Number of ECTS credits: 4 Course language: English Course leader: MEZERET THIERRY

### **≡** COURSE DESCRIPTION

The numerous financial losses reported on a regular basis by financial institutions have convinced these financial institutions and their regulators that proper risk management needs to be put in place to try and keep risks contained, not only on the pure financial front but also on the entire enterprise level.

However, major financial calamities can still take place, either due to unforeseen and catastrophic events (e.g. September 11 attacks) or a blatant disregard for ethics and the common good, fuelled by individual greed (e.g. development and then collapse of subprime loans, leading to the Global financial crisis of 2008).

Besides risk management, financial institutions have thus had to implement other measures, namely robust compliance processes and a **strong governance framework** to essentially dictate what is acceptable to do and what is not.

This has given birth to the concept of Enterprise Risk Management.

This study unit will explore how corporate governance is best set up, how Enterprise Risk Management and Compliance operate, and how the three are linked to and integrated with each other.

### **≡** COURSE OBJECTIVES

By the end of this course, you should be able to:

- Appreciate how poor investors protection is hurtful.
- Understand the need for strong corporate governance, and the laws underpinning its development
- Understand the risk management process in a financial institution
- Appraise how risk management need a strong internal governance
- Understand the enterprise risk management and the various risks faced by the company
- Appreciate why compliance is needed and where it finds its place in the organisation
- Understand all the other components and committees required for a proper governance.
- Understand how and why the global financial crisis could originate and spread over to the real economy
- Understand the function of a dealing room, exploring how it is organised and how it interacts with the rest of the bank

## **■ LEARNING OBJECTIVES**

C4B learning goal LG2 - Action

C4B learning objective

LO6 - Communicate in a foreign language in a professional context

Outcomes Lev. 2 - Converse with any interlocutors in their field(s) of

discipline

Details -

Non-acquired (<50% of total Developing ( $50\% \ge 60\%$  of Acquired ( $60\% \ge 70\%$  of total Advanced ( $70\% \ge 80\%$  of Expertise ( $80\% \ge 100\%$  of score) total score) total score)

Through final exam and/or

mid term test

C4B learning goal LG4 - CSR

C4B learning LO11 - Identify ethical issues and act on them from an ethical

**objective** perspective

Outcomes Lev. 2 - Categorize the relevant stakeholders and explain their interests

Details -

Non-acquired (< 50% of total score) Developing (50%  $\geqslant$  60% of total score) Acquired (60%  $\geqslant$  70% of total Advanced (70%  $\geqslant$  80% of total score) Expertise (80%  $\geqslant$  100% of total score) total score)

Through final exam and/or

mid term test

# **■ TACKLED CONCEPTS**

- Governance
- Agency Problem
- Enron and Parmalat cases
- Risk committee, audit committee, remuneration committee
- Excessive pay
- External auditors
- Sarbannes Oxley Act, Dodd Frank Act
- Bradbury code of conduct
- Global Financial Crisis

## **■ LEARNING METHODS**

- 30 hours face to face
- Lectures

## **ASSIGNMENTS**

• 45 hours of personal work

## Evaluation

- 30%: continuous assessment
- 70%: group presentation

# **BIBLIOGRAPHY**

• Lange, H. Saunders, A. Cornett, M. (2013): Financial Institutions Management (2013 ed). Mc Graw Hill 3RD Edition

## Additional textbooks

- Saunders, A Cornett, M (2013): Financial Institutions Management A risk approach (2013 ed). Mc Graw Hill 3RD Edition
- Mishkin, FS. and Eakins, SG. (2013) Financial Markets and Institutions, 8th edition, Pearson International Edition, Pearson Addison Wesley.
- Pilbeam, K. (2010) Finance and Financial Markets, 3rd edition, Palgrave Macmillan

Number of ECTS credits: 4 Course language: EnglishCourse leader: MEZERET THIERRY

### **≡** COURSE DESCRIPTION

Born out of the necessity for financial (and commercial/industrial) agents to protect themselves against the risks that financial market fluctuations expose them to, derivative products have become the most widely used risk management tools.

This course will provide an introduction to the functioning of the most widely used derivatives, and hands-on examples on how to use them.

### **≡** COURSE OBJECTIVES

- Being able to assess the risk on a market position (foreign exchange and interest rate)
- Understanding the concept of derivative product
- Construct simple hedges using Forward and futures
- Understanding the relationship between the roles of speculators, hedgers and arbitrageurs

## LEARNING OBJECTIVES

C4B learning goal LG1 - Analysis

**C4B** learning objective

LO1 - Make use of critical analysis/critical thinking skills

Lev. 2 - Formulate a personal and well-informed **Outcomes** 

opinion

Details

Non-acquired (< 50% of total

score total score)

Developing (50%  $\geqslant$  60% of

Acquired (60% ≥ 70% of total

Advanced (70% ≥ 80% of

Expertise (80%  $\geqslant$  100% of total score)

score) total score)

Through final exam and/or

mid term test

C4B learning goal LG1 - Analysis

C4B learning objective

LO2 - Analyse complex situations

Lev. 2 - Formulate hypotheses to understand a complex situation, in a structured way, by mobilizing disciplinary frameworks if **Outcomes** 

score)

necessary

**Details** 

Non-acquired (< 50% of total

score) total score)

Developing (50% ≥ 60% of Acquired (60% ≥ 70% of total

Advanced (70% ≥ 80% of

total score)

Expertise (80% ≥ 100% of

total score)

Through final exam and/or

mid term test

C4B learning goal LG2 - Action

C4B learning objective

LO5 - Evaluate, prevent and manage short, medium and long-term risks

Lev. 3 - Prioritize risk scenarios, decide a risk management plan and ensure the implementation of a risk management/prevention Outcomes

plan

Details

Non-acquired (< 50% of total

Developing (50% ≥ 60% of total score)

Acquired (60% ≥ 70% of total score)

Advanced (70% ≥ 80% of total score)

Expertise (80% ≥ 100% of

total score)

Through final exam and/or

mid term test

- Interest rate parity
- Forward contracts and FX swaps
- Futures contracts
- Hedging
- Speculation
- Arbitrage
- Bonds and Zero coupon Bonds
- Duration and immunisation
- Yield curve

# **■ LEARNING METHODS**

- 30 hours face to face
- Lectures
- In class tutorials and practical exercises

# **ASSIGNMENTS**

- 30%: continuous assessment
- 70%: final exam

# **BIBLIOGRAPHY**

- Mishkin F.S., Eakins S.E., (2015), Financial Markets and Institutions, Pearson, 8th edition.
- John Hull: Options, Futures and Other Derivatives (5thedition or later)

### **EVALUATION METHODS**

# **≡** SESSIONS

- FX market and Forward hedging 1
  BRIEFING: 03h00
- **FX market and Forward hedging 2**BRIEFING: 03h00
- Basis of Interest Rates instruments Pricing
  BRIEFING: 03h00
- Arbitrage principles
  BRIEFING: 03h00
- Yield Curve
  BRIEFING: 03h00
- Bonds and Zero coupon Bonds
  BRIEFING: 03h00

Puration and immunisation
BRIEFING: 03h00

Futures 1 - Principles
BRIEFING: 03h00

Futures 2 - Commodities and shares
BRIEFING: 03h00

Futures 3 - Bonds portfolios
BRIEFING: 03h00

Number of ECTS credits: 4 Course language: English Course leader: MEZERET THIERRY

### **≡** COURSE DESCRIPTION

This course is the logical continuation of DERIVATIVES Part 1', where forwards and futures were covered. Here we will introduce options and swaps, both from a pricing and usage perspective.

## **≡** COURSE OBJECTIVES

- have specialist knowledge of the different types of derivative instruments,
- be able to describe the strategies that can be implemented in derivative markets and understand their risk characteristics,
- have an in depth knowledge of the pricing of derivatives products.

## **■ LEARNING OBJECTIVES**

C4B learning goal LG1 - Analysis

**C4B** learning obiective

LO1 - Make use of critical analysis/critical thinking skills

Lev. 2 - Formulate a personal and well-informed Outcomes

opinion

Details

Non-acquired (< 50% of total

total score)

Developing (50%  $\geqslant$  60% of score)

Acquired (60%  $\geqslant$  70% of total Advanced (70%  $\geqslant$  80% of total score)

Expertise (80%  $\geqslant$  100% of

total score)

Through final exam and/or mid term test

C4B learning goal LG5 - Cooperation

C4B learning

LO15 - Act with flexibility, adaptability and intellectual curiosity objective

Lev. 3 - Confront several points of view and incorporate external Outcomes

opinions

**Details** 

Non-acquired (< 50% of total

score)

Developing (50%  $\geqslant$  60% of total score)

Acquired (60% ≥ 70% of total score)

Advanced (70% ≥ 80% of total score)

Expertise (80% ≥ 100% of total score)

Through final exam and/or

mid term test

### TACKLED CONCEPTS

- o Options markets and strategies
  - Put-call parity
  - Binomial pricing
  - o Mathematical foundations: Stochastic calculus and Monte-Carlo simulations
  - o Black-Scholes-Merton model
  - Hedging and the Greeks
  - Modelling volatility
  - Real and exotic options
  - o Swaps and swaptions

# **■ LEARNING METHODS**

- 30 hours face to face
- Group coursework
- Readings
- Practical exercises

# **ASSIGNMENTS**

- Readings, Exercises and Group coursework
- 30%: continuous assessment
- 70%: final exam

# **■** BIBLIOGRAPHY

• John Hull: Options, Futures and Other Derivatives (5th edition or later)

# RISK MODELLING

Number of ECTS credits: 4 Course language : English Course leader: MEZERET THIERRY

### **≡** COURSE DESCRIPTION

This course will explore how a financial institution copes with the implementation of Basel III in terms of risk measurement. It will in particular focus on the requirements of Pillar 1, i.e. the modelling (identification and measurement) of Market risk, Credit risk and Operational risk.

## **≡** COURSE OBJECTIVES

After completing this course you will be able to:

- · Measure the risk of market volatility,
- Understand and calculate Value at Risk
- Look at portfolio credit risk through measures such as PD, EDF, EAD, LGD,
- Model operational risk

### **E LEARNING OBJECTIVES**

C4B learning goal LG2 - Action

C4B learning

LO4 - Make proposals, take initiatives objective

Lev. 3 - Support and argue new proposals in a context where they were not Outcomes

envisaged

**Details** 

Non-acquired (< 50% of total score)

Developing (50%  $\geqslant$  60% of total score)

Acquired (60% ≥ 70% of total score)

Advanced (70% ≥ 80% of total score)

Expertise (80% ≥ 100% of

total score)

Through final exam and/or

mid term test

C4B learning goal LG3 - Entrepreneurship and Innovation

**C4B** learning

objective

LO9 - Develop innovative solutions and test them

Lev. 3 - Design an experimental protocol. Organize feedback to improve the **Outcomes** 

process/product/service

**Details** 

Non-acquired (< 50% of total

Developing (50% ≥ 60% of total score)

Acquired (60% ≥ 70% of total

Advanced (70% ≥ 80% of

Expertise (80% ≥ 100% of total score)

total score)

Through final exam and/or

mid term test

score)

C4B learning goal LG4 - CSR

**C4B** learning

obiective

LO12 - Take a decision from economic, social and environmental perspectives

score)

Lev. 2 - Quantify and prioritize the impact of one's activities on the ecosystem Outcomes

concerned

Details

Non-acquired (< 50% of total

score)

Developing (50% ≥ 60% of total score)

Acquired (60% ≥ 70% of total score)

Advanced (70% ≥ 80% of total score)

Expertise (80%  $\geqslant$  100% of

total score)

Through final exam and/or

mid term test

- Value at Risk (parametric VaR, historical VaR, Monte Carlo)
- PD, EDF, EAD, LGD
- Internal models (Standard, Fondation, Advanced)

# **■ LEARNING METHODS**

- 30 hours face to face
- Lectures
- In class tutorials and practical exercises

# **E** ASSIGNMENTS

• 45 hours of personal work

## Evaluation

- 30%: continuous assessment
- 70%: final exam

# **BIBLIOGRAPHY**

• Risk Management and Financial Institutions 3rd ed John Hull (Author), Christophe Godlewski (Author), Maxime Merli (Author)

Number of ECTS credits: 4 Course language: English Course leader: MEZERET THIERRY

### **≡** COURSE DESCRIPTION

This course will take you from the assessment of a single credit (through the methodology deployed by rating agencies and the technics of credit scoring) to an approach where the probability of default (and therefore the risk) for an entire credit portfolio is calculated – paving the way to the of credit risk element of the course on "Risk Modelling"

#### **≡** COURSE OBJECTIVES

After completing this course you will be able to:

- Understand the basis behind credit rating
- Compute credit scoring
- Understand the approach behind credit risk modelling using CreditMetrics.

## **■ LEARNING OBJECTIVES**

C4B learning goal

C4B learning LO1 - Make use of critical analysis/critical thinking

objective skills

Outcomes Lev. 1 - Select and check information

Details

Non-acquired (< 50% of total Developing (50%  $\geqslant$  60% of Acquired (60% ≥ 70% of total Advanced (70%  $\geqslant$  80% of Expertise (80%  $\geqslant$  100% of total score) score) total score) total score) score)

Through final exam and/or

mid term test

C4B learning goal LG2 - Action

**C4B** learning

LO4 - Make proposals, take initiatives objective

Lev. 2 - Construct unexpected proposals with high Outcomes

responsiveness

Details

Non-acquired (< 50% of total Acquired (60%  $\geqslant$  70% of total Advanced (70%  $\geqslant$  80% of Expertise (80%  $\geqslant$  100% of Developing (50% ≥ 60% of

total score)

total score)

score)

total score)

Through final exam and/or

mid term test

C4B learning goal LG2 - Action

**C4B** learning objective

LO5 - Evaluate, prevent and manage short, medium and long-term risks

Lev. 2 - Determine the potential risks plus the degree of probability and time frame, work out various risk Outcomes

scenarios

**Details** 

Developing (50% ≥ 60% of Non-acquired (< 50% of total Acquired (60% ≥ 70% of total Advanced (70% ≥ 80% of Expertise (80% ≥ 100% of score) total score) score) total score) total score)

Through final exam and/or

mid term test

- Rating
- Credit scoring
- Altman score
- Rating migration
- Probability of default
- CreditMetrics

# **■ LEARNING METHODS**

- 30 hours face to face
- Lectures
- In class tutorials and practical exercises

# **E** ASSIGNMENTS

• 45 hours of personal work

## **EVALUATION**

- 30%: continuous assessment
- 70%: final exam

## **BIBLIOGRAPHY**

• Risk Management and Financial Institutions 3rd ed John Hull (Author), Christophe Godlewski (Author), Maxime Merli (Author)

### **COMPLIANCE**

Number of ECTS credits: 4 Course language : English Course leader: MEZERET THIERRY

### **≡** COURSE DESCRIPTION

The 2008 Global Financial crisis and the 9/11 attacks both changed the world altogether, and financial regulation in particular. The former by tightening the rules dictating what products financial institutions can or cannot sell to their customers, the latter by enforcing increasingly stringent controls on money laundering and the financing of terrorism.

Besides the legal framework in which these regulations are devised, the course will explore the details of the measures taken and their impact on the functioning of FIs.

### **COURSE OBJECTIVES**

After completing this course you will be able to:

- understand the restriction on the sale of financial products to investors
- understand the notion (and some techniques of) money laundering so as to be able to control it

#### LEARNING OBJECTIVES

C4B learning goal	LG2 - Action
C4D (Cal lillig goal	LGZ - ACTION

C4B learning LO5 - Evaluate, prevent and manage short, medium and long-term

objective risks

**Outcomes** Lev. 1 - Locate and state overall risks characterizing a situation

Details

Non-acquired (< 50% of total	Developing (50% ≥ 60% of	Acquired (60% ≥ 70% of total	Advanced (70% ≥ 80% of	Expertise (80% ≥ 100% of
score)	total score)	score)	total score)	total score)

Through mid-term and final

exams

C4B learning goal LG4 - CSR

C4B learning

LO11 - Identify ethical issues and act on them from an ethical perspective objective

Lev. 3 - Clarify one's own positioning on ethical issues, adapt decisions to these ethical and responsible Outcomes

aspects

**Details** 

Non-acquired (< 50% of total Developing (50%  $\geqslant$  60% of Advanced (70%  $\geqslant$  80% of Expertise (80%  $\geqslant$  100% of Acquired (60% ≥ 70% of total score) total score) score) total score) total score)

Through mid-term and final

exams

C4B learning goal LG4 - CSR

**C4B** learning objective

LO12 - Take a decision from economic, social and environmental perspectives

Lev. 2 - Quantify and prioritize the impact of one's activities on the ecosystem Outcomes

concerned

**Details** 

Developing (50% ≥ 60% of Acquired (60% ≥ 70% of total Advanced (70% ≥ 80% of Expertise (80% ≥ 100% of Non-acquired (< 50% of total score) total score) score) total score) total score)

Through mid-term and final

exams

- MIFID II
- Integrity Policy
- Best Execution Policy
- Conflict of Interest
- Handling of customer complaints
- Code of Conduct for investments
- Fair Dealing
- Customer Profiling
- Market manipulation
- Insider Trading
- Chinese Wall
- Compliance
- protection of Whistleblowers
- AML et KYC (Anti Money Laundering et Know Your Customer)

## **■ LEARNING METHODS**

Test saisi par jean G

## **E ASSIGNMENTS**

• 45 hours of personal work

### **EVALUATION**

- 30%: continuous assessment
- 70%: final exam

# **BIBLIOGRAPHY**

Test saisi par JEAN G

# S4FIN547\_2019

# BANKING REGULATION & ALM

Number of ECTS credits: 4 Course language: English Course leader: MEZERET THIERRY

## **≡** COURSE DESCRIPTION

The Basel capital accords were developed over several years starting in the 1970's, mainly as a response to the Latin American debt crisis and serious disturbances in the international currency and banking markets.

The Basel accords' aim has been to improve bank stability through strong rules and supervision in the form of implementing minimum capital adequacy requirements for banks and other risk measurement and management techniques. They changed the way banks operate in terms of risk management functions and have become increasingly relevant over time, especially since the financial crisis of 2007-2008.

The purpose of this course is to analyse the Basel guidelines implications on banks, whilst also understanding how banks have had to adjust their Asset and Liability Management (ALM) to these ever-changing constraints.

## **≡** COURSE OBJECTIVES

- understand the Basel Agreements requirements on capital and liquidity for banks
- understand the issues of asset-liability management and the main mechanisms of its implementation
- learn how to measure and manage risks on and off-balance sheet with examples and case studies

### **LEARNING OBJECTIVES**

C4B learning goal LG1 - Analysis

**C4B** learning LO1 - Make use of critical analysis/critical thinking

objective skills

Outcomes Lev. 1 - Select and check information

Details

Non-acquired (< 50% of total Developing (50%  $\geqslant$  60% of Acquired (60% ≥ 70% of total Advanced (70% ≥ 80% of Expertise (80%  $\geqslant$  100% of total score) score) total score) total score) score)

Through mid-term and final

exams

C4B learning goal LG2 - Action

C4B learning objective

 ${\tt LO5}$  -  ${\tt Evaluate},$  prevent and manage short, medium and long-term risks

 $Lev.\ 3-Prioritize\ risk\ scenarios,\ decide\ a\ risk\ management\ plan\ and\ ensure\ the\ implementation\ of\ a\ risk\ management/prevention$ Outcomes

plan

Details

Non-acquired (< 50% of total score)

Developing (50%  $\geqslant$  60% of total score)

Acquired (60% ≥ 70% of total score) total score)

Advanced (70% ≥ 80% of Expertise (80%  $\geqslant$  100% of

total score)

Through mid-term and final

exams

C4B learning goal LG3 - Entrepreneurship and Innovation

C4B learning

objective

LO9 - Develop innovative solutions and test them

Lev. 2 - Think "out of the box" to imagine and submit new ideas. Arbitrate between innovative Outcomes

ideas

Details

Non-acquired (< 50% of total

score)

Developing (50% ≥ 60% of

total score) score)

Advanced (70% ≥ 80% of Acquired (60% ≥ 70% of total

total score)

Expertise (80% ≥ 100% of

total score)

Through mid-term and final

exams

C4B learning goal LG4 - CSR

C4B learning

objective

LO10 - Identify and understand stakeholder interests

Outcomes Lev. 3 - Design one's project including its stakeholder interests

**Details** 

Non-acquired (< 50% of total

score)

Developing (50% ≥ 60% of

total score)

Acquired (60%  $\geqslant$  70% of total Advanced (70%  $\geqslant$  80% of

score)

total score)

Expertise (80%  $\geqslant$  100% of

total score)

Through mid-term and final

exams

Audencia Business School 5 Sep 2019 16

- Capital adequacy framework and capital requirement
- Risk Weighted Assets
- 3 pillars approach —> market, credit and operational risk
- Standard, Foundation, advanced approach
- Common equity & Tiers 1 capital
- Counter cyclical buffer
- SIFI
- Net Stable funding ratios and Liquidity Coverage ratio
- Liquidity gap
- Net income gap
- Duration gap
- Internal funding cost
- RAROC

# **■ LEARNING METHODS**

- 30 face to face hours
- Lectures

## **E ASSIGNMENTS**

1. EVALUATION

Mid term Exam: 30%

Final Exam: 70%

## **≡** BIBLIOGRAPHY

Global Bank Regulation: Principles and Policies - Heidi Mandanis Schooner, Michael W. Taylor The handbook of ALM in banking: Andreas Bohn & Marije Elkenbracht Huizing