

# RISK MANAGEMENT

VU.NL/RISK

**VU**  **VRIJE  
UNIVERSITEIT  
AMSTERDAM**

LOOKING FURTHER

# RISK MANAGEMENT FOR FINANCIAL INSTITUTIONS

## DURATION OF THE DEGREE PROGRAMME

Part time, 2.5 years.

## TIME

Lectures take place on a weeknight, once a week, from 19:00-22:00.

## START DATE

The degree programme starts in September.

## ASSESSMENT

Every semester is assessed in writing. In addition, a number of cases must be completed every semester for which students receive a grade.

## PORTFOLIO

Students will be working on a portfolio consisting of four short essays. This fulfils the academic thesis requirement. The learning objectives of each essay are clearly defined and teach the student how to apply knowledge gained in writing research papers relevant to the daily practice.

## STUDY LOAD

An average of 10 hours per week (including a three-hour lecture).

## LANGUAGE

Depending on the composition of the group and the teacher's background, lectures can be given in Dutch or English. The required reading is mostly in English.

## TITLE

Students who graduate are awarded the title of MSc by VU Amsterdam. In addition, they can have their names added to the Risk Manager for Financial Institutions Register and use the title of RMFI.

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# CHAPTER 1 / UNIQUE PROGRAMME

## QUOTE

RENS DOMINICUS, RD MARKET RISK MANAGEMENT,  
ING BANK

'I'm in my second year. Various aspects that have been discussed previously are also discussed in the final semester (from a different perspective), allowing you to get an even firmer grasp on the information. The degree programme's teachers are incredibly proficient at helping their students get to grips with the material and immediately apply this expertise to a professional context. The atmosphere during the lectures is positive and constructive.'

The financial world has changed dramatically as a result of various crises. The theory and practice of risk management turned out to be ineffective at protecting the interests of stakeholders. The neoclassical equilibrium paradigm, which was the dominant framework in theory and practice up to this point, proved to be an insufficient basis for academically responsible and practically effective risk management. The role of human actions in decision-making under uncertainty must be better understood.

It is therefore necessary to work on creating a different view of how people in financial markets and financial companies make decisions in uncertain circumstances and deal with the risks associated with these decisions. Awareness of this is growing and the importance of a degree programme that contributes to this awareness should be obvious. For this reason, the VU School of Business and Economics launched the Risk Management for Financial Institutions programme in 2010.

This academic Master's degree programme has a strong focus on the practical aspects of Risk Management and is intended for working professionals who would like to acquire the theoretical and practical tools to improve risk management within their own organization.

This brochure contains extensive information about the degree programme. You can also check out our website: [yu.nl/risk](http://yu.nl/risk) or contact the training office for further questions (phone: 020-5986159).

## FOR WHOM?

The degree programme is intended for working professionals in the financial sector who would like to actively contribute to boosting risk management in their own organization. The programme also serves as an ideal stepping-stone for professionals who would like to switch careers.

The overarching, integrated approach to risk management makes the programme suitable for professionals from various disciplines in the financial world:

- > Risk managers at pension funds, insurers, banks and asset managers
- > Managers of the front office, mid-office and back office
- > Auditing accountants and auditors at financial institutions
- > Supervisors
- > Experienced professionals with the ambition to be promoted to senior managers (CEO, CFO, CIO, CRO)
- > Financial consultants focused on services to financial institutions or supervisors

## COURSE CONTENT

Unlike existing courses, this new programme incorporates aspects of other disciplines as well, topics from organizational science and studies of human behaviour in addition to economic and mathematic modelling, scenario analysis and Stress Testing. The practical approach, including cases and risk management games, brings the theory to life. As a result, the acquired knowledge can be applied directly to your own organization.

## SUBJECTS

- > The history of risk and risk management throughout the ages. What can we learn from systematic, recurring errors during economic cycles and how can we actively prevent them from happening in the future?
- > Different dimensions of uncertainty and how these uncertainties translate into potential risk sources, such as market and credit risk, operational risk, counterparty risk and compliance risk.
- > Qualitative and quantitative methods of risk measurement and risk management, from Stress Testing, based on theories of instability, and VaR, to Enterprise Risk Management.
- > The way financial institutions such as banks, insurers, pension funds, asset managers and their products operate and the financial markets on which they operate.
- > Financial frameworks and conduct guidelines that are used by regulators to regulate financial markets and manage risk, such as Basel and Solvency.
- > Cognitive psychology, the relationship with human choices in uncertain situations and the risk management to be applied to this.

Games, cases and essay writing exercises are included in the curriculum to allow students to acquire the skills needed to conduct proper academic research, learn to deal with internal resistance and adopt better risk measurement and risk management methods.

## CURRICULUM

The duration of the degree programme is 5 semesters. Semesters 1 to 4 focus on a single theme. In semesters 2 to 5 you will be expected to write four essays on the topic of the theme from the previous semester. Semester 5 is for writing the final essay and to practise applying the knowledge gained in games and through lectures to the current situation in the professional practice.

The themes are:

- > Semester 1: The foundations of risk management and financial institutions
- > Semester 2: Risk management and management of financial institutions: methods and techniques, rules and regulations
- > Semester 3: Risk management of derivatives, balance sheet management and financial markets
- > Semester 4: Human actions and event risk driven risk management
- > Semester 5: Interactive lectures, final essay and conclusion of the programme



## QUOTE

ANNE KOCK, SPECIALIST RISK & ALM, DNB

'I think the diversity of the group of students is great. We come from many different backgrounds and the academic standard is very high. This creates an environment that is highly conducive to exchanging knowledge, particularly by working together on cases.'

## QUOTE

SIGRID VAN ALDERWEGEN, TEAM LEADER  
MORTGAGES, DELTA LLOYD BANKING

'I was informed that this was a broad-based programme, taking into account multiple perspectives and fields of study, and I have to say I completely agree with this description of the programme. In my opinion, the cases have a definite added value, and working with other students continues to be very educational.'

## CHAPTER 2 / THE CURRICULUM

### THE FIVE SEMESTERS

SEMESTER 1	The foundations of risk management and financial institutions
SEMESTER 2	Risk management and management of financial institutions: methods and techniques, rules and regulations
SEMESTER 3	Risk management of derivatives, balance sheet management and financial markets
SEMESTER 4	Human actions and event risk driven risk management
SEMESTER 5	Interactive lectures, final essay and conclusion of the programme

## INTRODUCTION WEEKEND

Get to know your fellow students during a lively and interactive introduction weekend. This weekend includes some lectures focusing on the upcoming academic year, but there will also be plenty of opportunity to become acquainted with your future classmates and for networking.

## SEMESTER 1: THE FOUNDATIONS OF RISK MANAGEMENT AND FINANCIAL INSTITUTIONS

This semester is all about the foundations of risk management: what is a risk and what is Risk Management? How are risks identified, described and calculated? Why are existing methods of risk management used, how were they developed and what is wrong with them or could be improved on? This provides the foundation for understanding and improving existing methods and techniques.

In the second part of the semester, archetypes of various financial institutions are described based on cases. This leads to the study of the business strategies used by the various financial institutions.

This allows us to construct a framework in which to analyse risk management and formulate ideas for new risk management in students' own companies.

## SUBJECTS THAT ARE DISCUSSED:

### **Introduction to risk management**

- > Philosophy of risk and uncertainty
- > Sources of uncertainty and risk
- > Financial markets: dynamics, supply, demand, liquidity, value and price
- > Statistical calculations of uncertainty, reliability and relativity of statistical data
- > Introduction of methods of risk calculations, control and management

### **Financial institutions: archetypes, balance sheet characteristics and management**

- > Characteristics and dynamics of banks, insurance companies, pension funds and asset managers
- > The set up of financial institutions: strategy and policy
- > The relationship and interaction between strategy, policy, product development and risk profile

### **Case studies**

- > 'Success and shortcomings' of financial institutions in recent years
- > Explore and solve risk problems for financial institutions

## SEMESTER 2: RISK MANAGEMENT OF FINANCIAL INSTITUTIONS: METHODS AND TECHNIQUES, REGULATION AND SUPERVISION

In this semester, possible strategies are explored for the archetypes of the financial institutions discussed in the first semester. This strategy will then determine the institution's products, services and operations.

Obviously, this strategy is based on more than internal ideas. New regulations and frameworks are regularly introduced. The frameworks and the influence on business strategy are discussed extensively and in detail during this semester.

The strategy and the regulatory frameworks ultimately determine which instruments of risk management techniques are used. In this semester, the strengths and weaknesses of modern instruments are discussed. In order to apply the acquired knowledge, current cases are used.

## SUBJECTS THAT ARE DISCUSSED:

### **Risk management at financial institutions:**

#### **Enterprise Risk Management**

- > COSO II and Enterprise Risk Management (ERM)
- > Measuring risk, risk control and risk management at a financial institution

#### **Management of a financial organization**

- > Policy check; management models
- > Product development and the relationship to operational risks
- > Administrative organization and internal audits
- > Business support: IT, Back Office, Sales and Marketing
- > Scale and controllability of an organization

#### **Market supervision of financial institutions**

- > Market supervision and surveillance: the role of supervisors and rating agencies
- > Features and implications of FIRM (Financial Institutions Risk Method)
- > Features and implications of ICAAP (Internal Capital Adequacy Assessment Process), Basel and Solvency

#### **Case studies**

- > Design anti-cyclical regulations
- > Implementation of ERM / the COSO framework

### SEMESTER 3: RISK MANAGEMENT OF DERIVATIVES, BALANCE SHEET MANAGEMENT AND FINANCIAL MARKETS.

Risks faced by financial institutions with their trading books and investments, largely determine their material impact. For this reason, understanding market risk, budgeting and risk category allocation are regularly recurring themes in this programme.

If significant risks are identified, their scope and the institutions risk capacity can be harmonized. The use of derivatives is an important tool in achieving this.

### SUBJECTS THAT ARE DISCUSSED:

#### **Finance & Investments**

- > Balance management and ALM applications at financial institutions
- > Derivatives, valuation and use in portfolio & risk management
- > Tracing, measuring and controlling embedded options in the balance sheet of financial institutions
- > Financial markets and specific risk aspects in submarkets

#### **Case studies**

- > Solvency and liquidity management
- > Hedging embedded options in the balance sheets of financial institutions
- > Derivatives studies

## SEMESTER 4: HUMAN ACTIONS AND EVENT RISK DRIVEN RISK MANAGEMENT

The foundations of Neoclassical economics dominated the way we thought about people who trade in financial markets for decades. Rational decision-makers are always aiming for utility maximization. This has major implications for theories in the field of information processing, pricing, yield dynamics, and thus ultimately risk management. Things turned out to be different in practice.

In this semester, we will focus on modern, scientific insights from psychology and sociology in the field of human actions and making choices (behavioural finance). The history of financial markets and instability theory will also regularly feature in lectures. On the basis of current case studies, the implications of actual human actions and the lessons learned from the long history of risk management are studied. Where can risks be traced and how can implications for the organization be prevented, and what should be focused on?

## SUBJECTS THAT ARE DISCUSSED:

### Behavioural economy

- > Taking decisions in uncertain situations: theory and practice
- > Human decision-making behaviour in groups: instinct versus rationality
- > Cognitive emotional processes and systematic errors in assessments
- > Implications of cognitive and social processes on measuring risks
- > Implications of cognitive and social processes on interpreting and managing risks
- > Influencing choice of architecture to prevent mistakes

### Financial markets and event risk approaches

- > History of financial markets and crises
- > Instability theory and scenario approach
- > Processes set up event risk scenarios and stress test approach
- > Robust decision-making processes under high uncertainty

### Risk Management in practice and 'Wrap up'

- > Applications of behavioural finance and event risk approach in the context of risk methodologies, risk control and risk management in financial institutions; final case

## SEMESTER 5: INTERACTIVE LECTURES AND COMPLETION OF PORTFOLIO OF ESSAYS

The academic thesis obligation is met by writing a portfolio of four essays, spread across semesters 2 through 5. The first two essays are written individually, the next should be written in pairs and finally one essay in groups of three. The first three subjects are determined by the degree programme based on the current programme and are related to the learning objectives of the programme.

For the final essay, the programme gives students the option of choosing from a number of topics that are in line with the degree programme's multidisciplinary approach.

Students may also submit a request to write the essay on a subject of their choosing as long as their request is properly substantiated. Dividing the academic thesis requirement into a portfolio of four essays helps students connect to the material, aids the process of studying and improves the overall workload and continued appeal of the degree programme.

Writing essays is a great way for students to practise discussing the various aspects of risk management in a clear and accessible way. Semester 5 will also include a number of lectures relating to the materials discussed in the previous 4 semesters. Attendance and participation is mandatory, but there will be no exam.

To boost the academic quality of the essays and coach students in writing essays, students can get in touch with a specially appointed essay coordinator.

## QUOTE

MARCEL SCHEP, RISK & ACTUARIAL SERVICES  
MANAGER, KPMG ADVISORY

'I recently started this degree programme and am really enjoying it so far. I would recommend the degree programme to anyone working in a risk management environment or looking to switch careers. I have already learned so much over the last six months. The combination of theory and practice is particularly appealing to me.'

## QUOTE

LARS WOUTERS, RISK OFFICER, DE GOUDSE

'Before I started the programme, I spent some time comparing several degree programmes. The VU Amsterdam information event convinced me to enrol in this programme. The practical aspects of the programme, with less focus on quantitative aspects and also the study load convinced me. My expectations were met in this regard. The lecture material is interesting and varied and is presented in an interesting way by great speakers. I sometimes find myself on the edge of my seat during lectures.'

## CHAPTER 3 / ORGANIZATION

### VU SCHOOL OF BUSINESS AND ECONOMICS

The degree programme is part of the VU Amsterdam School of Business and Economics. VU Amsterdam aims to bring together fundamental research, applied research and degree programmes in all financial areas. In addition to postgraduate programmes, the School offers full-time programmes at Bachelor's and Master's level as well as PhD programmes.

### STUDY ASSOCIATION

In order to offer the first students of this new degree programme a network, the university partnered up with the Dutch Association of Investment Analysts (VBA). Once students have enrolled for the degree programme they can immediately become a probationary member of VBA. Members of the VBA have access to lectures, degree programmes and permanent education meetings, to help them keep their knowledge up-to-date and add to the network.

## LEADERSHIP AND RESPONSIBILITY

The final responsibility of the program rests with the School of Business and Education. A curatorial panel has also been appointed. The curatorial panel supervises the quality of the degree programme. The day-to-day management of the programme is the responsibility of the programme manager, who are jointly in charge of programme content. Michele Habets is in charge of operations (Education Office).

## SEMESTER COORDINATORS

The programme is subdivided in semesters, each with their own main theme. The semester coordinator monitors the internal cohesion of the course material and ensures it's up-to-date. The semester coordinators have a formidable track record in academia and in practice.

## LECTURERS, INSTRUCTORS AND CURATORIAL PANEL

The lectures are provided by instructors with a proven track record in both theory and practice. The following instructors have previously been part of the programme:

- > Keith Ambachtsheer (Rotman School of Finance),
- > Zvi Bodie (Boston University),
- > Fieke van der Lecq (Erasmus),
- > Henriëtte Prast (UvT),
- > Michael Damm (VU),
- > Paul Hilbers (DNB),
- > Rene Maatman (AFM),
- > Harman Short (AFM),
- > Monique Donders (Robeco),
- > Johan van der Ende (VBA / PGGM),
- > Dirk Schoenmaker (Duisenberg SF),
- > Theo Kocken (Cardano / VU),
- > Jaap Koelewijn (Nyenrode),
- > Theo Nijman (Netspar) and many others.

## QUALITY ASSESSMENT

The curatorial panel monitors the overall quality of the degree programme by overseeing the programme, the organization and the programme's financial health. The curatorial panel consists of working professionals with extensive practical and theoretical experience in the field of risk management for financial institutions.

## CHAPTER 4 / ADMISSION

### QUOTE

PROF. JEAN FRIJNS:

“It is inevitable that we will need to start paying more attention to risk policy and risk management across the board”

## ADMISSION REQUIREMENTS

Students must be in possession of an MSc or PhD degree from an accredited degree programme. They must be able to demonstrate that they have successfully completed the following courses: funding and investments, maths and statistics, economics.

## EXAMPLES OF ACCEPTED STANDARD LITERATURE

### Funding and investments

- > Principles of Corporate Finance, Brealey, Myers & Allen
- > Investment Analysis and Portfolio Management, Reilly & Brown
- > Options, Futures and other Derivatives, Hull

### Statistics

- > Quantitative Methods for Investment Analysis, DeFusco, McLeavy, Pinto & Runkle

### Economics

- > Economics: Private and Public Choice, Gwartney, Stroup, S.Sobel & Macpherson

Interested parties who meet the above criteria can in principle be admitted without deficiencies. Should you be lacking any demonstrable experience in one or several subjects, but you are in possession of an MSc or a doctoral diploma, then the programme coordinator will determine whether your knowledge and experience is enough and successful completion of the programme is to be expected.

In most cases, the candidate is invited by programme coordinator for an intake interview. Based on this intake interview, additional requirements can be set for admission.

## SELECTION PROCEDURE

At the request of the programme coordinator, the curatorial panel makes the final selection of the candidates. The following criteria play an important role in the selection:

- > Actual practical experience
- > The candidate's role during the degree programme
- > Academic performance in previous programmes
- > Composition of the entire group taking account of degree programme, age, experience and role
- > No more than 20 students will be admitted to the programme per academic year

The following procedure applies to the selection:

- > You can register for the programme using the registration form 6 weeks prior to the start of the academic year.
- > The programme managers will determine if the admission requirements have been met and if there are any shortcomings.
- > If necessary, an interview can be scheduled with programme management.
- > Final selection by programme managers: additional interviews with the candidates if necessary.
- > Decision of the curatorial panel, at the recommendation of programme management, on which candidates will be admitted to the new academic year.

## CHAPTER 5 / COST AND ENROLMENT

### REASONS TO REGISTER RIGHT NOW

Risk management is getting more and more priority within financial institutions

Standard models and risk management solutions are no longer sufficient, so new insights are essential now

Expansion of career opportunities

[Click here for dates of information evenings](#)

## COSTS

The degree programme costs €12,500 euros per year for the first two academic years. This is including the exams and syllabuses but excluding required reading. The VU Amsterdam library and computer facilities may also be used. No fees will be charged for the final semester.

## REGISTRATION

Click here to register immediately or go to our website [vu.nl/risk](http://vu.nl/risk).

Please attach the following annexes to your registration:

- > One passport photograph
- > Curriculum Vitae
- > Certified copies of relevant diplomas, with a list of grades awarded
- > Copy of valid passport or identity card (both sides)

PLEASE NOTE: a certified copy of your diploma must be supplied on request.

Once you have completed your registration you will receive written confirmation and an intake interview will be scheduled if necessary. The curatorial panel decides on definitive admissions.

## GENERAL TERMS OF PAYMENT

The academic year runs from September to June. Registration for each academic year is done separately. Tuition fees, examination fees, etc. are determined annually per degree programme. By registering, you are committing to pay these tuition fees.

## CANCELLATION

- > Any cancellation must always be made in writing.
- > If the cancellation letter is received before 1 September of the first academic year, any tuition fees already paid will be refunded.
- > If the cancellation letter is received before 1 January of the first academic year, half of the tuition fees due will be refunded.
- > No refund will be given for cancellations received after 31 December of the first academic year.
- > Diplomas are only issued if all payments have been made in full.

## MEER INFORMATIE

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