

Advanced Risk Management, s.r.o., a consulting company from the Czech Republic, specialized in financial risk management, invites you to the seminar:

# SPECIFICS AND USE OF RATING AND SCORING AND ITS USAGE WITHIN THE BASEL II FRAMEWORK

**WHO SHOULD ATTEND:** risk managers responsible for credit risk, experts responsible for the implementation of Basel II, especially for credit risk requirements, all whose work consists of assessing the quality of customers, Basel II leaders, internal auditors, compliance officers.

The seminar is conducted by experts in credit risk and Basel II:



**Mgr. Tomáš Němeček**

Mr. Tomáš Němeček is the senior analyst of Advanced Risk Management. He is responsible especially for the development of statistical models (including Advanced IRB Approach) and theoretical parts of seminars on Credit Risk, Operational Risk and Economic Capital. He is frequently invited as a lecturer to professional conferences and seminars, e.g. Institute for International Research. Mr. Němeček holds a master degree from the Faculty of Mathematics and Physics at Charles University in Prague and studied at Humboldt University in Berlin.



**Mgr. Ing. Václav Novotný**

Mr. Václav Novotný is the Managing Director of Advanced Risk Management. He has been focusing on advisory and training in the area of identification, measurement and management of financial risks for the last 10 years. His career started at the investment department of the largest Czech insurance company Česká pojišťovna in 1994. Mr. Novotný is the founding member and Chairman of the Board of Risk Management Club and is frequently invited as a lecturer to professional conferences and seminars. Mr. Novotný holds a master degree from Faculty of Mathematics and Physics at Charles University in Prague and from the Faculty of Finance and Accounting at Prague School of Economics.



**Petr Vinš, Ph.D.**

After acquisition of CRA by Moody's in January 2006, Mr. Vinš serves as General Manager of Moody's Central Europe a.s. with responsibilities for Central European region. Mr. Vinš was working as a financial analyst, project manager and head of division in Czech brokerage companies. In 1998, he was elected as the Chairman of the Management Board in CRA Rating Agency, a.s. Mr. Vinš holds a degree at the University of Economics in Prague, where he finished his master and Ph.D. study. He is co-author of several publications on rating and evaluation and author of number of articles.

Business Park Košíře, Jinonická 80, Prague 5, Czech Republic

**June 1 - 3, 2010**

## DAY 1:

### INTRODUCTION, MATH AND RATING

#### INTRODUCTION

- Definition of risk
- Objective of risk management
- Risk management process
- Classification of financial risks
- Sources - literature
- Difference between rating and scoring

#### MATHEMATICAL AND STATISTICAL MINIMUM

- Mathematical terminology and symbols
- Vectors and matrices
- Derivation and integral
- Random variable
- Probability density function and cumulative distribution function
- Expected value
- Variance and standard deviation
- Covariance and correlation
- Discrete distribution
- Continuous distribution
- Random sample
- Sample statistics
- Histogram
- Maximum likelihood method
- Linear and logistic regression

#### RATING

- History of rating
- Rating scale
- Relation between rating grades and probability of default
- Transition matrices and their use
- Types of rating
  - international × local rating
  - rating of a company × project × securitization
  - solicited × unsolicited rating
- Rating process

#### ADVANTAGES AND DISADVANTAGES OF RATING

## DAY 2:

### CREDIT SCORING

#### INTRODUCTION TO CREDIT SCORING

- Types of credit scoring and their foundation
  - application credit scoring
  - behavioral credit scoring
- Objective of credit scoring process

#### USED STATISTICAL METHODS

- Linear regression
  - foundation of the method
  - estimation of linear regression parameters
  - meaning of linear regression parameters
- Logistic regression
  - foundation of the method
  - estimation of logistic regression parameters
  - meaning of logistic regression parameters
- Discriminant analysis
  - foundation of the method
  - decision rule
  - calculation of cut-off point
  - quadratic and linear discriminant analysis problems
- Neural networks (overview)
- Qualification (decision) trees
  - foundation of the method
  - tree building model
  - interpretation of results

#### ASSESSMENT OF EFFICIENCY OF STATISTICAL METHODS

- Contingency table
- Graphical criteria of efficiency
- Numerical criteria of efficiency

#### REQUIREMENTS IMPOSED ON INPUT DATA

- Natural persons
- Corporations
- Importance of definition of default

#### APPLICATION OF STATISTICAL METHODS TO AN EXAMPLE

- Application of linear regression, logistic regression and discriminant analysis to sample data
- Assessment of efficiency
- Comparison of methods

#### ADVANTAGES AND DISADVANTAGES OF CREDIT SCORING

## DAY 3:

### USAGE OF RATING AND SCORING WITHIN THE BASEL II FRAMEWORK

#### CONCEPT OF BASEL II - THREE PILLARS:

- Minimum capital requirements
- Supervisory review process
- Market discipline

#### RATING AND STANDARDIZED (STA) APPROACH

- General rules
- External rating
- Requirements for STA approach
- Capital requirement calculation with use of information about external rating
- Requirements for external rating agencies

#### SCORING AND INTERNAL RATING BASED (IRB) APPROACH

- Principles of IRB approach
- Minimum requirements on IRB approach
- Rating systems under IRB approach and requirements for such systems
- Definition of default

#### Risk parameters:

- Probability of Default (PD)
- Loss Given Default (LGD)
- Credit Conversion Factor (CCF)
- Requirements on data and minimum length of time series for the estimates of PD, LGD a CCF
- Impact of definition of default on the value of the risk parameters
- Calculation of capital requirement
- Implementation and validation of IRB approach
- Evaluation of applications to use the IRB approach

#### USAGE OF RATING AND SCORING FOR ECONOMIC CAPITAL CALCULATION

- CreditMetrics
- Simple-factor model
- Multi-factor model

#### RECAPITULATION AND CONCLUSION OF SEMINAR

### SELECTED REFERENCES - PROJECTS:

- Cooperation with SKB, d.d. on Advanced IRB approach implementation
- Cooperation with Komerční banka, a.s. (Société Générale Group) on Advanced IRB approach implementation
- Validation of one part of the IRB approach of Česká spořitelna, a.s.(Erste Bank Group) used for the measurement of Capital Requirement to Credit Risk (models for risk parameters PD, LGD and CCF)
- Consulting on implementation of Pillar 2 provisions for OTP Banka Slovensko a.s.
- Strengthening the Czech Banking Sector - Application of Basle II (EUROPEAID/Phare project)
- Support to the Implementation of the Risk-Based Supervision in Slovak Republic EUROPEAID/Phare project)
- Validation of AMA approach of Česká spořitelna, a.s. (Erste Bank Group) used for the measurement of Capital Requirement to Operational Risk
- Validation of VaR approach of Česká spořitelna, a.s. (Erste Bank Group) used for the measurement of Capital Requirement to Market Risk

## SELECTED REFERENCES - SEMINARS:

AB UKIO BANKAS  
ABN AMRO Bank N.V.  
ČEZ, a.s.  
Citibank, a.s.  
Česká pojišťovna a.s.  
Česká spořitelna, a.s. (Erste Bank Group)  
Československá obchodní banka, a.s.  
(KBC Group)  
Dexia banka Slovensko a.s.  
E.ON Česká Republika, s.r.o.  
Erste & Steiermärkische Bank d.d.

GE Money Bank, a.s.  
Generali Pojišťovna a.s.  
HVB Bank Czech Republic a.s.  
HVB bank Slovakia, a.s.  
Komerční banka, a.s.  
(Société Générale Group)  
Ministry of Finance of the Czech Republic  
National Bank of Slovakia  
Nova KBM d.d.  
OTP Banka Slovensko a.s.  
Privredna banka Zagreb d.d.

SKB, d.d.  
Slovenská sporiteľňa, a.s.  
(Erste Bank Group)  
Slovenská záručná a rozvojová  
banka a.s.  
Slovnaft, a.s. (MOL Group)  
Transgas, a.s.  
UniCredit Bank Czech  
Republic, a.s.  
(UniCredit Group)  
Zagrebačka banka, d.d.

## BENEFITS FOR YOU/WHY TO ATTEND:

- The seminar is based on the experience with implementation of rating and scoring into process.
- The seminar contains a unique know-how acquainted in a process of implementation of Credit risk management within Basel II (both standardized and IRB Approach).
- Credit scoring methods are illustrated on numerical examples that help to understand to get acquainted with the practice.
- The practical implementation of rating rules is lectured by the General Manager of Moody's Central Europe a.s.
- Unique opportunity to talk to other bankers from Central and Eastern Europe.

## TERMS AND CONDITIONS:

If you wish to attend the seminar please fill in the application form below and send it back by fax to the number +420 257 290 473 or via e-mail to arm@arm.cz. After the receipt of the application form we will confirm your participation and issue a pro-forma invoice. The advance payment is the 100 % of the fee. An invoice will be issued after receipt of the payment.

The fee is 1,790 EUR + VAT (20%). Two or more attendants from the same institution will be charged 1,690 EUR + VAT (20%) each. The fee involves handout materials and refreshment during the three days of seminar.

The seminar will be held on June 1 - 3, 2010 at Business Park Košíře, Jinonická 80, Prague 5, Czech Republic. The schedule is as follows: on the first day the seminar starts by the registration at 8:30 a.m.

On the following days it starts at 9 a.m. The seminar lasts all three days until 5 p.m. with a break at 10:30 a.m. and 3:15 p.m. and a lunch break at 12:30 p.m. At the end of the first day of the seminar there will

be a cocktail giving you the opportunity for informal discussion.

Cancellation must be sent in writing. Cancellations three weeks before the seminar are subject to a 10% cancellation fee. For cancellations delivered less than three weeks before the first day of the seminar the cancellation fee is 100%. Any attendant can be substituted by another employee (colleague) from the same institution.

Advanced Risk Management, s.r.o. reserves the right to cancel the seminar and refund the fee. The institution is aware that by signing this application form it fully accepts the above-mentioned conditions. The applicant confirms that the participation of its employee is binding.

## APPLICATION FORM:

Name:

Position:

Company:  ID:

Address:  VAT No:

Phone:  Fax:  e-mail:

Signature and stamp



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