



Year	2024/2025	
Course title	Derivatives Market	
Course number	231231 - 2911	3 ECTS points
Lecturer	Lusztyn Marek, PhD	

A. Course objective

During the lectures students are going to learn about the most important derivatives, the mechanisms of their functioning on the market as well as the motivation of market participants.

B. Abstract

In the last several years an unprecedented development of derivatives market has been observed. Globalization of financial markets facilitated by the processes of deregulation and liberalization of national markets has been an enormous opportunity for the development of traditional and new derivatives. They are used for several purposes, but foremost for speculating and hedging on financial markets...

C. Learning outcomes

Knowledge

- By the end of the course students should
1. know what derivatives are and their types are and what they serve for,
 2. how to price and value derivatives,
 3. how to hedge financial exposure using derivatives.
- Knowledge of derivative instruments

Skills

- By the end of the course students should be able to:
1. price the derivatives,
 2. evaluate the chances and threats resulting from the use of derivatives.

Pricing and valuation of derivatives

Social competencies

1. The student should understand the behavior of derivatives market.
2. The student should understand the need for continuous education in this area.

D. Main issues

- 1 Applications of Financial Derivatives. Marking to Market
- 2 Forward. Stock Index Futures. FX Futures. Interest Rate Futures
- 3 Pricing Forward and Futures Contracts. Cash and Carry. Implied Repo Rate. Pricing T-Bond Futures. Basis. Spread. Strip. Stack
- 4 Hedging and Speculation with Forward and Futures
- 5 Call and Put Options. Intrinsic Value. Time Value. Put-call Parity
- 6 Option Pricing. Binomial Model. Black-Scholes Model. Implied Volatility, Greeks
- 7 Option Strategies. Probability Distribution. Performance.
- 8 Risk Management with Options. Hedge Ratio.
- 9 Interest Rate and Currency Swaps. IRS. FRA. Forward Swap. IAR. Off-market Swap. Basis Swap. CMS. Corridor. Diff. MTM
- 10 Cap. Floor. Collar. Swaption.
- 11 Pricing of Swaps. Up-Front Fee. Marked-to-market Value
- 12 Duration Gap and Currency Gap. Structured Finance.
- 13 Credit Derivatives

E. Basic literature

D.M. Chance, R. Brooks, An introduction to derivatives and risk management, Australia: South-Western, Cengage Learning, 2013.

F. Supplementary literature

R.K. Sundaram, S.R. Das, Derivatives: Principles and Practice, McGraw-Hill 2011.

G. Author's most important publications concerning the offered course

Doświadczenie zawodowe lub doświadczenie dydaktyczne: 1. Redakcja naukowa monografii naukowej "Polska bankowość w czasie pandemii Covid-19", rok wydania: 2022, wydawca: Europejski Kongres Finansowy, wydawnictwo Centrum Myśli Strategicznych. 2. "Weryfikacja historyczna modeli wartości zagrożonej - zastosowanie wybranych metod dla rynku polskiego w okresie kryzysu finansowego", Ekonometria, 1, 2013. 3. "Model wartości zagrożonej z uwzględnieniem baniek spekulacyjnych - przykład polskiego rynku akcji", Studia i Prace Kolegium Zarządzania i Finansów SGH, 1, 2013. In the last five years, I was the Deputy Chairman of the Management Board for risk management (Chief Risk Officer) at two systemically important banks (O-SII) and the President of the Management Board of a systemically important bank. Nominations for these roles were each time preceded by an assessment of the Polish Financial Supervision Authority regarding the suitability of a member of the supervised body, including, inter alia, substantive knowledge of the role, in line with the subject of the lectures. During my term in office, these banks have won global awards in the field of, inter alia, the best investment bank in CEE, the best bank in Poland in for the treasury and cash management services and the best digital bank for enterprises in CEE. My teaching activities at the Warsaw School of Economics have so far included conducting classes and diploma seminars in the field of financial risk management, derivative instruments and international banking.

H. Numbers of required prerequisites

not required

I. Course size and mode

	Full-time	Saturday-Sunday	Afternoon
Total:	30	14	-
Lecture	30	14	-

J. Final mark (assessment)

multiple choice examination 100%

K. Foreign language requirements

English

L. Selection criteria**M. Methods applied**

Lecture