

# 2025 Student Presentation for AFE1

## ▼ 1. General rules

- Each team picks up a project and presents it.
- They are all provided in English.
- Presentation Format
  - Each team has **30 minutes** for the presentation and **15 minutes** for questions from students.
- There are four topics available.
  - There are 16 students in total in 2025.
  - Each team consists of 2 students, resulting in 8 teams.
  - Each topic is selected by 2 teams.
    - Two teams work on the same topic and are evaluated through comparison.
    - These two teams will be comparatively evaluated by the other students.

## ▼ 2. Requirements

### ▼ PRESENTATION

- Every student must present a portion of the group presentation to be eligible for evaluation.
- During the presentation, each group member must clearly state their individual contribution to the project.

### ▼ DISTRIBUTION

- Each group must distribute the following materials to the instructor and other students **before** the presentation:
  1. **A full report** (A4, created in Word or LaTeX), which must include:
    - Executive summary
    - **Full analysis**
    - References
    - Appendix: Pseudocode or algorithms
    - Description of each group member's contribution
  2. Presentation slides
  3. (Supplementary) Program codes **with explanations** used for the analysis

### ▼ ANALYSIS includes:

- **Description of the product**
  - Basic characteristics of the product
  - Benefits and risks as claimed by the issuer
  - Review of disclaimers
- **Model setup for pricing the product using a financial engineering approach**
  - Identification of the underlying asset
    - Justification for considering it as a risk factor

- Identification of ignored risks
  - Justification for omitting them
- Validity of the stochastic process assumed for the underlying asset
  - The stochastic model should depend on the nature of the underlying
- **Evaluation criteria**
  - Clearly state the pricing method for options
- **Estimation of model parameters from historical data**
  - Data source
  - If unavailable, a similar risk variable may be used as a proxy
- **Pricing algorithm**
  - Estimate the price of the product assuming it is issued today
- **Comparison of computational efficiency: MC vs. QMC**
  - Analyze differences using a naive implementation
  - Apply variance reduction techniques if necessary
- **Product analysis**
  - From the perspectives of risk and return
  - Suitable investor profile
  - Can risk be reduced by combining with other products?
  - Possibility of a replicating strategy
  - Utility-based analysis
  - Behavioral finance perspective
  - Impact of transaction fees

#### ▼ AUDIENCE

- Other students are encouraged to ask questions and/or make some constructive comments during (and after) the presentation, which is also a part of evaluation.

#### ▼ EVALUATION

##### ▼ As a team

- **1. Quality of the full report**
- 2. Quality of understanding the topic (discussion with other students)
- 3. Presentation skill, quality of slides
- 4. A whole structure of presentation
- 5. Time management

##### ▼ As an individual

- The level of understanding, the presentation skills, and questions and comments are also evaluated individually.
- Q&A

##### ▼ As an evaluator

- Every student evaluate other terams

### ▼ 3.Four Topics

#### ▼ (A)(1) Investec Rand Nikkei 225 Autocall

- The base currency shall be Japanese yen (all evaluations should be in JPY terms).
- Analyze how the results differ compared to a simple investment in the Nikkei 225, focusing on the relationship between risk and return.
- Analyze the return characteristics of investing in the product (expected return, variance, distribution, VaR, etc.).

[\(1\)Investec Rand Nikkei 225 Autocall.pdf](#)

#### ▼ (B)(16)Buffered Return Enhanced Notes Linked to the Nikkei 225 Index

- The base currency shall be Japanese yen (all evaluations should be conducted in JPY terms).
- Consider an American-style option and calculate the value of the early exercise premium.
  - Derive the early exercise boundary is critical.

[\(16\)Buffered Return Enhanced Notes Linked to the Nikkei 225 Indexe24253 424b2.pdf](#)

#### ▼ (C)(8)Reverse Convertible.

- The base currency shall be Japanese yen (all evaluations should be in JPY terms).
- Compare the difference in returns between the case of a single-asset investment and that of a four-asset portfolio.
- Analyze the return characteristics of investing in the product (expected return, variance, distribution, VaR, etc.).

[\(8\)Reverse Convertible.pdf](#)

#### ▼ (D)(15)Worst-of European Barrier Autocallable Equity Linked Securities linked to a Basket of Shares

- The base currency is Euro.
- Compare the difference in returns between the case of a single-asset investment and that of a four-asset portfolio.
- Analyze the return characteristics of investing in this product (expected return, variance, distribution, VaR, etc.).

[\(15\)Worst-of European Barrier Autocallable Equity Linked Securities linked to a Basket of Shares.pdf](#)

