value add chain
- Distribution of value throughout the marketing chain (with examples)
- Differences between sectors

The Agribusiness Marketing Plan

- Managing the product and new product development
- Pricing strategies
- Promotion and advertising
- Marketing planning and costing
- Examples of marketing strategies
- · Analysing the results of marketing strategies

Risk Management Techniques

- Stocks, price controls and other interventionist strategies
- Price discovery and open markets
- Derivatives (options, swaps, futures and others) and their use
- Strategies for hedging (forwards, swaps, options, futures, exotics)
- Yield, revenue and weather insurance
- Concept of basis risk (with worked examples)
- Tax and accounting treatment of derivatives (with international examples)
- Key derivative market institutions
- Practical use of market based risk management strategies by agriculture (and agribusinesses)

UNIT 5 – AGRICULTURAL LENDING

Financing Structures in Theory and Practice

- Theory of corporate finance
- Cost of capital estimation methods
- · What financing methods do farms use?
- · SPVs and other special forms of financial structure

Principles of Corporate Lending

- Key ratio analysis for agribusiness transactions (including DSCR, LLCR and others)
- Significance and application of conventional corporate finance ratios
- Comparative ratio analysis evidence from international agribusiness
- Adjustments necessary to generate comparability (peer groups)

Structuring Agricultural Loans

- · Deriving agribusiness repayment capacity
- · Commodity cycles and income
- Refining DSCR calculations for agribusiness by sector
- Market-based covenants
- Taking and enforcing security

Credit enhancementsExamples of agricultural and agribusiness loans

- Agricultural Lending Institutions
- Who lends to agriculture and why
- Commercial banks
- Mutual lending institutions
- Evidence on international bank lending and agricultural leverage ratios
- Liquidity and refinancing
- Significance of commodity prices in agribusiness profitability and debt repayment capacity

UNIT 6 - THE AGRIBUSINESS SUPPLY CHAIN

Food Distribution

- Local, national and international food consumption
- Food processing and the use of chemical preservatives
- · Saturated and unsaturated fats.
- Food labelling (origin, nutrition, branding)

Logistics, Transport and Machinery

- How meat, fruit, and vegetables are stored, transported and packaged
- The role of cooperatives and intermediaries
- Explanations for the level of vertical integration between sectors
- The transport of agricultural commodities
- Quality assurance and quality control systems

Size and Shape of Intermediary Companies

- · Value chain analysis by country and sector
- · Risk management along the supply chain
- · Examples of intermediary agribusiness companies by sector

continued ...

- Agribusiness machinery companies and their operation and value
- M&A in agribusiness the logic, facts and results supermarkets and their competitors
- The size and shape of international to local final vendors
- Why have supermarkets evolved, what is their trajectory and what is the competition?
- Supermarket procurement and contracts
- · Online delivery and the evolution of consumer behaviour

UNIT 7 - INTERNATIONAL AGRIBUSINESS MARKETS

International Agricultural Trade

- · Size and scope of international agricultural trade
- · The role of brokers and trading companies
- Transport mechanisms and costings
- Price determination in international agricultural markets
- Trade constraints and issues (export/import quotas, tariffs, phytosanitary issues)

Risk of International Agribusiness

- Licenses, export quotas, exchange controls & transfer risk
- Foreign exchange risk
- Managing price risk
- · Default and credit/payment issues

Documentary Issues and Contracts

- Types of documents (title, bills of lading, bankers' acceptances, charters, receipts, bills)
- Full freight forward, free alongside ship and other transport arrangements and terms
- Legal obligations of the parties (shipper, receiver, bank, vessel owner, insurer)
- Examples of contracts and issues between the parties
- Commodity Letters of Credit (title, documentation including Letters of Indemnity, open account, consignment)
- Standby LoCs, Performance Bonds, Credit Surety, Retention Funds, Guarantees (legal and operational issues)
- Insurance issues

Bank Financing of Agribusiness Trade

- Pledges of warehoused goods legal aspects (including Collateral Management Agreements)
- Warehouse receipts finance
- Establishing bank security interests/collateral management/pledges
- · Issuance and re-issuance of international guarantees
- Working capital financing
- · Documentary discount/ pre-export finance
- · Alternative methods of commodity trade finance

UNIT 8 – POLICY, AGENCIES, REGULATION AND THE FUTURE OF AGRIBUSINESS

The Role of Government

- Infrastructure issues: transportation
- · Government investment incentives (taxes, grants, funds)

- Government agricultural support programmes (USA, EU, other examples)
- Government Agriculture Ministries and what they do: regulation, investment and administration

International and other Agricultural Agencies

- The Food and Agriculture Organisation of the United Nations: an evaluation
- University extension programmes and their success
- Research organisations (e.g. IRRI)
- International regulations (e.g. phytosanitary)

Legal Aspects of Agribusiness

- Principles of contract law, tort and misrepresentation
- International trade law
- Regulations, case law and legislation as it relates to domestic and international agribusiness
- International court cases of significance

The Future of Agribusiness

- Forecasting consumer demographics and structure of demand
- Main lines of international research
- Future crops, research and trade
- The implications for agribusiness value

UNIT 9 – INVESTMENT IN AGRIBUSINESS

Business Valuation

- Business valuation techniques: DCF, comparables, dividend valuation, rules
- · Applications to agribusiness in practice: DCF
- Analysis of agribusiness transactions: global evidence of comparables
- Dividends and rules: alternative methods of valuation in the global investment community
- Business valuation software: application to agribusiness Land
 Prices
- · Why do land prices matter so much to investors?
- Structuring land deals
- Empirical global evidence on land prices
- Land prices as a real option
- Forecasting land prices

Private Equity Investment in Agribusiness

- How does private equity work?
- · Success criteria for private equity
- Evidence of private equity investment in agribusiness
 worldwide
- Deal structuring for private equity (e.g. ratchets, envy ratios)
- Bank financing for private equity (leverage principles, finance availability)
- Term sheet examples
- · Strategic issues in quasi-governmental investment
- Exit strategies and options

Public Equity Investment in Agribusiness

• Listed agribusiness entities worldwide

continued...

- · Valuation and investment strategies
- Public agribusiness investment funds and their performance
- Comparison with other sectors

UNIT 10 - AGRIBUSINESS INVESTMENT MODELLING

Essential Tools for Agribusiness Investment Modelling

- Using Excel for modelling why is there no alternative?
- Using Excel: issues and model examples
- Graphs, charts and other presentational issues
- Forecasting operating revenues and costs

The Agribusiness Investment Model

- Structuring the model
- Creating model inputs from management and legal documentation
- Modelling operating revenues and costs
- Modelling loan amortisation
- Modelling IRR NPV and other valuation analysis
- Evaluating agribusiness investment models

Modelling Investment Risk

- Methods of handling risk
- Using Excel Scenario Manager to analyse alternative investment strategies
- Using @RISK to analyse the risks of the model (Monte Carlo)
- Investment reporting

THE MECHANICS OF ASSET AND LIABILITY MANAGEMENT

A complete modular guide to the practicalities of modern corporate finance



DELIVERED BY DISTANCE LEARNING OVER 16 WEEKS

This intensive course will provide you with a thorough overview of the different components of asset liability. Comprising of eight intensive modules, it will prove invaluable to all looking to develop their theoretical and practical understanding of asset liability.

UNIT 1 – ALM OR BANKS IN CONTEXT

Unit Content

- The basic balance sheet accounts and income statement components of a bank and understand how they relate to each other
- The principles and application of the Return On Equity (ROE) model for analysing bank profitability over time and against peers
- The importance of net interest margin, earning assets, and operating efficiency as sources of bank profitability
- The key ratios that signify the degree of credit risk, liquidity risk, interest rate risk, and capital risk assumed by a bank
- The factors that affect a bank's CAMELS rating
- The key financial concepts and data relevant to ALM in a bank

UNIT 2 – RISKS IN BANKING AND THE FUNCTION OF ALM

Unit Content

- The importance of risk management in banking
- Key areas of risk relevant to ALM, including credit risk, market risk and liquidity risk.
- · The economics of risk management
- The meaning and importance of Enterprise-wide Risk Management (ERM) within the risk management process and with respect to governance
- ALM in banking, with reference to the scope of the ALM function, the relationship between treasury management and ALM and key aspects that influence a bank's approach
- Key ALM activities, including, mismatch management and performance measurement, Funds Transfer Pricing (FTP) and liquidity management
- Key challenges in risk management, including technology and people

UNIT 3 – ROLES, RESPONSIBILITIES, AND CONSTRAINTS ON ALM

Unit Content

- The relationship between business strategy, value creation and ALM
- The cost of equity using the Capital Asset Pricing Model

(CAPM) and its relationship to the Return On Equity (ROE) and financial statements, covered in unit 1

- Capital management and ALM, with reference to the approach and policy, stress testing, assessing risks to capital, risk-weighted asset targets and capital generation
- The international regulatory framework for banks (Basel III)
- Minimum capital, leverage ratio and liquidity requirements, e.g. Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR)
- Basel III capital and liquidity standards, including differing UK, US and European perspectives in terms of specific capital requirements, i.e. the CRD IV package in Europe, Prudential Regulation Authority (PRA) in the UK, and Federal Reserve Board alignment in the US
- The responsibility for risk disclosure and the regulatory framework for disclosures.
- The impact of Basel III and criticisms against Basel III
- The role and responsibilities of the board of directors, the role of the senior ALM committee and the issues considered by the senior ALM committee

UNIT 4 - ALM AND MARKET RISK

Unit Content

- The importance of market risk
- Sources of market risk
- Techniques to identify market risk, including gap analysis, duration analysis, scenario analysis
- Value-at-Risk (VaR) and its advantages and disadvantages
- Methods that can be used for calculating VaR, including the historical method, parametric method and Monte Carlo method
- The Economic Value of Equity (EVE), its advantages and disadvantages and how to calculate it
- Earnings at Risk (EAR), advantages and disadvantages and its calculation
- The differences between EAR, EVE and VaR
- Market risk reporting
- The importance of Interest Rate Risk in the Banking Book (IRRBB)
- The tools to manage market risk
- How to manage beyond interest rate risk

THE MECHANICS OF ASSET AND LIABILITY MANAGEMENT

continued ...

UNIT 5 - ALM AND CAPITAL RISK

Unit Content

- The definition and role of bank capital
- Measuring bank capital and exposures
- Different types of bank capital
- The Internal Capital Adequacy Process (ICAAP) and Pillar 2
- Risk governance, appetite, and strategy and:
 - the extent of responsibility, accountability and involvement of senior management
 - the significance of risk appetite
 - the issues in reconciling capital planning and strategic planning
- The importance of the risk management processes and the specific issues involved in:
 - defining the risk-bearing capacity
 - quantifying the risk appetite
 - assigning capital limits to business units
- The technical considerations in assessing capital risk with respect to:
 - going concern vs. gone concern
 - economic-risk model
 - stress testing
- ICAAP for banking groups and in international arenas

UNIT 6 - ALM AND LIQUIDITY RISK

Unit Content

- The importance of liquidity risk management
- 2 types of liquidity risk funding (cash flow) liquidity risk and market (asset) liquidity risk
- Approaches for measuring and managing market liquidity risk
- The different liquidity resources
- Funds Transfer Pricing (FTP) and how FTP rates can be determined
- The significance of liquidity risk and Basel III
- · Liability side contingency and liquidity management
- Purchased liquidity management vs. stored liquidity management
- Asset side contingency and liquidity management
- Liquidity adjusted Value-at-Risk (LVAR)

UNIT 7 - ALM TECHNIQUES

Unit Content

- The relevance of hedging and the types of derivative instruments used for such purposes in ALM
- The principles of hedging, both through derivatives diversification

- The meaning and importance of financial futures and their relevance to ALM
- How financial futures are structured through futures contracts
- Futures trading as a zero sum gain
- The key issues associated with future margins, e.g. margin calls
- The use of interest rate futures to hedge a gap position
- Options and the distinction between call and put
 options
- The use of options as part of a hedging strategy
- Options on futures contracts (futures options), their importance and the role of caps and floors
- The use of interest rate swaps as part of a hedging strategy
- The advantages and limitations of swap markets
- The use of futures, options and swaps in terms of hedging strategies

UNIT 8 - THE FUTURE OF ALM

Unit Content

- The future beyond Basel III, with reference to:

 potential future regulatory challenges and changes
 - the potential capital impact for the banking industry and different sectors
 - the potential variations in capital impacts between institutions of different sizes, and business model
 - the expected impact on ROE, likely implications and reactions in terms of how banks can react, and possible mitigating actions that may be taken
 - potential actions that may be taken by banks until Basel IV rules are finalised
- The potential future of ALM in light of regulatory changes
- Principles of strategic ALM
- Connecting asset origination and liability raising within ALM
- Balance sheet optimisation and the maximisation of Return On Equity (ROE) to meeting the competing needs of regulators, customers and shareholders
- The role of proactive balance sheet management and proactive ALM
- Implementation challenges in proactive balance sheet management
- The role and importance of the board of directors and the Asset and Liability Management Committee (ALCO) in the future ALM process

THE MECHANICS OF CORPORATE FINANCE

A complete modular guide to the practicalities of modern corporate finance



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Unit 1 – The Foundations of Corporate Finance

Preliminary Comments

- Corporate finance and the scope of this course
- · Theory vs. practice

Value as the Central Driver of Corporate Decisions

- Share market fashions
- · Earnings per share don't count
- The limitations of accounting
- The concept of "risk"
- The essential importance of Free Cash Flow
- · Price distinguished from value
- The value range
- The perfect market myth

Volatility

- The importance of volatility and its quantification
- The drivers of cash flow volatility
- Company dynamics

Unit 2 – Valuation Issues

The Concept and the Fundamentals

- The core concept
- Passing fads
- Real options

The Pricing of Risk

- The correlation of risk and return
- Mistakes with marginal financing and present timeframes
- Influences on the required rate of return

Forecasting the Free Cash Flow

- Why volatility is irrelevant to the modelling
- Indexation of assumptions
- The use of generic, or template models

Discount Rates

- Long term horizon
- "Risk free" rates
- Risk premia

Discounting

- Shortcomings of Excel's NPV function
- EXP and XNPV functions explained
- Accurate calculation of NPVs

The Continuing Period

- The fallacy of a "terminal" value
- The growth rate
- Perpetuity formulae
- The technical and locational obsolescence factor
- The two-step formula
- The value of the company's Free Cash Flow

Deriving the Value Range

- Surplus assets
- · Net financial indebtedness
- Sensitivity analysis

The Limitations of DCF

This section flags some issues in the use of conventional valuation approach. We don't have enough room to go into detail in unit two, so the issues will be addressed in more detail in unit three.

- The Achilles heel
- The errors frequently encountered summary
- The alternative approaches summary

A worked example of the steps explained in the module

Unit 3 – Valuation and Pricing

More on the Limitations of DCF

- Algebra and modelling
- IRR
- What's wrong with Excel's IRR function
- Speculative transactions and reverse cycle modelling

Errors Frequently Encountered in Valuations

- Time horizons
- · The use of proxies
- · The modelling of capital expenditures
- The treatment of currency exposures
- The sensitivity of inflation
- The misuse of country risk premia
- The capital mix

Pricing Implications of the Cycle

- Pro cyclicality
- · Winner's curse

Setting up the Database for Pricing

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- The role of theory
- Selecting comparators
- Measurement yardsticks

- · Horizontal and vertical correlations
- A worked example
- Embedded assumptions of the pricing techniques
- · Adjustments for earnings growth
- Adjustments for accounting differentials
- Normalisation adjustments

Pricing Models

- Adopting the market's perspective
- Explanation of the model

Unit 4 - Capital Structuring

The Effect of Leverage on Value

- Academic theory
- Let's get practical
- Optimal capital structure theory critiqued
- Suggested conceptual approach to leverage

Debt Serviceability

Measures for evaluating appropriate leverage

Discussion Case Study

through their failure to

company in an appropriate way. We

perhaps the alternative choices were.

A company wishes to acquire another

agreed transaction. The price has been

agreed (NB: the tactics in implementing

company of similar size in a friendly,

acquisitions where there is no

the regulatory environment of

agreement between the parties or

where we have to negotiate price and

implementing transactions, will be the

subject of a later module). The focus

should be financed, looking at both

implications of different approaches.

here is upon how the acquisition

technical issues and the value

compare what they did with what

The rise and fall of a company

· Leverage and business risk

Leveraged recapitalisations

structure the financings of the

Calculational Case Study

Leverage and liquidityLeverage and acquisition vulnerability

THE MECHANICS OF CORPORATE FINANCE

continued ...

Unit 5 - Adaptations to Valuation

Project Appraisal

- Differential cash flows
- Implications of investing outside the core business sector

Private Companies

- The limitations of risk-return theory
- The implications of shareholder-
- management overlapIlliquidity premia
- iniquidity premie

Leveraged Buyouts

- Multiple discount rates
- Adjusted Present Value
- Private equity
- The five drivers of the IRR
- Management buyouts
- Venture capital

Emerging Markets

- Dealing with currency exposures
- Adaptation of proxies
- Additional premia

Joint Ventures

- Control and liquidity
- Speculative investment
- The requirements of the shareholder agreement

Project Financings

- The implications of introducing a special purpose vehicle and limited recourse financing
- Project IRR vs. sponsor IRR
- The five drivers of a sponsor IRR

Economic Value Added

- The strengths and weaknesses of accounting
- The concept of economic return and economic capital
- · The derivation of the data
- · The classification of EVA results
- · Strategic analysis using EVA
- CASE STUD



Unit 6 – Corporate Finance Modelling

The Objectives of Corporate Finance Modelling

The Four Types of Models Explained

- Valuation models
- Transaction structuring models
- Statistical probability models
 Pricing models and other data manipulation models

Model Planning and Design

- The objectives of the model
- The analysis worksheet
- The functionality required
- The status worksheet

Modelling Best Practice

- · Logic flow
- Inputs, engine room and bridge
- User interface
- No hard coding
- Consistent timelines
- Consistent formulae across rows
- Circularity
- Macro editing

Methods of Analysis

- Sensitivity
- Scenarios
- Break-even

Unit 7 – Mergers and Acquisitions – Part 1

An Introduction to Mergers and Acquisitions

- Social and economic frameworks
- Researching potential acquisitions
- Regulatory framework and overview
- of takeover lawDegrees of control
- Alternatives to takeovers

Valuation Issues in M&A

- Acquisition price
- Control premia
- Synergies
- Rationalisation costs and transaction costs
- Tax implications
- Earn outs

The Sequence of Analytical Steps

- The valuations
- Potential volatility
- Extractability of cashflows
- Debt serviceability
- Defensive liquidity and debt capacity
- Pro formas

Forms of Consideration and Funding the Acquisition

- Funding sources
- Legal constraints
- Tax implications

Private Treaty Acquisitions and Sales

- Methods of sale and purchase
- Timetable
- · Roles of professional advisors

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- Due diligence
- The sales and purchase
 - agreement

Unit 8 - Mergers and Acquisitions - Part 2

Commercial Considerations and Strategies for the Acquirer

- Key strategies
- Regulatory constraints
- Tactics during the offer period

Takeovers and Other Activity Involving

Timeline and overview of steps

Conduct during offer period

· Formal Response to the Bid

· Independent experts' reports

· Directors duties in the face of a bid

Defensive Strategies - Pre-Emptive and

Pre-emptive defensive strategies

· Reactive defensive strategies

· Schemes of arrangement

Dual listed companies

Target's statements

· Regulatory constraints

Reactive

Eliminating minority interests

• After the offer

Public Companies

The offer document

· Conditions in offers

THE MECHANICS OF CREDIT RISK ANALYSIS

A complete practical guide to analysing corporate credit risks



DELIVERED BY DISTANCE LEARNING OVER 14 WEEKS

This invaluable course is designed to equip credit professionals with the skills, knowledge and understanding to make effective lending decisions. The course consists of seven units. They will enable you to develop a strong theoretical and practical understanding of best practice credit analysis approaches.

Unit 1 – An Introduction to Credit Risk Analysis

Understanding the Foundation of Credit

- · What is credit
- · How does the credit market work
- The advantages of credit
- The disadvantages of credit
- The banks and credit
- The foundations of credit risk analysis
- The risk and return profile in the context of credit risk analysis
- · How is credit risk undertaken
- The 5 Cs of credit risk
- Why the banks undertake credit risk analysis

The Role of Credit Risk Management

- · What is credit risk management
- How does credit risk management differ from credit risk analysis
- The structure of credit risk
 management
- The objectives of using credit risk
 management
- The appetite for credit risk
- The process and stages of credit risk management

Unit 2 – Credit Risk Applicable to Corporates

Macro Risks

- PESTEL analysis
- Government spending
- · Consumer consumption
- Investments (Foreign Direct Investments – FDI)
- · Exports vs. imports
- National income
- Inflation and deflation
- Monetary policy
- Economic cycles

Industry Risks

- Industry life cycles
- Product life cycles
- Understanding the industry
- Different types of industry
- Risks specific to the industry
- Understanding competition
- Porters Five Forces (Tool for evaluating

competitive position): bargaining power of suppliers; bargaining power of buyers; threat of new entrants; threat of substitutes; rivalry

- Benchmarking and comparable analysis
- Company specific challenges

Company Risks

- Understanding the business model
- Revenue and cost drivers the business activities
- Key Performance Indicators (KPIs)
- Strategic analysis
- Differentiation
- Cost leadership Ansoff's model
- Product penetration
- Market penetration
- Diversification
- Management analysis Corporate governance
- Strategy and impact of change to credit risk

Unit 3 – Financial (Quantitative) Risks

Understanding the Business

- Understanding the business in terms of a business model
- The generic business model
- Deriving the revenue drivers and cost drivers
- Critical success factors

Financial Regulations and the Auditors

- Regulatory framework
- Corporate governance
- Chairman's statement
- · Operating and financial review
- Directors report
- Audit report and the role of auditors
- Format of the annual report
- International Financial Reporting Standards (IFRS)
- Use of IFRS for domestic reporting
- · Review of major IFRS pronouncements

The Statement of Financial Position (Balance Sheet)

- The accounting equation
- Structure of the balance sheet and salient features

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- Non-current assets
- Investments
- Current assets

- Non-current
- Liabilities
- · Accruals and provisions
- Equity
- Investments
- Goodwill
- Reading the footnotes in conjunction with the balance sheet
- Special situations and red flags and off balance sheet items
- Analysing the balance sheet
- Key analysis question formation and list from the balance sheet risk identification

Income Statement and Statement of Comprehensive Income

- Revenue model
- Revenue and receivables quality: ageing, provisions, collections
- Compound Annual Growth Rate (CAGR)
- Cost structure: fixed and variable costs, break-even analysis
- Defining expenses
- Comprehensive Income Statement

· Profitability: gross margins, operating

Analysing the income statement

from the income statement - risk

· Key analysis guestion formation and list

· Direct and indirect cash flow statement

cash flow, financing cash flow

Analysing the cash flow statement

· How to use the cash flow statement for

· Financial ratios and the statements of

· Relationship of income and cash flows

· How to use the cash flow statement to

quantify debt capacity - Debt Service

The structure and content of the cash flow

statement: operating cash flow, investing

- Reading the footnotes in conjunction with the income statement
- · Segment reporting

· Growth margins

Benchmarking

identification

· Cash vs. accrual

projections

cash flows

• Free cash flow

· Cash flow calculations

Cover Ratio (DSCR)

Statement of Cash Flows

margins
THE MECHANICS OF CREDIT RISK ANALYSIS

continued ...

Ratio Analysis

- Ratios used in operating performance and profitability: turnover, EBITDA, net working capital, cash flow
- Ratios used in capital structure
- Asset efficiency ratios
- Credit Ratios: liquidity, solvency and fixed charge coverage
- Capital return ratios (Return on Capital Employed vs. Return on Equity)
- Du pont ratio analysis (Profitability, Efficiency and Leverage)
- Interpretation of ratios, what each ratio is really telling
- When are ratios useful?
- · What are their limitations?
- Trend analysis
- Industry comparisons
- Key analysis question formation and list from the cash flow statement – risk identification

Working Capital

- The working capital cycle
- The link of the working capital cycle with liquidity and cash flow
- Ratios which are relevant to working capital
- Working capital vs. working investment
- The structure for financing working capital
- Factors influencing working capital: demand and supply, change in volumes, price changes, trade terms
- Potential risks in working capital
- · Risk mitigants in working capital

Unit 4 – Cash Flow Forecasting and Modelling

Projections and Forecasts

- Tools for projecting financial statements
- Defining assumptions
- Which dependent variables do we want to project?
- Projecting the income statement
- Seasonality
- Using value drivers to make decisions on future business profile
- The key cash drivers
- · Forecasting cash flows
- Looking at historical cash flows as basis for future cash flow
- Forecasting the balance sheet
- Assessing a company's financing needs
- Working capital projections
- New funding requirement and affordability
- Ratios in projections

• Sensitivity analysis – adjusting critical assumptions and value drivers

Building the Business Model and Projections

- Limitations on the information provided through financial accounts
- Understanding the reliability of financial data
- The five cash drivers
- Direct and indirect presentations of cash flows – variety of cash flow statements to be assessed and analysed; approaches to cash flow calculation and interpretation
- Different cash flow definitions FFO, RCF, FCF, RCF, levered and unlevered cash flow measures
- Methodology for assessing corporate projections and/or to prepare them for less sophisticated clients

Unit 5 – Pricing Credit Risk

The Principles of Credit Pricing

- Risk return profile
- Premium for taking on more risk
- Cost of capital and the Capital Asset Pricing Model (CAPM)
- Risk and the loan portfolio
- Risk and the related sectors
- The structure interest rate and fees
- What type of loan facility is suitable for borrowing
- Understanding how debt structure and security should be linked to the reason for the borrowing
- · What is the source of repayment
- A borrower's status and credit
- The role of maturity in pricing

Methodologies for Credit Pricing

- Using the Micro Finance model
- Establish the capital structure of a bank and the Basel III idea of capital
- Return on Risk Adjusted Capital (RORAC)
- Pricing and the market
- · Different types of pricing methods

Unit 6 - Collateral and Covenants

Collateral

- What is collateral?
- The characteristics of good and bad collateral
- Practical issues of taking, valuing and enforcing collateral
- Basis of valuation
- How robust is a security charge over commercial real estate?

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- The need to think about alternative sources of collateral and security to real estate
- A layman's guide to security interests a brief explanation for non-lawyers of the key aspects of different types of charges, pledges and liens
- Security interests and general obligations
- Guarantees key issues to consider about both guarantee and guarantor when taking this form of protection
- How collateral impacts pricing debt
- Methods of security: mortgages, lien, pledge

Covenants

- Non-financial clauses and conditions
- Negative Pledge, Cross Default, Material Adverse Change
- Change of control clauses: definitions, strengths and weaknesses
- Financial covenants when and how do they protect the bank
- Balance sheet and income based covenants
- Cash flow covenants in detail
- Designing intelligent covenant packages that provide timely early warning of problems and allow the bank to act to protect its interests

Unit 7 – Writing a Credit Report

The Contents of the Credit Report

- Purpose of the loan facility
- Structure of the facility
- · Review of the client
- Financial information
- Review of financial information
- How will the loan be repaid

Did you know?

developments.

more information.

We also run a Credit Risk

training course in Central

covering the latest regulatory

See page 72 or contact us for

London over three days,

- Company risks and mitigants
- Covenants
- Collateral
- Decision

THE MECHANICS OF DERIVATIVES AND FINANCIAL PRODUCTS

A state of the art guide to the uses & applications of financial securities & derivative products



DELIVERED BY DISTANCE LEARNING OVER 16 WEEKS

This ground-breaking course will provide you with a practitioners guide to the major securities and derivative products; their unique nuances; the inherent risks and how they are used in financial markets around the world. This course consists of eight unique modules which will ensure you understand the mechanics of the subject, enabling you to develop a strong theoretical and practical understand of current securities and derivatives applications.

Unit 1 - Equities, Global Equity Markets and Indices

- The differences between a security and a derivative: fundamental financial claims; ownership of equity vs. a derivative claim which is contractually bound to the performance of an underlying or fundamental claim
- The principal types of equities: ordinary (common) shares, preference shares, convertible securities, ranking for dividends, liquidation priority
- Issuance of equities: stages of IPO's, private placements, secondary offerings, rights issues, role of underwriters
- · Equity markets and trade execution
- Order driven/quote driven platforms: alternative trading venues, dark pools, order types, trade settlement
- Warrants, covered warrants and Contracts for Difference (CFDs): relative risks of warrants and covered warrants; mechanics of a CFD
- High frequency trading: market making, liquidity provisioning, flash crashes
- Equity valuation: dividend discounting models, financial ratios, fundamental analysis
- Historical overview of equity
- Review of major equity Indices: market classifications, major markets, emerging markets

Unit 2 - Fixed Income Securities

- Characteristics of Sovereign Bonds: US Treasury market; UK gilt market; Japanese government bond market; principal EU markets; index linked bond characteristics; stripped government bonds
- Characteristics of corporate debt: Eurobonds, Floating Rate Notes (FRNs), subordinated, Asset Backed (ABs), zero coupon bonds, convertible debt securities
- Issuance of fixed income securities: pricing and role of underwriters/syndicates; spreads over government bond benchmarks; over LIBOR; fixed and floating charge securities
- Fixed income markets and trade execution: Inter-dealer (IDB) price-driven electronic trading platforms; OTC inter-dealer voice trading; on-Exchange trading
- Valuation of fixed income securities: time value of money/discounting; yield to maturity; clean and dirty prices; trading cum dividend and ex dividend
- Bond sensitivity: modified duration and convexity; the term structure of interest rates
- Securitisation: Mortgage Backed Securities (MBS), CDOs, more exotic types

Unit 3 – Money Market Securities, Foreign Exchange and Settlement

Cash instruments and markets: treasury bills; commercial paper; money market funds; deposit insurance and default

compensation schemes

- Money markets: repo market, re-hypothecation
- Foreign exchange instruments and markets: characteristics of global FX Market, 24 hour nature, de-centralised, spot contracts, FX Forwards, FX Futures, currency swaps
- Macro-economic drivers of global capital flows: FX in emerging markets, exotic currencies, interest rate parity and pricing of forwards
- Clearing, settlement and safe custody: prime brokerage and equity finance, principles of Delivery vs. Payment (DVP)
- Custodians/Nominees: designated nominee, pooled nominee accounts, legal ownership/beneficial ownership
- Purpose, requirements and implications of securities lending: function of SBLIs, market makers

Unit 4 – Exchange Traded Funds and Collective Investment Schemes

- Characteristics of Exchange-Traded Funds (ETFs)
- Contrast passive index tracker ETFs with actively managed funds
- · Examination of geographical ETFs
- Characteristics of Collective Investment Vehicles (CIVs): OEICs, unit trusts, investment trusts, Real Estate Investment Trusts (REITs), Life assurance investment bonds, endowment policies, annuities
- Management of CIVs
- Structured products
- Hedge funds

Unit 5 – Exchange Traded Derivatives: Futures and Options

- Futures and options traded on exchanges: contractual assets; centralized clearing (CCPs); regulatory initiatives designed to promote migration from OTC to CCP; central clearing vs. counterparty risk
- Legal framework: clearing, initial margin, variation margin, novation and the role of Central Counterparty (CCP)
- Factors of options pricing: Black Scholes Merton model, binomial tree methods, option premium, understanding the "Greeks", delta and dynamic hedging, time value, intrinsic value
- Types of options: puts and calls; perspectives of buyer and writer; American; European; Asian style; risks to buyer/writers of options
- Characteristics of futures contracts
- Principal futures contracts: Eurodollar, bond futures, short term interest rates, stock index futures, FX futures, Energy, Metals, agricultural products
- Exchanges and platforms: open outcry; order types accepted by the markets; market orders; limit orders; cash settlement/physical delivery

THE MECHANICS OF DERIVATIVES AND FINANCIAL PRODUCTS

continued...

Unit 6 - Key Elements of Swaps

- · Characteristics and rationale in the development of swaps
- Principal types of swaps: interest rate swaps, plain vanilla and more complex, FX swaps, currency basis swaps, commodity swaps, equity swaps
- Credit default swaps how they work and how they are quoted
- Counter party risk: treatment under Basel III, role of collateral, principle of "netting"
- ISDA documentation: Master agreements and protocols, collateralisation

CASE STUD

The re-structuring/default of Greek government debt in 2012, impact on the sovereign CDS market, jurisdiction of swap agreements, Contingency Action Clauses (CACs)

Unit 7 - Risk Management with Derivatives

- Stress testing for derivative portfolios with non-linear characteristics: modelling methods, contingency scenarios, Basel III focus on stress testing, Extreme Value Theory (EVT)
- Monte Carlo simulations: how to conduct them; quantifying the exposure and severity of "outliers"; tail risk
- Principal components analysis uses in implementing risk management with derivatives
- Examination of the CME's SPAN algorithm regarding market volatility and liquidity
- Explanation of how margin works in the futures markets uses of collateral in mitigating counter-party risk with swaps
- Correlation issues: use of copulas; modelling techniques; non-linear risk characteristics; left tail dependencies; how these impacted CDOs
- Complex credit derivatives: basket CDS products; nth to default type structures

Unit 8 – Trading Derivatives, Hedging and Investment Strategies

- Derivatives users
- Usage of derivatives by banks to hedge credit and market risk
- Principles of hedging with futures: swaps and options, delta and gamma, volatility
- · Hedge ratio calculation for equity and bond futures
- Futures spread trading intra-market spreads and intermarket spreads
- Option strategies: long and short straddles, strangles, bull and bear spreads, motivations for strategies, risk/reward payoff diagrams
- Relative merits of different derivatives for hedging purposes: costs, counter-party risk, liquidity of markets, market to market issues
- Examination of role of derivatives in financial crisis of 2007/8: systemic risk, correlation issues

IFF's Distance Learning courses are produced in partnership with Middlesex University and offer participants the opportunity to study for a Post-Graduate Certificate



About the University

Middlesex University is a large London based university with a history in higher education dating from 1878. In 1992 it was granted the Royal Charter making it a university. It offers a broad range of courses through four academic schools of Arts and Education; Business; Engineering and Information Sciences; Health and Social Sciences and the Institute for Work Based Learning.

The university has over 34,000 students studying on Middlesex courses worldwide, both at its own campuses and also with partner institutions, making it one of the largest providers of British university education to international students.

International

Middlesex University Business School is a major international business school based in London with overseas campuses in Dubai and Mauritius and a global portfolio of partnerships delivering high quality accredited programmes in business and management.

Staff and students come from a wide spectrum of cultures and backgrounds with a common interest in executive education that is world class, modern and applicable. Middlesex University Business School is proud of its dedicated teachers and its rich range of learning resources including distance learning and virtual learning environments. The alumni are represented at the highest levels of organisations in business, the arts, healthcare and education.

Heritage

The Business School's heritage is based on strong partnerships with industry and the professions. The roots of the Business School lie in Hendon Technical College, one of the founding component colleges of Middlesex University, that opened in 1939. Middlesex introduced one of the UK's first personnel management courses in the 1950s. The College's Department of Management Studies introduced the BA Business Studies degree in 1965. This was the first course in the UK launched under a new government blueprint for business programmes. Within two years, the Middlesex course had become the largest Business Studies degree in the UK. The research output in business and management is thriving – the Business School had the second highest number of staff, among the modern universities, to submit to the 2008 Research Assessment Exercise (RAE).

Quality

The Quality Assurance Agency (QAA) visited Middlesex in the Spring of 2009 and noted in its report that its auditors had confidence in the University's current and likely future management of its academic standards and of the learning opportunities available to students.

Excellence

Middlesex University has been awarded The Queen's Award for Enterprise for outstanding achievement in international trade.

THE MECHANICS OF GLOBAL FINANCIAL MARKETS

A complete practical guide to Global Financial Markets



DELIVERED BY DISTANCE LEARNING OVER 16 WEEKS

This unique course has been designed to equip you with foundation level overview of the global financial industry, financial markets and macro-economic drivers of capital flows it is supplemented with an examination of major financial asset classes, portfolio theory, asset allocation and risk management.

Unit 1 – Business Models And Drivers Of Capital Flows In Global Capital Markets

- · Functions and business models of financial institutions
- Overview of global capital markets
- Macro-economic drivers of financial markets



Global Imbalances: deficit economies of the

West and the surplus economies of Asia

Savings glut and distortion to global interest rates

Unit 2 – Primary Asset Classes

- Equities as an asset class
- Essential characteristics of fixed income securities
- Sovereign & government bonds
- Corporate debt instruments
- Issuance of fixed income securities
- Fixed income markets and trade execution



Examination of the UK gilt market; types of gilts; index linked gilts

- Maturity structure of UK vs US government debt; nature and trading of STRIPS
- Structured products and exchange traded funds (ETFs)

Unit 3 – Monetary Policy And Credit Markets

Monetary policy of central banks



Role of ECB and Eurozone as a special case – EMU currency union, AQR, SSM, EBA

- Interpreting credit market data
- Introduction to derivative instruments



- Disruptive and significant changes in derivatives market structure resulting from Dodd Frank, Basel III and EMIR regulations regarding OTC and Exchange traded derivatives
- Contrast collateralisation of bilateral (OTC) derivatives trades and CCP trades

Unit 4 – Options And Swaps

Key Features of Options



Explanation of dynamic delta hedging

- Overview of interest rate swaps: pricing, risks and valuation
- Overview of Credit Default Swaps (CDS)



AIG Financial Products debacle with Credit Default Swaps
Explanation of Wrong Way Risk (WWR)

Unit 5 - Foreign Exchange And Futures Markets

- Overview of The Foreign Exchange Market
- FX Forwards, Options and Swaps



• Focus on the EUR/USD cross currency basis swap and the widening of a negative basis during periods of financial stress

• Exchange Traded Futures: Features and Risks



Illiquidity episodes in futures markets – Flash Crash of 2010 and the Flash Rally in the US Treasury Futures Market in October 2014

THE MECHANICS OF GLOBAL FINANCIAL MARKETS

continued...

Unit 6 – Portfolio Theory, Asset Allocation And Hedge Funds

• Portfolio Theory and the Risk/Return Trade Off



Significance of heightened correlations amongst the performance of diverse asset classes and the implications for portfolio diversification

- Asset allocation: Overview
- Hedge funds



Examination of the global macro strategy offered by several prominent hedge funds

Unit 7 - Financial Instability And Risk Management

· Indicators of stress and financial instability



The collapse of Northern Rock

- Drivers of asset bubbles
- Overview of risk management



JP Morgan's \$6 billion losses from the "London Whale" trades

Unit 8 – The Regulatory Environment And Corporate Governance

- Regulatory environment and regulatory capital
- · Governance and risk culture of financial firms



Examination of the circumstances surrounding the LIBOR fixing scandal

Collation of themes and outlook for markets in the medium term

THE MECHANICS OF INTERNATIONAL TRADE FINANCE

A comprehensive practical guide to the banking products currently used in the world of international trade finance, together with the financing solutions that might be packaged to meet a customer's needs



DELIVERED BY DISTANCE LEARNING OVER 16 WEEKS

This course has been developed to provide you with a step-by-step guide to international trade products, the impact of the International Chamber of Commerce regulations governing them and the risk factors/potential structures to be considered when financing trade related transactions.

Unit 1 – Introduction To International Trade Finance

International Trade

- Conflicting needs of seller and buyer
- Nature and importance of the
- commercial terms of trade • Type of risks encountered in
- international tradeOverview of the methods of payment

Trade Documentation

- Nature and use of negotiable documents
- Use and key features of each of the trade documents to include the sales invoice, bills of exchange (draft), promissory note, bills of lading, and other transport documents
- Importance of cargo insurance and preshipment inspection
- Methods of exercising control over the goods during transport and the features and value of documents of title

Trade Finance

- An explanation of what trade finance is, when used and its benefits
- The difference between trade services and trade finance

Unit 2 – Collections, Aval and Forfaiting

Collections

- Use and operation of DP and DA collections and appreciation of the ICC rules URC
- Bank responsibility
- Collection instructions and the process
 of protest in the case of dishonor
- Risk considerations and benefits for each of the parties

Advance Against Collections

- Method of financing collections and how these are structured
- Risks appreciation and benefits

Bank Aval

- Use and operation of bank aval
- Obligations and risk considerations of the avalising bank

Discounting Bills of Exchange

- Financing of bills of exchange with and without recourse
- Operation of discount finance

- Forfaiting
- Use and operation of forfaiting
- Nature of debt obligations and required due diligence
- Commitment to purchase; advantages to the seller
- · Forfaiting agreements; key terms
- · Benefits of the secondary market

Unit 3 - Documentary Credits

Principles and Usage

- · When used, key principles and parties
- Operation
- Appreciation of the ICC UCP, ISBP and URR rules

Issuing the Documentary Credit

- Risk appreciation for the applicant and issuing bank
- Obligation of the issuing bank
- Structuring the import credit to mitigate risk
- · Calculating the credit facility limit
- Advantages and disadvantages for the applicant

Advising/Negotiating the Documentary Credit

- Difference between advising and nominated bank
- Role and responsibility of the nominated bank
- Structuring the export credit to mitigate risk for the beneficiary and as a source of repayment for the bank
- Advising the credit
- Handling amendments
- Advantages and disadvantages of the export credit for the beneficiary

Confirmation

- Unconfirmed credits; beneficiary risk appreciation
- Risk, responsibility and obligations of the confirming bank
- Silent confirmation; the difference between an undertaking to pay and a commitment to negotiate

Documents

- Presentation and document examination
- Impact and process of a discrepant presentation
- Operation of the discrepancy waiver

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• Right of the issuing bank to reject a discrepant presentation

Payment

- Complying documents
- Discrepancy waiver approval
- Importance of the bank to bank reimbursement clause

Import Credits; Financing Opportunities

- Usance payable at sight credits
- Re-finance

Export Credits; Financing Opportunities

- Pre-shipment finance
- Discounting bank acceptances
- Purchasing deferred payment undertakings
- · Negotiating with and without recourse
- Allocation of proceeds

Unit 4 - Structured Credits

Oil Credits

- Variation in amount clauses
- · Use of letters of indemnity
- Requirement and risk considerations of shipping guarantees

Revolving Credits

- Use and operation
- Revolvement by value or period, and the operation of cumulative and noncumulative credits
- Calculation of the credit facility limit
- Risk appreciation for the issuing bank and applicant
- Comparison with credits reinstateable
 by amendment

Transferable Credits

- Use and operation
- · Allowed changes on transfer
- Risk appreciation for the issuing bank
 Advantages and disadvantages to the middle-party
- Comparison with back to back credits

Back to Back Credits

Standby Credits

Demand Guarantees

- Use and operation
- Risk appreciation for the financing bank and middle-party
- Structuring master and counter credits to mitigate risk

Unit 5 - Demand Guarantees and

· Key principles, parties and when used

· Comparison with conditional

guarantees and surety bonds

THE MECHANICS OF INTERNATIONAL TRADE FINANCE

continued ...

- · Appreciation of ICC URDG rules
- Operation of direct and indirect guarantees
- Role of the counter guarantee
- Issuing the demand guarantee
- Obligation of the guarantor
- Risk appreciation for the applicant and guarantor
- Structuring the demand guarantee wording to mitigate risk and manage risk exposure
- Types of trade-related guarantees
- Governing law
- Impact of extend or pay demands and foreign law and usage on expiry dates
- Claim demand; examination and payment obligation
- Cancellation
- Risk considerations for the applicant, counter guarantor and guarantor
- Benefits to the beneficiary
- Transferable guarantees and comparison with assignment

Standby Credits

- Key principles, parties and process
- Bank responsibility and obligations
- Appreciation of ICC rules ISP
 compared with UCP
- Types of trade-related standbys
- Operation of a commercial standby credit
- Automatic extension (evergreen)
- Presentation of claim demand documents; examination and payment
- Risk considerations for the issuer and applicant
- Benefits to the beneficiary
- Structuring a commercial standby credit to mitigate applicant and issuer risk
- Comparison with demand guarantees

Syndications

• Purpose operation and risk participation

Unit 6 - Structured Trade Finance

Structured Trade Finance

- What structured trade finance is and when it is used
- An alternative to 'balance sheet' lending'
- Trade loans; their use, structure and management of different risk exposures
- Determining the extent and nature of the structure
- Self-liquidating and partially structured facilities
- Use and construction of the trade cycle timeline and the formulation of the credit facility amount

Evaluation of the Trade Proposition

- Key aspects of assessment
- Relevance of the borrower's financial statements
- Principle of 'going concern' and relevance of other lending facilities

Security

- · Its use and purpose
- Taking transactional security over the goods; the use of pledge and trust receipts
- Relevance and importance of 'the law of the place'

Export Credit Agencies

- Their role in supporting exports
- ECA eligibility
- Nature of support
- · Buyer and supplier credit facilities
- Credit insurance
- · Working capital and bond support

Unit 7 – Open Account Payments and Their Financing

Open Account Trade

- Shortage of hard currency in key production areas
- Operation and market dynamics
- Mechanism of international payment transfer
- Use and operation of the bank payment obligation 'BPO'

Trade Payables

- · Buyer; purchase ledger management
- Creditor listing importance
- Structured methods of financing trade creditor payments
- Funding deposit payments
- Pre-shipment funding for the manufacturer

Approved Trade Payables Finance (Supply Chain Finance)

- Use, process and operation
- Role of the bank in supporting the buyer and suppliers
- Credit risk
- Proprietary and multi-finance platforms
- Risk appreciation for the bank, buyer and supplier
- Benefits

Trade Receivables

- Importance of the commercial agreement
- Nature of the sales invoice, credit notes and risk considerations

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- Seller; sales ledger management
 Debter listing importance
- Debtor listing; importance

Credit Insurance

- Types of cover
- Its use to support financing
- Evaluation of the terms

Receivables Finance

- Advance vs. debt purchase
- Risk evaluation
- Structuring receivables finance
- Disclosed and undisclosed facilities
- Eligible and ineligible debts
- Credit protection
- Rights of recourse
 - Assignment of debt
 - Presentations of debts for finance
 - Prepayment and retentions
 - Capture of the trade receivable
 - Specific debt purchase
- Factoring
- Confidential invoice discounting
- Off-balance sheet finance; true sale?

· Definition and types of commodity;

Characteristics of the commodity

Purpose of commodity finance

Financing the commodity trader

Pre-export Finance and Prepayment

• Use of red and green clause credits

· Use of warehouse receipts, deeds of

attornment and warehouse warrants

· How commodities are traded; the role

base and precious metals, energy and

Unit 8 - Commodity Finance

The Commodity Market

Market participants

Financing Commodities

Use and operation

Due diligence

Warehouse Finance

Use and operation

Off-take agreements

Risk considerations

Due diligence

Borrowing Base

Reporting

Countertrade

Counterpurchase

Risk considerations

Pre-sold or speculative?

Collateral management

Security pool and lending value

Other Forms of Commodity Trade

Control of cash flow

• Use and operation

Risk considerations

Risk considerations

of commodity exchanges

· Risks in commodity finance

agriproduce

market

THE MECHANICS OF INVESTMENT MANAGEMENT

An intensive guide to the world of modern investment management



DELIVERED BY DISTANCE LEARNING OVER 16 WEEKS

This cutting edge course represents a new frontier in the world of investment management education. Consisting of eight intensive modules, it offers participants at all levels in the sector an outstanding opportunity to improve both their technical and theoretical investment management knowledge and gain a recognised qualification as a result.

Unit 1 – Current Themes in Institutional Investment Management

Current Themes in Institutional Investment Management

- Fiduciary responsibility and investing: the responsibility of other people's money
- Institutional investors and the financial markets: Some modern history of the financial markets
- Asset classes, asset allocation, and asset liability modelling
- Different investor typologies: endowments, pensions, insurance, large family offices
- Dissecting securities: Are stocks and bonds called securities because they are safe and secure?
- Market cycles, historical returns, bull and bear markets, bubble and crashes
- Drivers of investment returns: stocks and bonds
- Dissecting contemporary market benchmarks
- Market efficiency theory and the difficulties in beating the markets: Passive or active portfolio management and benchmarking
- Introducing investment statistics: return series, volatility, market betas, correlations, other quantitative investment management tools
- Comparing modern portfolio management theory and post modern portfolio theory
- Modern risk management: the failure to protect against risk
- Back to human behaviour: investment markets, the human element, behavioural finance theory

Unit 2 – Stock Markets and Equity Investing

Stock Markets and Equity Investing

- Global stock markets: evaluating historical experience and returns
- Drivers of stock markets: stock market indicators and market valuation metrics
- Predicting stock market bubbles: Some examples from the past

- Benchmarking equities and running passive, mid tracking error, or alternative investment portfolios
- Stock selection: An insight into the work of a security analyst
- Understanding model investment returns and corporate growth from the perspective of a security analyst
- Understanding corporate lifecycles and investment returns
- Market capitalisation, size indicators, value growth stocks
- The intriguing universe of illiquid securities: Special concerns of small caps and microcaps
- Characteristics of a successful stock picker. What you need to know
- Evaluating charts and technical indicators
- Equity portfolio construction: diversification, concentration, tracking error, sector, size, style bets
- Evaluating the short side of the market
- Constructing long short portfolios
- Leveraged equities and running leveraged equity portfolio

Stock selection

Portfolio construction

Unit 3 – Fixed Income Portfolios and the Art of Lending

Fixed Income Portfolios and the Art of Lending

- Fixed income returns over time, credit quality and portfolio risk profiles
- Fixed income typologies: types, structures, covenants, puts and calls and fixed income issuance
- Dissecting fixed income product by risk factors
- High yield and distressed securities markets and investment
- Understanding the bond market: Over the Counter (OTC) securities and liquidity
- Managing a bond portfolio throughout the cycle: curves, slopes and the impact of economics
- Adding leverage to bond portfolios

- Introducing convertible bonds
- Introducing risk management of bond portfolios
- The insatiable growth of structured fixed income offerings
- Securitisation and market complexity
 - Understanding and evaluating waterfall securities
 - Evaluating mortgage securities
 - Structured notes and market blowups: a five star investment fund
 - Risk managing fixed income: Some introductory notes

Unit 4 – Introducing Derivatives

Introducing Derivatives

- The growing world of financial market derivatives
- Options, futures, forwards, swaps and other derivatives: definitions
- Understanding market sizes and derivative risks:
- Derivative market trading convention: exchange vs. OTC
- Derivative writing and short optionality risk
- Short and long optionality in nonderivative investment strategies
- Understanding Option Greeks: Delta, Gamma, Theta and so forth
- Option pricing and valuation: Black Scholes and option pricing formulae
- Stock option chains: An exercise in leveraged stock picking
- Option based investment strategies: Introducing volatility arbitrage
- Option Hybrids: convertible investment and convertible arbitrage strategies
- Credit default swaps and buying credit protection
- Derivatives as modern portfolio management and hedging tools

Unit 5 – Modern Asset Allocation Strategies

Modern Asset Allocation Strategies

- Asset liability matching and the asset allocation process
- Different asset allocation plans used by different types of institutional investors

THE MECHANICS OF INVESTMENT MANAGEMENT

continued...

- · Asset allocation and portfolio liquidity constraints
- · Understanding asset liability modelling Creating optimal portfolios: mean variance asset allocation
- Correcting inputs for asset allocation optimisation: revisiting asset class returns, expected returns, correlations and correlation roll
- · Post-modern portfolio theory and other asset allocation systems
- · Pension fund asset allocation: A look at some majors and their approaches
- · Endowment style asset allocation: A look at some majors and their approaches
- Tactical asset allocation
- · Core vs. satellite approaches to asset allocation
- Portable alpha strategies and their implementation
- Asset allocation with alternative assets

mainstream?

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The endowment asset allocation model becoming institutional

Asset allocation

Unit 6 – Risk Management of the **Institutional Portfolio**

Risk Management of the Institutional Portfolio

- Defining, measuring, monitoring and controlling risk in the portfolio
- Understanding investment market risk: The central difficulty of statistical probability vs. uncertainty
- · Risk measurement tools: VaR and its derivatives
- Running risk simulations via Monte Carlo and other statistical measures
- · Multifactor models and risk simulations
- Stress testing the portfolio and stress testing methodology
- Tail risk: Attempting to measure the unexpected
- Hedging risk: Hedging techniques
- Fixed income hedging strategies: Liability hedging vs. financial market hedging
- Equity hedging strategies
- Evaluating the cost of risk management: Costs of hedging

- · A perfect hedge: Hedging mismatches and when hedges do not work as expected
- · The "hedged fund" vs. the "hedge fund"



Evaluating the risk in a fixed income hedge fund

Unit 7 – Exploration of Alternative Assets: Progressive Adoption of Hedge Funds, Private Equity and Real Estate by Institutional Investors

Exploration of Alternative Assets

- · Alternative assets and liquidity: return drivers
- · Alternative returns and correlations: a good argument
- · Reviewing hedge fund strategies: defined and trade examples
- · Long short and quant market neutral pair trading strategies
- Event driven strategies: mergers, special situations, turnarounds
- . Credit and fixed income arbitrage strategies
- · Quant strategies: momentum, trend and countertrend models
- · Global macro: top down views of the world
- · Hedge fund risk profiles: operational risk vs. investment risk
- Fitting hedge funds into the institutional portfolio
- · Private equity and the institutional investor
- Return and liquidity profile
- · Venture, mid-market, LBO and takeovers, different styles for different purposes
- · Evaluating a LBO or venture deal
- · Special concerns of real estate investments
- · Real estate in the cycle
- Direct or indirect investments
- Timber: other types of real estate investment
- The work of evaluating and selecting hedge funds and private equity funds
- Risk managing alternative portfolios

Implementing and growing the _ alternative portfolio for an institutional investor

Unit 8 – Further Exploration in Institutional Asset Management: **Current Topics of Liquidity, Asset** Allocation, Risk Management, Alternative Investments and Fiduciary Responsibility

Further Exploration in Institutional Asset Management

- Evaluating in detail the institutional asset allocation policy
- Advanced asset allocation: implementing the decision and process
- Further notes in benchmark selection and manager evaluation
- Asset allocation decisions and fiduciary investment committee or board
- Challenging assumptions about liquidity in the asset allocation process: illiquid vs. liquid assets
- · Further topics in institutional risk management
- The dangers of a love affair with equity markets: understanding Japan
- The asset allocation process and risk management of the portfolio: two inseparable entities
- · Evaluating the risk in my asset allocation program
- Risk management of alternative investments: investment risk and operational risk
- The new component to risk managing an institutional portfolio: counterparty risk
- · Practical challenges in implementing a risk management programme
- Risk management as a board level decision
- Where we go from here: future topics in the institutional asset management industry
- Institutional portfolio asset allocation, alternative assets, and total portfolio risk management: towards a worldclass solution and best practice

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THE MECHANICS OF LOAN DOCUMENTATION

An essential guide to the key legal issues of loan documentation



DELIVERED BY DISTANCE LEARNING OVER 16 WEEKS

This cutting edge course has been developed to provide you with a step-by-step guide to the documentation used in corporate loans, bilateral loans and syndicated loans. The course consists of eight intensive and practical units and focuses on the practicalities of loan documentation. It offers professionals within the sector the opportunity to enhance both their technical and theoretical knowledge of the subject.

Unit 4 – The Syndicated Multicurrency

Financial covenants and financial terms

Majority lenders: Snooze-n-Lose, borrower

· Finance parties' rights and obligations

The Loan Agreement - The Definitions

Loan Agreement

Break costs

as participant

· Third party rights

The Facilities

Purpose

Material adverse effect

· Conditions precedent

· Prepayment and cancellation

Several liability of obligors

Additional Payment Obligations

Repeating representations

Know your customer checks

Interface with credit default swaps

Compliance certificate

· Notification of default

Missing undertakings

· Right of agent to act

The role of the agent

· Security over lenders' rights

· Potential conflict of duties

Agent's management time

• The law of appropriation

The Main Negotiation Arenas

Unanimous consents

· Sharing among the finance parties

Utilisation request

Prepayment

Costs of Utilisation

Default interest

Increased costs

Representations

Undertakings

· Disposals

Scope

Events of Default

Grace periods

Insolvency

Carve outs

Sundry Clauses

Resignation

Administration

Severance

Confidentiality

The Finance Parties

Basel III carve out

Market disruption

· Tax and indemnities

Group

Unit 1 - The Choice of Law, **Enforcement, Contractual** Interpretation, Secondary Lending

The Choice of Law and the Problem of Enforcement

The Different Legal Systems

- · Local law
- International systems of law
- Finance documentation standardisation

Origins of Law

- Statute law
- The common law
- · The Law of Equity

Enforcement of Rights · Law of the contract

- Jurisdiction
- · Enforcement Legal opinions The Interpretation of Contracts

Freedom of Contract

- Literal interpretation
- The Ejusdem Generis rule
- Contra proferentem Promissory estoppel

Verbal Contracts

- Evidence
- Administration
- Credit

Secondary Lending **Motivations for Sell-Down**

- Traditional origins
- More recent forces
- Sell-down methodologies
- Documentation of sell-down

Unit 2 – Pre-Requisites for the **Enforcement of Contractual Rights**

The Pre-Requisites

Incorporation

- Validity of incorporation
- · Company characteristics

Ultra Vires

- The constitution of the company
- · The 'old' law
- The new law
- Summary of Ultra Vires

· Sample board resolution

- Consideration Mutuality – Nexus
- Quantum
- · Absence of consideration: artificial consideration, deed
- Consideration brainteasers

Intention to Contract

- The offer
- The acceptance

- Illegality Severance clause Indemnities
- Impossibility

Uncertainty

Annual Security & Documentation Audits

Why Such an Audit is Recommended

- · The sorts of issues that can be identified
- · The implications of discovering issues pre-
- insolvency or post-insolvency
- A suggested checklist

Unit 3 – The Key Clauses in a Loan Agreement

Loan Agreement Overview

Standard Format Loan Agreements

- · As used in Europe & Asia
- · As used in the USA
- The layout of a loan agreement

The Key Clauses **Negative Pledge**

- What the clause does
- The borrower perspective
- · The reality of loan default
- The consequences of the contractual breach
- · Reversal of contraventions
- Policing the clause
- · Fiduciary duty vs. contractual duty
- · Sarbanes Oxley implications

Material Adverse Change

- · What the clause does
- The legal problem
- What does material mean
- The commercial argument

Cross Default Clause

- · What the clause does
- Cross default or cross acceleration
- Notification of default
- Negotiation issues

Waiver of Default

- What the clause does (apparently)
- · Doctrine of laches
- · Reservation of rights

Set Off

• What the clause does: equity law, mutual accounts, legal name, beneficial interest, fore-notice

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Insolvency

Role of the Agent and the Arranger

- · What the clause does
- · Appointment of the agent

Negligence

- The Duty of Care
- The test for negligence
- · Examples of negligence Disclaimers for liability

THE MECHANICS OF LOAN DOCUMENTATION

continued...

Unit 5 – Guarantees and Letters of Comfort

Guarantees

General Observations

- · Main differences from civil law guarantees
- · The common law rights of a guarantor
- Voodoo words and phrases
- Standalone guarantees

Content

- Consideration
- · Payment on demand Shortfall guarantees
- All monies
- · Ejusdem generis Limitation of liability
- The variations clause
- · In addition to
- Security held on trust .
- Continuing security and Clayton's Case Termination of guarantee
- Set-off
- No competition clause
- Indemnity clause
- · Joint and several
- Multiple guarantors Contagion
- Conclusive evidence clause
- · Survivorship clause
- Property of the bank Evidenced in writing
- Discharge

Letters of Comfort

Why Guarantees may not be Available

· Letters of acknowledgment

Example of Comfort Letter

Preliminary Requirements

- The intention
- Pre-contractual negotiations

Case Precedent

- Kleinwort Benson Ltd vs. Malaysia Mining Corporation Berhad [1989]
- · Banque Brussels Lambert vs. Australian National Industries Ltd (1989)
- Re Atlantic Computers (1995)
- The Toronto Dominion Bank vs. Leigh Instruments et al (1998)
- HSBC vs. Jurong Engineering (2000)
- LaSalle Bank NA vs. CitiCorp Real Estate (2003)
- Gate Gourmet Australia Pty Limited vs. Gate Gourmet Holding AG (2004)
- Toppan Printing vs. Chinese United Press Ltd. (2005)

Summary - Forensic Analysis of the Umble **Holdings Letter**

Unit 6 - Security under English Law

Security Classification & Overview

- **General Observations**
- Jurisdiction
- Classifications
- Registration

Possessory Security and Hypothecation

- Pledge
- Constructive pledge
- Banker's lien

Proprietary Securities

- Mortgages
- · Fixed charge
- Floating charge Mortgage debenture – fixed & floating charge

Administration

Litigation costs

Diminution

Insolvency

Preferences

Priority of Claims

Misfeasance

Directors Contribution

Wrongful trading

· Shadow directors

Purpose Vehicle

Implications

The tightrope

Due diligences

Project Cash Flow

Trapped cash

· Group covenants

Tax transparency

General partnership

· Limited partnership

· Ring-fenced deals

Legal Implications

Financing the SPV

The subordination

The Exit

SPVs in Leveraged Finance

The financing tranches

• The intercreditor deed

· The senior loan agreement

Tax efficiency

Trusts

Tax laws

SPVs in Project Financing

Limitation of recourse

Reversal of position

The cash flow waterfall

· Cash flow covenants

Single cash flow source

• Fraudulent trading - civil

• Fraudulent trading - criminal

Unit 8 - When the Borrower is a Special

Characteristics of Project Finance and the Legal

· Operational contracts and risk allocation

Alternative Dispute Resolution (ADR)

Project Accounting and Legal Issues

Minimum capitalisation laws

Earnings Per Share (EPS)

Selection of the SPV Format

Limited liability company

Unincorporated Joint Venture (UJV)

· The structure of investment funds

Characteristics of Leveraged Finance and the

Criteria for Selecting a Vehicle

• Winding up/liquidation

Avoidance of Transactions

The Tests for Avoiding Transactions

· Winding up or administration

• Transactions at an undervalue

· Extortionate credit transactions

Avoidance of floating charges

Transactions defrauding creditors

· Summary of regimes

The Pari Passu Principle

Connected persons

The Voidable Transactions

Choses in Action

· Book debts and other receivables

Retention of title – Romalpa clauses

Specific Instances of Security

Land

- Tenure
- Registered interests Unregistered interests
- Enforcement

Shares as Security

- Value and suitability
- Legal mortgage over shares
- · Equitable mortgage over shares
- Pros and cons of legal vs. equitable mortgage over shares

Life Insurance Policies

- Taking the security
- Imperfection

Fixed and Floating Charges

Batting Order for Security Documents Summary of Clauses

Covenant to pay

- Charging clause
- Negative pledge
- Covenant to deposit assets
- Covenant for further assurances
- Power of sale
- Power to appoint a receiver
- Chargor covenants
- Power of attorney
- Ruling off accounts
- Combination and set-off
- Notices
- No prejudice
- Severance clause

Unit 7 – Insolvency and Contractual Rights

Insolvency in the UK

Preliminary Observations

- Terminology
- History Workout

Financial Difficulties

- Voluntary schemes
- The Point of Insolvency

· The twilight zone

The London rules

Regimes

Insolvency Procedures

The Insolvency Act 1986

Objectives of insolvency

Guiding legal principles

Receivership simpliciter

· Administrative receivership

Composition of Creditors

· The cashflow insolvency test

· The balance sheet insolvency test

Insolvency Act 2000 and Enterprise Act 2002

Corporate Voluntary Arrangement (CVA)

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· Statutory schemes of arrangement

A complete practical guide to Market Risk



DELIVERED BY DISTANCE LEARNING OVER 14 WEEKS

This opportune course will provide you with an overview of all the different types of risk that have such a significant impact on our global financial markets today. This intensive course consists of seven units, which will provide you with an invaluable grounding in the subject, enabling you to develop a strong theoretical and practical understanding of current market risk practices.

Unit 1 – Fundamentals of Trading Activities And Risk Metrics

Fundamentals of Market Risk

- Review of major asset classes and financial instruments – equities, bonds, FX, commodities
- Identify principal drivers of each asset class – e.g. what drives interest rates and bond yields
- Equity Risk capital loss, bankruptcy, reorganisations, dividend suspension
- Interest Rate Risk risks associated with changes in short term/long term rates, yield curve
- Foreign Exchange Risk risks of adverse currency movements in assets denominated in currencies other than the domestic or base currency
- Commodity Risk risks of price changes, shortages, limit down moves
- Derivatives Risk delta, counter-party credit risk, basis risk, non-linear price behaviour
- Trading Risk gaps where not trading takes place, Flash Crashes, merits and demerits of stop losses
- Execution Risk difficult market conditions, failure to implement legs of arbitrage
- Liquidity Risk illiquid and volatile markets, margin calls, market capacity constraints
- Calculating Value-at-Risk modelling techniques, stress testing
- Limitations of normal distribution as basis for probabilistic modelling
- Hedging strategies with futures, options and swaps
- Uses and limitations of key risk ratios Sharpe, Treynor, Calmar

Trading Book Activities and Mark to Market Practice

- Liquidity of different trading markets and financial instruments
- Mark to market, mark to model CVA integral to forward looking fair value approach
- Accounting basics of fair market valuation of portfolios
- IFRS 13 and consideration of counter party credit risk, exit pricing
- Liquidity horizons as part of the FRTB methodology for market risk
- Clarification of the three levels used in IFRS 13 for valuation purposes

- Level Three and mark to model exposures
- Quantifying the exposure and severity of "outliers" and tail risk
- Understanding of the key concept of delta of a portfolio – hedging, options
- Importance of non-parallel shifts in yield curves to fixed income instruments
- Contrast financial instruments with linear/non-linear returns and hedging profiles
- Overview of structured products and securitisations

Value-at-Risk, Expected Shortfall and Market Risk Analytics

- Rationale for a metric quantifying risk within a confidence level – development of VaR
- Parametric Value-at-Risk limitations associated with standard normal deviate values
- Overview of "fat tails" the leptokurtic nature of financial time series data
- Reasons not to use the normal distribution as basis for probabilistic modelling
- Expected Shortfall (ES) and empirical methods for determining VaR
- Quantifying the exposure and severity of "outliers" and tail risk – Extreme Value Theory

Unit 2 – Interest Rate Risk and Overview of Basel III's Capital Adequacy Requirements

Key Drivers of Interest Rate Risk

- Bond duration calculation: Macaulay's duration, Modified duration, Convexity
- Calculating Basis Point Value (BPV) or DV01 from Modified Duration
- Explanation of an Excel model which permits the calculation of key bond metrics
- Explanation of the term structure of interest rates the yield curve
- Some historical examples of different shapes to the yield curve
- Theories as to what factors influence the shape of the yield curve
- Credit spreads, Over Treasuries, Over LIBOR
- Swap spreads which curves to use, OIS, LIBOR
- Fundamental statistical tools for

measuring and analysing risk – mean, variance

• Feedback loops between market risk, credit risk and liquidity risk

Overview of Basel III's Capital Adequacy Requirements

- Definitions of Regulatory Capital Core Tier 1, Tier 2
- Amount of capital increased base requirements, stricter definitions
- Conservation and other discretionary Pillar Two capital buffers
- Counter cyclical buffer macro prudential applications
- Leverage ratio impact on the notional amounts within swap agreements
- Contingent convertibles CoCos characteristics, examples of issuance
- Bail-in, bail-out, gone concern implications for capital
- Outline of the RWA methodologies
- Overview of each of core risks: market risk, credit risk, operational risk, liquidity risk
- Basel Committee's response to the financial crisis
- Distinction between the Banking Book / Trading Book
- Emphasis on new liquidity standards and ratios stable funding
- Available for Sale issues impacts on liquidity, HQLA, rigidity of balance sheets
- Review of the distinction between the banking book and the trading book
- Basel III attempts to address regulatory arbitrage
- Treatment of securitisations and offbalance sheet exposures

Swaps, Credit Value Adjustment and Collateral Management

- Detailed analysis of counter party risk with respect to OTC swaps
- Recognition of counter party credit risk for regulatory and fair value purposes
- Explanation of Expected Exposure (EE) and Expected Positive Experience (EPE)
- Nature of collateralization ISDA treatment
- Impact of netting on CVA
- Impact of collateral on CVA
- Overview of Funding Valuation Adjustment (FVA)
- Overview of Capital Valuation Adjustment (KVA)

continued...



How effective collateralisation strategies offset CVA in credit exposure

Unit 3 – Liquidity Risk and Market Micro-Structure

Asset Pricing in the Presence of Illiquidity

- Random walks and the assumption of continuous trading
- GAP risk and the effect of jumps on stochastic pricing frameworks
- Close relationship between correlation, liquidity and volatility
- Predicting volatility changes: GARCH
 models
- Attempts to create a meaningful value for VaR adjusted for liquidity
- Why Basel III has incorporated liquidity horizons into the FRTB
- Impact of liquidity conditions on short term funding
- Need for Contingency Funding Plans (CFPs)



Detailed examination of how liquidity horizons are a fundamental feature of risk assessment within the FRTB framework



Flash Rally in the US Treasury Market in October 2014

- Circumstances of a breakdown of liquidity in the US Treasury market in October 2014
- Changing nature of dealer inventories of corporate bonds – unintended consequence of Basel III?
- Liquidity in the US Treasury futures market
- Changing micro-structure of cash and futures markets for fixed income instruments
- Role of high frequency trading firms
- Implications for liquidating bond holdings under stressful market conditions

Market Micro-Structure and Macro Liquidity Risk

- Fragmentation of market venues and technological infrastructure
- Impact of HFT on market microstructure
- New role of electronic market makersLiquidity providers and liquidity
- consumers conflicts within HFT algorithms

- Circuit breakers in equity markets, futures markets
- Paradox of macro liquidity-hardest to find when most needed
- Dynamic hedging strategies can they be applied in illiquid markets?
- Statistical arbitrage strategies break down through lack of liquidity



The Flash Crash of May 2010 Impact of High Frequency Trading (HFT) on liquidity in US equity market Preparation

Text: Findings Regarding the Market Events of May 6, 2010

The Collapse of Northern Rock

Preparatory text: Treasury Select Committee's report (TSC) entitled The Run on the Rock which can be found at the following location on the web: www.publications.parliament.uk/pa/cm200708 /cmselect/cmtreasy/56/56i.pdf

Unit 4 – Systemic Risk and Case Studies From The 2007/8 Crisis

Lessons from the 2007/9 Global Financial Crisis

- Complexity of certain securitisations and structured products
- Lack of liquidity for securitised products during second half of 2008
- Examine dramatic rise in haircuts in money markets in 2008
- Contagion risks with dispersed OTC derivative exposures
- Rationale for the use of central counter parties (CCPs) in clearing
- Evidence that asset returns are not normally distributed – skew, kurtosis, fat left tails
- Left tail dependencies across assets
- Probability of joint default/liquidity crisis

 problems with modelling joint default risk – focus on the limitations of the Gaussian copula approach to calculating risk for combining assets in structured products.



Financial contagion and the breakdown of systemic liquidity after the collapse of Lehman Brothers and during the Eurozone crisis

Monitoring Benchmarks to Assess Market Conditions

- Money market indicators indicating credit/liquidity stresses
- LIBOR/OIS spread, TED spread
 Haircuts in repo markets, CDS rates

- Foreign exchange indicators cross currency basis swap spreads, abnormal FX carry trade behaviour, EM FX volatility
- Market stress indicators VIX, bid/ask spread

Cross Sectional Market Correlations and Systemic Liquidity

- Elevated and unstable correlations poses fundamental problem for CAPM inspired model of portfolio diversification
- Paradox of macro liquidity-hardest to find when most needed
- Correlations approach unity during financial contagion i.e. most assets move down together –market lacks liquidity
- LTCM crisis triggered by Russian default lead to illiquidity in US Treasury market and collapse of fund – required Treasury rescue
- Circuit breakers in equity markets, futures markets
- Dynamic hedging strategies can they be applied in illiquid markets?
- Statistical arbitrage strategies break down through lack of liquidity



Securitised Banking and the Run on Repo (Paper by Gorton and Metrick, 2010) Available from www.nber.org/papers/w15223

- Contrasts the traditional notion of a run on banks via depositor withdrawals with the experience in the 2007/8 crisis characterised as a run on repos
- Examines the linkage and circularity in market's need for liquidity in 2007/8 via repos but where there was a shortage of highest rated collateral and lower quality including sub-prime securities were offered as collateral
- Explanation of the methodology linking the changes in LIBOR-OIS spread and ABX index during the financial crisis
- Explanation of the tri-party repo and clearing system in the US

Bear Stearns Balance Sheet and Financial Condition in 2008

- Examination of 10-Q statement for H2, 2008 of Bear Stearns in some detail
- This illustrates the financial condition of Bear prior to being subsumed within JP Morgan Chase
- Review of stockholder's equity in relation to total balance sheet
- Reliance on short term repo funding
- Disclosures of its approach to liquidity risk management

continued...

Examination of AIG and its Role in the Credit Default Swap Market in the Lead up to the 2008 Crisis

- Explanation of credit default swaps rationale, usage, cash flow analysis
- Nature of the sub-prime mortgage securities that AIG underwrote
- Rescue by the US government consequences of bail out to its counter parties

J P Morgan's London Whale Trade losses

- Highlights of US Senate Subcommittee
 Report
- Explanation of the credit derivatives market
- Symptoms of poor risk management and culture at world's largest bank

Unit 5 – Derivatives, Collateral and CCPs

Overview of Derivatives

- Contractual assets swaps, options, forwards, futures contracts
- Legal framework, CME Contracts, ISDA Master Agreement, ISDA Credit Support Annex
- Central Clearing Parties (CCPs) Initial Margin and Variation Margin
- OTC Collateral arrangements Swap Execution Facilities (SEFs)
- Regulatory issues related to CCP vs. OTC
- Option pricing methods BSM, binary trees, delta, gamma etc
- Cost of carry, contango and backwardation
- Counterparty risk, basis risk, liquidity risk
- Foreign exchange derivatives swaps, currency forwards, non-deliverable forwards
- Cross currency basis swaps structure and pricing, effect of interest rates differentials
- US T Bond futures market, LIFFE gilt futures market
- Short term interest rate futures -Eurodollar futures market
- Swap spreads over governments
- Equity Index and individual equity options and futures

Focus on Moving Clearing to CCPs from OTC arrangements

- Basel III treatment of OTC clearing vs. CCP clearing
- Different capital charges for OTC and CCP
- Novation as replacement for original OTC bilateral agreements
- Nature of Swap Execution Facilities (SEFs)
- Role of Chicago Mercantile Exchange
 (CME) in swap clearing

- Emphasis on CCPs in Dodd Frank
- How margin works in CCPs initial
- margin and variation margin
- Comparison of collateral requirements for OTC vs. CCPs
- Forecast that in future clearing will be 75% via CCPs 25% via OTC
- Inter-operability across CCPs overall margin requirements
- Explanation of novation as replacement for bilateral trading activity
- Do CCPs concentrate risk and create more chance of systemic crisis?
- Membership funding, loss mutualisation at CCPs, government guarantees?
- ISDA netting agreements -netting by novation, exposure netting, collateral management



Full explanation of Initial Margin/ Maintenance Margin – Excel calculations exercise



Determining Initial Margin – CME SPAN algorithm to determine worst probable one day losses

Mechanics of CCPs

- Novation as replacement for original OTC bilateral agreements
- Nature of Swap Execution Facilities (SEFs)Role of Chicago Mercantile Exchange
- (CME) in swap clearing
- Comparison of collateral requirements for OTC vs. CCPs
- Cross margining use of futures and exchange traded derivatives in conjunction with swap clearing

How safe are CCPs?

- The Waterfall Structure of a CCP
- Auctioning procedures following member defaults
- Assessments for Clearing Members
- Inter-Operability across CCPs risks and ESMA findings
- Review of current regulatory concerns regarding risks inherent in CCPs

CME SPAN algorithm

- Scanning methods
- Volatility scaling methods
- Initial margin and variation
 margin

LCH.Clearnet Approach to Stress Testing

- A Framework for the Standardised Stress Testing of CCPs
- Examination of the fivestage methodology
- Stress scenarios historical and hypothetical

Unit 6 – Tail Risk, Stress Testing and ICAAP

Stress Testing - the Big Picture view

- Basic concepts of stress testing base case vs. adverse (worst case) scenarios
- Explanation of how adverse scenarios
 may be constructed and simulated
- Distinguishing between macro/global factors and local/micro factors
- Explanation of core techniques for conducting stress tests
- Stress testing using hypothetical returns
- Stress testing using historical returns
- Stress testing for derivative portfolios
 with non-linear characteristics

Overview of Scenario Generation for Stress Testing

- How can we generate and calibrate shocks and adverse scenarios
- simulations randomised market scenarios expressing risk factors
- macro factors establishing associations with broad macroeconomic variables
- expert judgment qualitative and forward looking
- · Identification of key risk factors
- Associating probabilities to risk factors quantitative and qualitative approaches
- Mapping qualitative and descriptive data to numerical values
- Model based simulations of adverse case scenarios
- Identification of worst case scenariosData deficiencies and estimation of
- outlier scenarios
 Just how extreme can adverse scenarios become?

Stress Testing Methods, Benefits and Limitations

- Modelling methods contingency scenarios
- Monte Carlo simulations how to conduct them
- Explanation of Principal Components Analysis
- Sizes of historical samples are they sufficiently large to include wide variety of conditions?
- Limitations of back testing when used to assess CDO risk in US housing data
- Danger of optimising risk management parameters - over-fitting to the historical data
- Examination of network theory and contagion risk
- Quantifying the exposure and severity of "outliers" and tail risk

continued...



Stress testing within the European banking system – the Asset Quality Review programme

Tail Risk in Financial Markets

- Limitations of normal distribution as basis for probabilistic modelling
- Quantifying the exposure and severity of "outliers" and tail risk
- · Systemic Risk indicators
- Money market indicators indicating credit/liquidity stresses – LIBOR/OIS spread, TED spread, "haircuts" in repo markets, CDS rates for banks, sovereign CDS rates
- Foreign exchange indicators cross currency basis swap spreads, abnormal FX carry trade behaviour, EM FX volatility
- Market stress indicators VIX, bid/ask spread, market microstructure measures
- Swap spreads LIBOR/OIS, EURIBOR/EONIA

Overview of ICAAP - Internal Capital Adequacy Assessment Process

- Explanation of the Three Pillars Approach of the Basel Accords
- Outline of the role of Pillar Two supervisory review
- Definitions of economic capital, regulatory capital and how they differ
- Importance of stress testing in capital management
- Risk management reporting to supervisors and market disclosures
- How does ICAAP fit within the increased requirements of Pillar 1 under Basel III?

Unit 7 – Legislation and Regulations Regarding Market Risk

Basel III Treatment of Market Risk

- Separation of trading book and banking book
- Risk weightings for market risk
- Contrast approaches to calculation of capital charges for market risk
- Standardised approach
- Overview of Internal Models Approach (IMA)
- Incremental Risk Charge and Stressed VaR
- Implementation details in US, EU and Asia

International Regulatory Framework and G-SIBs

 Identification of world's G-SIB banks and classification methods

- International efforts to address the Too Big to Fail issue – has progress been made?
- Additional Basel III requirements on institutions which are systemically important SIFIs
- Basel III method for determining capital levels required of G-SIBs
- TLAC and bail in capital requirements by 2022
- Uneven implementation of Basel III across jurisdictions - regulatory arbitrage
- Dodd Frank Act Financial Stability Oversight Council (FSOC)
- Living Wills, current status of large US banks without approval of proposed living will arrangements
- Motivation for establishment of countercyclical capital buffers
- Leverage ratio how much variation is there in international implementation?
- International resolution challenges finding "attachment" point for G-SIBs
- Dealing with obligations and liabilities that are subject to foreign law

Fundamental Review of The Trading Book (FRTB)

- Contrast Basel III treatment of market risk
 with the FRTB
- New methodology for the Standardised Approach (SA) and Internal Models Approach (IMA)
- Expected Shortfall (ES) replaces Valueat-Risk (VAR)- designed to better capture tail risk
- Liquidity horizons rationale and calculation methods
- P&L Attribution Test
- Some concerns about FRTB implementation
- IMA validation testing
- Full revaluations and short cuts e.g. Taylor series for option pricing
- Focuses on sensitivities of risk positions in the trading book
 Evenue of coloration data risk observes
- Example of calculating delta risk charge for simple FX portfolio
- Vega Risk Charge, Curvature Risk Charge, Default Risk Charge

Interest Rate Risk in the Banking Book

- Distinction between banking and trading books
- Economic Value of Equity (EvE) and Net Interest Income (NII) metrics
- IRRBB link to Basel III capital adequacy requirements
- Implementing Basel's six scenarios specifications and recommended implementation
- · IRRBB and enterprise-wide stress testing

The European Markets and Infrastructure Regulation (EMIR)

- European Union law impacts market participants in the EEA (European Economic Area)
- Impacts market participants outside EEA
 trading with an EEA counterparty
- Purpose is to reduce systemic risks posed by derivatives transactions
- Requires reporting of all derivatives
- trades to an authorised trade repository • Centralised clearing derivatives trades
- above a certain thresholdReconciliation of derivatives portfolios
- periodically and
 Agreements for dispute resolution procedures between counterparties

MiFID II

- Requires banks to have more sophisticated risk controls in place to manage risk associated with trading activities
- Requires banks to adapt the way risk is managed on an intra-day basis
- Organisational requirements for trading activities
- Algorithmic trading and obligations for clearing members
- Position limits and position management controls in commodity derivatives



HFT trading under MiFID II will be subject to a range of restrictions and controls



Stress testing of algorithms by the participants, built in circuit breakers, the introduction of minimum tick sizes across trading venues and allowing venues to adjust fees for cancelled orders

THE MECHANICS OF MERGERS & ACQUISITIONS

A complete practical guide to mergers & acquisitions



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Unit 1 – Fundamentals of Mergers And Acquisitions (M&A)

Introduction and Definitions

- M&A in perspective
- why acquire?
- rationale for M&A and the influence of the market for corporate control on the form of the deal
- M&A importance of understanding the business cycle – boom and bust
- what constitute M&A activities and the M&A toolkit
- The importance of M&A in the creation of value
 - understanding the core components of value creation and the risk-return trade-off
 - tensions in creating shareholder value
 other stakeholder perspectives and potential differences vis-à-vis management and lenders – the agency issue
 - characteristics of successful versus unsuccessful M&A deals
 - the 'winner's curse'
- Creating a clearly defined strategy to guide the selection of an M&A route
 - defining M&A objectives consistent with corporate strategy
 - understanding the source(s) of your success
 - estimating funding potential
 - identifying success criteria and avoiding the winner's curse
- Determining screening criteria to narrow the number of prospective targets by understanding key issues including
- what can be established from publicly available information
- how to form a realistic view of the acquisition opportunity
- due diligence, why is it important as regards many issues – legal, accounting, management and environmental
- critical importance of commercial due diligence
- whether and when to use specialist advice
- clear and valid measures of success

Unit 2 – Valuation

Review of Valuation Methods

- Understanding the different methods that can be used to value mergers and acquisitions
 - Discounted Cash Flow (DCF)
 - multiples derived from comparables
 - asset valuation

Valuation Modelling for M&A Analysis

- Developing a financial model to evaluate prospective targets and synergies
- Assessment of the 'value drivers' that are driving value
- Value driver analysis and its application in a free cash flow model
- Important technical issues to understand
- cost of capital and its estimation in relation to mergers and acquisitions
- relevance of terminal value and challenges in its estimation
- discounted cash flow to the firm and equity – when to use each
- Challenges of and the principles to be applied in the valuation of a potential acquisition opportunity with different business units in terms of identifying the value of the various parts of the business and the application of peer group analysis
- Importance of triangulating valuation using a number of different methods

Unit 3 – Synergies And Control Benefits

Synergies and Control Benefits

- Introduction to synergies and control benefits, the difference between them and challenges in their measurement and analysis within a transaction
- Important considerations in assessing synergies and control benefits
 - the strategic context
 - importance of understanding different perspectives, e.g. buyer's versus seller's and management versus credit committee
 - understanding the control premium

- principles in the valuation of synergies and control benefits
- the different types of synergies and control benefits – operating, financing, and tax

Valuing Synergies and Control Benefits Using the Incremental Value Effect (IVE)

- Use of the Incremental Value Effect (IVE) approach for valuing synergy and control benefit effects
- The challenges and the principles to be applied in the estimation of synergies and control benefits arising from a potential acquisition opportunity with different business units:
 - assessing debt capacity, financing synergies/control benefits
 - estimating the potential for refinancing

Unit 4 – Due Diligence

Importance of Due Diligence and Different Types

- Introduction to rationale for and the importance of due diligence most acquisitions fail!
- Review of the types of due diligence legal, accounting, financial etc.

Due Diligence in Practice

- Due diligence in practice, including
 - building an effective team
 - developing the due diligence checklist
 - data room development and management
 - document review
 - other information gathering
 - analysis and synthesis of information
 analysis of the competition peer
 - group assessment
 - obtaining third party information
 verifying the target's information

Importance of and Introduction to Commercial Due Diligence

- Critical importance of commercial due diligence for understanding potential success:
 - how due diligence can be linked with business valuation and

THE MECHANICS OF MERGERS & ACQUISITIONS

continued...

synergy/control premium assessment

- use of preliminary valuation and identification of key value drivers in > evaluating the high impact factors
 prioritising high impact factors to structure the direction of the due diligence process -high impact high likelihood investigated first
- Specific due diligence issues:
 hostile versus friendly deals
 - vendor due diligence

Unit 5 - Financing

Introduction to Acquisition Finance and the Perspective of Different Types of Acquirer

- Introduction to acquisition finance
- The difference between the publicly financed perspective and the privately financed (private equity) perspective

The Inflence of Financial Theory Upon Acquisition Finance

• Linking the financing of M&A with theoretical perspectives - the optimal capital structure

Review of Different Types of Acquisition Financing Instruments

- Different public equity financing instruments - debt, equity and other alternatives, e.g. mezzanine
- Examples of types of finance used in practice, including
 - secured and unsecured debt
 - asset-based finance
 - bridge financing
 - high-yield bonds
 - mezzanine debt/equity
 - subordinated seller notes and earnouts
 - equity

Unit 6 – Private Equity M&A

Introduction and Overview of Private Equity M&A

- Introduction to the private equity approach to M&A
- The increasing importance of private equity in M&A
- Overview of key issues in the private equity M&A process
 - creating a funding structure
 - valuation
 - due diligence

- negotiation
- legal issues and documentation

Buyouts in Private Equity M&A

- Introduction to buyouts
- Review of types of buyouts –management buyouts
 - -management buy ins
 - leveraged buyouts (LBOs)
- Leveraged buyouts
 - typical LBO structure
 - sources of financing
 - purchasing shares or assets
 - evaluating a buyout candidate
 - financing a buyout candidate
 - key practical issues

Unit 7 – Integration and Building Value

Introduction and Overview of M&A Integration

- Introduction to integration and its importance as a major contributor to M&A success
- Understanding what and how much to integrate, and the identification of essential disposals

M&A Integration in Practice

- Importance of pre M&A integration planning, scheduling and setting milestones
- Identification and estimation of potential problem areas, including – technology
 - organisational structure
 - culture
 - management and administration
 - compensation and motivation

Role of Restructuring in the Integration Process

- Dealing with underperforming parts of the business and restructuring
 - types of restructuring portfolio, management, and financial
 - pressures to restructure business turbulence and debt problems
 - restructuring options liquidations, divestitures, asset sales, and spin-offs
 - multi-business restructuring

Tools for Building Value From Integration

 Managing for value, integration and building value in the new business – tools available – Zero Based Budgeting (ZBB), Economic Profit (EP) analysis, and Value Based Management (VBM)

Unit 8 – Negotiation

Review of the Importance of Negotiation in M&A

- Introduction to negotiation and its importance as a major contributor to M&A success
- Understanding the negotiation process

Review of Negotiation Process

- Negotiation tactics for closing the gap between the buyer and seller
- Managing the negotiation environment
- Team selection issues
- Role of investment bankers and other advisors
- Developing a negotiating stance
- Developing a negotiation strategy based upon understanding value options
- acquisition defence strategies as a method for identifying value potential
- identification of the "best" buyer key criteria
- understanding different types of buyers – strategic versus private equity
- using the appropriate sale process to extract value

A complete practical guide to operational risk



DELIVERED BY DISTANCE LEARNING OVER 14 WEEKS

This opportune course will provide you with an overview of all the different types of operational risk that have such a significant impact on our global financial markets today. This intensive course consists of seven units, which will provide you with an invaluable grounding in the subject, enabling you to develop a strong theoretical and practical understanding of current operational risk practices.

UNIT 1 - BIG PICTURE OVERVIEW

Overview of Key Operational Risk Issues and Governance

- Distinguishing operational risk from other kinds of risk
- The impact of operational risk on the organisation
- Implementing an organisational structure based on holistic principles – ERM
- Well-resourced internal audit systems, proper risk discovery, measurement and reporting systems
- Overview of how to determine the level of regulatory and loss absorbing capital for op risk
- Determining the direct and indirect effects of adverse operational outcomes
- Estimating probability of adverse outcome and loss to business
- Determining the direct and indirect effects of an adverse outcome
- HR processes designed to screen new employees, conduct regular reviews, motivate and enhance employee morale
- Separation of risk and compliance function from front office/P&L targets

Adverse Consequences from Operational Failures

- Reputational risk the trustworthiness of businesses
- Extreme reputational damage may lead to business failure e.g. Arthur Andersen
- · Legal risk -enforceability of contracts with counterparties
- · Litigation risk fines and class action law suits
- Breaches of regulation e.g. BNP Paribas \$9 billion fine for violating US rules on dealing with black-listed countries
- Derivatives risks e.g. swap agreements between Orange County in California and investment banks were declared null and void
- Avoidance of overly complex instruments use standardised master agreements
- Roque trading e.g. Societe Generale, UBS
- IT systems failures and customer dissatisfaction e.g. TSB systems integration failure

The co

The consequences of the Deepwater Horizon oil spill disaster in the Gulf of Mexico for BP

Macro Level KRIs and Op Risk Indicators

- Characteristics of macro or systemic KRIs stress levels in the banking system
- Understanding the distinction between macro level KRI's and those which are endogenous to the operations of specific institutions
- Market stress indicators VIX, bid/ask spread, market microstructure measures
- Use of KRIs for operational risk assessments
- Aggregation of KRIs across different business units
- Development of contingency scenarios what if analysis
- Using ratios and KRIs for trend analysis

- Continued development of quantitative protocols, and reporting systems for detecting causes of risk resulting in financial loss
- Explanation of how Value-at-Risk (VaR) can be applied to operational risk

UNIT 2 – PEOPLE AND CONDUCT

Best Practice in Human Resource Management

- · Commitment by all levels of the organisation to ethical principles
- Codes of conduct articulation of the company's philosophy
- Focus on gender discrimination and prevention of sexual harassment
- Screening of the ethical profile of all executives and board members
- Full engagement of human resources personnel in the risk culture
- Enterprise wide support for ongoing professional development
- Diversity of perspectives ensure status quo is rigorously challenged
- Remuneration of risk and compliance teams must be wholly separated from front office interference, "star traders" and P&L performance?
- Rewards, bonuses should be adjusted for risk and claw backs and deferred compensation structures should be in place for key revenue generators
- Business ethics and corporate social responsibility (CSR)
- A socially responsible firm should be an ethical firm and vice versa - responsibility to all stakeholders and not just shareholders
- How do businesses ensure that directors, managers and employees act ethically?



Circumstances of the HSBC Money Laundering

- abuse
- Prohibited dealings with "outlaw" regimes
- Record fine paid to the US regulators

Rogue Trading – Low Frequency, High Losses, Reputational Damage

- Unauthorised trading and fraudulent trading is there a difference
- How did control systems fail to prevent very large losses?
- Concealment of losses informational asymmetry between risk takers and risk supervisors
- Conditional deferred payments for traders claw-backs, bonus payments in subordinated debt and restricted equity etc
- Contingency planning related to stress testing
- Design business systems with negative feedback not amplifying failures
- Deciding on the appropriate capital allocation for unauthorised trading
- Risk estimates should be fully factored into the assessment of viability/profitability from different kinds of operational activities

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Review the circumstances of the losses at Societe Generale in 2008 by J Kerviel, and at UBS in 2012 by Kweku Adoboli

LIBOR Rigging Scandal – Systematic Market Abuse

- Circumstances surrounding the manipulation of LIBOR
- Market manipulation, fraud and collusion with external third parties
- Evidence collected by Federal Reserve and Bank of England
- · Failure of the regulators
- Collusion between traders at different banks
- · Impact on trillions of dollars of derivative transactions
- Fines imposed by regulators
- Legal risk law suits
- Barclays recent change of business model and reorganisation
- Example of poor risk culture



UK Parliamentary Treasury Select Committee Report on LIBOR Rigging

UNIT 3 - SOFTWARE AND MODEL RISK

Reliance on Robust and Secure Software Systems

- Architecture of enterprise software integration and security issues
- Cyber risk how secure are in bound channels?
- How secure are outsourced systems?
- Documentation of home-made and outsourced solutions
- Increasing focus on data collection and aggregation FRTB issues
- Complexity issues integration of middleware with back office systems
- · New technologies and integration with legacy systems
- Preparation for block chain technologies impact on business processes
- Adoption of artificial intelligence (AI) based methods
- Use of machine learning and other cognition modelling

Data Aggregation Depends on an Integrated Software Architecture

- · Addressing failures of silo approach to risk reporting systems
- Need for integration of risk reporting systems across business lines and geographical regions
- Requirements within BCBS 239 for aggregating risk exposures
- Identifying potential risk concentrations before they manifest into a critical phase
- Implementing appropriate management information systems (MIS)2 at the business and bank-wide level
- Enhancing the infrastructure for reporting key information, particularly that used by the board and senior management to identify, monitor and manage risks
- Accelerating the speed at which information is available and hence decisions can be made
- Risk reports should be easy to understand yet comprehensive enough to facilitate informed decision-making.
- Description of the risk within FRTB regulations if bank loses ability to use IMA approach

• FRTB requires full integration of front and back office systems for assessing trading book exposures



Overview of IMA validation testing within FTRB – backtesting P&L attribution testing

Electronic Markets and Algorithmic Trading

- Description of multilateral trading facilities (MTFs), dark pools
- Fines levied for failure to disclose full list of participants in dark
 pools
- Fragmentation of market venues and technological infrastructure
- Impact of HFT on market micro-structure
- · Nature of "flash" trading with increased risk of "flash crashes"
- · New role of electronic market makers
- Regulatory surveillance of potential disruptive behaviour from algorithmic trading
- · Circuit breakers in equity markets, futures markets



The Flash Crash of May 2010 Impact of High Frequency Trading (HFT) on liquidity in US equity market

UNIT 4 – DATA SECURITY AND BUSINESS PROCESSES

Cyber Risk and Data Security

- Examination of all breaches and near misses
- Objectives, scope and reliability of incident recording
- Risks from external suppliers and clients outsourcing risks
- Management of contracts with third party suppliers
- Impact of new products, processes, business lines and locations
- Differentiation between prevention and managing negative outcomes
- Addressing the cultural divide between IT "tech" staff and senior management
- · Cloud computing and outsourcing Amazon Web Services
- Risk assessment process how does the business identify and respond to potential and actual risks?
- Risk governance philosophy needs to be fully integrated into all accounting, surveillance, IT systems and data storage back-up systems
- Change management implementing new requirements on privacy, GDPR etc

Critical Business Process Diagnostics

- Internal loss data collection collation to common causes
- Emerging risks identification new products and processes
 Thorough testing to ensure robustness of all new proposed
- offerings to clients
- Characteristics of re-engineering business processes (BPR)
- Six Sigma Approach application of the approach in financial services
- · Features and risks of Straight Through Processing
- "Digitisation, FinTech, blockchain" all these developments are really threatening banks' business models
- Design business systems with negative feedback not amplifying failures
- No process or activity too large or too complex for risks to be readily understood

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- · Adopt holistic and enterprise wide surveillance techniques
- Minor losses that may be accepted cost of remedy vs. toleration
- CINSE STUD
- Systems integration failure at TSB Bank
- Role of external consultants
- Middleware malfunction and inadequate testing
- Costs direct and indirect to the business

Root Cause Analysis

- Identification of underlying causes for operational failures digging beneath the surface
- Forensic and systematic analysis of large scale failures and near failures
- Data mining approaches and time line sequences critical nodes in networks
- Transforming from a reactive approach to operational failure to a pro-active approach
- Prioritising amongst multiple root causes
- Process mapping identify all critical steps, what can go wrong, what controls can be in place
- Establish the relevant metrics for each root cause leading to process disruptions
- Action plans to alleviate or mitigate symptoms arising from root causes

UNIT 5 – COMPLIANCE AND REGULATORY CHANGE

Public Policy and Role of Financial Regulators

- Balancing Regulatory Compliance and Internal Best Practice
- Increasing focus on macro-prudential regulation stress testing
- Role of political action groups and commercial lobbying
- Surveillance of financial services sector by regulatory bodies
- Focus on boundaries between financial crime and operational vulnerabilities
- Examination of the robustness of procedures to avoid money laundering
- Description of \$10 billion fine to BNP Paribas for dealing with clients in countries on US "black list"
- · Capital adequacy, Basel III, role of banking supervisors
- Miscellaneous risks arising from government/supra national actions
- · Confiscation, nationalisation, capital controls, FATCA
- Regulatory control of fund managements including hedge funds
- Consumer protection focus SEC, FCA, CFTC, EU Commission
- CASE STUD
- Revisions to the regulatory framework for banking in the UK since the 2007/8 financial crisis
- Role of BOE's Financial Policy Committee (FPC), examination of ring fencing
- Role of the Prudential Regulation Authority (PRA) and the Financial Conduct Authority (FCA) in the UK financial services sector

Basel Measurement Approaches for Operational Risks

- Brief outline of the Basel Basic Indicator Approach (BIA) and Standard Approach (SA)
- Explanation of the Basel III Advanced Measurement Approach (AMA)

- Scenario Based Approach (SBA)
- Loss Distribution Approach (LDA)
- Business environment and internal control factors (BEICFs)
- Key Risk Indicators (KRIs)
- · Role of senior management in identifying adverse scenarios
- · Distributions for occurrence and severity of losses
- Basel III Business Line and Event Type Codes
- Process Mapping mapping processes to appropriate regulatory categories
- Templates for data capture for Basel compliance and internal reporting
- Role of external data scaling of comparable institutions
- SBA templates
- Cascading of failures how to "group" associated losses

The New Basel Approach to Operational Risk

- BCBS Consultative Documents on revisions to current op risk
 approaches
- Explanation of the Business Indicator metric
- Non-linear scaling of operational risk to total revenue of a bank
- Using absolute values for estimating bank's exposure to op risk
- Review of the BCBS Operational risk Capital-at Risk (Op CaR) model
- Internal Loss Multiplier and Loss Component



Is the Basel Committee moving away from simulations and modelling tools for calibrating capital charges?

UNIT 6 – QUANTIFICATION, SCENARIO ANALYSIS AND MITIGATION

Risk Control Self-Assessment (RCSA)

- Risk identification kinds of risks and associated internal processes
- Involvement of internal departmental heads and op risk committee
- Questionnaires alerts to potential risk areas and points failure
- Conducting an RCSA Workshop role of facilitators, experts, back office
- Internal reporting mechanisms iterations, validation protocols
- Key Risk Indicators developing new KRIs and following peer aroups
- Monitoring systems to ensure no misconduct in trading and reporting
- Adequacy of internal controls to prevent rogue trading
- Is collateral being posted according to all obligations with counter parties and CCPs?
- Are all trading activities being checked by at least two separate parties?

Methodologies for Measuring and Modelling Operational Risks

- Basel Committee requires close monitoring of internal modelling
 and model risk
- Loss Modelling Methods contingency scenarios
- The Loss Distribution Approach (LDA)
- Templates for collecting loss data
- Using Scenario Based Analysis (SBA) for filling in gaps in data
- The role of Business Environment Internal Control Factors
 (BEICFs)

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- · Scarcity of historical data in the outliers for operational losses
- Different distributions for modelling severity of losses
- Monte Carlo based loss scenarios
- Stress testing methodologies
- · Data limitations involved in quantifying operational risks
- · Segregating internal vs. external software failures

Estimating Extreme Losses with Extreme Value Theory (EVT) and Power Laws

- Lack of outlier loss data challenge to statistical distribution analysis
- Usefulness of Pareto distribution in calibrating extreme value
- Worked examples of applying EVT to tail risk in operations
- Explanation of power laws in natural world earthquakes
- Evidence for power laws in finance
- How to determine whether power laws are present

Managing and Mitigating Operational Risks

- Enterprise wide risk control environment strategic management philosophy and cultivating an ethos of prudence and robust risk control
- Risk assessment process how does the business identify and respond to potential and actual risks?
- Risk control systems need to be pro-active not reactive not "fire-fighting"
- Avoid silos when risk information is kept isolated in separate divisions supervision and vigilance at the senior level becomes impossible
- Fully resourced compliance officers check on whether regulations are being followed
- Use of insurance products to mitigate operational losses

Legitimate and invalid uses of insurance to mitigate risk – taken from the Basel Committee's documentation on Operational Risk

UNIT 7 – RISK CULTURE AND GOVERNANCE

Symptoms of Poor Risk Culture

- Poor tone set by the key executives and weak governance
- Boards of directors with cronyism and lack of independent NEDs
- "The Enron scandal grew out of a steady accumulation of habits and values and actions that began years before and finally spiralled out of control"
- Inconsistent approaches to mark to market accounting e.g. JP Morgan's use of most favourable marks to avoid registering large Whale losses
- A "box ticking" mentality which produces myopia and failure to see the big picture
- Front office revenue generators not adequately subject to "internal controls"
- Over reliance on special purpose vehicles and off-balance sheet
 accounting
- · Failing to eliminate dysfunctional, legacy business processes
- · Failing to recognise "blind spots" of the organisation's culture

- Accepting a lack of transparency in high-risk areas
- Senior management endowed with "charisma" and an untouchable quality which makes them remote from internal criticisms



Collapse of Enron in 2001 and the dissolution of its auditors, Arthur Andersen

Changing the Risk Culture

- Cultural change requires sustained effort and time to adapt to new norms
- Organization's structure and culture should reward adherence and advocacy of best practices and disown activities that detract from it
- Consistent, coherent, sustained and visible leadership in terms of tone and practice from the top of the organisation – C-level executives and board members
- Support for ongoing learning and development associated with raising awareness and competence in risk management at all levels
- · Privacy and protection to whistle-blowers
- Very clear articulation of accountabilities for those managing risks and uncompromising approach to holding them to accountability
- Demotion of the notion of box ticking and encouragement of more holistic views
- · Avoidance of silos lack of macro oversight
- Systems of accountability, responsibilities bounded by safety thresholds, alerts, disciplinary guidelines, sanctions for violation



Avoiding group think – encourage diversity in thinking rather than ostracizing alternative viewpoints

Best Practices for Refining Governance and the Risk Culture

- Articulating a corporate culture which is fully aligned with the risk management process
- Enterprise wide risk control environment strategic management philosophy and cultivating an ethos of prudence and robust risk control
- Risk control systems need to be pro-active and not reactive not "fire-fighting"
- Risk governance philosophy should be fully integrated into all accounting, surveillance, IT systems and internal audit functions
- Frequent consideration of appointing new external auditors
- Selection of risk control strategies appropriate to the objectives of the business and implementation of such strategies
- Implementing an organisational structure including wellresourced internal audit systems, proper IT monitoring and back office functions
- Continued development of quantitative protocols, and reporting systems for detecting causes of risk resulting in financial loss
- HR processes designed to screen new employees, conduct regular reviews, motivate and enhance employee morale
- Fully resourced compliance officers check on whether regulations are being followed

THE MECHANICS OF PRIVATE EQUITY

A complete practical guide to private equity



DELIVERED BY DISTANCE LEARNING OVER 16 WEEKS

This opportune course will provide you with an overview of all the different types of private equity that have such a significant impact on our global financial markets today. This intensive course consists of eight units, which will provide you with an invaluable grounding in the subject, enabling you to develop a strong theoretical and practical understanding of current private equity practices.

UNIT 1 – FUNDAMENTALS OF PRIVATE EQUITY AND VENTURE CAPITAL

Introduction to Private Equity and Venture Capital

- Introduction, definitions and history
- What is the difference between venture capital and private equity?
- The pros and cons of being private
- Why private equity potential to add value from better governance, financial, and operational initiatives
- Credit crises, their impact and consequences for private equity
- Private equity and venture capital today and its changing face
- Importance of understanding the J curve
- Private equity investment strategies:
- leveraged buyouts
- venture capital (early vs. late stage)
- special situations (i.e. distressed)
- mezzanine
- secondary purchases
- fund of funds

Private Equity Investment Structures

- The private equity industry and sources of funds for financing new ventures, including angel investors, banks and other institutions
 - how are private equity and venture capital funds structured?
 - private equity limited partners and general partners
 - partnership structuring issues
 - general partner's key activities
 - > selecting investments
 - > structuring investments
 - > monitoring investments
 - > exiting investments
 - private equity partnerships and fundraising
 - private equity market
 - > investors
 - > intermediaries
 - > issuers
 - partnership covenants
 - evaluating general partners
- The life cycle of a fund, from launch to return of capital
- The costs of investing
- management fees
- carried interest

UNIT 2 – INVESTMENT PROCESS, DUE DILIGENCE AND RISK MITIGATION

Investment Process

- Investment origination in terms of finding investments: deal sourcing
- Choosing investments the screening process, screening criteria and selection

Understanding, Identifying and Mitigating Different Types of Risk

- Strategic risk
- Operational risk
- Management risk
- Political risk
- Currency risk

Analysis and Due Diligence

- · Importance of financial and valuation analysis
 - identification of key value drivers and identifying potential pitfalls
 - use and calculation of Discounted Cash Flow measures -Net Present Value/Internal Rate of Return (IRR)
- Commercial analysis
 - verifying the opportunity
 - evaluating ability to execute
- Legal considerations

UNIT 3 - VALUATION AND PRICING

Valuation and Pricing Considerations

- The difference between value and price
- Companies and the corporate life cycle and the impact on valuation
- Why value?
 - equity positions
 - fund growth from external parties
 - exit
 - remuneration base
- · Review of valuation approaches:
 - intrinsic valuation traditional Discounted Cash Flow (DCF) techniques and challenges in application, including a review of equity and entity valuation
 - relative valuation multiple based analysis revenue, profit, cash, asset - and challenges in application
 - probabilistic valuation sensitivity analysis, scenario analysis, decision trees and simulations
 - real options valuation potential value created from additional options

THE MECHANICS OF PRIVATE EQUITY

continued...

Private Equity Valuation

- The private equity approach to valuation
 - comparison of public equity and private equity valuation
 - importance of the exit driven perspective
 - relation between active private equity management and valuation
 - guidelines on private equity valuations International Private Equity and Venture Capital Valuation (IPEV) Guidelines
- Value creation in private equity and how private equity firms create value
 - minimise purchase price
 - maximise leverage
 - minimise liabilities purchased
 - manage transaction costs
 - improve business operations
 - maximise tax efficiency
 - optimise exit
- Valuation and what kind of value issues need to be considered;
 - absolute value
 - > what is the value of the business/opportunity?
 - > what is driving the value can the value drivers be identified and quantified?
 - > the importance of understanding the underlying business and how to build this around fundamental analysis
 - relative value
 - > what is the potential that can be extracted at exit?
 - > how does this value differ from absolute value?
 - > how can it be measured learning from merger and acquisition best practice – analysing operational, financial and other (e.g. taxation) effects
 - > importance of understanding

Incremental Value Effect (IVE)

 valuation architecture - analysing the business/opportunity by building according to desires and needs rather than using the 'standard' model

UNIT 4 – LEVERAGE AND BUYOUTS

Capital Structure and Debt Capacity

- Private equity and leverage
- Leverage as a strategy
- Traditional approaches to evaluate leverage
- Contemporary approaches to evaluate leverage
 - link with cost of capital minimisation
 - link with issues re DCF analysis methodology
 - > free Cash Flow (FCF) to the enterprise versus to equity, and the importance of understanding equity cash flows
 > sensitivities and identification of key value drivers
 - > identifying the discount rate
 - > debt maturity and repayment issues
 - > terminal value challenges
 - > assessing and challenging growth assumptions
 - triangulating value using alternative methodologies



Calculating debt capacity of a company

Private Equity and Buy-Out Structures

- Introduction to buy-outs
- Review of types of buyouts
- management buyouts
- management buy-ins
- leveraged buyouts (LBOs)
- Leveraged buyouts
 - typical LBO structure
 - sources of financing
 - purchasing shares or assets
 - evaluating a buyout candidate
 - financing a buyout candidate
 - key practical issues

Evaluating a buyout

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UNIT 5 - VENTURE CAPITAL

Venture Capital in Perspective

- What is the difference between venture capital and private equity?
- Why be a venture capitalist potential to add value from better governance, financial, and operational initiatives
- Venture capital today and its changing face Silicon Valley Model
- Importance of understanding the J curve
- · Venture capital investment strategies, including:
 - seed
 - start-up
 - expansion
 - mezzanine

Challenges in Evaluating Venture Capital Opportunities – Valuation

- · A life cycle view of companies
- · Characteristics of young companies and sectors
 - Valuation issues relative valuation
 - problems with multiple analysis
 - determining the starting point revenue multiples vs. profitability multiples
 - identifying potential stability for multiple calculation
- Valuing a start-up or early stage business in practice
 - primary errors made in valuing early stage businesses
 - undertaking macro and micro analysis
 - assessing potential product success and achievable market share
 - top down vs. bottom up approaches
 - bottom up approach to a valuation
 - estimating and using different discount rates theoretical vs. practical perspective
 - > single vs. phased discount rates

THE MECHANICS OF PRIVATE EQUITY

continued...

- > discount rates as maturity approaches and mean reversion
- ensuring consistency in a valuation
- intrinsic and extrinsic multiples
- real options and their potential impact on valuation

UNIT 6 – STRUCTURING AND RESTRUCTURING PRIVATE EQUITY INVESTMENTS

Structuring Private Equity Investments

- · Structuring for optimised returns
- Equity important distinction between public and private equity for structuring purposes
- Debt broad range of types, particularly venture debt
- · Debt, equity and mezzanine what is the difference
- What is Payment-In-Kind (PIK) debt
- What is mezzanine finance
- Why mezzanine finance is important in private equity
- What forms can mezzanine finance take
- Importance of mezzanine finance, particularly as a development tool

Distress and Restructuring

- Distress and restructuring as a potential private equity opportunity
- What are the types of company distress
- What is equity cure
- What is financial restructuring
- · What is a 'hair cut' and how does it work
- Powers of a secured lender
- Tools to restructure a balance sheet
- Equity investors, the impact of distress and the options available
- · Management and restructuring?

UNIT 7 – DEAL, APPROVAL PROCESS, EXECUTION AND DOCUMENTATION

Key Elements of The Deal, Approval and Execution Process

- Deal process inside the PE firm
 - initial screening of deals
 - "heads up" memorandum
 - non-binding indications / term sheets
 - detailed due diligence and evaluation
 - formal and detailed presentation to the investment committee
 - final approval and funding
- The role of the Investment Committee (IC)

Documenting a Transaction

- Key documents and their functions
- Term sheets and purchase agreement and the key sections thereof
- · Representations and warranties
- Covenants
- Conditions precedent
- Closing conditions

UNIT 8 - MANAGING AND REALISING PRIVATE EQUITY INVESTMENTS

Managing the Investment

- · The life-cycle of an investment
- Mechanisms of control
 - board representation
 - allocation of voting rights
 - control of access to additional financing
- Best practices
- Planning for problems

Realising the Investment - Exit Strategies

- Exit planning
- Review of methods and issues
 - types of sale:
 - > trade sale
 - > strategic sale
 - > fire sale
 - > secondary sale
 - advantages and disadvantages
 - the process
 - key success factors
 - estimating synergies valuing existing businesses on a stand-alone basis and comparing them with the value of the combined businesses
 - importance of understanding different perspectives control premium, valuation of synergies and perspective
 valuing the acquisition target with synergies
- Initial Public Offering (IPO)
 - advantages and disadvantages
 - process
 - valuation challenges
 - pricing and allocation
 - aftermarket
- Recapitalisation

THE MECHANICS OF PROJECT FINANCE

A state of the art practical insight into the world of modern project financing



DELIVERED BY DISTANCE LEARNING OVER 16 WEEKS

This cutting edge course represents a new paradigm in project finance education. Comprised of six core units and two elective units (chosen from two potential elective paths) it offers participants at all levels in the project finance sector an outstanding opportunity to improve both their technical and theoretical skills.

UNIT 1 – AN INTRODUCTION TO PROJECT FINANCE

What is "Project Finance" – How Does it Differ From Other Forms of Lending?

Who Uses Project Finance and Why?

- · "Off-Balance-Sheet" lending
- Project finance "Carve-Outs"
- · Joint ventures/unequal partnerships
- Risk sharing
- · Capital rationing/return maximisation
- "No Choice"

Key Characteristics of Project Finance – Corporate Structures and Contractual Relationships

- Usually (not always) limited-liability "SPV"
- Multiple contractual relationships

Disadvantages for Borrowers/Sponsors

- Increased complexity (risk identification/mitigation/allocation)
- Need for third-party due diligence reports
- Longer time-lines
- Higher debt costs interest margins and fees
- · Supervision by and reporting to lender group
- Tighter debt covenants and undertakings

Risk/Reward Relationships of the Players – Lenders and Borrowers/Sponsors

- Borrower/sponsor seeks to optimise return through NPV/IRR/WACC analysis and wide sensitivity analysis on both upside and downside
- Lender is not exposed to upside in business of analysing and managing/mitigating/transferring risk

The Impact of the "Credit Crunch" on Project Finance Markets

UNIT 2 – QUALITATIVE RISK IDENTIFICATION, ANALYSIS AND MITIGATION (A)

Sponsor Risk - A Potential "On-Off" Switch

- Competence and track-record
- Management skill-sets
- Equity injection capacity and timing

Country/Political Risk – Banks are Better at Accepting Commercial Rather than Political Risk

- What are the risks?
- Mitigating country / political risk

Risks of the Project Itself (Part One)

- Construction/completion risk
- · Operation and maintenance risk

UNIT 3 – QUALITATIVE RISK IDENTIFICATION, ANALYSIS AND MITIGATION (B)

Risks of the Project Itself (Part Two)

- Supply risks
- Reserve risk special type of supply risk
- Sales/offtake risk
- Approvals and permits
- · Environmental considerations
- Regulatory risk

UNIT 4 – QUANTITATIVE RISK ANALYSIS AND DEBT SIZING/STRUCTURING

The Borrower/Sponsor Objectives:

- Maximise debt
- · Minimise/delay equity injections
- · Maximise/accelerate distributions
- · Avoid "cash-traps"

Use of Different Techniques by Borrower to Assess Project Attractiveness – Cashback, NPV, IRR

THE MECHANICS OF PROJECT FINANCE

continued...

The Banker's Objectives – Timely Debt-Service with an Adequate "Cushion"

Debt Sizing and Sculpting

- The cash flow waterfall in more detail
- The Lender's model its structure and function
- CFADS the starting point for quantitative analysis and debt sculpting
- · Lender ratios for debt calibration and stress testing
- The NPV-based ratios (LLCR/PLCR) and sculpting to maintain loan-to-value
- · Control accounts and other "Cash Traps"
- Base case design and sensitivity running
- Getting to the optimum debt level balancing equity against bank funds

UNIT 5 – DOCUMENTING THE DEAL

The Documentation Process

- The lender/borrower/counsel interface
- Different approaches to the term sheet
- · Drafting for completeness with economy

A Recap on Syndicated Debt Terminology with Special Reference to Project Finance:

- Obligors borrower and guarantor
- Use of and access to the funds purpose, availability and conditions precedent
- · Loan economics interest and fees
- Repayment and/or prepayment

The Key "Command and Control" Mechanisms in Project Finance Agreements

- · Control accounts and the cash flow "Waterfall"
- · Availability and the debt: equity balance
- · Conditions precedent
- Reps and warranties
- Covenants
- Events of default

Borrower/Sponsor Needs and "Hot-Buttons"

- · Access to the loan facility
- · Limits on operating flexibility and control
- Cash-traps and "IRR-Killers"
- · Offences against the limited-recourse concept
- Pricing margins and fees

UNIT 6 - THE PROJECT FINANCE TIME-LINE AND PROJECT FINANCE SECURITY-TAKING

Steps in the Project Financing Process

- Pre-feasibility analysis
- Financial feasibility analysis using advisers
- Approaching lenders underwriting/best efforts; financing competitions
- The Banks' credit process
- Due diligence consultants
- The documentation process
- Reaching financial close

Lender Security-Taking Objectives

- Maintaining priority/defeating the "pari passu" principle
- Maintaining value
- Limiting dealings
- Negotiating strength
- Enforcement/disposal

Relative Value of Different Security Types Security in Challenging Locations

Key Security Instruments

- Guarantees and indemnities
- · Bank guarantees and performance bonds
- Pledges
- Mortgages and charges
- Assignments
- · Security over shares
- Credit balances
- Direct agreements

Elective Path A or Elective Path B

See following page for the above options

THE MECHANICS OF PROJECT FINANCE

continued...

Elective Path A or Elective Path B

Elective Path A

Elective Unit 1 – Infrastructure Project Finance

Sector Background

- History of/drivers for infrastructure project finance
- Contractual and legal framework
- Key project documents the concession and other government agreements

The Banker's Risk Analysis/Key Structuring and Pricing Drivers

- Local legal issues: procurement regime; Concession law;
- Insolvency law; experience and capacity; political risk Concession risk
- · Construction issues in infrastructure transactions
- · Operation and maintenance
- Typical risk allocations

Modelling and Structuring Methodology

- Base methodology
- Sector variants: roads, rail/light rail, ports, airports

The Infrastructure Project Finance "Identikit"

- Key lender concerns
- Typical maturity profile
- Likely gearing/leverage levels
- Debt sculpting methodology
- Pricing
- Security structures

Case Study

Elective Unit 2 – PPP/PFI Project Finance

Sector Background

- Drivers for PPP/PFI project finance/origins of the sector
- Features of PPPs/contractual and legal framework
- PPP/PFI agreements
- The PPP process/public sector involvement
- Investor drivers contractors and financial investors
- · Impact of "credit crunch"

The Banker's Risk Analysis/Key Structuring and Pricing Drivers

- · Local legal issues
- Concession risk
- Demand risk who takes it?
- Construction issues in PPP transactions
- Operation and maintenance
- Typical risk allocations
- Modelling and Structuring Methodology
- Base methodology
- · Sector variants: roads, hospitals, schools, prisons, waste

The PPP Project Finance "Identikit"

- Key lender concerns
- Typical maturity profile
- Likely gearing/leverage levels
- Debt sculpting methodology
- Pricing
- Security structures

Case Study

Elective Path B

Elective Unit 1 – Oil and Gas/Mining Project Finance

Sector Background

- The hydrocarbon value chain upstream to downstream
- Petroleum geology and reserves the "Bare Bones"
- Mining reserves the "Bare Bones"
- Exploration and development licences, concessions and other agreements

The Banker's Risk Analysis/Key Structuring and Pricing Drivers

- · Upstream oil and gas lending:
- Refinery finance
- Pipeline and storage finance
- LNG financing: liquefaction, regasification, tanker Finance
- Petrochemical financing · Financing the extraction and processing of other minerals

Modelling and Structuring Methodology

- Upstream oil debt structuring single and multiple fields
 Midstream/downstream debt structuring: refineries, LNG, petrochemicals
- Open cast and underground mining

The Oil and Gas and Mining Project Finance "Identikit"

- Key lender concerns
- Typical maturity profile
- Likely gearing/leverage levels Debt sculpting methodology .
 - Pricing
- Security structures

Case Study ₩)

Elective Unit 2 – Conventional and Renewable Power **Project Finance**

Sector Background

- How power markets work
- Financing power projects in emerging markets
- Developed/regulated markets "Base-Load", "Mid-Merit" or "Peaking"? CHP/cogeneration projects
- Renewable energy and energy from waste
- The Banker's Risk Analysis/Structuring and Pricing Drivers Offtake regime: power purchase agreements, tolling projects,
- merchant power, green certificates, feed-in tariffs
- Construction issues in power transactions
- Operation and maintenance regime
- Typical risk allocations

Modelling and Structuring Methodology

- Power purchase agreement transactions
- Tolling projects
- Merchant power
- Renewable power projects
- Cogeneration projects

The Power Project Finance "Identikit"

- Key lender concerns
- Typical maturity profile

Security structures

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Case Study

- Likely gearing/leverage levels
- Debt sculpting methodology Pricing

THE MECHANICS OF REAL ESTATE FINANCE

Develop the knowledge & skills to compete in today's dynamic global real estate market



DELIVERED BY DISTANCE LEARNING OVER 20 WEEKS

This modular course will equip you with a thorough practical grounding in all the different key elements of real estate finance. Consisting of 10 intensive units, this course will prove invaluable to all professionals in the markets looking to develop their theoretical and practical understanding of real estate finance.

Unit 1 – Introduction to Real Estate Investment and Development

What is Real Estate and Why Does it Matter?

- The concept and development of real estate
- Housing markets across the world
- The commercial investment market in real estate
- Definitions and range of real estate analysis

Real Estate in the Wider Economy

- Real estate assets and economic development
- Concept and application of real estate multipliers
- Corporate real estate policy
- Demographics and housing need
- Government policy and real estate

Building Blocks of Real Estate Financial Analysis

- · Gross and net income
- Differences in calculating Net Operating Income (NOI)
- Overall capitalisation rate and other aspects of ratio analysis
- · Capital expenditure issues
- Assessing Net Present Value (NPV) and Internal Rate of Return (IRR) for properties
- Differences between property types
- The band of investment approach

Property Performance Analysis

- Problems and issues with performance evaluation
- Sources of data
- Evolution of data measurement
- International comparisons of performance
- Current issues in performance management
- Lifecycle costing

Unit 2 – Real Estate Finance

Evaluating Real Estate Cash Flows

- Equity NPV/ IRR and project IRR
- XNPV, XIRR, MIRR
- Cost of capital issues for real estate companies (CAPM, APT and other methodologies)

Mortgages and Bank Finance

- Concepts and applicability of the mortgage
- Calculating mortgages and impact on value
- Amortisation structures
- Credit analysis for mortgages
- Available types of mortgage (including Islamic mortgages)
- Recourse and other covenants in real estate lending
- Additional securities and guarantees in development finance
- International analysis of current mortgage lending recent funding developments

Analysing Debt and Equity Cash Flows

- Modelling cash flow and ratios
- The Debt Service Coverage Ratio and Income Ratios
- Depreciation, tax and capital allowances
- · Calculating net cash from sale
- Costs, taxes and inflation

Commercial Property Cashflow

- Debt service and pre-tax cash flow
- The sinking fund
- Lease variations
- Differences between sectors
- Estimating resale value
- Terminal capitalisation rates

Unit 3 – Real Estate Valuation

The Real Estate Valuation Industry

- The valuation profession in international context
- The RICS and international valuation

standards (Red Book)

- Governance issues concerning real estate valuation
- The DCF Approach to Valuation
- Priorities of valuation methodology and application of DCF methodologies
- · Issues in DCF valuation techniques

The Comparables Approach to Valuation

- Sales approach to residential property valuation
- Sources of comparable data
- Comparable property matrix approach
- Hedonic regression calculations in comparable analysis

The Cost Approach to Valuation

- Type of costs
- Methods of evaluating costs
- Sources of cost estimation
- Incurable and curable depreciation
- Market extraction method

Unit 4 – Real Estate Investment Structure and Method

Legal Aspects of Property Investment

- Concept of title, property registration
 and all relevant issues
- Title and title insurance
- Boundaries easements and fixtures
- Disclosure and governance in real estate acquisitions and ownership
- Legal aspects of mortgages (liens, priorities, repossession)
- Government role in mortgage market legal issues (financial sector development plan etc)

Property and Conveyancing Law

- Legal principles, structure, court and devolution
- Legal issues for property professionals
- Law of contract
- Law of Tort, nuisance and negligence
- Land law, property rights and obligations
- · Liabilities for owners / occupiers
- Islamic property legal issues

THE MECHANICS OF REAL ESTATE FINANCE

continued...

Leasing Analysis

- Introduction to leases
- Stop calculations, lease renewals and lease valuation
- Analysing lease comparables
- Depreciation, net operating income and yield calculations
- Securing tenants in relation to valuation and finance (lease marketing)
- Tenant credit analysis
- Health and safety analysis
- Tenant modifications and costs
- Forecasting and limiting operating costs
- Differences between types of commercial property leases
- Lease covenants
- Rent reviews and lease renewal options
- Commercial leases and statutory control
- Tenant management

Property Administration and Management

- Concept and application of Facilities Management (FM)
- Quality management and benchmarking
- Property inspections
- Technology and administrative controls
- Working with contractors and consultants
- Maintenance and structural preservation
- Procurement and supply chain management
- Property life cycle planning
- Insurance in real estate investment
- Sustainability and real estate
 management
- Measurement of sustainability internationally and understanding the triple bottom line

Real Estate Accounting

- Main provisions of the relevant accounting standards
- Accounting decisions implications for landlords and tenants
- Impact of leases on financial statements
- Analysis of real estate accounts

Unit 5 – Indirect Real Estate Investment

Property in the Investment Portfolio

 Concept of Modern Portfolio Theory (MPT)

- Measuring variance (Beta and equivalents)
- Constructing a portfolio
- Property correlation with other assets (equities, bonds, commodities)
- Best international practice on property in a portfolio
- International trends in property correlation
- Principles of portfolio diversification
- Evidence from fund holding of real estate
- Corporate real estate strategy
- Sale and Leaseback strategies (OPCO/PROPCO)

Fund Ownership Vehicles

- Advantages and disadvantages of indirect vs. direct property investment
- Listed vs. unlisted property investment vehicles
- Investment funds (closed and open), trusts and other legal structures
- International property investment, diversification and portfolio management
- Real Estate Investment Trusts REITs
 - The history of property liquidity
 - · Characteristics and structure of REITs
 - REITs legislation worldwide
 - REITs taxation and accounting
 - REIT performanceREIT investment strategies

Synthetic Property

- Investment in high-yield real estate debt
- Synthetic leases
- Advantages and disadvantages of synthetic property investment
- The development of synthetic property
- Currently available instruments
- Securitisation of real estate (including Sukuks)
- Prospects for real estate securitisation

Unit 6 – Real Estate Development Finance

Introduction to the Development Process

- The raw materials: land and demographics
- History of real estate development
- Differences between sectors
- The stages of real estate development
- Key developers, their projects and

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international diversification

• Concept and application of real estate development strategy

Market Analysis

- Urban Economics (4Q, bid-rent curves and agglomeration analysis)
- The role of geographic information systems (GIS)
- Recent city expansion worldwide statistics, key drivers and market dynamics
- Types of data (e.g. yields, absorption rates) and their limitations
- The Market Analysis Report and its evaluation

Land Prices

- Modelling land prices
- · Empirical evidence on land prices
- Land prices as a real option
- Forecasting land prices
- The theory and practice of land banking

Highest and Best Use Approach

- Definitions of HBU
- Site and improved value
- Calculating HBU
- Preparing and deciding on HBU for different development sites

Unit 7 – Real Estate Development Management

Feasibility Studies

- Site analysis (including environmental studies)
- Traffic studies
- Analysing comparable and competitive developments
- Differences between types of real estate feasibility studies
- · Financial feasibility models

zoning and subdivision

and the wider community

building and construction

Building plans and inspections

Interlocking developments and project
 phasing

Legal and Regulatory Issues for Real Estate Development • Planning and development regulations,

Developer contributions to infrastructure

• Applied property law, legal issues in

Boundaries – easements and fixtures

· Law of Sale and Contract for developers

THE MECHANICS OF REAL ESTATE FINANCE

continued...

- · Gaining title and successful conveyance
- Quality assurance regimes
- Developing real estate checklists for development

Real Estate Project Management

- Selecting consultants, architects and designers
- Design, architecture and building in the development process
- Legal relationships between developers and consultants
- Choosing appropriate project development structures
- · Construction companies and their role
- Major international construction companies and their structure/performance
- Contract negotiation (including finance and guarantees)
- Real estate development checklists
- Construction management software (BIM and others)
- Construction phases, disbursements
 and monitoring
- Scheduling and budget control
- Completion and handover

Analysing Development Success

- Principles of Corporate Management for real estate companies
- Accounts of real estate developers
- Case studies of successful and failed property development companies
- Structure and function of real estate joint ventures
- M&A and real estate development companies

Unit 8 – Real Estate Modelling and Risk

Introduction to Real Estate Modelling

- Using Excel for real estate modelling essential skills
- Objectives of real estate models
- Design, testing and feedback
- Model sensitivity and auditing
- Depreciation in real estate models
- Dealing with escalation/inflation

software)

- Quarterly/monthly/annual computations
- Examples of real estate models
 Alternatives to Excel (ARGUS, Estatemaster and other property development and management financial

Construct and Sell (CS) Modelling

- Construction assumptions
- The construction schedule
- Construction corkscrew modelling
- Sales analysis and proceeds/taxation
- CS Valuation

Buy and Let (BL) Modelling

- Analysing investment assumptions
- Cataloguing forecasts
- Revenue and cost modelling
- Steps in the DCF real estate model
- DCF real estate valuation

Construct and Let (CL) Modelling

- Integrating construction and lease assumptions
- Model audit and risk analysis
- Conducting sensitivity, scenario and Monte Carlo analysis on real estate models

Unit 9 – Real Estate Sales and Marketing

Marketing and Sales Background

- Macro-analysis: the starting point
 Analysing demographics for sales and marketing
- Target markets wealth, income and the effective demand for real estate
- The five Ps and the evolution of marketing theory
- Marketing techniques sampling, surveys and statistics
- Legal aspects of marketing: data collection, retention and analysis
- Marketing ethics

Real Estate Marketing

- The value proposition of real estate
- Target markets and segmentation
- Packaging the real estate proposition
- Local specifics (e.g. land registration issues)
- Analysing the competition
- Explaining, comparing and justifying risk
- Real estate branding: a detailed investigation
- Countries, regions, cities and developments: multi-layered branding

Real Estate Marketing Techniques

- The real estate website
- Fly-throughs of property developments
- Email and targeting
- · Social media and real estate marketing

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• The use of conventional media (billboard, radio, TV, print)

- · Launch events and on-going campaigns
- International comparisons of success

Real Estate Sales

- Theory and development of sales techniques
- The sales task inside the developer/real estate investor
- Reporting lines and reporting formats
- The role of the realtor/estate agent
- Sales negotiationsClosing the sale
- Sales contracts and after-sales actions

Unit 10 – Real Estate Risk Management

The Crucial Role of Forecasting

- Qualitative forecasting techniques
- Time series forecasting
- Building and using a regression model
- Integrating forecasting techniques

Identifying and Quantifying Risks

- Market risks (price, rent and yield)
- Credit risk
- Construction risk
- Political and regulatory risk
- Insurable risks
- The history of real estate risk
- Comparing and integrating risks in an ERM framework for the real estate developer/investor

Risk in the Financial Model

 Implications of risk for financial returns (statistics)

Concept and application of Monte Carlo

Sensitivity analysis

to real estate

insurance

majeure et al)

• Constructing scenarios in Excel and bespoke real estate software

· Applying risk analysis to real estate

Types and applicability of real estate

• Key aspects of real estate insurance

• Exemptions, claims and legal actions

· Exceptions to insurable claims (force

financial models in practice

Insurance and Real Estate

POSTGRADUATE CERTIFICATE



DELIVERED BY DISTANCE LEARNING OVER 14 WEEKS

This modular course will equip you with a thorough practical grounding in all the different key elements of regulatory risk reporting. Consisting of seven intensive units, this course will prove invaluable to all professionals in the markets looking to develop their theoretical and practical understanding of regulatory risk reporting.

UNIT 1 - INTRODUCTION TO RISK MANAGEMENT AND REPORTING

Terminology, Concepts and Scope of Risk Management

Risk management is primarily concerned with determining the likelihood that an undesirable event will occur and taking preventative actions and remedies to minimise the adverse consequences – key issues are:

- Estimation of the magnitude of loss from an unexpected event
- Estimating probability that there will be an adverse outcome and loss to the business
- Determining the direct and indirect effects of an adverse outcome
- Analytical framework for detecting causes of risk resulting in financial loss
- Selection of risk control strategies appropriate to the objectives of the business and implementation of such strategies

Fundamentals of Value-at-Risk

- Historical development of VaR reasons for a single measure of enterprise risk
- Explanation of probabilistic methods based on a normal distribution
- · How to calculate VaR using spreadsheet tools
- Evaluation of Basel III metric Expected Shortfall as a reliable indicator of market risk
- Limitations of normal distribution in assessing magnitude of tail risk

Regulatory Oversight and Risk Reporting

- Requirements for banks to reporting, on a continuing basis, a wide variety of supervisory and statistical data to regulators and central banks
- · Surveillance of financial services sector by regulatory bodies
- Capital adequacy, Basel III, role of banking supervisors
- · CRD IV and CRR implementation in the EU
- Current regulatory framework for banking in the UK
- Role of BOE's Financial Policy Committee (FPC)
- Role of the Prudential Regulation Authority (PRA) and the Financial Conduct Authority (FCA) in the UK financial services sector
- Key IT processes for electronic submission of regulatory reporting in the UK and European frameworks
- Need for enterprise wide data aggregation and analytics (BCBS 239)

Regulatory Reports

- CRR: COREP Capital Adequacy CA1 CA5, FINREP Financial Reporting
- PRA: Capital Forecast (PRA101 PRA103), Financial Forecast (PRA104 - PRA108)
- · Bank of England: Statistics Reports (Form BT, Form ELS)

UNIT 2 – COUNTERPARTY AND CREDIT RISK

Credit Metrics, Credit Scoring and Credit Rating Systems

- Quantitative modelling of credit risk
- Techniques for modelling default risk of CDO's and other structured vehicles
- Lessons from SPVs and other off-balance sheet financing
 on credit risk management
- Assessing credit risk of corporate bonds, swaps, and forwards
- Examination of Credit Metrics™
- Basel Committee approach to credit risk risk weighting of assets

Concentration of Credit Risk - Integral to Basel ICAAP

- Concentration risk not properly captured in Pillar 1 metrics
- Examples of too much exposure to real estate, hydrocarbons
- Large exposures definitions
- Connected parties treatment under Basel and CRD IV
- Demotion of reliance on external credit ratings as required under Dodd Frank in US
- Publication of ICAAP reports to engage all stakeholders in the risk culture of the firm



Modelling tool in Excel illustrating how to develop robust credit concentration Risk Indicators

Regulatory Treatment of Counterparty Credit Risk

- Counterparty credit risk definitions, measurement
- Credit failures in 2008 crisis, systemic risk
- · Counterparty risk in interest rate swaps
- Experience of AIG and mono-lines insurance companies in financial crisis
- · The role of a central clearing house
- Market factors which drive counterparty credit deterioration
- Definitions, ratios, new provisions on credit risk in Basel III framework
- Credit Value Adjustment (CVA) and Debit Value Adjustment (DVA), Funding Value Adjustment (FVA)
- Pricing counterparty risk use of CDS spreads, ratings
- Loss Given Default (LGD) and recovery rates

Regulatory Reports

- CRR: COREP Credit Risk (Standardised Approach, IRB, IP Losses), Large Exposures
- PRA: FSA015 Pillar 2 (FSA071, FSA076, FSA077, FSA078, FSA079, FSA082), IRB Portfolio Risk FSA045

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UNIT 3 – MARKET RISK

Market Risk Overview

- · Equity Risk capital loss, bankruptcy, reorganisations, dividend suspension
- Interest Rate Risk changes in short term/long term rates, yield curve
- Foreign Exchange Risk risks of adverse currency movements
- Derivatives Risk non-linear price adjustments for most derivatives
- Trading Risk gaps where note trading takes place, Flash Crashes
- Execution Risk difficult market conditions, failure to implement legs of arbitrage

Trading Book Activities and Mark to Market Practice

- Mark to market, mark to model CVA integral to forward looking fair value approach
- · Accounting basics of fair market valuation of portfolios
- · IFRS 13 and consideration of counterparty credit risk, exit pricing
- · Liquidity horizons as part of the FRTB methodology for Market Risk
- Clarification of the three levels used in IFRS 13 for valuation purposes
- Level Three and mark to model exposures
- · Quantifying the exposure and severity of "outliers" and tail risk
- Understanding of the key concept of delta of a portfolio hedging, options
- Importance

Basel Treatment of Market Risk

- · Value at Risk and Expected Shortfall
- · What about tail risk does Basel III address this adequately?
- Outline the Fundamental Review of the Trading Book (FRTB)
- Standardised approach
- · Separation of trading book and banking book
- Overview of Internal Models Approach (IMA)
- · Off Balance Sheet items

Regulatory Reports

- CRR: Market Risk (C18.00 C24.00), CVA (C25.00)
- PRA: Pillar 2 (FSA080), Market Risk (FSA005, FSA006), Interest rate gap analysis (FSA017)

UNIT 4 – OPERATIONAL RISK

Enterprise Risk Management (ERM) and Operational Risk

- Strategic management philosophy and cultivating an ethos of prudence and robust risk control
- · Critical examination of the importance of risk culture, governance and codes of conduct
- · Need to report on conduct matters to the UK's Financial Conduct Authority (FCA)
- Risk assessment process how does the business identify and respond to potential and actual risks?
- ERM needs to be fully integrated into all accounting. surveillance, IT systems and data storage back up systems

- Monitoring of controls constant checking on the quality and integrity of the procedures
- Fully resourced compliance officers check on whether regulations are being followed
- Loss Modelling Methods contingency funding plans, Monte Carlo simulations

Adverse Consequences from Operational Failures

- Reputational risk the trustworthiness of business
- Damage to a firm's reputation can result in capital loss and destruction of shareholder value, even if the company is not found guilty of a crime.
- Extreme reputational damage may lead to bankruptcy e.g. Arthur Andersen
- · Legal Risk uncertainty about enforceability of contracts with counterparties
- Litigation Risk mis-selling of derivatives regulatory fines and class action law suits
- Rogue trading Soc Gen, UBS, ineffective back office controls - should separate traders and risk takers entirely from back office surveillance systems



- · Nature and magnitude of financial misconduct in banking and financial services
- Detailed examples of reputational damage e.g. Goldman Sachs, Barclays, HSBC, UBS, Wells Fargo
- The London Whale debacle affecting JP Morgan in 2012

Basel Measurement Approaches for Operational Risks

- Outline of the Basel Basic Indicator Approach (BIA) and Standard Approach (SA)
- Explanation of the Basel III Advanced Measurement Approach (AMA)
- Scenario Based Approach (SBA)
- Loss Distribution Approach (LDA)
- · Business environment and internal control factors (BEICF's)
- Key Risk Indicators (KRI's)
- Basel III Business Line and Event Type Codes
- Process Mapping mapping processes to appropriate regulatory categories
- Templates for data capture for Basel compliance and internal reporting
- Role of external data scaling of comparable institutions
- SBA templates

The New Basel Approach to Operational Risk

- BCBS Consultative Documents on Revisions to current Op Risk Approaches
- Explanation of the Business Indicator metric
- Non-linear scaling of operational risk to total revenue of a bank
- Using absolute values for estimating bank's exposure to Op Risk
- Review of the BCBS Operational risk Capital-at Risk (Op CaR) model
- Internal Loss Multiplier and Loss Component

Regulatory Reports

- CRR: Operational Risk (C16.00, C17.01, C17.02)
- PRA: Pillar 2 (FSA072 FSA075)
- REP001, REP002

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UNIT 5 – LIQUIDITY RISK

Overview of Liquidity

- Different definitions of liquidity accounting, economic and market driven
- The importance of the new focus on liquidity in the Basel III framework
- Short term funding requirements vs. longer term stable funding
- Overview of duration gap analysis basis for net worth (accounting equity) calculations
- Understanding hidden liquidity risks on the balance sheet
- Funding, asset/liability liquidity and derivative pricing/hedging
 - how are they all linked?
- Bid-ask spreads as indicator of market depth
- Illiquidity of some markets for complex derivatives
- Accounting issues (IFRS 9 and 13) regarding fair value for traded instruments

Funding and Liquidity Risk Management

- Learning lessons from lack of liquidity of many structured products in 2008 crisis
- Asset liability mismatches in the balance sheet
- · Understanding hidden liquidity risks in a portfolio
- Should illiquid assets be eligible for inclusion on a bank's trading book?
- Duration gap analysis basis for net worth (accounting equity) calculations
- Varying the duration characteristics of portfolios of fixed income securities
- Characteristics of securitisations, CDO's, SPVs and conduits
- Funding, asset/liability liquidity and derivative pricing/hedging
 - how are they all linked?

Liquidity and Regulations

- Why Basel III has created a reporting obligation regarding liquidity
- Definition of High-Quality Liquid Assets (HQLA) under the LCR of Basel III
- Criteria for allocation to Level 1 and Levels 2A and 2B of HQLA
- Funding, asset/liability liquidity and derivative pricing/hedging
- how are they all linked?
- Short term funding requirements vs. longer term stable funding (NSFR)
- Asset Encumbrance reporting obligations of EBA and PRA
- Increased collateralisation requirements for OTC derivatives
- Covered bonds encumbrance and subordination issues

Liquidity and Regulations

- CRR and Liquidity Delegated Regulation: LCR, NSFR, Asset Encumbrance
- PRA: Pillar 2 (PRA110)

UNIT 6 – STRESS TESTING

Stress Testing - The Big Picture View

- Basic concepts of stress testing base case vs. adverse (worst case) scenarios
- Distinguishing between macro and global factors with local and micro factors
- Valuation procedures in liquid public markets and illiquid private markets
- Explanatory overview of various techniques for conducting stress tests

Stress-Testing Methods, Benefits and Limitations

- Tests how well VaR estimates would have performed in the past
- Principal Components Analysis for VaR
- Sizes of historical samples are they sufficiently large to include wide variety of possible conditions
- Danger of optimising risk management parameters overfitting to the historical data
- · Role of stress testing in central bank supervisory processes

Diagnostic Approaches for the Identification of Troubled Banks

- Types and quality of assets both on and off the balance sheet
- Market risk exposure in the trading book types of positions, liquidity of instruments
- Composition of liabilities short/long term, maturity mismatches, contingent exposures
- NPL Stock Ratio and NPL Coverage Ratio
- Complexity and robustness of internal modelling procedures
- Ratio of RWA to Total Assets history, recent trend
- Local issues size of banking sector relative to GDP, regional property exposures
- Sensitivity of specific bank's market capitalisation to periods of market stress
- Leverage ratio for non-risk weighted assets, price to book ratios

Examination of the methodology and outcomes from 2018 stress tests conducted by the European Banking Authority (EBA)

Stress Testing - Integral to The Basel ICAAP and ILAAP

- Supervisory Review and Evaluation Process (SREP)
- Economic capital calculations survival horizon
- Liquidity stress testing principles and methods
- Bank of England's approach to the ILAAP
- Reverse stress testing and contingency planning
- How stressful are the bank's stress modelling exercises?
- Reputational risk conduct related issues, impact of market abuse on bank's integrity
- · Articulation of the firm's risk profile and risk appetite
- Publication of ICAAP reports to engage all stakeholders in the risk culture of the firm

Regulatory Reports

• PRA: FSA083, PRA111

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UNIT 7 - DERIVATIVES

Overview of Derivatives and Key Underlying Markets

- · Overview of the size of derivatives markets
- BIS statistics on total swaps outstanding
- Contractual assets that perform in accordance with underlying asset class behaviour
- Explanation of delta one derivatives and those with non-linear payoffs
- · Explanation of CDO's and structured credit products
- Legal framework, ISDA, Clearing, Initial Margin and Variation Margin
- · Historical origins of the futures markets
- Risk elements of derivatives
- Counterparty risk, basis risk, liquidity risk
- Central clearing vs. counterparty risk

Derivatives and Counterparty Credit Risk in The 2007/8 Crisis

- Examination of the underlying causes of the collapse of Lehman Brothers in 2008
- Risks associated with OTC derivatives and collateral management
- Poor application of collateral management under ISDA CSA arrangements
- Issues related to ISDA netting procedures



• US Treasury rescue of AIG – nature of credit default exposure to sub-prime mortgages

Basel Treatment of Derivatives and Role of CCPs

- Basel III and CRD IV regulatory response to counterparty credit risk
- Explanation of Credit Valuation Adjustment (CVA), Wrong Way Risk
- Margin systems and role of clearing organisations
- Regulatory and legislative background to the greater requirement for centrally cleared derivatives - EMIR and Dodd-Frank Act
- · Basel III permits much less stringent capital for CCP trades
- Novation as replacement for original OTC bilateral agreements
- Comparison of collateral requirements for OTC vs. CCP's
- · Importance of derivatives disclosures for G-SIB banks

Regulatory Reports

- CRR: Market Risk (C18.00 C24.00), CVA (C25.00)
- PRA: Pillar 2 (FSA080), Market Risk (FSA005, FSA006), Interest rate gap analysis (FSA017)

THE MECHANICS OF RENEWABLE ENERGY

A complete modular guide to the practicalities of renewable energy



DELIVERED BY DISTANCE LEARNING OVER 20 WEEKS

This intensive course will provide you with a thorough overview of the different components of renewable energy. Comprising of ten intensive modules, it will prove invaluable to all looking to develop their theoretical and practical understanding of renewable energy.

UNIT 1 – OVERVIEW OF RENEWABLE ENERGY SOURCES AND TECHNOLOGIES

Topics Covered

- Energy production and energy economics
- Climate change, energy contribution to carbon emissions and the evolution of renewable energy
- Solar Power (from rooftop to solar farm)
- Bioenergy
- Hydroelectricity
- Tidal Power
- Wind Energy
- Wave Energy
- Geothermal

Methodology

Each type of energy source is analysed along with case studies. There is a central text, whilst additional materials and concepts are introduced using case studies. Learning is reinforced via a multiplechoice questionnaire at the end of the module. The forum will be open immediately for questions and discussion.

UNIT 2 – RENEWABLE ENERGY TECHNOLOGIES, SUSTAINABILITY AND COSTINGS

Topics Covered

- What technologies are needed for each type of renewable energy
- · What are the construction costs for renewable energy plants
- How do costs compare with conventional power sources
- Renewable energy lifecycle costs
- Battery technology and energy storage (community, corporate and individual)
- Comparative sustainability analysis
- Public and private applications
- Integration with the grid, including network integration issues and costs

Methodology

Cost models, a central technical text, together with key case studies on specific renewable energy technologies from international sources, examples of solar panels, wave and wind farms, hydroelectric power stations and other renewable power sources, and a multiple choice test which ranges across the technical and environmental issues of renewable energy.

UNIT 3 – GOVERNMENT REGULATION, TARGETS AND INVESTMENT

Topics Covered

- Government energy strategies compared
- · International climate change regulation and targets

- · Government budgeting and spending on renewable energy
- The internal decision-making process for government including legislative oversight
- Working with the private sector: PPP for renewable energy
- International differences in renewable energy and their causes
- Renewable energy and city planning
- Environmental assessment and community involvement

Methodology

In addition to a downloadable central text, exhaustive references, and case studies there will be a series of interactive exercises which include step-by-step guides and exercises for the learner on government decision-making at both national and local level, putting learners successively in the position of policy-makers, financiers and consumers, and a multiple choice test.

UNIT 4 – MARKETS, COMPETITION AND PRICING

Topics Covered

- World energy markets international differences in market structure and pricing
- Energy markets wholesale and retail
- · Analysing offtakers: industry, agriculture and consumers
- · Subsidies and differential pricing/tariffs
- Grid issues including energy resale and microgrids
- Energy competition and power draw-downs
- International energy trade and renewables

Methodology

Extensive pricing analytics including spreadsheets, discussion of the latest academic research, case studies of government pricing decisions and market pricing, a central text, and a multiple choice test

UNIT 5 – MARKETS, COMPETITION AND PRICING

Topics Covered

- The renewable research world
- · Leading companies developing renewables
- Competition in renewable development
- Renewable energy company management
- Involvement of major energy companies in renewable energy
- Private equity and other independent investment in renewables
- Socially responsible investment (SRI) and renewable energy
- Valuation of renewable energy companies

Methodology

Presentations, case studies, a central text and valuation spreadsheets for different renewable technologies, together with a summary exercise on a proposed renewable investment from the standpoint of the investor, the sponsor, and the offtaker.

THE MECHANICS OF RENEWABLE ENERGY

continued...

UNIT 6 - FINANCIAL STRUCTURE OF RENEWABLE ENERGY PROJECTS

Topics Covered

- Corporate vs. project finance
- Assessing performance (NPV, IRR, cost of capital, and measures of sustainability)
- Equity and debt integration
- Cashflow waterfalls
- · The lender's perspective on a renewable model
- Integrating model results with valuation, policy, regulation and the market
- · Handling risk management in the financial model
- Auditing a renewable energy model telling good from bad

Methodology

Numerous step-by-step financial models, together with a central text and case studies of different renewable energy deals internationally form the core of this module, supplemented with podcasts and background documentation.

UNIT 7 – OWNERSHIP/LEGAL STRUCTURES AND THE RENEWABLE ENERGY SPV

Topics Covered

- · Government, private and other ownership analysis
- Considerations in selecting a structure
- Corporate finance structures
- · Project finance structures for renewable energy
- Special purpose vehicle ("SPV")
- General and limited partnerships
- Trust structures and the role of trustees
- Joint ventures ("JVs")

Methodology

Legal documents, explanatory podcasts and a central stepby-step text covering all the relevant structures and examples of their use are accompanied by a multiple choice test which will involve evaluating a renewable energy project finance proposal and recommending improvements to structure and financing.

UNIT 8 – CONTRACTS FOR RENEWABLE ENERGY CONSTRUCTION, FINANCE AND OPERATION

Topics Covered

- Requests for Proposals (RFPs)
- · Public tender information and requirements
- Expressions of Interest
- Power Purchasing/offtake Agreements (PPAs) for renewables
- Comparing and contrasting international PPP contracts with application to renewables
- Licences and land agreements
- Construction cost agreements (EPC contracts)

- Operating and Maintenance (O&M) agreements
- Term Sheets
- Shareholder Agreements

Methodology

Principal documentation templates are provided together with examples of contract successes and failures, together with a central commentary identifying the significant points in each type of contract document. A multiple choice test on contracts is also provided.

UNIT 9 – RENEWABLE ENERGY PROJECT TECHNOLOGIES AND RISKS

Topics Covered:

- Technological innovation in renewable energy
- Significant technical risks in renewable energy
- Political risk and its components (nationalisation, regulation, tax)
- Risks of the economic cycle (demand and supply)
- Other economic risks (inflation, currency, commodity prices)
- Construction problems and technical risk
- Natural disasters, force majeure and terrorism
- Partner and counterparty risks (equity, debt, input supplies)
- · Environmental compliance

Methodology

Examples of how different technologies and risks have eventuated are accompanied by checklists and methodologies for integrating risk analysis into renewable energy modelling and due diligence. A multiple choice test completes the learning package of this detailed module.

UNIT 10 – RISK MITIGATION TECHNIQUES

Topics Covered:

- The risk matrix, risk allocation and transference
- Derivatives and their use in renewable energy projects
- Insurance and Reinsurance for renewable energy projects
- Contracts as risk mitigation methods
- Credit enhancement and the role of international agencies
- Modelling the implications of risk mitigation
- · Risks remaining outside the model
- · Risk retention and presentation to management

Methodology

Worked examples of derivatives, a downloadable tutorial on their use, together with examples of insurance and risk transfer documentation, and case studies of risk mitigation in renewable projects, form a cohesive package of interactive learning methods in this module, which is completed with a multiple choice test.
THE MECHANICS OF RISK MANAGEMENT

A structured practical guide to all aspects of financial risk management



DELIVERED BY DISTANCE LEARNING OVER 16 WEEKS

This opportune course will provide you with an overview of all the different types of risk that have such a significant impact on our global financial markets today. This intensive course consists of eight units, which will provide you with an invaluable grounding in the subject, enabling you to develop a strong theoretical and practical understanding of current risk management practices.

UNIT 1 – INTRODUCTION TO RISK MANAGEMENT

Terminology, Concepts and Scope of Risk Management

- · Estimation of the magnitude of loss from an unexpected event
- Estimating probability that there will be an adverse outcome and loss to the business
- · Determining the direct and indirect effects of an adverse outcome
- Identification of risks, contingencies and associated potential costs
- Selection of risk control strategies appropriate to the objectives of the business and implementation of such strategies
- · Monitoring and adapting to external and internal risk factors

Fundamentals of Value at Risk

- How to calculate VaR; Review of statistical tools for measuring risk
- Risk/reward concepts from Capital Asset Pricing Model (CAPM)
- · Evaluation of whether VaR is a reliable indicator of portfolio risk
- Limitations of normal distribution in assessing magnitude of tail risk

Overview of Some Fundamental Strands to Risk Management:

- Modelling risk scenarios
- · Hedging strategies to manage risk
- · Examination of specific risk based derivatives
- Settlement risk; Systemic risk
- · Advanced hedging topics

UNIT 2 - INTEREST RATE AND CURRENCY RISK

- · Identification and measurement of interest rate risk
- · Value at Risk based approaches to risk measurement
- Scenario simulation analysis involving stress tests and worst case scenarios
- Stochastic interest rate modelling
- · Pricing and valuation of interest rate derivatives
- Application of interest rate derivatives in interest rate and currency risk management
- Interest rate derivatives and Asset Liability Management (ALM)

Basic Mathematics of Fixed Income Instruments

- · Discounted cash flow analysis and time value of money
- · Weighting of cash flows
- Fixed term annuities, variable cash flow periods, perpetual securities
- Macaulay Duration; Modified Duration
- Present Value of a Basis Point (PVBP)
- Convexity adjustments
- Deriving the zero-coupon yield curve
- Asset/Liability management and interest rate and currency risk
- Distinguish between risk of capital loss for bonds and reinvestment risk

- Risks associated with changes to the term structure of interest rates
- Mismatching of income producing assets and liabilities
- Stress testing asset/liability mix by Monte Carlo simulations

Managing Interest Rate Risk with Derivatives

- Explanation of delta and gamma for options strategies
- Using the Black-Scholes formula to determine the price of options
- · Determine the possible payoffs of option contracts
- Construct payoff diagrams for call and put options and combination strategies
- Understand some of the applications of option contracts
- Understand the directional effects of relevant variables on the value of options
- Swaps as a hedging mechanism and as a tool to reduce cost of borrowings

Using Derivatives for FX Risk Management

- Forwards contracts
- Understanding futures quotations and applications in hedging
- Currency swaps
- · Understanding currency options terminology
- Options vs. futures and forwards contract
- Examine the manner in which certain currencies can be aligned with risk on/risk off market characteristics

UNIT 3 – MARKET RISK

Distinguish Risks Associated with Different Asset Classes and the Separate Stages of Conducting Transactions for Securities in Financial Markets

- Equity risk; Interest rate risk; Foreign exchange risk; Commodity risk; Derivatives risk; Trading risk; Execution risk; Liquidity risk
- Adapt the VaR metric to capture the specific risks associated with each asset class

Examination of the Contributions and Limitations of the CAPM and MPT as a Theoretical Framework Enabling Proper Understanding and Implementation of Risk Management Techniques

- · Risk/return trade off
- The concept of the efficient frontier
- · Systematic risk; Idiosyncratic or specific risk
- MPT and diversification
- Risk adjusted return
- Difference between CAPM and Arbitrage Pricing Theory (APT)

Lessons from the 2007/9 Global Financial Crisis and the Changed Landscape of Capital Markets

• Nature of correlation in contemporary markets

THE MECHANICS OF RISK MANAGEMENT

continued...

- Historically elevated levels of correlation in the returns of many asset classes
- · Elevated and unstable correlations poses fundamental problem for

CAPM Inspired Model of Portfolio Diversification

- Correlations are unstable and tendency to approach unity at times of crisis
- Evidence that asset returns are not normally distributed
- Left tail dependencies across assets
- Probability of joint default/liquidity crisis

Back-Testing Methods, Benefits and Limitations

- · Tests how well VaR estimates would have performed in the past
- Principal components analysis for VaR
- Limitations of back testing when used to assess CDO risk in US housing data
- Danger of optimising risk management parameters
- · Benefits of more loosely coupled systems as less fragile

UNIT 4 – LIQUIDITY RISK

Identifying the Special Risks Associated with Lack of Market Liquidity

- Distinguish assets which may be illiquid even in normal market conditions and crisis induced illiquidity of capital markets as a whole
- There is a feedback loop where adverse price movements leads to margin calls, diminished value of collateral, leading to "fire sale" of assets causing more margin calls etc
- Repos and short term interval funding as in maturity transformation presumes liquid markets
- Marking to market for liquid instruments vs. mark to model for rarely traded instruments

How to Capture the Separate Dimension of Liquidity Risk into an Integrated Value at Risk (VaR) Metric for Market Risk

- · Greater anxiety to sell less likely to obtain "normal" market price
- Extreme fear/anxiety conditions will lead to market collapses and massive drawdowns
- How to monitor liquidity conditions
- Contrast between money market rates which involve counterparty risk and swap rates which often do not have risk of loss of notional value
- Far out of the money options tend to be overlooked or not properly accounted for in risk management
- Stress testing

Cash and Liquidity Management

- Forecasting cash requirements from cash flow analysis under stress conditions
- Working capital management
- · Efficient cash management structures
- Risks of using money market instruments for short term funding of liabilities

Special Liquidity Issues Which Arise When Capital Markets are Facing Stress

Financial contagion and the role of very connected "super spreaders"

- Greater need to be vigilant regarding counterparty exposure and daily cash management
- Stress testing of balance sheets
- Need for Contingency Funding Plans (CFPs)
- Significantly adjust expectations as to liquidity of complex structured products and derivatives

UNIT 5 - OPERATIONAL RISK

Creating the Most Effective Internal Risk Management Environment to Minimise the Likelihood of Operational Errors and to Contain the Damages/Losses When Such Execution Failures Arise

- Enterprise wide risk control environment
- Risk control systems need to be pro-active and not reactive
- Needs to be fully integrated into all accounting, surveillance, IT systems and data storage back-up systems
- Monitoring of controls
- Internal auditors have to make decisions on the extent of their reliance on controls to manage risks and thus how much further probing has to be done

Adverse Consequences Including Risk of Insolvency and Regulatory Sanctions from Operational Failures

- Damage to a firm's reputation can result in capital loss and destruction of shareholder value, even if the company is not found guilty of a crime
- Case studies and detailed examples of reputational damage
- Legal risk; Litigation risk; Derivatives; Reputational risk
- Rogue trading

Improving Risk Control Systems in the Light of Recent Market Abuses and Execution Failures

- Practitioners with models will have superior knowledge to their managers
- Conditional deferred payments for traders
- Contingency planning related to stress testing
- · Deciding on the appropriate capital allocation for contingencies
- Assess risks of loss of key personnel
- Dangerous to slide from an inability to quantify a certain operational risk to neglecting it

UNIT 6 - CREDIT AND COUNTER-PARTY RISK

Credit Metrics, Credit Scoring and Credit Rating Systems

- Quantitative modelling of credit risk using stochastic processes
- Techniques for modelling default risk of CDOs, CMOs and other structured vehicles
- Assessing credit risk of corporate bonds, credit swaps, forwards
 and options
- Adapting VaR measures to include a metric for default value at risk
- · BIS approach to credit risk

Techniques for Implementing Credit Risk Management

• Finding robust techniques to model the distribution of credit losses

THE MECHANICS OF RISK MANAGEMENT

continued ...

- · Netting off payments between counter parties
- Periodic settlement of obligations
- Margin and collateral requirements
- Using credit derivatives as part of credit risk management strategy
- Advanced topics in assessing default probabilities including copula methods

Strengths and Limitations of the Basel Accords with Respect to Credit Risk Management

- Basel II's sound practices for the management and supervision of operational risk
- Basel III
- Restrictions on dividends and bonuses for banks whose capital falls below 7%
- · Increased capital ratios for systemically important banks

Bypassing the Credit Risk from OTC Transactions through Central Party Clearing

- Novation replaces original trades and establishes clearing house as guarantor of performance
- Settlement risk is obviated by delivery vs. payment as implemented by clearing systems
- Well capitalised guarantee framework and centralised collateral management

UNIT 7 – SYSTEMIC AND SOVEREIGN RISK

Which Financial Metrics can be Monitored to Determine the Imminence of Changes in Market Liquidity?

- Credit Default Swap (CDS) rates on key financial intermediaries
 and sovereigns
- Money market spreads; Cross currency basis swap rates
- · Which are leading and which are coincident indicators?
- Macro stress-tests can assess the resilience of the financial system
- · Contagion (percolation) models

Examine the Impetus Behind Macro Prudential Regulation Which Seeks to Impose Additional Requirements on Institutions Which are Systemically Important with a View to Reducing Joint Default Probability

- Explore regulatory focus on new capital surcharges, contingent capital, bail-in debt, living wills, resolution mechanisms
- Understand motivation for establishment of counter-cyclical capital buffers
- Initiatives to strengthen the regulation and supervision of hedge funds, OTC derivatives and rating agencies

Examine Those Factors Considered by Credit Ratings Agencies (CRAs) in Sovereign Risk Ratings and Which can be Used in Making an Independent Assessment of Sovereign Credit Worthiness

- Proportion of domestically-held debt; Term structure of debt: Debt/Revenue
- Demographic profile
- Access to capital markets and default history or having assistance from IMF etc.

- Reserve currency status
- Interest rate on debt
- · Current account position

UNIT 8 – REGULATION AND RISK MANAGEMENT

The Debate Regarding Financial Regulation is a Key Contemporary Public Policy Issue Focusing on the Need for Risk Containment and Desire to Avoid Repeat of the Global Banking Crisis:

- · Demands on governments to regulate risks are increasing
- Increasing inter-connectedness of financial system
- · Complexity of financial instruments and high degree of leverage
- Concerns about the shadow banking system and offshore and off balance sheet structures
- Contrast macro-prudential policy initiatives with traditional microprudential
- · Pro-cyclical and counter-cyclical risk management
- Movement towards a banking union for the European Union
- Dodd Frank Act and Financial Stability Oversight Council (FSOC), Volcker rule

Overview of the Principal Global Regulators of Financial Markets and Financial Services Companies

• USA; UK; European Union; Transnational

Issues Related to Regulatory Arbitrage and the Growing Push for Transnational Cooperation on Effect Regulations to Enhance Enforcement of Risk Management Protocols:

- BOE's Mervyn King stated that "banks live globally and die locally"
- FDIC and Bank of England have developed resolution strategies to avoid taxpayer bailouts
- Contingency action clauses
- Gaming the Basel accords
- Organisation structures designed to circumvent taxation and regulatory oversight

Examine the Characteristics of Major Statutes Which Regulate Most Enterprises and Review Some Proposed Measures and Accords Which are the Subject of Ongoing Public Debate

- Sarbanes-Oxley
- Dodd-Frank Act and Volcker Rule
- Basel II and III
- European banking supervision
- · Vickers Commission
- European Union/ESMA

A complete practical guide to operational risk



DELIVERED BY DISTANCE LEARNING OVER 20 WEEKS

This opportune course will provide you with an overview of all the different types of transaction banking that have such a significant impact on our transaction banking today. This intensive course consists of ten units, which will provide you with an invaluable grounding in the subject, enabling you to develop a strong theoretical and practical understanding of current transaction banking practices.

UNIT 1 - FINANCIAL MATHEMATICS & ACCOUNTING

What is Transaction Banking?

- Simple definition, future growth and opportunities
- · Benefits of core values and long term relationships

Essential Maths and Conventions

- · What is interest?
- Interest rate components, interest rate references and where to obtain the rates
- Day-count conventions explored – why are they important?
- Frequency and periodicity and how to transform interest rates effective vs. nominal rates
- Time value of money
 - future value and present value
- the assumptions behind the generic TVM formula
- Reinvestment risk and the "real" present value
 - reinvestment risk explored
 - coupon vs. zero rates

Fundamentals of Accounting

- What is accounting?
 - which stakeholders are interested
 - what is contained in the reports
 - what does each statement tell us
 - the key interrelations in the accounts

Key Accounting Concepts

- Harmonising international standards
- The accruals concept
- Profit vs. cash flow

Statement of Comprehensive Income

- · Above the line: the Operating Business
 - expensed costs
 - COGS inventory effects
 - inventory valuation choice
 - depreciation and amortisation

Statement of Financial Position

- Financial position presentation liquidity
- Item classification

The Statement of Cash Flows

- The importance of cash flows
- Building cash flow statements

Building Up Simple Accounts

Everything is interrelated

UNIT 2 – CASH MANAGEMENT & ROLE OF TREASURY

Introduction to Cash Management

- What is the treasury function and the treasurer responsible for?
- The corporate objectives of cash management
- · Why cash management is attractive to the bank
- The benefits of good cash management to both the corporate and the bank
- · Examine the business and corporate operating cycle

Cash Management Policy and Procedures

- Forecasting, short term (operational), medium term (tactical) and long term (strategic)
- Cash management, minimise the need of funding, maximise the return on excess cash positions, and an early warning system for potential problems
- · Handling of payments and receipts
- Moving money between accounts both domestically and internationally
- · Defining 'float' and how to manage it

Importance of Working Capital

- Recognising why working capital matters and why does it need to be managed?
- · Customers objectives in managing working capital
- Working capital vs. operating working capital
- What are positive and negative working capital and the implications of both
- Defining the cash conversion cycle (CCC)
- What are working capital metrics and how are they used?
- Recognise how a corporate might improve the efficiency of working capital
- The dangers of overtrading

Corporate Operating Cycle

- The business/operating cycle
- · The corporate operating cycle
- payables cycle (P2P)
- cash conversion cycle (C2C)
- the forecast to fulfil process (F2F)

Working Capital Metrics

- Calculating and interpreting receivable days, payable days and inventory days
- Calculating and interpreting DSO, DIO and DPO
- Using sales based ratios
- Working capital effects of changes to receivables, inventory or payables
- Understanding corporate KPIs

continued...

UNIT 3 - WORKING CAPITAL & LIQUIDITY MANAGEMENT

Working Capital Financing

- Identifying the methods of financing working capital
- Describe receivables management, use of trade discounts
- Examine payable management and advantages of improving payables
- · Define inventory optimisation and EOQ
- Outline the traditional methods of working capital finance
- Show the use of bank overdrafts, revolving credit facilities and commercial paper

Invoice Discounting and Factoring

- Recognise alternative methods of working capital finance
- · Recognise the issues of working capital and accounts receivable
- Outline key features and the structure of invoice discounting
- Define factoring and how it differs from invoice discounting
- List the risks to the bank and benefits to the client of invoice discounting and factoring

Supply Chain Financing

- Discuss the use and operational structure of supply chain finance
- Explore the risks and benefits at both ends of the physical supply chain
- Structuring elements and how it works
- The practical implications and technology of supply chain finance

Liquidity Management

- · Define the role and benefits for liquidity management
- State the aims of cash sweeping, cash pooling
- Define the mechanics, benefits and risks of cash sweeping and cash pooling
- Define the mechanics, benefits and risks of notional pooling
- Outline the mechanics of interest optimisation and aggregation
- Show the options available for investing a cash surplus
- State the risks vs. returns on investing a cash surplus

UNIT 4 – ACCOUNT SERVICES & CORRESPONDENT BANKING

Account Services

- · What are corporate accounts and account services?
- The importance of "Know Your Customer" (KYC) and Anti-Money Laundering (AML)
- The role and nature of Basel III changes on a bank's capital and funding structure
- What are "sticky deposits", Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR)
- · Operational vs. non-operational corporate relationships
- Electronic Banking IBAN and Bank Identifier Code (BIC) Correspondent Banking Services
- The need for correspondent banking and the role of correspondent banks
- The use of Nostro and Vostro accounts
- · What are the benefits to a bank of offering clearing services?
- The central bank's role in the international payment system
- The fundamentals of: Real Time Gross Settlement (RTGS), Net Settlement Systems (NSS) and Single European Payment Area (SEPA)

Payment and Collection Services

- The nature of payment operations both domestic and international
- Outline multiple collection types, multi delivery channels and geographical challenges
- The nature of collection operations
- · What are the issues with domestic vs. cross-border collections?
- Why use virtual accounts and lock-box services?
- · Listing potential clients for payment and collection services

Card Services

- What are the individual and corporate card services available through a bank?
- · The mechanics of credit card transactions
- Corporate linking and card association
- The risks associated with cards and card risk management
- What are card acquiring services and the risks associated with the service?

SWIFT Services

- · Introduction to SWIFT and SWIFT message standards
- The need for and the use of SWIFT messages
- Message types and formats, standardisation of messages
- · What are SWIFT for corporates services?
- Objective of ISO messages

Client Access

- · Current and future developments in client access
- · Individual and corporate electronic banking services
- · Outline innovations in electronic banking
- · Reporting, data management and data enrichment services
- · What are treasury to bank communications?

UNIT 5 - CAPITAL RAISING - DEBT AND EQUITY MARKETS

Corporate Financing Alternatives

- Short term capital funding
- Medium and long term capital funding

Money Markets

- Why do we need short term financing?
- Commercial paper
- who uses commercial paper?
- US CP vs. ECP and asset backed commercial paper

Fixed Income Products

- · Basic of fixed income terminology
- Clean vs. dirty pricing using Bloomberg screens
- Price as discounted sum of cash flows
- What are GMTNs and EMTNs?
- The bond new issue launch process
- Assessing the optimal strategy
- The role of the bank syndicate desk

 pricing process & relevant benchmarks
- The main stages of bond issuance
- The secondary markets

EQUITY MARKETS AND EQUITY CAPITAL MARKETS Equity Markets

• The equity vs. debt decision

continued...

- Equity finance the key features
- The role on equity indices
- Factors affecting equity prices economic, corporate actions and common themes
- Role of equity research

Equity Capital Markets

- Selling existing shares exit routes
- Multi track process
- Going public and the structure of an IPO
- Key company considerations for the IPO
- Understanding the "Greenshoe" process
- Rights issues and other secondary market offerings
- The TERP and the value of nil-paid rights

UNIT 6 - CORPORATE AGENCY & SECURITY SERVICES

WHAT ARE SECURITIES SERVICES, CUSTODY AND TRUST SERVICES?

Overview of Trading and a Transaction

- Define a trade, the process of trade creation and the market participants
- Show forms of trade execution OTC and exchange traded
- · List pre-trade checks legal and compliance

Operational Overview

- Define the Straight Through Processing (STP)
- · Recording static data, what it is and why is it important?
- Describe trade capture, identification, validation, enrichment and conformation
- Recognise trade reporting MiFID and OTC reporting practical considerations

Clearing, Settlement Process and Safekeeping

- Define clearing, settlement and safekeeping and time line for each activity
- Outline both the Delivery vs. Payment (DVP) and Delivery Free of Payment (DFoP)
- Describe the process of central clearing and what are the advantages
- Examine settlement instructions and Standard Settlement Instructions (SSI)

Inventory Management

• Recognise the need for and process of Stock Borrow and Lending (SBL) and Sale & Repurchase Agreement (Repo)

Corporate Actions

- · Describe the nature of corporate action, voluntary and involuntary
- · Examine each of:
 - dividend and coupon payments
 - stock splits and consolidations
 - stock buy-backs

Operational Risk

• Understanding the nature of operational risk

Fund Services

• Fund accounting, compliance monitoring, transfer agency, trustee services, performance measurement and financial reporting

Investor Segment Overview

- · Why invest, investment basics and investment process
- Understanding risk tolerance
- Understanding portfolio structure
- Benchmarking
 - passive management vs. active management

Investor Profiling

- Insurance companies, pension funds and mutual funds
- Asset managers local asset managers and global funds
- Alternative funds hedge funds

UNIT 7 – FOREIGN EXCHANGE AND COMMODITY HEDGING

Foreign Exchange Products

- History of foreign exchange markets
- · Influences on and drivers of foreign exchange (FX) rates
- The risks to a corporate in FX exposures, the effects of importers and exporters

Spot FX Markets

- · FX quotations and conventions of the FX markets
- Cross rates
- How corporate clients are exposed to FX risk, transaction and translation risk

Forward FX Markets

- The use of FX forward rates for a corporate customer
- Mechanics of forward prices
 - market forces vs. economic theory
 - cost of carry concept
 - basic of FX swaps and NDFs

Introduction to Commodity Markets

- The nature of commodities
- Market structure
- Classifications of commodities
- Commodity returns and indices
- Trading instruments terminology
- Commodity seasonality
- Commodity forward prices
- Contango or backwardation

Understanding the Oil Markets

- Factors that affect crude oil prices – crude oil grades
- Inside the oil barrel
- Oil futures contract

Trading Metals Markets

- Types of metals
- · Metal consumption and uses of precious and base metals
- Trading considerations
- Copper market fundamentals
- Gold Markets

UNIT 8 - INTRODUCTION TO TRADE FINANCE

Why Trade Overseas and Why Banks Offer Trade Finance?

Background to trade finance, leading exporting and importing

continued...

countries, and world commodity profiles • Review of WTO statistics

- How global trade flows are shifting from their traditional routes
- Why a customer should look at exporting and how it could lead to increased sales?
- The changing regulatory environment and why trade finance may look attractive to a bank.
- How trade finance transaction can lower the risk profile from conventional lending
- The bank's view on risk mitigation, financing, settlement and balance sheet management
- Current market conditions

Risk Assessment for Trade Finance

- Potential risks associated with international trade from the perspective of:
 - negotiation product, production and transportation risks
 - commercial risks
 - country and political risks
 - foreign exchange risk
 - financial risks
 - bank risk
- · What is the meaning of adverse business risk?
- The importance of Know Your Customer (KYC) and Anti-Money Laundering (AML)
- · Examine how to mitigate potential risks

The Players and Components of a Trade Finance Transaction

- The exporter, the importer, exporter's bank, importer's bank
- The goods, the cash, and the document flow

International Trade Documents

- · Why documents are important?
- The essential trade finance related documents
- The role and inter-connectivity of trade documents -
- Commercial documents Sales contract, invoice (commercial, tax, customs and consular)
- Transportation documents Marine/ocean Bill of Lading, Charter-party Bill of Lading, multimodal transport documents, road, rail and inland waterways documents, air transportation/air waybills
- Insurance and financial documents Insurance policy, bill of exchange, promissory note
- Official documents Certificates of origin, certificates of inspection, analysis certificate and health certificate
- Other documents packing lists

UNIT 9 – CLEAN PAYMENTS AND DOCUMENTARY TRADE PRODUCTS

Terms of Delivery

- What are the uses and scope of Incoterms 2010?
- Incoterms 2010
- departure EXW
- main carriage unpaid FCA, FAS, FOB
- main carriage paid CFR, CIF, CPT, CIP
- arrival DAP, DAT, DDP
- Diagram the charges relating to the delivery of goods
- The advantages/disadvantages to the importer/exporter in the use of Incoterms 2010
- Calculate alternative pricing examples for different delivery definitions

Methods of Payment

- What is the risk ladder?
- Review of the methods of payment from open account through to payment in advance
- What is the role of the exporter, importer and bank under different methods of payment?
- When does an exporter or importer use the differing methods of payment
- Risk analysis for clean payments open account vs. payment in advance

Documentary Collections

The key elements of documentary collections and when they are used

Delivery Against Acceptance (D/A), Delivery Against Payment (D/P)

- Role and risks relating to the Remitting and Collecting banks
- The act of avalisation and the meaning of "delivery against acceptance pour aval"
- What are the duties of the banks involved with documentary collections?
- · Conditions relating to the release of documents
- Exporter's risks when comparing D/A and D/P
- The Uniform Rules for Collections published by ICC URC 522

Letters of Credit

- The bank/customer relationship and how it differs from documentary collections
- What are the roles and obligations of the parties to a letter of credit
- Irrevocable, irrevocable and confirmed
- The risks and benefits to the exporter and importer of a letter of credit
- International Chamber of Commerce UCP 600 Rules

UNIT 10 - CONTRACTUAL & FINANCIAL GUARANTEES

Exporter's Checklist for Letters of Credit

- What the exporter should check before committing to both a commercial contract and letter of credit?
- Risk to the bank between the terms of the letter of credit, the SWIFT message and the actual transaction documents

Financing Associated with a Letter of Credit

- The use of post-shipment financing associated with a letter of credit
 - negotiation
 - discount

Standby Letters of Credit, Guarantees and Bonds

- Product summary client & bank value proposition – standby Letter of Credit transaction flows
- Guarantees and bonds
- Key features
- Types of Guarantees and bonds bid/tender bonds, performance bonds, advance payment bonds, retention bonds, warranty/maintenance bonds custom bonds, shipping guarantee
- Mechanics of guarantee transactions

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International Faculty of Finance 240 Blackfriars London SE1 8BU

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