



# ČESKÁ FINANČNÍ AKADEMIE VYKROKOVÁ ČEKOVÁNÍ

*Znalosti jsou cestou ...*



# Katalog seminářů 2012

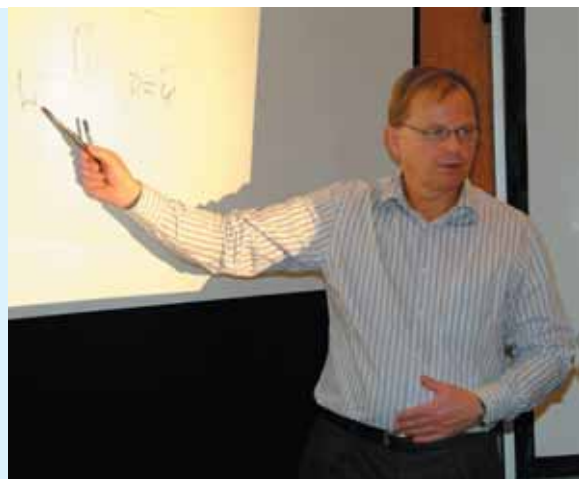
SEMINÁŘ	DĚLKA	TERMÍN KONÁNÍ	ÚČASTNICKÝ POPLATEK	CENA BLOKU
• Interest Rate Risk Management	3	20.–22. 2. 2012	52.000	74.000 <sup>3+2</sup>
• Liquidity Risk Management <b>UPDATED</b>	2	23.–24. 2. 2012	37.000	
• Private Banking – Wealth Management, Behavioral Finance and Investment Solutions	3	5.–7. 3. 2012	52.000	74.000 <sup>3+2</sup>
• Economic Indicators and their Impacts on Financial Markets	2	8.–9. 3. 2012	37.000	
• Basel III – Executive Overview <b>NEW</b>	1	27. 3. 2012	19.500	61.000 <sup>1+3</sup>
• Market Risk – Measurement, Mitigation and Regulatory Treatment <b>NEW</b>	3	28.–30. 3. 2012	52.000	
• Swaps – Mechanics, Pricing, Applications and Risk Management <b>UPDATED</b>	3	16.–18. 4. 2012	52.000	74.000 <sup>3+2</sup>
• Interest Rate Models – Advanced Pricing and Risk Management <b>UPDATED</b>	2	19.–20. 4. 2012	37.000	
• Financial Risk Management – Methods, Tools, Regulation and Control	2	21.–22. 5. 2012	37.000	74.000 <sup>2+3</sup>
• Quantitative Risk Measurement – Value-at-Risk, EVT and Monte Carlo Simulation <b>UPDATED</b>	3	23.–25. 5. 2012	52.000	
• Investment Management – Asset Allocation, Portfolio Construction and Risk Budgeting	2	26.–27. 6. 2012	37.000	61.000 <sup>2+2</sup>
• Index Investing – Index Funds, ETF's, Synthetics and Index Certificates <b>UPDATED</b>	2	28.–29. 6. 2012	37.000	
• Basel III Workshop – Framework, Implementation and Risk Management Implications <b>UPDATED</b>	3	17.–19. 9. 2012	52.000	74.000 <sup>3+2</sup>
• Economic Capital Allocation Workshop	2	20.–21. 9. 2012	37.000	
• Financial Instruments and Markets	2	16.–17. 10. 2012	37.000	61.000 <sup>2+2</sup>
• Behavioral Finance – Investors' Psychology, Market Impact and Investment Applications	2	18.–19. 10. 2012	37.000	
• Credit and Counterparty Risk Management <b>UPDATED</b>	3	5.–7. 11. 2012	52.000	74.000 <sup>3+2</sup>
• Credit Portfolio Management	2	8.–9. 11. 2012	37.000	
• Asset-Liability Management in Banks	3	19.–21. 11. 2012	52.000	74.000 <sup>3+2</sup>
• Stress Testing – Principles, Regulation and Practical Use in Risk Management <b>UPDATED</b>	2	22.–23. 11. 2012	37.000	
• Country and Sovereign Risk: Analysis, Rating and Risk Management	2	11.–12. 12. 2012	37.000	61.000 <sup>2+2</sup>
• Enterprise Risk Management <b>NEW</b>	2	13.–14. 12. 2012	37.000	

Účastnické poplatky a ceny bloků jsou uvedeny v CZK bez DPH. Tréninové programy, které svou strukturou tvoří navazující celek, je možno objednat za zvýhodněné ceny v rámci tzv. bloků, označených např. 2+3.

*Znalosti jsou cestou ...*  
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### Komplexní záběr

Česká finanční akademie je unikátní vzdělávací program, který nabízí sérii vysoce kvalitních otevřených seminářů pro finanční profesionály. Semináře komplexně pokrývají následující oblasti: finanční inženýrství, management všech typů finančních rizik, analýzy finančních instrumentů a trhů, management aktiv a pasiv, finanční modelování, oceňování a aplikace finančních derivátů, měření výkonnosti a řadu dalších odvětví moderního finančního průmyslu. Cílem projektu je výuka nejaktuálnějšího finančního know-how, které je široce použitelné v každodenní praxi.



### Praktická orientace

Jednotlivé semináře jsou vždy přesně tématicky zaměřeny. Programy seminářů jsou konstruovány tak, aby komplexně pokryly vymezenou problematiku. Semináře České finanční akademie jsou maximálně prakticky orientované a obsahují řadu reálných příkladů a praktických cvičení. Výukový efekt je navíc ještě zintenzivněn použitím počítačových simulací. Každý seminář je konzistentně přednášen jediným lektorem, což dovoluje maximálně zvýšit jejich specializaci a intenzitu. V neposlední řadě je vždy věnována velká pozornost nadstandardní kvalitě využívaných studijních materiálů. Semináře jsou přednášeny v anglickém jazyce bez simultánního tlumočení.



### Tradice a mezinárodní kvalita

Tvůrcem seminářů je renomovaná společnost MONECO, která je dlouholetým a spolehlivým partnerem řady významných tuzemských i zahraničních institucí. Cyklus seminářů je pořádán s mimořádným úspěchem již sedmnáctým rokem a za dobu jeho existence jím úspěšně prošlo více než 5000 tuzemských i zahraničních odborníků. Semináře České finanční akademie pro svou prvotřídní kvalitu, mezinárodní úroveň a komplexní záběr získaly renomé plně srovnatelné s obdobnými výukovými a tréninkovými programy předních zahraničních institucí.



### Místo konání

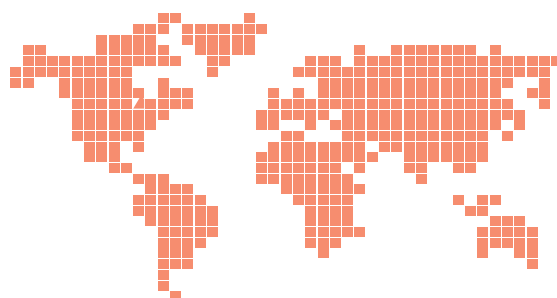
Semináře vzdělávacího programu Česká finanční akademie se konají v konferenčních prostorách čtyřhvězdičkového hotelu Mövenpick v Praze. Hotel se nachází na Praze 5, v těsné blízkosti obchodního, nákupního a zábavního centra Nový Smíchov. V hotelu jsou dvě znamenité restaurace: Restaurace Mövenpick a Il Giardino restaurant s překrásným výhledem na Prahu. Účastníkům seminářů je poskytován nadstandardní konferenční servis a občerstvení a k dispozici jsou také služby business centra a velkokapacitní podzemní parking. Konferenční místnosti jsou plně klimatizované a jsou vybaveny moderní audio-vizuální technikou. Účastníkům je k dispozici vysokorychlostní bezdrátové připojení k internetu (Wi-Fi).



### Účastníci seminářů

Semináře jsou především určeny pro profesionály z významných finančních institucí, mezi které patří: centrální a komerční banky, investiční skupiny, obchodníci s cennými papíry, pojišťovací společnosti, investiční společnosti, institucionální správci finančních aktiv, auditorské společnosti, akciové společnosti se sofistikovaným finančním řízením či leasingové společnosti. V posledním období se seminářů České finanční akademie v Praze účastní stále více klientů z celé Evropy.

- Společný projekt společností MONECO a BASISPOINT
- Kvalitní a obsáhlé studijní materiály
- Vysoká didaktická úroveň lektorů
- Využití audiovizuální techniky
- Odborná kvalita na mezinárodní úrovni
- Komplexní záběr za velmi příznivé ceny



Odborným lektorským garantem seminářů je německo-dánská poradenská a konzultační skupina BASISPOINT, která se specializuje na poskytování nejmodernějšího finančního know-how velkým finančním institucím na celém světě. Lektori skupiny BASISPOINT, kteří přednášejí na seminářích České finanční akademie, mají nejen poslední teoretické znalosti v dané problematice, ale také dlouholetou aktivní praxi na finančních trzích. O vysoké didaktické úrovni a kvalitě lektorů svědčí velmi pochvalné reakce mnoha českých i zahraničních absolventů.

### **SØREN BRAES, MSc (Eng)**

Søren Braes je zakládajícím partnerem a ředitelem oddělení analýz a softwarového vývoje ve společnosti BASISPOINT. Je odpovědný za realizaci významných projektů v oblasti specializovaných softwarových systémů se zaměřením na řízení finančních rizik a optimalizaci komplexních investičních portfolií.

Je držitelem vědeckého inženýrského titulu M.Sc. a má rozsáhlé expertní znalosti a praktické zkušenosti v oblasti statistických analýz a operačního výzkumu. Již více než deset let se lektorsky angažuje na kurzech a seminářích zaměřených na analýzu finančních trhů a instrumentů, finanční deriváty, řízení globálních smíšených multiměnových portfolií a management finančních rizik.

Søren Braes má schopnost podrobně a zároveň srozumitelně objasnit mnohdy velmi komplexní a náročné problémy. Pan Braes přednáší na mnoha konferencích pořádaných v různých evropských zemích.

V současné době je velmi žádaným konzultantem a expertním poradcem, kterého si vysoce cení mnoho významných mezinárodních bank, pojišťovacích společností a dalších finančních institucí. Před svým působením ve skupině BASISPOINT pracoval v německé pobočce přední skandinávské softwarové a poradenské společnosti, kde zastával významnou řídicí pozici. Pan Braes se narodil v roce 1964, je ženatý a má dvě děti.



### **SØREN PLESNER, MSc (Econ), CFA, FRM, PRM**

Søren Plesner je zakládajícím partnerem a výkonným ředitelem společnosti BASISPOINT GmbH, která je součástí skupiny BASISPOINT GROUP.

Specializovaná poradenská a konzultační společnost BASISPOINT byla založena v roce 1995. Do roku 1995, před svým působením ve skupině BASISPOINT, zastával Søren Plesner různé vedoucí pozice ve známých mezinárodních společnostech působících v oblasti bankovních a korporátních financí, jako např. v IBM, Danske Bank a naposledy ve významné dánské softwarové a konzultantské společnosti, kde působil na pozici ředitele.

Søren Plesner má dlouholeté zkušenosti ve školení a vzdělávání ze všech oblastí moderních financí a finančních trhů, především v problematice sofistikovaných analýz investičních instrumentů, moderního finančního inženýrství, řízení globálních investičních portfolií a komplexním managementu finančních rizik.

Pan Plesner má excelentní lektorské a pedagogické zkušenosti, které prokazuje vystupováním na řadě odborných konferencí, seminářů a kurzů pořádaných pro renomované mezinárodní instituce v mnoha zemích světa, např. v USA, Mexiku, Německu, celé Skandinávii i v zemích střední a východní Evropy. Søren Plesner je certifikovaným držitelem titulů Financial Risk Manager™ (FRM®), PRMIA Certified Risk Manager a Chartered Financial Analyst™ (CFA®). Narodil se v roce 1951, je ženatý a má dvě děti.



### MAPA PŘIDANÉ HODNOTY

Délka červeného pruhu vyjadřuje míru vhodnosti semináře pro uvedené útvary a sekce. Jedná se o průměrnou odhadovanou vhodnost, která se může v určitých případech lišit od skutečnosti, mimo jiné i z důvodu různé úrovně juniority/seniority účastníka semináře.

	TREASURY	INVESTMENT MANAGEMENT	ASSET-LIABILITY MANAGEMENT	RISK MANAGEMENT	CORPORATE BANKING	SUPERVISION, AUDIT, COMPLIANCE
Interest Rate Risk Management	■	■	■	■	■	■
Liquidity Risk Management	■	■	■	■	■	■
Private Banking – Wealth Management, Behavioral Finance and Investment Solutions	■	■	■	■	■	■
Economic Indicators and their Impacts on Financial Markets	■	■	■	■	■	■
Basel III – Executive Overview	■	■	■	■	■	■
Market Risk – Measurement, Mitigation and Regulatory Treatment	■	■	■	■	■	■
Swaps – Mechanics, Pricing, Applications and Risk Management	■	■	■	■	■	■
Interest Rate Models – Advanced Pricing and Risk Management	■	■	■	■	■	■
Financial Risk Management – Methods, Tools, Regulation and Control	■	■	■	■	■	■
Quantitative Risk Measurement – Value-at-Risk, EVT and Monte Carlo Simulation	■	■	■	■	■	■
Investment Management – Asset Allocation, Portfolio Construction and Risk Budgeting	■	■	■	■	■	■
Index Investing – Index Funds, ETF's, Synthetics and Index Certificates	■	■	■	■	■	■
Basel III Workshop – Framework, Implementation and Risk Management Implications	■	■	■	■	■	■
Economic Capital Allocation Workshop	■	■	■	■	■	■
Financial Instruments and Markets	■	■	■	■	■	■
Behavioral Finance – Investors' Psychology, Market Impact and Investment Applications	■	■	■	■	■	■
Credit and Counterparty Risk Management	■	■	■	■	■	■
Credit Portfolio Management	■	■	■	■	■	■
Asset-Liability Management in Banks	■	■	■	■	■	■
Stress Testing – Principles, Regulation and Practical Use in Risk Management	■	■	■	■	■	■
Country and Sovereign Risk: Analysis, Rating and Risk Management	■	■	■	■	■	■
Enterprise Risk Management	■	■	■	■	■	■

- **An ALM Framework for Managing Interest Rate Risk** <sup>3+2</sup>
- **GAP and Duration GAP Analysis**
- **Customer Behaviour and Interest Rate Risk**
- **Measuring Interest Rate Risk on Non-Maturing Products**
- **Measuring and Managing Prepayment Risk**
- **Measuring and Managing Value-at-Risk**
- **Using Derivatives to Hedge Interest Rate Risk**
- **Basel Sound Interest Rate Risk Management Practices**

The purpose of this seminar is to give you a good understanding of tools and techniques for measuring and managing interest rate risk.

We start with a general introduction to interest rate risk and explain how this type of risk should be measured and managed within an asset-liability framework. We explain important concepts such as margin, spread, leverage, surplus, and balance sheet risk. We look at the balance sheets of “typical” institutions and discuss the funding/investment requirements and constraints that arise from the business nature of these institutions.

We then take a closer look at methods for measuring interest rate risk. We show how GAP and Dynamic GAP simulations can be used to identify repricing and spread risk, and we explain mark-to-market based measures such as Duration GAP, “Surplus”, “Surplus-at-Risk”, and “Value-at-Risk”. We also explain how the interest rate and spread risk on non-maturing assets and liabilities (including “core deposits”) can be estimated and integrated into the overall assessment of asset-liability risk. Further, we explain how interest rate risk on optional cash flows such as prepayable mortgages can be estimated using pre-payment models and option-adjusted analysis.

After this, we present, explain and demonstrate a variety of methods for managing interest rate risk at the micro and macro levels. These methods include immunization, contingent immunization, surplus management and the use of derivative instruments such as futures, swaps and interest rate options for synthetic risk transfer. We discuss some of the practical problems arising from the use of these methods, including some accounting considerations related to the accounting standards (IAS 39 and FAS 133).

Finally, we discuss sound interest rate risk management practices (Basel Committee guidelines). We suggest appropriate risk management policies and procedures, and we discuss organizational considerations and monitoring, reporting, and internal controls requirements.

## MONDAY, FEBRUARY 20

09.<sup>00</sup>–09.<sup>15</sup>

### Welcome and Introduction

09.<sup>15</sup>–12.<sup>00</sup>

### General Introduction to Interest Rate Risk

- What is Interest Rate Risk?
- Profitability and Interest Rate Risk
  - Margins, leverage and ROE
  - Maturity transformation risk
  - Spread risk
- Interest Rate Risk in an ALM Framework
  - Asset-Liability risk
  - Surplus and surplus risk

### Measuring Interest Rate Risk (1)

- NPV Risk vs. “Repricing” Risk
- GAP Analysis
  - Static GAP
  - Dynamic GAP
  - Case: GAP analysis in “NoHope Bank”
- Exercises

12.<sup>00</sup>–13.<sup>00</sup>

### Lunch

13.<sup>00</sup>–16.<sup>30</sup>

### Measuring Interest Rate Risk (2)

- Simulation Method
  - Simulating NII
  - Simulating effect of product mix and pricing
  - Monte Carlo simulation
- Duration Analysis
  - Duration explained
  - Duration GAP
- Yield Curve Analysis
  - Projection of re-pricing rates
  - Key rate duration
- Using Factor Models
- Case: Duration Analysis and Factor Analysis in NoHope Bank
- Exercises

## TUESDAY, FEBRUARY 21

09.<sup>00</sup>–09.<sup>15</sup>

### Recap

09.<sup>15</sup>–12.<sup>00</sup>

### Measuring Interest Rate Risk (3)

- Measuring Interest Risk of Non-Maturing Assets and Liabilities
  - Saving accounts, demand deposits, mortgages etc.
  - The importance of “core deposits”
  - Assessing the impact of structural changes on how customers withdraw their money or choose their amortization schedule
- Pre-Payment Analysis
  - Using OAS analysis to evaluate interest rate risk of pre-payable mortgages
- Value-at-Risk Analysis
  - Calculating VaR for interest sensitive assets and liabilities
- Case: Analyzing Optional Cash Flows and VaR in “NoHope Bank”
- Exercises

12.<sup>00</sup>–13.<sup>00</sup>

### Lunch

13.<sup>00</sup>–16.<sup>30</sup>

### Managing Interest Rate Risk (1)

- Structural Management
  - A/L mix and pricing
  - Balance sheet re-engineering
- Strategies for Interest Rate Risk in Portfolio Management
  - Matching
  - Classic immunization
  - Contingent immunization
  - Surplus management
  - Factor immunization
- Case: Immunization Strategies in “NoHope Bank”
- Exercises

## WEDNESDAY, FEBRUARY 22

09.<sup>00</sup>–09.<sup>15</sup>

### Recap

09.<sup>15</sup>–12.<sup>00</sup>

### Managing Interest Rate Risk (2)

- Overview of Derivative Instruments for Hedging of Interest Rate Risk
- Using FRAs and Futures to Manage Re-pricing Risk
- Using Interest Rate Swaps to Hedge Fixed and Floating Rate Assets and Liabilities Loans
- Using “Macro Swaps” to Hedge Loan and Deposit Portfolios
- Using Interest Rate Options to Cap Funding Costs
- Managing Pre-Payment Risk
- Managing Multi-Dimensional IRR
- Accounting Issues in Using Derivatives for Hedging of IRR
  - “Hedge accounting”
- Case: Using Derivatives in “NoHope Bank”

12.<sup>00</sup>–13.<sup>00</sup>

### Lunch

13.<sup>00</sup>–16.<sup>30</sup>

### Sound Interest Rate Risk Management Practices

- Interest Rate Risk Management Policies and Procedures
- Organizational Considerations in Interest Rate Risk Management
  - Management structure (board and senior managers)
  - Lines of responsibility and authority for managing interest rate risk
- Interest Rate Risk Monitoring and Reporting
- Capital Adequacy and Disclosure of Interest Rate Risk
- Internal Controls and Independent Audits

### Evaluation and Termination of the Seminar

- **Liquidity Risk and Liquidity Crises**
- **The Links between Liquidity, Market and Credit Risk**
- **Assessing Bank and Market Liquidity Risk**
- **Liquidity Ratios, Liquidity Curves and Liquidity-at-Risk**
- **Liquidity Ratios under Basel III**
- **Liquidity Black Holes and Liquidity Stress Testing**
- **Tools for Liquidity Risk Management**
- **Liquidity Pricing**

3+2

The purpose of this seminar is to give you a good understanding of liquidity risk and of the tools and techniques for managing this type of risk.

We start with a general introduction to liquidity risk and explain the difference between “cash flow risk” and “market liquidity risk”. We explain how liquidity risk has become tightly integrated with market, credit and operational risk, and we give examples of how the complex interactions between these risks may result in major financial disasters and global liquidity crises.

We then present and explain a number of tools for assessing liquidity risks, including liquidity risk indicators, cash flow projections and the “liquidity curve”. We also present and explain in detail the new liquidity ratios under the Basel III framework (Liquidity Coverage Ratio and Net Stable Funding Ratios). We give practical examples and discuss the challenges for financial institutions in meeting these requirements. We also explain how a financial institution can use asset liquidity modelling, liquidity stress testing and long term liquidity profiling, and we explain how the liquidity risk of non-maturing assets and liabilities is linked to interest rate risk, and how this risk can be quantified using stochastic modelling techniques.

Further, we explain how liquidity risk can be managed within the context of an integrated risk management program. We present a number of liquidity management tools, including “contingency planning” and financing instruments such as repos and money market facilities. We also explain how the “securitization” technique has been used to turn illiquid assets into marketable securities, and we discuss the role of this type of financing in a “post-crash” environment.

Finally, we look at liquidity costs and liquidity pricing factors, and we explain the process of “liquidity pricing” in an ALM context.

The course will be highly practical and will provide you with tools that you can use in your day-to-day and strategic liquidity management.

## THURSDAY, FEBRUARY 23

09.00–09.15

### Welcome and Introduction

09.15–12.00

### General Introduction to Liquidity Risk Management

- Liquidity Risk and the Global Crisis
- The Integration of Liquidity Risk with Market and Credit Risk
- Case Studies: Northern Rock, Bear Stearns, Lehman Brothers etc.
- Regulatory Reactions

### Assessing Bank Liquidity Risk

- An ALM Framework for Assessing Liquidity Risk
- Factors that Affect Bank Liquidity
- Balance Sheet Analysis
- The Regulator Perspective (Basel III)
  - The Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR) under Basel III
- Sources of Cash Flow Uncertainty
- Contingent Cash Flows (MBS, Derivatives)
- Assessing Liquidity Risk Using Cash Flow GAP Analysis
- Stochastic Liquidity Modelling (PC-simulations)
  - Modelling Static and Uncertain Cash Flows of Maturing/Non-Maturing Deposits, Assets with Pre-Payment Risk, Derivatives, Margin Payments, “Liquidity at Risk” etc.
- Practical Case Studies and Exercises

12.00–13.00

### Lunch

13.00–16.30

### Assessing Market Liquidity Risk

- The Relationship between Market and Liquidity Risk

### Measuring Market Liquidity Risk of Treasuries

- Bid/ask Spread
- Trading Volume, Size and Frequency
- Price Impact
- Price Volatility and Yield Spread

### Measuring Market Liquidity Risk of Corporate Bonds

- Liquidity Indicators
- How to Separate Liquidity Spread from Credit Spread

### Liquidity Risk of Emerging Market Investments

### Measuring Liquidity in Futures and Swaps Markets

- Open Interest and Volume
- Liquidity and Swap Spreads

### Liquidity Shocks and Liquidity “Black Holes”

- Practical Case Studies:
  - LTCM, “Subprime” and other Liquidity Crises
- Exercises

## FRIDAY, FEBRUARY 24

09.00–09.15

### Brief recap

09.15–12.00

### Managing Liquidity Risk in Practice

- Sound Practices for Liquidity Risk Management
  - Developing a Structure for Managing Liquidity Risk
  - Measuring and Monitoring Net Funding Requirements
  - Managing Market Access
  - Contingency planning
  - Foreign Currency Liquidity Management
  - Examples of Liquidity reporting
  - Internal Controls for Liquidity Risk Management
  - Basel Committee “Principles for Sound Liquidity Risk Management”

### A Closer Look at Practical Tools for Liquidity Management

- The Source Continuum
- Contingency Funding Planning
- Liquidity and Underwriting Facilities
- MTNs, CDs, CPs, asset-backed CPs and Repos
- Securitization and Synthetic Securitization
- Gaining Access to Central Bank Liquidity in a Crisis Situation
- A Rating Agency’s Perspective on Liquidity Risk management
- Practical Case Studies and Exercises

12.00–13.00

### Lunch

13.00–16.30

### Liquidity Pricing

- Reasons for Liquidity Costs
- Defining Liquidity Costs and the Pricing Factors
  - Structural Liquidity Costs
  - Contingent Liquidity Costs
- A Liquidity Traders View
  - Long vs. Short cash
  - Rate paid vs. Rate Achieved
- Balancing the Costs of Overfunding/Underfunding
- Liquidity Cost Curves
- Fund Transfer Pricing
  - Transfer Prices for Liquidity
  - Liquidity Pricing for Specific Asset and Liability Classes
  - The Role of FTP in Economic Capital Allocation and Risk Adjusted Performance Measurement
- Practical Case Studies and Exercises

### Evaluation and Termination of the Seminar

- **Private Banking Strategies, Products and Services**
- **Wealth Planning for Private Banking Clients**
- **Relationship Management Skills for Private Bankers**
- **Behavioral Finance for Private Bankers**
- **Asset Allocation and Portfolio Construction**
- **Investment Solutions in Private Banking**
- **Performance Measurement, Client Reporting, Ethics and Regulation**

3+2

The purpose of this seminar is to give you a thorough introduction to the business of “Private Banking” and a good understanding of how the goals and needs of private banking clients can be met through careful financial planning and “standard” as well as tailored investment solutions.

We start with a general introduction to private banking. We give an overview of the industry and its players and we discuss the current opportunities and challenges in private banking.

We then take a closer look at the wealth planning process. We discuss how the clients can be categorized according to various wealth and personal characteristics and we explain how wealth money should be managed according to the client’s situational profile (economic circumstances, stage of life risk tolerance, tax situation etc.). We also discuss the roles and requirements of financial advisors/relationship managers.

We then turn to the asset management process. We give an overview of traditional and alternative asset classes and their characteristics, and we explain how to build the investor’s portfolio in accordance with capital market expectations and investment policy. We discuss how traditional portfolio theory (quantitative models) and behavioural finance can be integrated in the portfolio construction process. We also explain how financial and human capital can be optimally balanced according to the client’s risk-return objectives and investment constraints.

On day three, we give practical examples of investment solutions that are offered to private banking clients. Such solutions include traditional asset classes - equity and fixed income – as well as alternative investments such as hedge funds, private equity, real estate, derivatives, ETFs and “structured” products. We explain the risk and return characteristics of the products, and we discuss their suitability for private banking clients.

Finally, we explain how investment performance can be measured, appraised and communicated to the client. We also discuss the all-important ethical aspects of investment the advisory/wealth management business.

MONDAY, MARCH 5

09.00–09.15

**Welcome and Introduction**

09.15–12.00

**Introduction to Private Banking and Wealth Management**

- PB Strategies, Products and Services
- Growth and Opportunities in the PB Market

**Wealth Planning for PB Clients**

- Private Banking Clients
  - Key Characteristics & Know Your Customer
  - Client Requirements and Expectations
  - Client Psychology and Investment Temperament
- Client Segmentation and Profiling
  - Traditional/New Approaches to Profiling Clients
- Financial Planning for Private Banking Clients
  - Monitoring the Clients Financial State
  - Risk/Return Objectives and Constraints
  - Preparing the Investment Policy Statement
- Pension Planning, Tax Mitigation, Family Office and Protection Against Risk (Insurance)
- Value Proposition
  - Quality, Offering, Advice, Service, Execution
- Pricing (Private Banking vs. Brokerage)

12.00–13.00

**Lunch**

13.00–16.30

**Relationship Management Skills for Private Bankers**

- Presentation and Negotiation Skills
- Other Critical Skills in Sales
- Adviser-client Relationship and Account Development
- Identifying Problems in the Client Relationship (Silent Criticism)
- Work with other Advisory Professionals for the Benefit of Clients
- How to Assess your Relationship Performance
- Professional Image and Social Role

**Generational Wealth Management, Wealth Transfer and Sudden Wealth**

- Wealth Management in a Changing Landscape
- Private Banking for Clients of Different Generations
- Wealth Transfer
  - Roles of Family Members
  - Three Types of Family Governance
  - Implement Family Goals into Asset Allocation
- Sudden Wealth and other Special Topics

TUESDAY, MARCH 6

09.00–09.15

**Recap**

09.15–12.00

**The Private Banking Investment Universe**

- Traditional Investments (Overview)
- Alternative (non-correlated) Investments
- Art, Wine, Race Horses, Woodland,...
- Suitability for Private Banking Clients

**Behavioral Finance for Private Bankers**

- Behavioral Finance and Its Implications for the Portfolio Choice
- Heuristic Biases
  - Representativeness, Overconfidence, Anchoring-and-Adjustment, Aversion to Ambiguity
- Frame Dependence
  - Cognitive and Emotional Aspects
  - The “House Money Effect”
  - Loss Aversion, Self-Control
  - Fear of Regret and Regret Minimization
  - Money Illusion
- Investment Implications and Strategies for Inefficient Markets
- Case Study and Small Exercise

12.00–13.00

**Lunch**

13.00–16.30

**Asset Allocation and Portfolio Construction**

- Goals-Based Investing: Integrating Traditional and Behavioral Finance
- Basic Strategies for Asset Allocation and Risk Reduction
  - Human Capital
  - Financial Capital
  - Stage of Life Cycle
  - Bequest Preference and Risk Aversion
  - Asset Allocation and Life Insurance
- Portfolio Construction
  - Pragmatic Approach – the Portfolio Pyramid
  - Constructing Mean-Variance Efficient Portfolios
  - Tactical Asset Allocation
  - Portfolio Rebalancing
  - Stock Picking
- Case Study and Exercise

WEDNESDAY, MARCH 7

09.00–09.15

**Recap**

09.15–12.00

**Investment Solutions in Private Banking**

- Traditional Investment Funds
- Hedge Funds
  - Hedge funds and their investment strategies
  - Ways of investing in hedge funds
  - Due diligence checkpoints
- Private Equity
  - Venture funds and buy-out funds
  - Ways of investing in private equity
  - Due diligence checkpoints
- Real Estate Investments
- Commodity Investments
- Derivatives and Structured Products
- Constructing Optimal Portfolios with Alternative Investments and Structured Products
- Core-Satellite Investing Using ETFs
- Carry Trades
- Investing in Fixed Income Structured Products
- Strategies for Protecting Principal
- Investing in Inflation-Linked Notes
- Case Studies and Exercises

12.00–13.00

**Lunch**

13.00–16.30

**Performance Measurement, Client Reporting, Ethics and Regulations**

- Measures of Return and Risk
- Measuring Risk-Adjusted Return
- Benchmarks and Benchmarking
- Attribution Analysis
- Style Analysis
- GIPS-Compliant Client Reporting
- Ethical Aspects of Wealth Management
- MiFID, PRIIPS and other Regulation
- Case Study and Exercise

**Outlook: The Future of The Wealth Management Industry**

**Summary, Evaluation and Termination of the Seminar**

- **Macroeconomics and Financial Markets**
- **Importance of Fiscal and Monetary Policy for Financial Markets**
- **Overview of Economic Indicators and their Uses**
- **Leading Economic Indicators and their Effects on Financial Markets**
- **Coincident Economic Indicators and their Effects on Financial Markets**
- **Lagging Economic Indicators and their Effects on Financial Markets**
- **Economic Integration and Global Financial Markets**

3+2

The purpose of this seminar is to give you a good understanding of the practical uses of economic indicators for investment analysis and other investment management purposes.

We start with a review and analysis of modern macroeconomics from the perspective of the financial community, focusing on important issues such as growth, business cycles, inflation expectations, interest rates, trade and balance of payments deficits, government deficits etc. We also explain how fiscal and monetary policies are used as stabilization tools and discuss how these policies can affect the broad financial markets and market values of different asset classes.

We then take a closer look at how trends and cyclical behaviour of economic variables are reflected in various economic indicators. We give an overview of the different types of economic indicators and explain how they are classified according to direction (procyclical, countercyclical or acyclical) and timing (leading, coincident or lagging variable). Further, we look in more detail at examples of the various types of indicators, including “hours of production workers in manufacturing”, “new claims for unemployment insurance” (leading indicators), “index of industrial production”, “personal income”, and “value of new orders for consumer goods” (coincident indicators), and “unemployment rate” (lagging indicator). We will go LIVE to follow the release of some of these indicators during the seminar!

In each case, we explain how the indicators should be interpreted, and we discuss how the release of new economic data can impact the value of financial instruments and investment projects. We also demonstrate how regression analysis can be used as a practical tool in conjunction with economic indicators and modelling to forecast industrial production, consumer spending and other important variables, and to identify linkages between various indicators. Further, we show how factor models can be used to estimate the effect on stock prices, interest rates and exchange rates of changes in these economic variables. We also give practical examples of possible profitable investment strategies based on the effects of forecasted/expected changes in economic indicators.

THURSDAY, MARCH 8

09.<sup>00</sup>–09.<sup>15</sup>

## Welcome and Introduction

09.<sup>15</sup>–12.<sup>00</sup>

### A Review of Modern Macroeconomics

- Overview of Important Macroeconomic Variables
- Alternative Measures for Output and Income
- Economic Fluctuations, Unemployment and Inflation
- Government Deficits and Interest Rates
- Balance of Payments and Exchange Rates
- Fiscal and Monetary Policies and their Impacts on the Financial Markets
- Small Exercises

### Introduction to Economic Indicators

- What Is an Economic Indicator, and Why Are they Important?
- Types of Economic Indicators
  - Lagging, Coincident
  - Procyclical, Countercyclical, Acyclical
  - Composite and Diffusion Indexes
- Overview of Domestic and International Indicator Indexes
- Linkages between Economic Indicators
- Overview of the Practical Uses of Economic Indicators

12.<sup>00</sup>–13.<sup>00</sup>

## Lunch

13.<sup>00</sup>–16.<sup>30</sup>

### Leading Indicators and their Importance to Financial Markets

- Important Indexes of Leading Indicators
  - The Conference Board (US)
  - OECD’s Composite Leading Indicator for the G7 Economies
  - The ECRI Index
- A Closer look at the Individual Leading Indicators
  - Stock Prices and Stock Market Returns
  - Average Weekly Hours
  - New Orders

- Money Supply
- Housing Permits
- Philly Fed and ISM
- Consumer Spending and Confidence
- Interest Rate Spreads (Yield Curve)
- Other Leading Indicators
- Forecasting Recessions Using Leading Economic Indicators
- Interpreting Declines in the Leading Index: The Three D’s
- Investment Implications
  - How the Release of New Economic Data Can Impact the Value of Financial Instruments and Investment Projects
- Cautions and Conclusions about Leading Indicators
- Small Exercises

FRIDAY, MARCH 9

09.<sup>00</sup>–09.<sup>15</sup>

## Brief recap

09.<sup>15</sup>–12.<sup>00</sup>

### Coincident Indicators and their Importance to Financial Markets

- Industrial Production
  - Real and Nominal GDP, Volume of Sales of the Manufacturing and Wholesale-Retail Sectors, Durable Goods Orders, Factory Orders
  - Practical Investment Implications of Industrial Production Indicators
  - Examples of Investment Strategies of (Changing) Industrial Production Indicators
- Employment
  - Employment Situation, Weekly Claims for Unemployment Insurance, Help-Wanted Advertising Index, Corporate Layoff Announcements, Mass Layoff Statistics (MLS)
  - Practical Investment Implications of Employment Indicators
  - Examples of Investment Strategies to Exploit (Changing) Employment Indicators

- Other Coincident Indicators
  - Personal Income and Spending
  - New and Existing Home Sales
  - Practical Investment Implications and Examples of Investment Strategies
- Small Exercises

12.<sup>00</sup>–13.<sup>00</sup>

## Lunch

13.<sup>00</sup>–16.<sup>30</sup>

### Lagging Indicators and their Importance to Financial Markets

- Unemployment
  - Inventory-Sales Ratios
  - Prices, Productivity, Wages, Employment Cost Index
- Consumer and Social Costs
  - Ratio of Installment Credit Outstanding to Personal Income
  - Percentage Change in CPI
  - Average Duration of Unemployment
- Other Lagging Indicators
- Practical Investment Implications of Changing Lagging Indicators
  - Understanding the Behavior of the Economy
  - Examples of Investment Strategies that Are Based Upon the Analysis of Lagging Indicators
- Small Exercises

### Outlook: Economic Integration and Global Financial Markets

- Where is the Global Economy Heading?
- What will be the Impact on Global and Local Financial Markets?
- Taking the Pulse of the Global Economy by Looking at Economic Indicators

### Summary, evaluation and termination of the Seminar

- **Background and Intentions of Basel III**
- **Raising the Quality of the Capital Base**
- **Revised Rules for Capital Coverage**
- **The New Basel Liquidity Ratios**
- **Supervisory Review, Stress Testing and ICAAP**
- **Basel III Market Impact and Managerial Challenges**

1+3

The purpose of this seminar is to give you an overview of the updated Basel rules for capital adequacy and liquidity coverage in banks.

We start with a general introduction to the Basel framework and give an overview of the changes that have been agreed to strengthen resilience of the banking system in the wake of the global financial crisis.

We discuss how the quality, consistency, and transparency of the capital base will be raised and the risk coverage of the capital framework will be strengthened by reducing procyclicality, improving risk management, and by introducing a countercyclical capital buffer and a gross leverage back-stop.

We then give an overview of how various types of risk are measured under the Basel III and how these risk measures translate into capital charges. We illustrate with some simple examples.

Further, we explain the requirements under “pillars 2+3” for stress testing, internal capital assessment and allocation, and risk disclosure, and we discuss the role of supervisors under the supervisory review process.

Finally, we discuss the practical challenges of implementing the (new) rules. We also look at the possible consequences of Basel III for the individual bank and for the banking system.

TUESDAY, MARCH 27

09.<sup>00</sup>–09.<sup>15</sup>

### Welcome and Introduction

09.<sup>15</sup>–10.<sup>15</sup>

### Background and Intentions of Basel III

- The Crisis and the Need to Strengthen the Capital Framework
- Raising the Quality of the Capital Base
- Enhancing Risk Coverage
- Reducing Procyclicality
- Supplementing the Risk-Based Capital Requirement with a Leverage Ratio

10.<sup>15</sup>–10.<sup>30</sup>

### Coffee Break

10.<sup>30</sup>–12.<sup>00</sup>

### Revised Rules for Capital Coverage

- Updated Capital Definition
  - Tier 1 + Tier 2 capital
- The Risk-Based Capital Ratio
  - New minimum requirements in relation to risk-weighted assets Non-Risk Based Leverage Ratio
- Countercyclical Capital Buffers
  - The conservation buffer
- Promoting Forward-Looking Provisioning
- Treatment of Counterparty Risk and Securitization
- Special Capital Charges for Systemically Important Institutions
- Transition Arrangements
- Practical Case Study: New vs. Old Capital Charges

12.<sup>00</sup>–13.<sup>00</sup>

### Lunch

13.<sup>00</sup>–14.<sup>30</sup>

### Measuring and Managing Liquidity Risk Under Basel III

- The Current Supervisory Regimes for Liquidity Risk
  - Stock-based indicator angle
  - Mismatch indicator angle

- The New Basel III Liquidity Ratios
  - Liquidity Coverage Ratio
  - Net Stable Funding Ratio
- Case Study: Calculating the New Basel Liquidity Ratios for Sample Bank

14.<sup>30</sup>–14.<sup>45</sup>

### Coffee Break

14.<sup>45</sup>–15.<sup>30</sup>

### Supervisory Review, Stress Testing and ICAAP

- Overview of Changes in Basel III
  - The enhanced Supervisory Review Process and ICAAP
  - Enhanced disclosures and market discipline
- Stress Testing
  - Basel III principles for sound stress testing practices and supervision

15.<sup>30</sup>–16.<sup>15</sup>

### Managerial Challenges and Market Impact

- How Will Basel III Impact Organization, Policies and Procedures?
- How Will the Rules Affect Bank Profitability?
- Integrating Basel III into an ERM Framework
- Discussion: How will the updated Basel rules affect the banking and other markets?

16.<sup>15</sup>–16.<sup>30</sup>

### Q+A, Summary, Evaluation and Termination of the Seminar

1+3

- **Best Practices in Market Risk Management**
- **Quantitative Tools for Market Risk Measurement**
- **Measuring and Managing Equity Risk**
- **Measuring and Managing Interest Rate Risk**
- **Quantifying FX and Commodity Risk**
- **Value-at-Risk and Stress Testing**
- **Regulatory Treatment of Market Risk**

1+3

The purpose of this course is to give you a good and practical, “hands-on” understanding of strategies, tools and techniques for managing market risks.

We start with a general introduction to market risk and discuss how recent years’ dramatic developments in financial markets have lead to an increased urgency in managing risk generally. We review current best practices in market risk management, and we explain the process of identifying, measuring and managing market risk. We also introduce and explain the “general” quantitative techniques that are used in risk quantification.

We then turn to look in more detail at how the individual types of market risk are measured and managed. We explain and demonstrate how equity risk is measured at the single instrument and portfolio levels and how these risks can be mitigated using futures, options and swaps. Further, we explain how interest rate risk is measured using the duration concept, and we explain and demonstrate how general interest rate risk, yield curve risk and spread risk can be hedged using interest rate derivatives. We also explain and demonstrate how FX and commodity risk can be measured and managed.

After looking at the individual risk types, we introduce the important, aggregate risk measure “Value-at-Risk” (VaR). We explain how VaR is calculated for various risk types. We discuss the strengths and weaknesses of VaR and we point out the pitfalls of using VaR in isolation. We also explain how “stress testing” can and should be used to complement VaR measures.

Finally, we give you a thorough review of the regulatory treatment of market risk under the Basel rules. We explain and demonstrate how the “pillar 1” capital charges are calculated. We also explain how market risks are treated under “pillar 2”, and we discuss the internal and external reporting requirements.

WEDNESDAY, MARCH 28

09.<sup>00</sup>–09.<sup>15</sup>

### Welcome and Introduction

09.<sup>15</sup>–12.<sup>00</sup>

### Introduction to Market Risk Management

- Why Market Risk Has Become More Important
  - Globalization and integration of markets
  - Increased volatility
  - Tougher regulation/Increased capital charges
- Overview of Types of Market Risks
- Best Practices in Market Risk Management
- The Risk Management Triangle: Identification, Measurement and Management
- Market Risk Management Functions in a Bank
  - Control, Supervision and Limit Setting
  - Valuation (Mark to market) and P/L Monitoring
  - Risk Measurement and Board Reporting
- Basel Capital Requirements for Market Risk
  - Overview

### Quantitative Tools for Market Risk Measurement

- The Components of Market Risk
- Measuring Return and Volatility
- Probability, Loss Distributions, Arbitrage Models
- Exercises

12.<sup>00</sup>–13.<sup>00</sup>

### Lunch

13.<sup>00</sup>–16.<sup>30</sup>

### Measuring and Managing Equity Risk

- Drivers of Equity Risk
- Macroeconomic Factor Models
- Systematic and Unsystematic risk
- Measuring Systematic Risk (Beta)
- Risk Pricing
  - The Capital Asset Pricing Model (CAPM)
  - The international CAPM
  - The equity premium puzzle
- Managing Equity Risk with Derivates
  - Equity derivatives – market overview
  - Altering portfolio beta with index futures
  - Hedging equity portfolios with equity options
  - Hedging with equity swaps
- Case Studies
- Exercises

THURSDAY, MARCH 29

09.<sup>00</sup>–09.<sup>15</sup>

### Recap

09.<sup>15</sup>–12.<sup>00</sup>

### Measuring and Managing Interest Rate Risk

- Price and Yield Analysis
- Duration Analysis, BPV and Convexity
- Interest Rate Volatility
  - Price and Yield Volatility
- Leverage and Interest Rate Risk
- Measuring Yield Curve Risk
  - “Bucketing”
  - Key rate duration
  - Principal components analysis
- Pre-payment and Option Embedded Risks
- Measuring Interest Rate Risk at the Portfolio Level
- Managing Interest Rate Risk with Derivatives
  - Interest rate derivatives – market overview
  - Altering portfolio duration with bond futures
  - Hedging interest rate risk with swaps
- Case Studies and Exercises

12.<sup>00</sup>–13.<sup>00</sup>

### Lunch

13.<sup>00</sup>–16.<sup>30</sup>

### Measuring and Managing FX Risk

- Key Determinants of FX Volatility
- Measuring FX Exposure
  - Economic exposure, translation exposure and transaction exposure
- FX Volatility and Single-Position Risk
- FX Portfolio Risk
- Managing FX Risk with Forwards, Swaps and Options
  - Hedging principal value vs. total economic Risk
- Case Study and Exercise

### Measuring and Managing Commodity Risk

- Types of Commodities and their Risks
- Volatility and Correlation of Commodity Returns
- Hedging Commodity Risk with Commodity Derivatives
- Case Study and Exercise

FRIDAY, MARCH 30

09.<sup>00</sup>–09.<sup>15</sup>

### Recap

09.<sup>15</sup>–12.<sup>00</sup>

### Portfolio Market Risk

- Portfolio Effects and Diversification
- Correlation and Covariance Analysis
- Composite and Portfolio Risk Measures

### Value at Risk and Stress Testing

- What is “Value-at-Risk”?
- Uses of VaR in Risk Management
- Ways of Measuring VaR
  - Parametric and non-parametric VaR
  - Historical simulation
  - Monte Carlo simulation
- Calculating VaR for Linear Exposures
- Calculating VaR for Non-linear Instruments
- Stress Testing
  - Why stress testing?
  - Main uses of stress testing
  - Scenario analysis
  - Mechanical approaches
- Case Study and Exercise

12.<sup>00</sup>–13.<sup>00</sup>

### Lunch

13.<sup>00</sup>–16.<sup>30</sup>

### Regulatory Treatment of Market Risk

- The Risk Measurement Framework
  - The Standardized Measurement Method
    - Interest rate risk
    - Equity position risk
    - Foreign exchange risk
    - Commodities risk
    - Treatment of options
  - The Internal Models Approach
    - Qualitative and quantitative standards
    - Specification of market risk factors
    - Stress testing
    - External validation
  - Revised Rules for Treatment of Counterparty Risk (Basel III)
  - Regulatory Reporting (Pillar II + III)
  - Internal Reporting and Control (limits etc.)
- Summary, Evaluation and Termination of the Seminar**

- **Interest Rate Swaps and Currency Swaps**
- **Non-Generic Swaps**
- **Swap Pricing – Single and Multiple Curves**
- **Swap Curve Construction with Collateral**
- **Swaps with Embedded Options**
- **Caps, Floors and Swaptions**
- **Applications of Swaps and IRO's**
- **Risk Management of the Swap Book**

3+2

The purpose of this seminar is to give you a good understanding of the mechanics, pricing and applications of generic as well as more advanced swaps and of swap-related option structures.

We start with a general introduction to swaps and swaps markets and we discuss important market developments. We then turn to look in more detail at interest rate swaps. We explain the mechanics of “vanilla” interest rate swaps and give examples of swap cash flows. We give a thorough explanation of how swaps are valued consistently according to “the new paradigm” of multiple curves with and without a collateral agreement. Further, we explain how to calculate and interpret risk analytics such as dollar duration and key rate duration, and we give practical, real-life examples of the uses of interest rate swaps for creating synthetic assets and liabilities and for managing interest rate risk.

On day two, we start with introduction to currency swaps. We give examples of the cash flows of different types of currency swaps and we explain how they are priced according “the new paradigm”. Among other things, we explain the reason for and the importance of the so-called basis swap spread. Further, we give examples of applications of currency swaps in Treasury and Risk Management.

Having gained good understanding of swap fundamentals we then turn to examine a number of more advanced swap structures and their related option instruments. We analyze structures such as “Amortizing”, “Accreting”, “Forward Starting”, “Arrears Reset”, “Constant Maturity” and “Differential” swaps. We also look at structures with embedded option features such as “Cancellation Swaps”.

On day three, we present and analyze a number of swap-related options, including Caps, Floors, Swaptions and more advanced types such as “Constant Maturity Floors”. We also explain and demonstrate how they can be practical applied in Treasury and Risk Management.

Finally, we explain how the risks of a swap book can be managed. We explain and demonstrate how interest rate risk and FX risk can be hedged using FRAs and futures. Further, we explain and illustrate how counterparty risk can be assessed and managed.

## MONDAY, APRIL 16

09.00–09.15

### Welcome and Introduction

09.15–12.00

#### Introduction to Swaps

- Swaps and Swap Markets
- Overview of Swap Types and Applications

#### Interest Rate Swaps

- Types, Mechanics and Cash Flows
- Swap Pricing: The New Paradigm
  - Problems in using Libor as the discount rate
  - The effect of collateral
  - Single-curve vs. multiple curve approaches
- Swap Curve Construction without Collateral
  - Case of single IRS
  - Taking the TS basis into account
  - Implications from different choice of discounting curve
- Swap Curve Construction with Collateral
- Pricing and Valuation Examples
- Exercises

12.00–13.00

### Lunch

13.00–16.30

#### Interest Rate Swaps (Continued)

- Risk Analysis
  - Dollar duration
  - Key rate duration
  - Value-at-Risk
- Applications
  - Creating synthetic cash flows
  - Asset swaps
  - Liability swaps
  - Using swaps to manage interest rate risk of bond portfolio
  - Using swap overlay strategies in ALM
  - Using macro swaps to hedge banking book
- Exercises

## TUESDAY, APRIL 17

09.00–09.15

### Recap

09.15–12.00

#### Currency Swaps

- Overview of Currency Swap Structures
- Decomposing Currency Swap Structures into Building Blocks
- Pricing Currency Swaps as Series of Long-dated Forward Contracts
- Liquidity Issues and the Basis Swap Spread
- Swap curve Construction
  - Case of CCS without collateral
  - Case of collateralized swaps in single currency
  - Case of collateralized swaps in multiple currencies
- Pricing and Valuation Examples
- Applications
- Risk Analysis
- Exercises

12.00–13.00

### Lunch

13.00–16.30

#### Non-Generic Swaps

- Amortizing Swaps and Accreting Swaps
- Forward Starting Swaps
- Arrears Reset Swaps
- Constant Maturity Swaps
- Yield Curve Swaps/Basis Swaps
- Mark-to-Market Swaps
- Differential Swaps
- Overnight Index Swaps
- Deferred Coupon Swaps
- Stepped Coupon/Ratchet Swaps
- Total return swaps
- Examples of Applications of Non-Generic Swaps
- Cases and Exercises

## WEDNESDAY, APRIL 18

09.00–09.15

### Recap

09.15–12.00

#### Swap-Related Options and Option

##### Embedded Swaps

- Interest Rate Guarantees, Caps, Floors and Collars
  - Pay-of profiles and valuation (overview)
- Swaptions
  - Receiver/payer swaptions
  - European, American, Bermudan types
  - Pay-of profiles and valuation (overview)
- Option Embedded Swaps
  - Cancellation swaps
  - Extendable swaps
- Applications (examples)
  - Hedging loan with swap, cap or collar
  - Hedging contingent interest rate exposure with swaptions
  - Call monetisation with swaptions
- Exercises

12.00–13.00

### Lunch

13.00–16.30

#### Risk Management of the Swap Book

- Managing Interest Rate Risk
  - Hedging with FRAs, ED futures and bond futures
- Managing FX Risk
  - Hedging with currency forwards and options
- Calculating and Managing Value-at-Risk of the Swap Book
- Measuring and Managing Counterparty Risk
  - Calculating current and potential future exposure
  - Netting and collateral management
- Managing Legal Risk

#### Evaluation and Termination of the Seminar

- **The Term Structure of Interest Rates and Volatility** <sup>3+2</sup>
- **Equilibrium and No-Arbitrage Models**
- **The BDT and the Hull-White Models**
- **The Libor Market (BGM) Model**
- **Multi-Curve Libor Market Models**
- **Stochastic Volatility Models**
- **Using Interest Rate Models in Risk Management**

The purpose of this advanced-level seminar is to give you a good understanding of modern interest rate models and their uses in option pricing and risk management.

We first present and explain important concepts such as the term structure of interest rates and the term structure of volatility. We then take a closer look at various processes for interest rate evolution over time, and we explain how interest rate volatility can be modelled into these processes.

Next, we present and explain a number of “classical” models for interest rate processes, including “Equilibrium” models such as the Rendleman-Barter and Cox-Ingersoll-Ross and “No-arbitrage” models - with and without mean reversion features. This class of models includes single-factor models such as the Ho-Lee, Vasicek, Hull-White, Black-Derman-Toy as well as two-factor models such as Longstaff-Schwartz. We also present the popular “Libor Market”, or BGM (Brace-Gatarek-Muselia), model, which is widely used by practitioners. We discuss the important characteristics and parameters of these models, and we demonstrate how they can be constructed, calibrated and implemented in practice using tree-building procedures and Monte Carlo simulation.

Further, we present and explain a double-curve framework, adopted by the market after the liquidity crisis started in summer 2007. We revisit the problem of pricing and hedging plain vanilla single currency interest rate derivatives using different yield curves for market coherent estimation of discount factors and forward rates with different underlying rate tenors. We also derive the no arbitrage double curve market-like formulas for basic plain vanilla interest rate derivatives and show how they can be used for pricing of FRA, swaps, cap/floors and swaptions etc.

Further, we present models for stochastic volatility, exemplified by the widely used Heston Model today. We motivate the uses of such models, and we show how the model is computationally validated, calibrated and applied in the pricing of standard and more exotic interest rate options.

Finally, we look at how interest rate models can be used for various risk management purposes, including calculating key ratios and estimating return distributions for “Value-at-Risk” calculation.

**THURSDAY, APRIL 19**

09.<sup>00</sup>–09.<sup>15</sup>

**Welcome and Introduction**

09.<sup>15</sup>–12.<sup>00</sup>

**Introduction to Interest Rate Modelling**

- Interest Rates and their Behavior
- The Term Structure of Interest Rates and Volatility
- Features of Interest Rate Models
  - No-arbitrage
  - Mean reversion
  - Spot or forward rates
  - Stochastic volatility
- New Challenges in Interest Rate Modelling

**Equilibrium Models**

- Rendleman and Barter
- Vasicek
  - Mean reversion in the Vasicek model
  - Term structures in the Vasicek Model
- Cox, Ingersoll, & Ross (CIR)
  - General form of CIR
  - Term structures in the CIR model
- Examples and Exercises

12.<sup>00</sup>–13.<sup>00</sup>

**Lunch**

13.<sup>00</sup>–16.<sup>30</sup>

**Classical No-arbitrage Models – Single Curve Environment**

- The BDT Model
  - General form
  - Deriving the model from zero curve and volatility structure
- The Hull-White Model
  - A general tree-building procedure

- The Swap Market Model
- The Libor Market (BGM) Model
- Using Monte Carlo Simulation with Interest Rate Models
- Single-Curve Pricing & Hedging Interest-Rate Derivatives – Examples
  - Swaps
  - Caps, floors, swaptions
  - Exotic interest rate options
  - Structured interest rate products
- Exercises

**FRIDAY, APRIL 20**

09.<sup>00</sup>–09.<sup>15</sup>

**Recap**

09.<sup>15</sup>–12.<sup>00</sup>

**Modern Libor Market Models**

- From Single to Double-Curve Paradigm
- Double-Curve Framework, No Arbitrage and Basis Adjustment
  - General Assumptions
  - Pricing Procedure
  - No Arbitrage Revisited and Basis Adjustment
- The Double Curve Libor Market Model
- Foreign-Currency Analogy and Quanto Adjustment
  - Forward Rates
  - Swap Rates
- The Double-Curve Lognormal LMM
- Foreign-Currency Analogy and Quanto Adjustment
  - Forward Rates
  - Swap Rates

- Double-Curve Pricing & Hedging Interest Rate Derivatives (Examples)
  - Swaps
  - Caps, floors, swaptions
  - Exotic interest rate options
- Examples and Exercises

12.<sup>00</sup>–13.<sup>00</sup>

**Lunch**

13.<sup>00</sup>–16.<sup>30</sup>

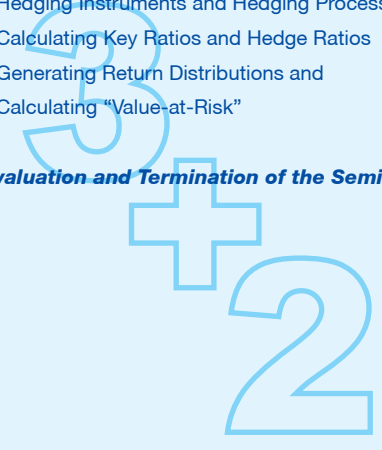
**Stochastic Volatility Models**

- The World of Stochastic Volatility
- The Heston Model
  - Motivation and parameters
  - Computational valuation
  - Calibration
  - Generating volatility surfaces and skews
- Pricing Options Using Stochastic Volatility Models
- Examples and Exercises

**Using Interest Rate Models in Risk Management**

- Hedging Instruments and Hedging Process
- Calculating Key Ratios and Hedge Ratios
- Generating Return Distributions and Calculating “Value-at-Risk”

**Evaluation and Termination of the Seminar**



- **Understanding Financial Risks and their Interactions** 2+3
- **Market and Regulatory Developments in Risk Management**
- **Market, Credit and Liquidity Risks**
- **Sovereign Risk**
- **Value-at-Risk and Stress Testing**
- **Hedging Financial Risks**
- **Practical Implementation and Control**

The purpose of this seminar is to give you a good and practical understanding of financial risks and of methods and tools for managing these risks under normal as well as stressful market conditions such as those that we have experienced in recent years.

We start with a general introduction to risk management, and we discuss why sound risk management practices is today more important than ever. We explain how globalization, financial innovation, risk “mutation”, tighter integration, the increasingly “systemic” nature of risk, and regulatory changes have made risk management more challenging.

We then give you a thorough review of the different types of risk that financial institutions, investors, borrowers and corporations face: market risk, credit risk, sovereign, and liquidity risk. We carefully explain the various forms of each of these major risk categories, and we illustrate – using real life case studies from the crisis that has ravaged financial markets in recent years – how negative risk outcomes can lead to disastrous financial consequences.

Further, we present and explain a number of quantitative techniques for measuring and managing financial risk. Models include “single-factor” models such as duration and beta based risk assessment, and more sophisticated, multi-factor models. We also explain how to calculate value-at-risk for single positions and for portfolios, and we discuss the pitfalls and limitations of using value-at-risk as risk measure. We explain the importance of managing “tail risks” and of performing rigorous “stress testing”. Further, we present methods for quantifying credit risk, including the widely used “Merton-style” structural models, and we explain how to assess liquidity risk using techniques for projecting deterministic and stochastic cash flows.

Finally, we present and explain a number of risk management strategies and explain how they can be implemented and controlled in practice. Strategies include risk monitoring, limit setting and limit controls, hedging with derivatives and immunization.

## MONDAY, MAY 21

09.00–09.15

### Welcome and Introduction

09.15–12.00

### Introduction to Financial Risk Management

- The Importance of Financial Risk Management – Lessons from the Great Recession and Sovereign Debt Crisis
  - What Went Wrong, and What Have We Learnt?
- The Changed Assumptions about Risk Management
  - Globalisation of Financial Markets and Economic Imbalances
  - Financial innovation and Increased Complexity
  - Integration and Mutation of Financial Risks
  - The “Great Deleveraging” During the Global Credit Crisis
  - Systemic Risks and Regulatory Reform

### Understanding Financial Risks and their Interactions

- Overview of Risks and their Interactions
- Market Risks
  - Interest Rate Risk
  - Equity Risk
  - FX Risk
  - Volatility Risk
- Case Studies - Market Risk Related Crises
  - European Currency Turbulence and the Asian Currency Crisis

12.00–13.00

### Lunch

13.00–16.30

### Financial Risks and their Interactions (Continued)

- Credit Risks

– What Is Credit Risk?

- Classic Credit Risk and Counterparty Risk
- Sovereign Risk
- Credit Spread Risk
- Settlement Risk (Herstatt Risk)
- Case Study: The Subprime Crisis and Its Impact on Financial Institutions and Markets
- Case study: Counterparty Risk, Lehman Brothers and AIG
- Case Study: The European (Global?) Debt Crisis
- Liquidity Risk
  - What Is “Liquidity” and “Liquidity Risk”
  - Funding Liquidity Risk and Market Liquidity Risk
  - Liquidity “Black Holes”
  - Case Studies: LTCM, Bear Stearns, Northern Rock, Lehman
- Workshop: Identifying Financial Risk from Balance Sheet and Supplementary Data

## TUESDAY, MAY 22

09.00–09.15

### Brief recap

09.15–12.00

### Quantitative Techniques for Risk Measurement and Management

- A Generic Model for Measuring Market Risk
- Models for Measuring Market Risk
  - Duration and Key Rate Duration (Interest Rate Risk)
  - Beta and Multifactor Models (Equity Risk)
  - Measuring Portfolio Risk
  - Measuring and Interpreting “Value-at-Risk” (VaR)
  - Pitfalls and limitations of Using VaR in Isolation
  - Stress Testing Market Risk
- Overview of Advanced Methods for Estimating Volatility and Correlation

• Measuring “Tail Risk”

- Overview of Quantitative Models for Measuring Credit Risk
  - Structural Models
  - Default Intensity Models
  - Stress Testing Credit Risk
- Methods for Measuring and Managing Liquidity Risk
  - Liquidity Ratios, Liquidity Curves and Liquidity-at-Risk
  - Stress Testing Exposures to Liquidity Risk
- Exercises

12.00–13.00

### Lunch

13.00–16.30

### Risk Management Strategies and their Practical Implementation

- Regulatory Requirements for Risk Management in Banks, Insurance Companies, Pension Funds and other Institutions
- Hedging Financial Risk – Practical Examples
  - Hedging Interest Rate Risk with Futures, FRAs, Swaps and Options
  - Hedging Equity Risk with Futures and Options
  - Hedging Currency Risk
  - Hedging Credit Risk with Credit Derivatives
  - Challenges of Hedging Sovereign Risk
- Special Risk Management Strategies
  - Immunization and Factor Immunization
  - Dynamic Hedging (Portfolio Insurance)
- Practical Considerations in Risk Management
  - Procedures, Controls and Reporting Requirements
  - Hedge Accounting
- Outlook: Basel III and other Regulatory Changes and their Possible Impacts on Financial Risk Management

### Evaluation and Termination of the Seminar

- **Basic Risk Measures and their Limitations**
- **Measuring VaR for Linear and Non-Linear Positions**
- **Using Monte Carlo Simulation for VaR Calculation**
- **Measuring VaR Using Principal Components Analysis**
- **Back-testing VaR Models**
- **Measuring Risks Using Extreme Value Theory**
- **Using EVT for Stress Testing and Economic Capital Planning**

2+3

The purpose of this seminar is to give you a good understanding of advanced quantitative risk measurement methods.

We start with an overall introduction to modern risk analysis and explain why risk measurement has become more important and challenging. We briefly review basic risk measures such as beta, duration, modified duration, convexity and standard deviation and discuss their limitations in a world with increasingly complex financial instruments.

We then give a thorough explanation of how “Value-at-Risk” and other measures of shortfall risk can be calculated for linear as well as non-linear exposures. We explain the use of delta-normal and delta-gamma-normal methods for the calculation of VaR for forwards, swaps and options, and we explain and demonstrate the use numerical techniques (including historical simulation and Monte Carlo simulation and principal components analysis) for calculating VaR of more complex instruments and portfolios.

Further, we explain how to back-test these “Value-at-Risk” models. As a particular case study, we look at the back-testing requirements of the Basel framework. We also take you a step further to show how the impact of estimation risks can be considered by using dynamic parametric VaR models and by correcting standard back-testing procedures.

Finally, we introduce Extreme Value Theory and explain and demonstrate its applications in finance. We present the two main approaches to estimating tail distributions: the “Block Maxima” and the “Peaks over Threshold” groups of models. We demonstrate how a “Generalized Pareto Distribution” can be fitted to real-life financial data (stock prices etc.), and we visualize results using graphical tools. We also explain and demonstrate how EVT can be used in financial risk management. We use extreme value theory to calculate conditional and non-conditional VaR, and we discuss the use of EVT in Stress Testing and in asset allocation.

## WEDNESDAY, MAY 23

09.00–09.15

### Welcome and Introduction

09.15–12.00

### Introduction to Quantitative Risk Analysis

- The Evolution of Risk Management
- Mathematical Finance, Statistics & Econometrics
- The New Regulatory Framework

### Basic Risk Measures and their Limitations

- General vs. Idiosyncratic Risk
- Measures of Sensitivity
  - Duration
  - Beta
- Basic Measures of Volatility
  - Variance, standard deviation, Covariance
- A Closer Look at Loss Distributions
  - Risk factors and loss distributions
  - Conditional/unconditional loss distributions
  - Exercises

12.00–13.00

### Lunch

13.00–16.30

### Measuring VaR for Linear Instruments

- Measuring VaR for Portfolios of Linear Instruments
  - Position mapping
  - Correlation and portfolio volatility
  - Undiversified VaR
  - Diversified VaR
  - VaR for asset portfolios
  - VaR for assets/liabilities
- VaR for Linear Derivatives Positions
  - FRAs and deposit futures
  - Bond forwards and futures
  - FX forwards and swaps
  - Exercises

## THURSDAY, MAY 24

09.00–09.15

### Recap

09.15–12.00

### Measuring VaR for Non-Linear Positions

- Local Versus Full Valuation
- Delta-Normal Method
- Delta-Gamma Approximation
- Historical Simulation Methods
- Small exercise

### Monte Carlo Simulation Methods

- Building blocks in Monte Carlo Simulation
- Constructing and Simulating the SDE
- Sampling from Multivariate Distributions
  - Cholesky decomposition
- Simulating Pay-off Profiles
  - Linear instruments
  - No-linear instruments
  - Path-dependent structures
- Calculating Percentiles/VaR
- Using Monte Carlo Simulation and Principal Components Analysis

12.00–13.00

### Lunch

13.00–16.30

### Monte Carlo Simulation Methods (continued)

- Workshop
  - Using Monte Carlo Simulation to Estimate VaR of Portfolios of Non-Linear Instruments

### Back Testing VaR Models

- Setup for Back testing
- Model Back testing with Exceptions
- Decision Rule to Accept or Reject Model
- Model Verification: Other Approaches
- Case: Back testing in Basel
- Conditional Coverage Models
- Examples and Exercises

## FRIDAY, MAY 25

09.00–09.15

### Recap

09.15–12.00

### Measuring and Managing Risk Using Extreme Value Theory

- General Introduction to EVT
  - Explaining rare and unexpected events
  - Examples of catastrophic losses
- Basic EVT Tools
  - Statistical analysis of historical data
  - Quantiles vs. tail distributions
  - Mathematical foundation of EVT
- Models for Extreme Values
  - General theory and overview of models
  - Block Maxima models
  - Peak-over-Threshold models
  - The Generalized Pareto Distribution
  - Modelling predictive distributions using Bayesian methods
  - Modelling multivariate extremes
  - Multivariate extreme value copulas
- Exercises

12.00–13.00

### Lunch

13.00–16.30

### Measuring and Managing Risk Using Extreme Value Theory (continued)

- Measuring Risk Using EVT
  - Estimating and interpreting VaR
  - Estimating expected shortfall
  - Stress testing using EVT
  - EVT and stochastic volatility models (GARCH)
- Using EVT in Risk Management and Asset Management
  - Calculating regulatory capital using EVT
  - Modelling and measuring operational risk
  - Developing scenarios for extreme losses
  - Asset allocation using EVT
- Examples, simulations and exercises

### Evaluation and Termination of the Seminar

- **The “New Normal” – the Changed Investment Assumptions**
- **Behavioral Finance and Investment Decision Making**
- **Global Asset Classes and their Risk-return Characteristics**
- **Formulation and Implementing an Investment Policy**
- **Strategic and Dynamic Asset Allocation**
- **Low-Volatility Investing**
- **Risk Budgeting and Portable Alpha**
- **Liability Driven Investing**
- **Using Derivatives in Investment Management**

2+2

The purpose of this seminar is to give you a good and practical understanding of the state-of-the-art methods and tools for managing investment portfolios.

First, we discuss the challenges that face investors and investment managers in the aftermath of the global financial crisis. We discuss how these challenges can be taken into account when formulating investment objectives, policies and benchmarks. We also discuss the increasing impact of “behavioral” (non-rational) considerations in investment decision making, and we explain how this may lead markets becoming increasingly non-efficient, in violation of many of the assumptions behind “modern” portfolio theory.

We then take a closer look at the various traditional and alternative asset classes and their historical and prospective risk-return characteristics and we explain how funds can be allocated to these asset classes using a pragmatic “pyramid” approach as well as the optimization techniques suggested by modern and post-modern portfolio theories. We also explain how dynamic asset allocation strategies such as “constant mix”, “constant proportion portfolio insurance”, “contingent immunization” and “option-based portfolio insurance” can be implemented to obtain the optimal risk-return profile, or to manage surplus risk, under various market conditions.

Further, we explain how an alternative low-volatility investing strategy can be designed and implemented and how this strategy may lead to the achievement of market returns with lower risk. We also we explain how to manage “surplus risk” and how the increasingly popular “Risk Budgeting” technique can be used to allocate “risk units” to optimize the risk-adjusted returns across managers and asset classes.

Finally, we explain and demonstrate how derivatives can be effectively used in managing investment portfolios. Examples include synthetic investing with futures, hedging of duration risk, tactical asset allocation, “insurance” strategies with options and “overlay” strategies with swaps.

**TUESDAY, JUNE 26**

09.00–09.15

**Welcome and Introduction**

09.15–12.00

**The Investment Management Process**

- The “New Normal” – Challenges in the Aftermath of the Crisis
- Behavioral Finance and Investment Decisions
- Formulating Risk and Return Objectives
- Identifying Investment Constraints
- The Investment Policy Statement
- Choice of Benchmark

**Global Asset Classes and their Risk-Return Characteristics**

- Equity markets
- Fixed income
- Emerging markets
- Real Estate
- Commodities
- Funds and Trusts
  - Unit Trusts
  - Exchange-Trade Funds (ETFs)
  - Hedge Funds
- Derivatives Structured Products
- Historical Returns of Different Asset Classes
- Discussion: Expected Future Performance

12.00–13.00

**Lunch**

13.00–16.30

**Strategic Asset Allocation and Portfolio Construction**

- The Importance of Strategic AA for Investment Performance
- “Classic” Mean/Variance Optimization
- Shortfall-optimization

**Dealing with the Problems in the Classic Optimization Approach**

- Time-varying volatility
- Illiquid investments
- Life cycle investing
- Bayesian Analysis and Portfolio Choice
- Resampling the Efficient Frontier
- Scenario Optimization
- The Black-Litterman Asset Allocation Model
- Integrating Traditional and Behavioral Finance
  - Goals-based investing
  - Constructing portfolios as layered pyramids
- Dynamic Asset Allocation (Rebalancing) Strategies
- Exercises

**WEDNESDAY, JUNE 27**

09.00–09.15

**Recap**

09.15–12.00

**Low-Volatility Investing**

- The Volatility Effect and Its Possible Explanations
  - Leverage restrictions
  - Inefficient two-step investment process
  - Behavioral biases of private investors
- Low Risk Stocks As a Separate Asset Class
- Case study: How A Simple Investment Strategy Can Create a Market Return with Lower Risk

**Risk Budgeting, Surplus Risk Management and Liability Driven Investing**

- Risk Allocation vs. Asset Allocation
- The Concept of “Portable Alpha”
- Constructing Optimal Portfolios under Risk Budgeting Constraints
  - Maximizing the Information Ratio
  - Shortfall Risk Optimization

**Surplus Risk Management**

- Defining the surplus in an ALM framework
- Managing “Surplus-at-Risk”
- Liability Driven Investing (LDI)
  - Using overlays to match duration of liabilities
- Exercises

12.00–13.00

**Lunch**

13.00–16.30

**Using Derivatives for Asset Management**

- Derivatives and their Usefulness in Asset Management
- Portfolio Management with Financial Futures
  - Minimizing cash drag through synthetic indexation strategies
  - Exploiting pricing inefficiencies in the cash/futures relationship
  - Duration management with futures and swaps
  - “Tactical allocation” with futures
  - “Sector-switching” with futures
- Portfolio Management with Options
  - Securing minimum portfolio value
  - Enhancing portfolio return/reducing risk through covered call strategies
  - Management of shortfall-risk
- Using Swaps and “Structured Products”
- Using Derivatives to Create “Overlays” and “Absolute Return” Investments
- Exercises

**Evaluation and Termination of the Seminar**

- **Indexation vs. Active Management**
- **Full Replication, Stratified Sampling and Tracking Error Minimization**
- **Investing in Index Funds**
- **Using Index Futures for Synthetic Investments**
- **Bull, Bear, Leveraged and Bonus Certificates**
- **Exchange-Traded Funds**
- **Investment Strategies with ETFs**

2+2

Index tracking or passive investment is now well established as a sensible form of investing. Today, indexing can be applied to almost anything and provides investor with a very cost-efficient way of obtaining exposure to equities, bonds, commodities, real estate and other asset classes.

The purpose of the seminar is to give you a thorough introduction to the concept of “indexing” and a good and practical understanding of indexing tools and strategies.

We start with a general introduction to indexing. We contrast with “active management” and compare the relative historical performance of the two approaches to investing. We also give an overview of available indexing strategies and tools and summarize their advantages and limitations.

We then take a close look at how “vanilla” and more advanced indexation strategies can be implemented using dynamic strategies, index funds, exchange-traded funds (ETFs), index futures and index certificates – with and without principal guarantees. Strategies include “classic” index tracking through full replication, stratified sampling and tracking-error minimization as well as more “active” (or hybrid) strategies such as core-satellite investing and enhanced indexing.

We explain how the “cash drag” can be minimized in synthetic replication strategies with index futures, and how index strategies with down-side protection and/or exotic pay-off profiles can be constructed as structured products.

We give a thorough introduction to ETF's and explain how these instruments are created and traded in the primary and secondary markets and how they are used for low-cost index-tracking. We also explain and demonstrate how ETFs are increasingly used to gain exposure to special investment strategies that have been codified into indexes. Such strategies include the use “inverse”, or “upside down”, index ETFs, “leveraged” index ETFs and swaps-based ETFs.

Finally, we discuss the explicit and implicit risks of using indexation products, including the counterparty risk which is inherent in derivatives-based ETFs.

**THURSDAY, JUNE 28**

09.<sup>00</sup>–09.<sup>15</sup>

**Welcome and Introduction**

09.<sup>15</sup>–12.<sup>00</sup>

**Index Investing – General Introduction**

- What is “Index Investing”?
- Motivations for Index Investing
  - Are markets efficient or not?
- Passive vs. Active Investing – Historical Returns and Costs
- Overview of Index Investing Tools and Strategies

**“Classic” Index Tracking**

- Full Replication of Index
- Stratified Sampling
- Tracking Error Minimization
- Rebalancing Strategies
  - Constant Mix
  - CPPI
- Investing in Traditional Index Funds
  - Types of index funds
  - UCITS-compliant funds (EU)
  - Historical returns of index funds
- Small Exercises

12.<sup>00</sup>–13.<sup>00</sup>

**Lunch**

13.<sup>00</sup>–16.<sup>30</sup>

**Synthetic Index Investing**

- Advantages/Limitations of Synthetic Investing
- Overview of Instruments for Synthetic Indexation
  - Index futures and swaps
  - Commodity futures and swaps
- Minimizing Cash Drag with Equity Index Futures

- Cost-of-Carry and the fair futures price
- Replicating the index with cash + futures
- Comparing the returns of cash and synthetic investment

- Synthetic Commodity Investing with Commodity Futures
  - The importance of the “roll yield”
- Global Diversification with Synthetic Index Investing
- Synthetic Index Funds
- Investing in Index Certificates
  - Bull and Bear certificates
  - Leveraged certificates
  - Bonus certificates
  - Case Studies
- Small Exercises

**FRIDAY, JUNE 29**

09.<sup>00</sup>–09.<sup>15</sup>

**Brief recap**

09.<sup>15</sup>–12.<sup>00</sup>

**Exchange-Traded Funds (ETFs): Mechanics and Markets**

- What is an “Exchange-Traded Fund”?
- Mechanics of ETFs – How they work
- ETFs Compared to Mutual Funds
- Types of ETFs
  - Physical ETF's
  - Synthetic ETF's
  - Leveraged ETF's
  - Inverse ETF's
- The ETF Creation and Redemption Process
  - Market participants
  - The creation Unit
  - The primary market
  - The secondary market
  - Management and trading costs

- “Live” Sightseeing Tour of the ETF Markets
  - Equity, bond and commodity ETF's
- Current Use of Exchange-Traded Funds by Investment Professionals
- Do ETF's Create Systemic Risks

12.<sup>00</sup>–13.<sup>00</sup>

**Lunch**

13.<sup>00</sup>–16.<sup>30</sup>

**Investment Strategies with ETFs**

- Asset Allocation with ETFs
- Enhanced Indexing Strategies
  - Enhanced cash
  - Index construction enhancements
  - Exclusion rules
  - Trading enhancements (algorithmic trading)
  - Portfolio construction enhancements
- Core-Satellite Investing with ETFs
  - Static and dynamic core-satellite approach
  - Traditional and relative CPPI Approach
  - Controlling the risk of tactical bets with dynamic core-satellite portfolios of ETFs
- “Upside-Down” Investing with Inverse and Leveraged ETFs
- Creating Absolute Return Funds with ETFs
- Risks of Investing in ETF's and other Index Products
  - Explicit Risks (Market risk)
  - Implicit Risks (Counterparty and Operational Risks)
- Small Exercises

**Evaluation and Termination of the Seminar**

- **The Revised Framework and Capital Definitions**
- **Building and Validating Internal Rating Systems**
- **Measuring Counterparty Risk**
- **Measuring CVA Capital Charges**
- **Measuring Market and Operational Risks**
- **Measuring and Managing Liquidity Ratios**
- **Supervisory Review, Stress Testing and ICAAP**
- **Basel III Impacts on Financial Markets**

3+2

The purpose of this workshop is to give you a good understanding of and hands-on experience with the updated Basel rules for capital adequacy and liquidity coverage in banks.

We start with a general introduction to the Basel framework and give an overview of the changes that have been agreed to strengthen resilience of the banking system in the wake of the global financial crisis.

We discuss how the quality, consistency and transparency of the capital base will be raised and the risk coverage of the capital framework will be strengthened by reducing procyclicality, improving risk management, and by introducing a countercyclical capital buffer and a gross leverage back-stop.

We then give a thorough explanation of how the various types of risk are measured under the Basel III and how these risk measures translate into capital charges. We start with credit risk, explaining how “risk-weighted assets” are calculated using the standardized and the internal rating based approaches (IRB). We carefully explain how internal ratings systems can be built, implemented, stress tested and validated, and we give examples of how capital charges and RWAs are calculated using the “supervisory risk weight function”. We will also discuss the changing requirements for making conservative PD and LGD estimates and also the possible changes to the IRB risk weight function. We also discuss the strengthened requirements to measuring counterparty and securitization risks.

Further, we explain and demonstrate how market and operational risk is quantified under the Basel III. We also give a thorough explanation of the new Basel liquidity ratios, illustrated by practical examples.

Finally we explain the requirements under “pillars 2 + 3” for stress testing, internal capital assessment and allocation, and risk disclosure, and we discuss the role of supervisors under the supervisory review process. We also discuss the practical challenges of implementing the (new) rules. We look at the possible consequences of Basel III for the banking system. The workshop will be highly practical with real-life examples, cases and exercises.

## MONDAY, SEPTEMBER 17

09.00–09.15

### Welcome and Introduction

09.15–12.00

#### Basel III – Introduction

- Background, Intentions and Scope
- Overview of Changes to Basel II

#### Basel III – Capital Definitions and Capital Coverage

- Updated Capital Definition
  - Tier 1 + Tier 2 capital
- The Risk-Based Capital Ratio
  - New minimum requirements in relation to risk-weighted assets Non-Risk Based Leverage Ratio
- Countercyclical Capital Buffers
  - The conservation buffer
- Promoting Forward-Looking Provisioning
- Transition Arrangements
  - Special Capital Charges for Systemically Important Institutions

12.00–13.00

### Lunch

13.00–16.30

#### Measuring Credit Risk Under Basel III

- Overview – What Has Changed?
- The Standardized Approach
  - Using external ratings to calculate RWA
- The Internal Ratings Based (IRB) Approach
  - Categorization of exposures
  - Risk components
  - The supervisory risk weight function
- Building an Internal Rating System
  - Using credit scoring and other methods to assign clients to rating categories
  - Estimating PD and LGD
- Recognition of Guarantees and Credit Derivatives under IRB
- Workshop: Estimating Capital Charge under the IRB Approach

## TUESDAY, SEPTEMBER 18

09.00–09.15

### Recap

09.15–12.00

#### Validating Internal Rating Systems

- Validation of Rating Process
- Validation of the Rating System
  - Model design
  - Risk components
  - Back-testing and benchmarking
- Workshop: Validate Small Rating System

#### Treatment of Counterparty Risk under Basel III

- Overview
- Changes under Basel III
- The Standardized Method
- Internal Model Method
- CVA Capital Charge
- Treatment of “Wrong Way Risk”
- Workshop: Calculating RWA and Regulatory Capital the Standardized and IMM Approaches

12.00–13.00

### Lunch

13.00–16.30

#### Measuring Market Risk Under Basel III

- What Has Changed from Basel III?
- Measuring Market Risk in the Trading Book
- Measuring “Stressed VaR” Using Historical Simulation
- Measuring Interest Rate Risk in the Banking Book
- Workshop: Calculating Stressed VaR for a Small Trading Portfolio

#### Measuring and Managing Operational Risk

- Basic Indicator Approach
- The Standardized Approach
- Advanced Measurement Approach
- Workshop: Calculating Capital Charge for OP Risk

## WEDNESDAY, SEPTEMBER 19

09.00–09.15

### Recap

09.15–12.00

#### Measuring and Managing Liquidity Risk Under Basel III

- The Current Supervisory Regimes for Liquidity Risk
  - Stock-based indicator angle
  - Mismatch indicator angle
- The New Basel III Liquidity Ratios
  - Liquidity Coverage Ratio
  - Net Stable Funding Ratio
- Building a System that Can Generate Liquidity Curves and Estimate “Stressed” Net outflows
- Workshop: Calculating the New Basel Liquidity Ratios for Sample Bank
- Managing Liquidity Ratios under Basel III
  - Building and Preserving Liquid Assets
  - Securing Contingent Financing
  - Case Study

12.00–13.00

### Lunch

13.00–16.30

#### Pillars II and III under Basel III

- Overview of Changes in Basel III
  - The enhanced Supervisory Review Process and ICAAP
  - Enhanced disclosures and market discipline
- Stress Testing
  - Basel III principles for sound stress testing practices and supervision

#### Implementation Issues and Outlook

- Systems and Data Requirements – the New Challenges under Basel III
- How Will Basel III Impact Organization, Procedures?
- How will the updated Basel rules affect the banking and other markets?

#### Evaluation and Termination of the Workshop

- **Risk Management and Economic Capital**
- **Economic Capital Assessment and Planning in Banks**
- **Allocating Capital Across Business Units**
- **Risk-Adjusted Loan Pricing and Performance Measurement**
- **Pillar II, ICAAP & SREP**
- **Scenario Analysis and Stress Testing**
- **Practical Cases in Economic Capital Assessment and Allocation**

3+2

The purpose of this workshop is to give you a good understanding of methods for measuring and controlling aggregate risks in financial institutions and to discuss how these methodologies can be integrated into an economic capital allocation process that meets the requirements of the CRD ICAAP.

We start with a brief review of recent trends within financial risk management. We trace the progression of risk-management techniques, from “duration management” via ALM to Enterprise-wide Risk Management. We look at the two prevailing approaches to measuring and managing risks: the “silo” approach, and the ERM, or fully integrated, approach to risk management. We explain how risks are measured at the individual and at the aggregate levels using “Value-at-Risk” and other measures and how these measures translate into regulatory (Basel) and economic capital charges.

Our main focus at this workshop will be on the use of “economic capital” as the foundation for risk management in modern financial institutions. We define the concept of “economic capital”, and we explain in depth a number of approaches to calculating the amount of capital required to maintain a certain solvency level.

Further, we explore how, through the process of internal capital allocation, an institution can control risk-taking on an ex-ante basis and how this “capital-at-risk” is used as the basis for risk-adjusted performance evaluation. We explain how to manage risks in order to ensure that firm-wide exposure is consistent with shareholders’ risk preferences, how to define limits for individual risk units, and how management can evaluate performance on a risk-return basis (RAROC).

We also explain and discuss the capital assessment and capital planning requirements under ICAAP (pillar II of the Capital Requirement Directive). We give an overview of the principles and requirements of ICAAP and explain their interactions with the Supervisory Review Process (SREP). We explain thoroughly how banks perform risk analysis, scenario analysis, stress testing etc. to comply with these requirements.

Finally, participants will have the opportunity to work “hands-on” with practical case studies in economic capital assessment and allocation in a financial institution.

THURSDAY, SEPTEMBER 20

09.00–09.15

## Welcome and Introduction

09.15–12.00

### Introduction to Risk Management and Economic Capital

- After the Crisis - The Changing Assumptions about Risk Management
- The Evolution of Risk Management – from Duration to ERM
- The Need for more Efficient Capital Assessment and Allocation
- Approaches to Measuring and Managing Risks
  - The “Silo” Approach to Measuring and Managing Risks
  - Enterprise-wide Risk Management
- The Foundations of Economic Capital
- Economic Capital as a “Common Currency” for Risk

### Economic Capital in Banks

- Why Increased Focus on “Economic Capital”?
- Integration and Mutation of Risks
- Active Risk Management
- Board Reporting
- Strategic Decision Making and Shareholder Value Creation

12.00–13.00

## Lunch

13.00–16.30

### Economic Capital Assessment and Allocation

- Using Mathematical Modelling for Assessing Economic Capital at the Institution Level

- Risk factors and diversification
- Quantifying EC of integrated risks
- Treatment of specific risks (e.g.: business or strategic risk)
- Allocating Capital Across Business Units
  - Making risk-return profiles comparable across business lines
  - Estimating how much risk each business unit contributes to the institutions’ total risk
  - Determining major sources of concentration and diversification
  - Deciding who gets the diversification benefits
  - Deriving appropriate limits for all risks and business lines
- Risk Pricing, Loan Pricing and Limit-Setting Based Upon Economic Capital
- Measuring and Evaluating Risk-Adjusted Performance
- Small Exercises

FRIDAY, SEPTEMBER 21

09.00–09.15

## Brief recap

09.15–12.00

### ICAAP – the Internal Capital Allocation Process under Basel II

- Introduction to ICAAP
  - Pillar II, ICAAP and SREP
- The Four Principles of Pillar II
- ICAAP Requirements
  - Assessments of the amounts, types and distribution of financial resources, capital resources and internal capital
  - Identification of the major sources of risk
  - Stress and scenario tests

- Ensure that the processes, strategies and systems used in its ICAAP, are both comprehensive and proportionate to the nature, scale and complexity of that firm’s activities
- Documentation of the Institution’s ICAAP
- A Closer look at the ICAAP Requirements
  - Capital adequacy
  - Risks analysis
  - Capital planning
  - Scenario analysis and stress testing
  - Liquidity Planning
  - Aggregation and diversification

12.00–13.00

## Lunch

13.00–16.30

### Workshops: Practical Cases in Economic Capital Assessment and Allocation

- Workshop 1:
  - Identifying and Assessing an Institution’s Risk According the ICAAP Requirements
  - Setting Strategic Risk and Earnings Targets within an ERM Framework
- Workshop 2:
  - Building and implementing a quantitative economic capital model
  - Measuring risks on an integrated basis
  - Calculating the overall capital requirement in the institution
  - Integrating regulatory and economic capital models into an overall framework
- Workshop 3:
  - Internal Capital Allocation and Performance Measurement

### Evaluation and Termination of the Workshop

- **Recent Developments in Global Financial Markets** **2+2**
- **Equity Markets and Instruments**
- **Fixed Income Markets and Instruments**
- **Money and FX Markets**
- **Listed and OTC Derivatives**
- **Regulatory Changes and the New Infrastructure**
- **Structured and Leveraged Finance**

The purpose of this seminar is to give you a good, practical and all-round understanding of global financial markets and of their instruments.

We start with a general overview and discussion of recent developments in the global financial markets, including trends such as globalization, credit crisis, European debt and currency crisis, new regulation (Basel III, Solvency II, MiFID II) etc.

We then take a closer look at equity markets. We present and describe different types of equity instruments, and we explain how these instruments are used in corporate financing. We also explain, how they are traded in the primary and secondary markets, and we discuss their risk and return characteristics from the investor's perspective.

After this, we turn to look at fixed-income markets. We explain the differences between "money markets" and "capital markets", and we give examples of instruments traded in these markets. We also look at the instruments' role in public and corporate financing, and we describe their investment characteristics.

Further, we explain developments in the global money and FX markets and explain the importance of these markets in international financial intermediation. We also discuss how the global credit and sovereign debt crises have affected the functioning of money markets, in particular the interbank market.

We then give a thorough introduction to derivatives markets. We explain the main characteristics of derivative instruments, and we discuss the differences between listed and OTC instruments. We also discuss the (proposed) regulatory changes and the move to centralized trading and clearing. We present and describe instruments such as futures, options, swaps, credit derivatives, and we explain their uses in trading and risk management.

Finally, we look at developments in the markets for structured and leveraged finance. We present structures such as "asset-backed securities" and "leveraged loans", and we explain their uses from both a financing and an investing perspective. We also discuss possible future developments in these financing techniques, including the possible use of securitization in the financing of public debt.

TUESDAY, OCTOBER 16

09.<sup>00</sup>–09.<sup>15</sup>

### Welcome and Introduction

09.<sup>15</sup>–12.<sup>00</sup>

### Recent Developments in Global Financial Markets

- Brief History of Market Developments
- Overview of Types of Financial Instruments and Markets
- The Global Financial Crisis and the European Debt Crisis
- Regulatory Reform and the Changing Financial Landscape

### Equity Markets and Instruments

- Main Characteristics of Equity Instruments
- World Equity Markets
- The Role of Equity Instruments in Corporate Financing
- How Equities are Traded
  - Primary and secondary markets
  - Case study: "High Frequency Trading" and its market impact (the "Flash Crash" etc.)
- Mutual Funds and ETF's
- Risk and Return Characteristics of Equity Investments
  - Historical performance
  - P/E, P/BV and other important ratios
  - Measuring equity risk in a portfolio context
- Practical Case Studies and Exercises

12.<sup>00</sup>–13.<sup>00</sup>

### Lunch

13.<sup>00</sup>–16.<sup>30</sup>

### Fixed Income Markets and Instruments

- Main Characteristics of Fixed Income Instruments
- Overview of Global Fixed Income Markets

- Treasury bills and government bonds
- CP's and corporate bonds
- Agency securities
- Convertibles and other hybrid instruments
- How Fixed-Income Instruments Are Traded
  - Primary and secondary markets
- Risk and Return Characteristics of Fixed-Income Instruments
  - Historical performance
  - Interest rate risk, inflation risk
  - Credit risk, sovereign risk, prepayment risk and liquidity risk
  - Measuring risks in a portfolio context
- Case Studies and Exercises

WEDNESDAY, OCTOBER 17

09.<sup>00</sup>–09.<sup>15</sup>

### Recap

09.<sup>15</sup>–12.<sup>00</sup>

### Money and FX Markets and Instruments

- Global Money and FX Markets
- Types of Instruments
  - Deposits, T-Bills, CP's, CD's
  - Spot, forward and forward-forward transactions
- How the crisis has impacted the money and FX markets
- The Future of the Euro
- Measuring and Managing FX Exposure

### Derivative Markets and Instruments

- General Introduction to Derivatives and their Characteristics
- Types of Derivatives Instruments and Markets
- Forwards vs. Options
- Listed vs. OTC Markets
- Futures and Options Markets

- Mechanics of futures and options
- Practical examples of equity, index, currency and bond futures and options
- How futures and options are traded
- Using futures and options for hedging

12.<sup>00</sup>–13.<sup>00</sup>

### Lunch

13.<sup>00</sup>–16.<sup>30</sup>

### Derivative Markets and Instruments (continued)

- OTC Markets
  - FRAs, swaps, caps, floors and swaptions
  - Credit derivatives
  - The move to standardization and centralized clearing
  - ISDA "Big Bang" protocol
  - Using OTC derivatives in risk management and financial engineering
- Case Studies and Exercises

### Structured and Leveraged Finance

- Asset-Backed Securities
- Synthetic and Hybrid Securitizations
- Leveraged and Hybrid Loans
- Case Study

### Evaluation and Termination of the Seminar

- **Fear, Greed, Bubbles and Market Crashes**
- **Heuristic-Driven Biases and Frame Dependence**
- **Inefficient Markets and Securities Pricing**
- **Creating a Successful Advisory Relationship with Behavioral Finance**
- **Integrating Traditional and Behavioral Finance**
- **Goals-Based Investing**
- **Portfolios, Pyramids, Emotions and Biases**
- **Investment Strategies for Inefficient Markets**

2+2

The purpose of this seminar is to give you a good understanding of the psychological factors that affect investment decision making of investors and to discuss how these factors affect financial markets and how they can be integrated into the investment planning process.

We start with an overall introduction to behavioral finance and its applications. We explain what behavioral finance is and, using examples from financial crises, we discuss how investor psychology may lead to a "herd" behavior that exacerbates swings, bubbles and crashes in financial markets. We also discuss how behavioral finance can help the investment advisor in creating a successful advisory relationship.

We then explore in-depth the various themes of behavioral finance. The first theme is heuristic-driven biases. We explain how biases such as "representativeness", "overconfidence", "anchoring-and-adjustment", "availability bias" and "aversion to ambiguity" can impact long-term and short term forecasts.

The second theme is frame dependence. We here explain how loss aversion can result in investors' willingness to hold on to deteriorating investment positions and we evaluate the impacts that the emotional frames of "self-control", "regret minimization", and "money illusion" have on investor behavior.

Further, we evaluate the impact that representativeness, conservatism, frame dependence, and overconfidence may have on security pricing and discuss the implications for market efficiency.

Finally, we discuss how behavioral finance can be used in the investment management process. We introduce the concept of "goals-based investing" and explain how portfolios can be structured as layered pyramids and how such structures address needs associated with security, potential, and aspiration. We evaluate the effects of regret and self-attribution bias on the relationship that investors form with their financial advisers, and we evaluate the impact of excessive optimism and overconfidence on investors' decisions regarding portfolio construction. We also explain and demonstrate how a client's "lifestyle objectives" can be translated into a quantitative risk budget and how an optimal portfolio can be constructed under this constraint.

## THURSDAY, OCTOBER 18

09.00–09.15

### Welcome and Introduction

09.15–12.00

#### Introduction to Behavioral Finance

- Behavioral Finance vs. Traditional Finance
- Herd Behavior, "Irrational Exuberance" Bubbles and Crashes
- Overview of Market and Investment Implications and Opportunities
- How BF Can Help You Creating a Successful Advisory Relationship
- Using Behavioral Finance in Client Profiling
  - Psychographic Models Used in BF
  - "Passive" vs. active investors (Barnewall two-way model)
  - Bailard, Biehl and Kaiser Five-Way Model

#### Heuristic Biases

- Representativeness
  - How long-term earnings forecasts tend to be biased in the direction of recent success
  - "Gamblers fallacy"
- Overconfidence
- Anchoring-and-Adjustment
  - Why estimates are not revised enough to reflect new information
- Aversion to Ambiguity
- Case Studies and Small Exercises

12.00–13.00

### Lunch

13.00–16.30

#### Frame Dependence

- Transparent vs. Opaque Frames
- Concurrent Decisions and Mental Accounting
- Decision Problems as Packages
- Hedonic Editing
- Cognitive and Emotional Aspects

- The "House Money Effect"

- Loss Aversion
  - how loss aversion can result in investors' willingness to hold on to deteriorating investment positions
- Self-Control
- Fear of Regret and Regret Minimization
- Money Illusion
  - the impacts that the emotional frames of self-control, regret minimization, and money illusion have on investor behavior
- Case Studies and Small Exercises

## FRIDAY, OCTOBER 19

09.00–09.15

### Recap

09.15–12.00

#### Inefficient Markets

- "Efficient" vs. "Inefficient" Markets
- Is the "Efficient markets Hypothesis" the Biggest Mistake in Financial History?
- The Impact of Representativeness, Conservatism, Frame Dependence, and Overconfidence on Security Pricing
- Implications for Market Efficiency
- The Folly of Forecasting
  - How the illusions of knowledge and control lead expert forecasters to be overconfident in their forecasting skills
  - Ego defense mechanisms and inaccurate forecasts
  - Why forecasts may continue to be used when previous forecasts have been inaccurate
- Acute and Chronic Market Inefficiencies
  - Behavioral factors that may give rise to chronic inefficiencies

- Portfolio Rebalancing Behavior

- Holders, rebalancers, valuers, and shifters
- The impact of rebalancing behaviors on market efficiency
- Case Studies and Small Exercises

12.00–13.00

### Lunch

13.00–16.30

#### Investment Applications and Strategies for Inefficient Markets

- Portfolios, Pyramids, Emotions, and Biases
  - The influence of hope and fear on investors' desire for security and investment potential
  - How portfolios can be structured as layered pyramids
  - How structures address needs associated with security, potential, and aspiration;
  - The effects of regret and self-attribution bias on the relationship that investors form with their financial advisers;
  - The impact of excessive optimism and overconfidence on investors' decisions regarding portfolio construction.
- Incorporating Investor Behavior into the Asset Allocation Process
  - Integrating traditional and behavioral finance
  - Converting life-style objectives to a risk-budget
- Investment Decision Making in Pension Funds and Insurance Companies
- How Market Inefficiencies Can Be Exploited in Investing and Trading Strategies
- Case Studies and Small Exercises

#### Evaluation and Termination of the Seminar

- **Regulatory Initiatives**
- **Fundamental Credit Analysis**
- **Credit Scoring Models**
- **External and Internal Rating Systems**
- **Measuring and Managing Counterparty Risk**
- **Monitoring and Controlling Credit Risk**
- **Using Covenants, Netting and Collateral**

3+2

The purpose of this course is to give you a good understanding of methods, tools and techniques for measuring, mitigating and controlling credit and counterparty risk.

We start with an introduction to credit risk and credit risk management and an overview of regulatory initiatives towards strengthening of credit management practices in financial institutions.

We then explain how credit risk can be quantified using “traditional” and more advanced techniques. First, we explain how credit risk can be identified and measured by looking at accounting data combined with an analysis of financial and non-financial risks. We present and explain important ratios, including “coverage”, “profitability” and “leverage” ratios. We also demonstrate how cash flow projections are used to gauge a borrower’s debt servicing capability. Further, we explain how ratios, cash flows etc. can be analyzed statistically to obtain credit scorings for corporate as well as sovereign debt.

On day two, we first look at rating systems. We explain the methodologies of rating institutions and we discuss how their ratings should be interpreted and used under the Basel standardized approach. Further, we give a thorough introduction to internal rating systems. We explain how such systems can be built, calibrated and implemented, and we demonstrate how they can be used for quantifying pooled PDs and recovery rates. We also explain and demonstrate techniques for validating internal rating system.

Further, we explain and demonstrate how to measure counterparty risk in derivatives and securities financing transactions using a simple add-on method as well as a more advanced method of simulating potential exposure profiles. We also explain how to assess CVA risk and how to calculate the capital charge for this type of risk.

On day three, we present and demonstrate techniques and tools for mitigating and controlling credit risk. We start with an overview of “general” principles for sound credit management, illustrated by a practical case.

We explain and demonstrate how credit and counterparty risk can be mitigated through the use of loan covenants, netting and collateral. Finally, we explain how corporate and sovereign credit risk can be transferred using credit guarantees, credit derivatives and securitization.

## MONDAY, NOVEMBER 5

09.00–09.15

### Welcome and Introduction

09.15–12.00

#### A Framework for Credit Risk Management

- Credit Risk: The Post-Crisis Landscape
- The Anatomy of Credit Risk
  - Types of credit risks
  - Sovereign risk vs. corporate credit risk
  - Building blocks in credit risk
- Regulatory Initiatives - Basel III

#### Fundamental Credit Analysis

- Fundamental Business Analysis
  - Macroeconomic environment
  - Industry characteristics
  - Competitive position
- Financial Analysis
  - Financial characteristics and policy
  - Profitability and liquidity
  - Coverage ratios
  - Capital structure and leverage
  - Cash flows and debt servicing capacity
  - Financial shenanigans
- Small Exercises

12.00–13.00

### Lunch

13.00–16.30

#### Fundamental Credit Analysis (Continued)

- Fundamental Credit Analysis of Retail Clients
  - Credit history
  - Job situation, income and wealth
  - Age, health and other biometric factors

#### Credit Scoring Models

- Types of Credit Scoring Models
  - Judgmental scoring models
  - Statistical scoring models
- Example: Altman’s Z-Score
- Using Bayesian Methods for Improving Credit Scoring Models
- Credit scoring of Retail Clients
- Credit Scoring of Sovereign Debt
- Credit Scoring: Practical Exercise

## TUESDAY, NOVEMBER 6

09.00–09.15

### Recap

09.15–12.00

#### Rating Systems

- External Rating Systems
  - Rating institutions and their methodologies
  - Sovereign vs. corporate ratings
  - Ratings and their interpretations
  - Case study: using external ratings for calculating risk weighted assets
- Internal Rating Models
  - The Basel IRB Risk Weight Function
  - Building, calibrating and implementing and internal rating system
  - Quantifying stressed PDs using historical default experience, statistical models and external mapping
  - Benchmarking and migration of PDs
  - Calculating loss given default (LGD)
  - Validating internal rating systems
  - Exercise
- Case study: Using outputs from internal rating system and to calculate capital charge

12.00–13.00

### Lunch

13.00–16.30

#### Measuring Counterparty Risk

- Counterparty Risk – General Introduction and Overview
  - Lending risk vs. counterparty risk
  - Examples of transactions that expose parties to counterparty risk
- Exposures Definitions
  - Current exposure
  - Potential future exposure
- Measuring CP Risk using the Add-On Method
- Measuring CP Risk Using the IMM
  - Modelling Potential Future Exposure
  - Calculating the EAD and the Capital Charge
- Calculating the CVA Capital Charge
- Taking Wrong Way Risk into Account
- Exercises

## WEDNESDAY, NOVEMBER 7

09.00–09.15

### Recap

09.15–12.00

#### Managing Credit and Counterparty Risk

- General Principles for Managing Credit Risk
  - Appropriate credit risk environment
  - Sound credit granting process
  - Credit administration, measurement and monitoring
  - Adequate controls over credit risk
  - The role of supervisors
- Case Study:
  - Credit risk organization and procedures at large bank
- Using Covenants to Mitigate Risk
  - Affirmative covenants
  - Negative covenants
- Managing Counterparty Risk
  - Active counterparty credit monitoring
  - Trade approvals against credit line limits
  - Early termination of deals
  - Netting
  - Collateral management
- Small exercise

12.00–13.00

### Lunch

13.00–16.30

#### Managing Credit Risk (Continued)

- Using Credit Guarantees and Insurance to Transfer Credit Risk
- Using Credit Derivatives to Transfer Credit Risk
  - Credit default swaps
  - Total return swaps
  - Pricing credit derivatives
  - Practical and legal issues
- Practical Case Studies
  - Using CDSs to hedge corporate and sovereign credit risk
- Using Securitization to Transfer Credit Risk
- Practical Case Studies and Exercises
- Outlook: Future Challenges in Credit Risk Management

#### Evaluation and Termination of the Seminar

- **Credit Risk within Bank Risk Management**
- **Building Blocks of Modern Credit Portfolio Management**
- **The Collateral Management Process**
- **Data Requirements for Building a Credit Portfolio Model**
- **Credit Portfolio Models**
- **Credit Portfolio Optimization**
- **Tools and Techniques to Manage a Credit Portfolio**

3+2

The purpose of this course is to give you a good understanding of the processes, methods, tools and techniques for managing credit risk in a portfolio context.

We start with an overview of traditional and current definitions of credit risk together with recent regulatory initiatives. We then look at requirements for a sound ICAAP (Internal Capital Adequacy Assessment Process) within a bank and discuss how to measure the unexpected loss and the Economic Capital.

We take a closer look at the individual building blocks of a modern credit portfolio management process. We show how scoring models together with external and internal ratings are integrated into the process and discuss limitations and possible improvements. We then turn to collateral management, which is recognized as an important building block in the credit portfolio management process to achieve credit enhancement and risk mitigation. Whilst helping to reduce credit risk, collateral management exposes the firm to operational, legal, liquidity and price risks.

Aggregating credit risk in a portfolio context is far from being simple. We propose a new way and look at the aggregation over time represented by the rating migrating matrix. Often the data gathering process necessary for credit risk analysis presents a big challenge to most banks. We shall present state-of-the-art methodologies together with practical tips how to overcome this challenge.

We then present a number of widely used quantitative credit portfolio models and explain their advantages and disadvantages. We use the models to calculate credit VaR and economic capital for a sample portfolio.

We shall show how a credit portfolio can be optimally allocated to optimize the expected credit return on a given investment horizon.

We then present and demonstrate techniques and tools for mitigating and controlling credit risk. We show how loans should be priced using risk-adjusted pricing and explain how credit risk can be reduced through the use of loan covenants, collateral and margining arrangements. Finally, we explain how credit risk can be transferred using credit guarantees, credit derivatives and securitization.

THURSDAY, NOVEMBER 8

09.<sup>00</sup>–09.<sup>15</sup>

## Welcome and Introduction

09.<sup>15</sup>–12.<sup>00</sup>

### Credit Risk within Bank Risk Management

- The Anatomy of Credit Risk
- Traditional and Current Definitions of Credit Risk
- Regulatory Overview
- Introduction to ICAAP
- Credit VaR
- The Use of Economic Capital as a Key driving Force for Credit Portfolio Management

### Building Blocks of Modern Credit Portfolio Management – Part I

- Fundamental Business Analysis
- Financial Analysis
- Credit Scoring Models
  - Judgmental Scoring Models
  - Statistical Scoring Models
- External Rating Systems
  - Differences between Rating Agencies
  - Limitations
- Internal Rating Models
  - Requirements and Key Elements
  - Deployment
  - Verification

12.<sup>00</sup>–13.<sup>00</sup>

## Lunch

13.<sup>00</sup>–16.<sup>30</sup>

### Building Blocks of Modern Credit Portfolio Management – Part II

- The Collateral Management Process
  - Calculation of haircut

### Portfolio Credit Risk versus Single Credit Risk

- Break-down of the usual Credit VaR Concept
- Defining a new Portfolio Credit Risk Measure
- Credit Migration Analysis
- Integrating Credit Risk into total Portfolio Risk

### Data Requirements for Building a Credit Portfolio Model

- Expected Loss Parameters
  - Probability of Default, Loss Given Default, Exposure at Default
- Economic Capital Parameters
  - Correlations, Concentration, Maturity and Migration Matrix
- Portfolio Loss Distribution
  - Key Statistics, Distribution Types, Impact of Parameters

FRIDAY, NOVEMBER 9

09.<sup>00</sup>–09.<sup>15</sup>

## Recap

09.<sup>15</sup>–12.<sup>00</sup>

### Credit Portfolio Models

- Anatomy of a Portfolio Credit Model
- Overview of widely used Credit Portfolio Models
  - Advantages and Disadvantages
- Uncorrelated Binomial Model
- Single Factor Gordy Model
- Factor Probit Models
- The Merton Family of Models
- Adaptive Intensity Models
- Calculating Credit VaR and the Economic Capital
- Stress Testing the Models

### Credit Portfolio Optimization

- The Importance of the Investment Horizon
  - Adjusting the Credit Migration Matrix
- Mean Reversion Effects of Total Credit Portfolio Rating
- Balancing Risk Appetite and Diversification
- Stable Allocation Strategies
- Optimization of the Credit Return from a Portfolio
  - Unconditional and Conditional
  - Incorporating Rebalancing Costs
- Stress Testing the Models

12.<sup>00</sup>–13.<sup>00</sup>

## Lunch

13.<sup>00</sup>–16.<sup>30</sup>

### Tools and Techniques to Manage a Credit Portfolio

- General Principles for Managing Credit Risk
  - Credit Risk Organization and Procedures
  - Risk Appetite Setting and Limit Setting
- Capital Allocation and Risk Adjusted Pricing
- Using Covenants to Mitigate Risk
- Using Credit Guarantees and Insurance to Transfer Credit Risk
- Using Credit Derivatives to Transfer Credit Risk
  - Credit Default Swaps and Total Return Swaps
  - Unfunded versus funded Instruments
- Using Securitization to Transfer Credit Risk

### Evaluation and Termination of the Seminar

- **Objectives and Organization of ALM** <sup>3+2</sup>
- **Interest Rate and Spread Analysis**
- **GAP and Duration GAP Analysis**
- **Analyzing Non-Maturing Assets and Liabilities**
- **Value-at-Risk and Regulatory Capital Assessment**
- **Managing Interest Rate Risk with Derivatives**
- **Funding and Liquidity Management**
- **Fund Transfer Pricing**

The purpose of this seminar is to give you a good understanding of Asset-Liability Management as a tool for managing an institution's balance sheet in pursuit of the optimal balance between revenues and risks.

We start with an introduction to ALM, and we discuss the objectives and means of ALM. We also give an example of how ALM is organized in a typical bank.

Next, we explain important concepts such as margin, spread, leverage, surplus, and balance sheet risk. We look at the balance sheets of "typical" institutions and discuss the funding/investment requirements and constraints that arise from the business nature of these institutions.

We then look into how interest rate risk can be measured and managed within the ALM framework. We explain and discuss measures such as Net Interest Income (NII), GAP, and Duration GAP. We also present and explain models for measuring interest rate risk on non-maturing assets and liabilities (e.g. demand deposits) and for measuring "Value-at-Risk" of trading assets and liabilities.

Further, we explain how interest rate risk can be managed using derivative instruments such as FRAs, swaps and interest rate options. We explain how "macro swaps" are used by banks to hedge interest rate risk at the balance sheet level, and we show how caps, floors and swaptions can be used to manage the explicit and embedded option risks of a bank's assets and liabilities.

We then present and explain tools for assessing liquidity risks, including liquidity ratios, cash flow projections and the "liquidity curve". We look in detail into liquidity risk measurement within a financial institution using liquidity modelling, liquidity stress testing and long term liquidity profiling. We explain how liquidity risk can be managed in an ALM context. We review the latest regulatory developments for liquidity risk management, and we present liquidity management tools, including "contingency planning" and financing instruments such as repos and money market facilities.

Finally, we look at liquidity costs and liquidity pricing factors, and we explain the process of "liquidity transfer pricing" in an ALM context.

## MONDAY, NOVEMBER 19

09.<sup>00</sup>–09.<sup>15</sup>

### Welcome and Introduction

09.<sup>15</sup>–12.<sup>00</sup>

#### Introduction to ALM

- ALM – a Strategic Management Tool
- The Use of ALM in Banks
- The ALCO and the ALCO process
- Case Study: ALM Organization, Policies and Procedures in a Large Bank

#### Interest Rate and Spread Analysis

- Profitability and Interest Rate Risk
  - Margins, leverage and ROE
  - Maturity transformation risk
  - Spread risk
- Interest Rate Risk in the Banking Book
  - Basel Pillar II requirements
  - NPV Risk vs. "Re-pricing" Risk
- GAP Analysis
  - Static GAP
  - Dynamic GAP
  - Case: GAP analysis in "NoHope Bank"
- Exercises

12.<sup>00</sup>–13.<sup>00</sup>

### Lunch

13.<sup>00</sup>–16.<sup>30</sup>

#### Interest Rate and Spread Analysis (continued)

- Simulation Method
  - Simulating NII
  - Simulating effect of product mix and pricing
  - Monte Carlo simulation
- Duration Analysis
  - The economic value of assets and liabilities
  - Duration explained
  - Duration GAP and duration of equity
  - Case study: Duration analysis in "NoHope Bank"
- Measuring Interest Rate Risk of Non-Maturing Assets and Liabilities (NoMALS)
  - Types and characteristics of NoMALS
  - The annuity-margin approach
  - Stochastic programming model
  - Calculating duration and convexity of NoMALS
  - Constructing replicating portfolios
  - Case study: NoMALS in "NoHope Bank"
- Analyzing Prepayment Risk
- Exercises

## TUESDAY, NOVEMBER 20

09.<sup>00</sup>–09.<sup>15</sup>

### Recap

09.<sup>15</sup>–12.<sup>00</sup>

#### Measuring Interest Rate Risk in the Trading Book

- Basel Pillar I Requirements
- General vs. Specific Interest Rate Risk
- The Maturity and Duration Approaches
- Value-at-Risk Analysis
  - Value-at-Risk for bonds and other primary instruments
  - Value-at-Risk for interest rate derivatives
- Yield Curve Analysis
  - Key rate duration
  - Principal components analysis
  - Diversified Value-at-Risk
- Case: Value-at-Risk in "NoHope Bank"
- Exercises

#### Managing Interest Rate Risk

- Structural Management
  - A/L mix and pricing
  - Balance sheet re-engineering
- Portfolio Strategies
  - Matching, immunization, active management

12.<sup>00</sup>–13.<sup>00</sup>

### Lunch

13.<sup>00</sup>–16.<sup>30</sup>

#### Managing Interest Rate Risk (Continued)

- Using Derivatives for Interest Rate Risk Management
  - Using FRAs and futures to manage re-pricing risk
  - Using interest rate swaps to hedge cash flow risk
  - Using interest rate swaps to hedge fair value risk
  - Using "macro swaps" to hedge assets/liabilities at the bank level
  - Using interest rate options to cap funding costs
  - Using interest rate options to hedge explicit and embedded optionality of assets and liabilities
  - Managing pre-payment risk
  - Managing multi-dimensional and contingent IRR
- Accounting Issues
  - Accounting treatment of derivatives under IFRS/US GAAP
  - Hedge accounting: cash flow vs. fair value hedges
  - Treatment of macro hedges
- Case Study: Using Derivatives in "NoHope Bank"
- Exercises

## WEDNESDAY, NOVEMBER 21

09.<sup>00</sup>–09.<sup>15</sup>

### Recap

09.<sup>15</sup>–12.<sup>00</sup>

#### Liquidity Management

- An ALM Framework for Assessing Liquidity Risk
- Factors that Affect Bank Liquidity
  - Financial market access
  - Balance sheet structure and earnings
- Balance Sheet Analysis
  - Core vs. non-core deposits
  - Available-for-sale vs. held-to-maturity securities
- Sources of Cash Flow Uncertainty
- Assessing Liquidity Risk Using Balance Sheet Ratios
- Assessing Liquidity Risk Using Stochastic Cash Flow Mismatch Analysis
- Basel III Regulatory ratios
  - Liquidity coverage ratio
  - Net stable funding ratio
- Managing Liquidity Risk
  - A framework for managing liquidity risk
  - Managing market access
  - Contingency planning
  - Foreign currency liquidity management
- Practical Case Studies and Exercises

12.<sup>00</sup>–13.<sup>00</sup>

### Lunch

13.<sup>00</sup>–16.<sup>30</sup>

#### Liquidity Pricing and Fund Transfer Pricing

- Reasons for Liquidity Costs
- Defining Liquidity Costs and the Pricing Factors
  - Structural liquidity costs
  - Contingent liquidity costs
- Liquidity Traders View
  - Long vs. Short cash
  - Rate paid vs. Rate achieved
- Balancing the Costs of Overfunding/Underfunding
- Liquidity Cost Curves
- Fund Transfer Pricing
  - Transfer prices for liquidity
  - Liquidity pricing for specific asset and liability classes
  - The role of ftp in economic capital allocation and risk adjusted performance measurement
- Practical Case Studies and Exercises

#### Evaluation and Termination of the Seminar

- **Basel Sound Stress Testing Practices**
- **Stress Testing and Risk Governance**
- **Stress Testing Credit Risk**
- **Stress Testing Market Risk**
- **Stress Testing Operational Risk**
- **Integrated Risk Stress Testing and Capital Allocation**
- **The Role of Regulators in Stress Testing**
- **The EBA EU-Wide Stress Tests of Banks**

3+2

The purpose of this seminar is to give you a good understanding of stress testing methodologies and tools and of their practical use in banks' risk management.

We start with a review of the performance of stress testing during the crisis. Experiences from the crisis has led many banks and supervisory authorities to question whether stress testing practices were sufficient prior to the crisis and whether they were adequate to cope with rapidly changing circumstances.

In response to this, the Basel Committee has developed a new set of recommendations for sound stress testing practices. We give an overview of these recommendations and discuss their implications for banks and regulators.

We then present an overall framework for stress testing and give a thorough explanation of how different types of stress testing are applied to credit, market, operational and liquidity risk.

Methodologies include simple sensitivity tests and more complex tests which aim to assess the impact of a severe macroeconomic stress event on measures like earnings and economic capital.

We explain how to use scenario analysis to quantify the potential impact of historical extreme events, stylized scenarios such as the break-down of correlation assumptions and hypothetical one-off events.

We also explain how to use "mechanical" approaches such as factor push analysis and maximum loss optimization. In each case, we give practical examples and we discuss the practical implementation challenges.

Finally, we discuss how integrated stress testing is used to account for correlations between different risks types and how the results of stress testing are fed into a bank's capital and liquidity planning procedures. We also discuss the role of regulators in supervising banks' use of stress testing in risk management and capital allocation. As a practical case study, we look at and discuss the results of the EU wide stress tests of banks that have been performed by the European Banking Authority (EBA).

THURSDAY, NOVEMBER 22

09.<sup>00</sup>–09.<sup>15</sup>

## Welcome and Introduction

09.<sup>15</sup>–12.<sup>00</sup>

## Stress Testing – Introduction

- What Is "Stress Testing"
- Reasons for Increased Focus on the Need for Improved Stress Testing
  - The performance of stress testing during the crisis
- The Future Role of Stress testing in Risk Management

## Basel Principles for Sound Stress Testing Practices and Supervision

- Use of Stress Testing
- Integration in Risk Governance
- Stress testing methodology and scenario selection
- Specific areas of focus
  - The effectiveness of risk mitigation techniques
  - Complex and bespoke products
  - Pipeline and warehousing risks
  - Reputational risk
  - Highly leveraged counterparties
  - Wrong-way risk
- The Role of Regulators in Supervising Banks' Stress Testing Practices
- Case Study: The EBA EU-Wide Stress Tests of Banks

12.<sup>00</sup>–13.<sup>00</sup>

## Lunch

13.<sup>00</sup>–16.<sup>30</sup>

## Stress Testing Credit Risk

- Stress Testing Framework
- Types of Stress Tests
  - Single factor/sensitivity analysis

- Reverse stress testing
- Multi factor/scenario analysis
- Types of Scenarios
  - Historical scenarios
  - Hypothetical scenarios
- Examples of Macroeconomic Scenarios
- Connecting Macroeconomic Indicators to Conditional Loss Distribution
  - Connecting factor returns and macro variables
  - Calculating stressed PDs and LGDs
  - Model validation
- Impact of Stress Conditions on a Portfolio
- Covering Corporate and Retail in Economic Capital
- Case Study/Workshop

FRIDAY, NOVEMBER 23

09.<sup>00</sup>–09.<sup>15</sup>

## Brief recap

09.<sup>15</sup>–12.<sup>00</sup>

## Stress Testing Market Risk

- Scenario Analysis
  - Stylized scenarios
  - Creating hypothetical scenarios
  - Mild and severe worst case scenarios
  - Scenario analysis – benefits and problems
- Traditional Stress Tests
  - Factor push analysis (using factor models)
  - Multiple factor stress testing
- Advanced Stress Tests
  - Extreme value theory
  - What happens in a true crisis?
  - Stressed covariance matrix
  - Maximum loss optimization

## Stress Testing Operational Risk

- A Stylized ORM Model
- Defining standard Key Risk Indicators

- Risk Drivers and Indicators
- Handling Material Risk Concentrations
- Common Scenarios for OR Stress Tests
- Operational Risk – the Future

12.<sup>00</sup>–13.<sup>00</sup>

## Lunch

13.<sup>00</sup>–16.<sup>30</sup>

## Stress Testing Liquidity Risk

- Institution-specific shocks
  - significant downgrade
  - partial loss of deposits;
  - loss of unsecured wholesale funding
  - significant increase in secured funding haircuts
  - increases in derivative collateral calls and substantial calls
- Systemic shocks
  - Systemic bank-run
  - Dry-up of market liquidity – "liquidity black holes"
- Case Study/Workshop

## Coherent (Integrated) Risk Stress Testing

- Historical/Hypothetical Scenarios which are Common for all Risk Types
- Taking the Correlation between Risk Types into Account
- Diversification Effects and Risk Capital Allocation

## Evaluation and Termination of the Seminar

- **Financial Crises, Country Risk and Sovereign Default Risk**
- **Economic and Financial Foundations of Country Risk Assessment**
- **Country Risk Assessment Methodologies**
- **Country and Sovereign Ratings and their Interpretations**
- **Risk Models for Sovereign Credit Risk**
- **International Portfolio Investment Analysis**
- **Hedging Country and Sovereign Risk**

The European debt crisis that started in the spring of 2010 has led to a hugely increased focus on country risk in general and on sovereign credit risk in particular.

The purpose of this seminar is to give you a good introduction to country and sovereign risk and a good and practical understanding of tools and methods for assessing and managing these risks.

We start with a general introduction to country and sovereign risk. We define the concepts “country risk” and “sovereign risk”, and we explain the sources of these risk. We also give an overview of the role that country and sovereign risks have played in the current and historical financial crises (such as the Asian currency Crisis).

We then look at the economic and financial foundations of country risk assessment. We explain the debt dynamics and “events” such as debt restructuring, debt moratorium, and currency devaluation.

Further, we present and explain a number of country risk assessment methodologies, including the analysis of socioeconomic, fiscal and monetary variables. We also discuss how country and sovereign risks are reflected in country and sovereign credit risk ratings. We give examples of country and sovereign debt ratings and we discuss their impact on sovereign debt markets. We present some quantitative risk models for country and sovereign risk and explain how these models can be used in practice for calculating “Country VaR” and other risk measures.

Further, we look at the investment implications of country and sovereign risk. We explain how sovereign debt instruments affect the risk-return characteristics of an investment portfolio, and we demonstrate how to construct optimal portfolios that include government bonds.

Finally, we present and explain a number of tools for mitigating country and sovereign risk, including the use of national and multinational guarantees, restructuring strategies, future flow securitizations, and risk transfer with sovereign credit derivatives.

## TUESDAY, DECEMBER 11

09.<sup>00</sup>–09.<sup>15</sup>

### Welcome and Introduction

09.<sup>15</sup>–12.<sup>00</sup>

### Financial Crises, Country Risk and Sovereign Default Risk

- Country and Sovereign Risk: Definitions, Terminology, Sources of Risk
- The European Debt Crisis and the Future of the Euro
- Sovereign Debt Crises – the Historical Perspective
- Solving Debt Crises – Debt Reduction Strategies and Instruments

### Economic and Financial Foundations of Country Risk Assessment

- Country Debt Dynamics
- Near- Medium and Long Term Fiscal Outlooks
- Default/Moratorium/Restructuring
- Devaluation
  - Relative price effects
  - Income effects
  - Stock adjustments
  - Country Risk Ratios

12.<sup>00</sup>–13.<sup>00</sup>

### Lunch

13.<sup>00</sup>–16.<sup>30</sup>

### Country Risk Assessment Methodologies

- Welfare and Social Indicators
- Macroeconomic Structures of Growth
- External Indebtedness, Liquidity and Solvency
- The Savings-Investment Gap and Domestic Financial Intermediation
- Growth, Crisis and Governance
- Case Study and Small Exercise

### Country and Sovereign Ratings and their Interpretations

- Global Country Risk Ratings
  - Specialized ranking firms
  - Export credit agencies
  - Global country risk ranking methods
- Country (Sovereign) Credit Risk Ratings
  - The methodologies of major credit rating agencies (Moody’s, S&P and Fitch)
  - Sovereign debt ratings and their interpretations
  - The impact of ratings on sovereign bond markets (spreads etc.)
- Case Study and Small Exercise

## WEDNESDAY, DECEMBER 12

09.<sup>00</sup>–09.<sup>15</sup>

### Brief Recap

09.<sup>15</sup>–12.<sup>00</sup>

### Quantitative Risk Models for Country and Sovereign Risk

- Econometric and Mathematical Models
- Value-at-Risk
- Principal Components Analysis
- Models for Assessment of Credit Risk
  - Probabilities of default using historical data
  - Probabilities of default using credit spreads
  - CountryMetrics
  - Loss given default and credit VaR
  - Incorporating correlation and contagion
- Case Study and Small Exercise

### International Portfolio Investment Analysis

- Investment Risk
  - The Macro CAPM
  - Measuring political risk as an insurance premium

### International Portfolio and Country Risk Management

- The impact of country risk on international portfolio investment
- The International Capital Asset Pricing Model (ICAPM)
- Limitations of the ICAPM
- Case Study and Small Exercise

12.<sup>00</sup>–13.<sup>00</sup>

### Lunch

13.<sup>00</sup>–16.<sup>30</sup>

### Hedging Country and Sovereign Risk

- Overview of Country and Sovereign Risk Mitigation Instruments
- National Export Credit Agencies
- Multilateral Risk Guarantee Institutions
- Public and private risk guarantee institutions
- The Market Based Approach
- Using Project Finance and Future Flow Securitizations to Mitigate Country Risk
- Hedging Sovereign Risk with Credit Derivatives
- Regulatory Aspects (Basel III, Solvency II etc.)
- Case Study and Small Exercise

### Evaluation and Termination of the Seminar

- **ERM Definition and Evolution**
- **The COSO and CAS Frameworks**
- **Identifying Risks and Opportunities**
- **Risk Modelling Methods**
- **Risk Management Tools and Instruments**
- **Policies, Procedures, Monitoring and Control**
- **ERM Case Studies**

2+2

The purpose of this seminar is to give you a thorough introduction to “Enterprise Risk Management” and a good and practical understanding of how ERM can be used as a strategic management tool in financial as well as non-financial firms.

We start with an overall introduction and explain the rationale for ERM. We describe how the evolution toward ERM can be characterized by a number of driving forces: More and more complicated risks, external pressures, the move to an integrated (holistic) view of risk, a growing tendency to quantify risks, and a growing awareness that risks can also be seen as opportunities.

We present and discuss a general framework for ERM. We conceptualize ERM along two dimensions: One spanning the types of risks included, and the other spanning the various risk management process steps. We introduce and explain the two most well-known and generally accepted frameworks, COSO, CAS and ANZ, and we present a comprehensive case study that we shall discuss throughout the seminar.

We then work our way through the various steps of the ERM framework. We explain and discuss how a firm can establish a philosophy regarding risk management and set objectives that form the risk appetite and risk tolerance of the firm. Further, we explain how to the firm can identify events, differentiate between risks and opportunities, and prioritize and manage risks. We review important and widely used models for quantifying risks (such as “Value-at-Risk”) and we explain how risks can be managed using risk transfer and other techniques. We also explain how the firm can allocate “economic capital” to absorb retained risks and measure risk adjusted performance at the enterprise and the business unit levels.

Finally, we discuss how to establish policies and procedures that help ensure that the risk responses, as well as other entity directives, are carried out. We also explain how the effectiveness of ERM system and its components is monitored through ongoing monitoring activities and separate evaluations.

**THURSDAY, DECEMBER 13**

09.<sup>00</sup>–09.<sup>15</sup>

**Welcome and Introduction**

09.<sup>15</sup>–12.<sup>00</sup>

**Introduction to Enterprise Risk Management**

- Definition of ERM
- The Evolution and Drivers of ERM
  - More and more complicated risks
  - External pressures
  - The move to a holistic view of risk
  - Growing tendency to quantify risks
  - Seeing risks as opportunities
- ERM as a Strategic Decision Tool

**The ERM Framework**

- Conceptualizing ERM
  - Types of Risk
  - ERM process steps
- The COSO ERM Framework
  - Categories
  - Entity levels
  - Components
- The ANZ ERM Framework
- The CAS Framework
- Presentation of the Case Study

12.<sup>00</sup>–13.<sup>00</sup>

**Lunch**

13.<sup>00</sup>–16.<sup>30</sup>

**The Internal Environment and Objective Setting**

- Establishing a Philosophy Regarding Risk Management
- Recognizing Unexpected and Expected Events
- Establishing the Entity’s Risk Culture and Risk Appetite

- Considering all other Aspects of How the Organization’s Actions may Affect its Risk Culture
- Case Study and Small Exercise

**Event Identification**

- Types of Risks and their Interactions
  - Business, hazard, operational, market and credit risks
- Internal and External Events
- Differentiating between Risks and Opportunities
- Channelling Opportunities back to Strategy Setting
- How Internal and External Factors Combine and Interact to Influence the Risk Profile
- Case Study and Small Exercise

**FRIDAY, DECEMBER 14**

09.<sup>00</sup>–09.<sup>15</sup>

**Recap**

09.<sup>15</sup>–12.<sup>00</sup>

**Risk Assessment**

- Understanding the Extent to which Potential Events Might Impact Objectives
- Relating Time Horizons to Objective Horizons
- Assessing Risk on an Inherent Basis
- Assessing Risk on a Residual Basis
- Qualitative and Quantitative Risk Assessment Methodologies
- Using Risk Models to Quantify Risks
  - Strategic and business risks
  - Hazard and operational risks
  - Market risks
  - Credit risks
  - Liquidity risks
- Case Study and Small Exercise

**Risk Response**

- Identifying and Evaluating Possible Responses to Risk
- Evaluating Options in Relation to
  - Entity’s risk appetite
  - Cost vs. benefit of potential risk responses
  - Reduction of impact and/or likelihood of event

12.<sup>00</sup>–13.<sup>00</sup>

**Lunch**

13.<sup>00</sup>–16.<sup>30</sup>

**Risk Response (continued)**

- Transferring Risk
  - Insurance
  - Derivatives
  - Risk securitization
- Assessing and Allocating Economic Capital
- Case study and small exercises

**Control Activities, Information and Communication, and Monitoring**

- Policies and Procedures
- Identifying, Capturing and Communicating Pertinent Information
- Ongoing Monitoring Activities
- Separate Evaluations
- Measuring and Appraising Performance
- Case Study – Practical Implementation of an ERM Framework

**Evaluation and Termination of the Seminar**

# ZÁVAZNÉ OBCHODNÍ PODMÍNKY

České finanční akademie a společnosti MONECO, spol. s r. o.

## ČESKÁ FINANČNÍ AKADEMIE

Jedná se o komplexní program intenzivních seminářů a praktických workshopů přednášených v anglickém jazyce vysoce kvalifikovanými zahraničními lektory. Česká finanční akademie je společným projektem poradenských společností MONECO a BASISPOINT, jejímž cílem je poskytnout finančním profesionálům přístup k nejmodernějšímu know-how a analytickým metodám v oblasti řízení finančních rizik a finančního inženýrství.

## MÍSTO KONÁNÍ A UBYTOVÁNÍ ÚČASTNÍKŮ

Všechny semináře vzdělávacího projektu Česká finanční akademie se konají v prostorách mezinárodního čtyřhvězdičkového hotelu Mövenpick v Praze na Mozartově ulici číslo 1, tel.: +420 257 151 111. Vzhledem k tomu, že ubytování není součástí seminářů, na vyžádání účastníkům rádi rezervujeme ubytování přímo v hotelu Mövenpick za speciálně zvýhodněné ceny pro účastníky České finanční akademie.

## JAZYKOVÉ POŽADAVKY

Veškeré studijní materiály, používaný simulační software a vlastní přednáškový program jsou vždy vedeny v anglickém jazyce bez simultánního tlumočení. Pro účast na seminářích je proto požadována minimálně pasivní znalost anglického jazyka na úrovni porozumění běžnému mluvenému přednesu a výkladu, včetně odborné terminologie v dané oblasti.

## REGISTRACE ÚČASTNÍKŮ

V případě zájmu o účast na semináři je nutné se závazně registrovat pro konkrétní termín. Po zaslání závazné přihlášky obdrží účastníci potvrzení účasti. Vzhledem ke skutečnosti, že producenti při organizaci seminárního programu České finanční akademie kladou zásadní důraz na maximální intenzitu výukového procesu a získání individuálních praktických dovedností každého absolventa, je vždy striktně limitován maximální počet účastníků na seminářích. Přihlášky budou proto akceptovány v došlém pořadí až do naplnění kapacity předmětného semináře. V případě, že nebude možno přihlášku z nějakého důvodu akceptovat, obdrží objednatel obratem o této skutečnosti vyrozumění.

## ÚČASTNICKÝ POPLATEK A CENA BLOKU

Účastnický poplatek představuje celkovou cenu pro jednu osobu za jeden seminář. Účastnický poplatek je stanoven pro každý seminář jednotlivě a nezahrnuje DPH. Cena bloku představuje poplatek za účast na vzájemně navazujících seminářích, což jsou integrované modely: 3+2, 2+3, 2+2, 3+1 a 1+3. Ceny bloků jsou stanoveny v „**Kalendáři seminářů České finanční akademie**“. V účastnickém poplatku, respektive ceně bloku je souhrnně zahrnuto kurzovné, veškeré studijní materiály, případně použitá softwarová řešení, certifikace formou udělení diplomu a kompletní občerstvení. Součástí účastnického poplatku nebo ceny bloku není ubytování účastníků.

## CENOVÉ SLEVVY A PLATBY

Při závazné registraci účasti více osob jsou poskytovány objemové slevy z účastnického poplatku. Při závazné registraci minimálně dvou účastníků jedné firmy na jednom semináři bude poskytnuta sleva ve výši 10 % z účastnického poplatku. Při závazné registraci jedné osoby na dva a více seminářů současně bude poskytnuta sleva 10 % z účastnických poplatků. Uvedené slevy není možné kombinovat a nejsou poskytovány účastníkům na vzájemně navazujících seminářích, což jsou integrované modely: 3+2, 2+3, 2+2, 3+1 a 1+3. Účastníci semináře obdrží daňové doklady (faktury) k úhradě účastnických poplatků minimálně 10 pracovních dnů před konáním semináře. **Podmínkou účasti je vždy uhrazení celkové fakturované částky před zahájením konání příslušného semináře.**

## ZRUŠENÍ ÚČASTI

V případě nemožnosti osobní účasti na závazně objednaném semináři je možná účast předem avizovaného náhradníka. Zrušení účasti bude akceptováno v písemné formě nejpозději dvacet kalendářních dnů před termínem zahájení semináře, přičemž bude účtován stornovací poplatek ve výši 10% z účastnického poplatku nebo ceny bloku. **Zrušení účasti v době kratší než dvacet kalendářních dnů před zahájením semináře není z technických a organizačních důvodů možné.** Organizátoři a producenti České finanční akademie si kdykoli vyhrazují právo na zrušení části nebo celého semináře z jakýchkoli blíže nespecifikovaných důvodů, včetně případu vyšší moci. V tomto případě bude přihlášeným účastníkům vrácen účastnický poplatek v plné výši.

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## ZPŮSOBY JAK SE REGISTRovat

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Česká republika

# ZÁVAZNÁ PŘIHLÁŠKA

• Interest Rate Risk Management	3+2	20. – 22. 2. 2012	<input type="checkbox"/>
• Liquidity Risk Management		23. – 24. 2. 2012	<input type="checkbox"/>
• Private Banking – Wealth Management, Behavioral Finance and Investment Solutions	3+2	5. – 7. 3. 2012	<input type="checkbox"/>
• Economic Indicators and their Impacts on Financial Markets		8. – 9. 3. 2012	<input type="checkbox"/>
• Basel III – Executive Overview	1+3	27. 3. 2012	<input type="checkbox"/>
• Market Risk – Measurement, Mitigation and Regulatory Treatment		28. – 30. 3. 2012	<input type="checkbox"/>
• Swaps – Mechanics, Pricing, Applications and Risk Management	3+2	16. – 18. 4. 2012	<input type="checkbox"/>
• Interest Rate Models – Advanced Pricing and Risk Management		19. – 20. 4. 2012	<input type="checkbox"/>
• Financial Risk Management – Methods, Tools, Regulation and Control	2+3	21. – 22. 5. 2012	<input type="checkbox"/>
• Quantitative Risk Measurement – Value-at-Risk, EVT and Monte Carlo Simulation		23. – 25. 5. 2012	<input type="checkbox"/>
• Investment Management – Asset Allocation, Portfolio Construction and Risk Budgeting	2+2	26. – 27. 6. 2012	<input type="checkbox"/>
• Index Investing – Index Funds, ETF's, Synthetics and Index Certificates		28. – 29. 6. 2012	<input type="checkbox"/>
• Basel III Workshop – Framework, Implementation and Risk Management Implications	3+2	17. – 19. 9. 2012	<input type="checkbox"/>
• Economic Capital Allocation Workshop		20. – 21. 9. 2012	<input type="checkbox"/>
• Financial Instruments and Markets	2+2	16. – 17. 10. 2012	<input type="checkbox"/>
• Behavioral Finance – Investors' Psychology, Market Impact and Investment Applications		18. – 19. 10. 2012	<input type="checkbox"/>
• Credit and Counterparty Risk Management	3+2	5. – 7. 11. 2012	<input type="checkbox"/>
• Credit Portfolio Management		8. – 9. 11. 2012	<input type="checkbox"/>
• Asset-Liability Management in Banks	3+2	19. – 21. 11. 2012	<input type="checkbox"/>
• Stress Testing – Principles, Regulation and Practical Use in Risk Management		22. – 23. 11. 2012	<input type="checkbox"/>
• Country and Sovereign Risk: Analysis, Rating and Risk Management	2+2	11. – 12. 12. 2012	<input type="checkbox"/>
• Enterprise Risk Management		13. – 14. 12. 2012	<input type="checkbox"/>

## ORGANIZACE

Název:

Fakturovat k rukám pana/paní:

Pracovník odpovědný za vzdělávání:

Adresa včetně PSČ:

IČ:  EU - DIČ:

## ÚČASTNÍCI

1. Jméno a příjmení:	<input type="text"/>	E-mail:	<input type="text"/>
Pozice:	<input type="text"/>	Tel.:	<input type="text"/>
2. Jméno a příjmení:	<input type="text"/>	E-mail:	<input type="text"/>
Pozice:	<input type="text"/>	Tel.:	<input type="text"/>
3. Jméno a příjmení:	<input type="text"/>	E-mail:	<input type="text"/>
Pozice:	<input type="text"/>	Tel.:	<input type="text"/>

Jméno a podpis oprávněné osoby:

Místo a datum:

# ČESKÁ FINANČNÍ AKADEMIE

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