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HSBC Quants Academy

## Introduction to the program

February 2024



## Your HSBC coordinator



# DR. PHILIPPE J.S. DE BROUWER

Passionate leader, expert in teamwork, personal growth, data science, AI, and innovation

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Polish and Belgian citizenship <http://www.de-brouwer.com>



## WORK EXPERIENCE

### Senior Vice President

HSBC

March 2016 – Present Krakow, Poland

- created and matured the Model Risk Management team
- also created Credit Research for Asset Management and Regulatory Compliance
- was 5 years head of Diversity, Equity and Inclusion in Krakow
- head of academic partnerships

### Head of Analytics Development

RBS

February 2015 – February 2016 London, UK

- expand the scope of the big data and analytics team
- set up cooperation with the Imperial College of London

### Head of Risk Consulting

KBC Consumer Finance

July 2012 – February 2015 Warsaw, Poland

- create internal consulting for risk management
- hands on credit modelling experience

### Executive Director and Member of the Board

KBC Fund Management

April 2009 – July 2012 Dublin, Ireland

- build up the asset management company to manage 1000+ investment funds as COO,
- Chief Investment Officer (responsible for 120 Bln. EUR), and
- multiple board functions in investment funds

### CEO of KBC TFI

KBC

June 2002 – April 2009 Warsaw, Poland

- merge 4 asset management companies into one
- grow the business as CEO of KBC TFI S.A. (from 2005)
- create new investment funds and get them sold

leader in asset management

## PUBLICATIONS

The Big R-Book: from data science to learning machines and big data  
Wiley & Sons. [homepage of the book](#)

Refereed Publications  
[list at www.de-brouwer.com](http://www.de-brouwer.com)

Maslowian Portfolio Theory: a Coherent Approach to Strategic Asset Allocation  
VUB Press

## PUBLIC SPEAKING

Teamwork Leadership

Career Development

Data Science Artificial Intelligence

R Statistical Analysis innovation

investment management

quantum computers

## EDUCATION

Ph.D. in Applied Economic Sciences

Free University of Brussels

2009 – 2012

Thesis title: "Maslowian Portfolio Theory, a Coherent Approach to Strategic Asset Allocation."

M.Sc. in Applied Economic Sciences

Free University of Brussels

1992 – 1999

M.Sc. in Theoretical Physics

Free University of Brussels

## Plan (changes might occur)

	<u>time (h)</u>	<u>coordinator</u>	<u>lecturer</u>	<u>date</u>
<b>PART I: Introduction to Banking and Risk</b>				
introduction + HSBC + jobs + CVs	3.0	Philippe De Brouwer	Philippe De Brouwer	2024-02-26
Banking / financial services organizations	3.0		Philippe De Brouwer	2024-03-04
Risk Management and risk types	3.0		Philippe De Brouwer	2024-03-11
loss distributions and risk metrics	3.0		Jorge Rosales	2024-03-18
<b>PART II: Market Risk</b>				
Introduction to Market Risk modelling framework: Risk measurement and estimation	3.0	Jorge Rosales	Jadwiga Janik?	2024-03-25
Introduction to Market Risk modelling framework - Historical Simulation method and Model validation	3.0		Jadwiga Janik?	2024-04-08
FRTB	3.0		Jorge Rosales?	2024-04-15
<b>PART III: Credit Risk</b>				
Introduction to Credit Risk & the modelling framework	3.0	Piotr Kobus	Piotr Kobus	2024-04-22
Risk-Based Pricing	3.0		Roman Ivanov	2024-04-29
Regression techniques and scorecards in credit risk modelling	3.0		Sattwik Das, Michal Kusy	2024-05-06
<b>PART IV: Counterparty Credit Risk</b>				
Introduction to CCR + XVA	3.0		Eray Ferah	2024-05-13
Introduction to ST + PVA	3.0		Artur Zajac	2024-05-20
<b>PART V: Other topics</b>				
Machine Learning from the Perspective of an Econometrician	3.0	Philippe De Brouwer	Marcin Jaskowski	2024-05-27
Operational Risk modelling	3.0		Jorge Rosales	2024-06-03
Monte Carlo Simulations			Tadeusz Czernik	
<b>PART V: Concluding remarks &amp; Exam</b>				
Student's presentations & exam + starting in in a private company	3.0	Philippe De Brouwer	volunteers	2024-06-10

## Grading

Subject	Percentage
Presence in classroom	10
Participation in classroom	10
End-work	80

From which:  
40% - presentation  
60% - logic and content

## The End-Work

- ◆ Choice of project
  - ◆ Market Risk
  - ◆ Credit Risk
  - ◆ Counterparty Credit Risk (maybe)
- ◆ Teamwork
  - ◆ 2 to 5 people per project
  - ◆ You choose your team
- ◆ Plan
  - ◆ May 13: communication of the project briefings
  - ◆ May 15: teams and subjects to be submitted to prof. Dzieza
  - ◆ June 10: presentation in HSBC – for each team:
    - ◆ 10 minutes presentation
    - ◆ 10 minutes discussion

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