University of Economics in Katowice

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Contact

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Research Interest

fractal analysis of financial markets, Efficient Market Hypothesis, Fractal Market Hypothesis, financial and real investments efficiency evaluation, risk measurement

Education

Ph.D., Doctoral Studies, University of Economics in Katowice — 2016
- Field: Social sciences
- Discipline: Economics and finance
- Dissertation: *Implications of the fractal market theory for financial investment risk assessment*

M.A., Faculty of Finance and Insurance, University of Economics in Katowice — 2011
- Specialization: Finance and investments
- Thesis: *Methodical issues in verifying the efficient market hypothesis – case of PKO BP SA prices*

Professional Experience

University of Economics in Katowice
- Faculty of Finance, Department of Investment – lecturer and researcher — since 2015
- Manager of the Finance and Accounting for Business study programme — since 2021
- Faculty Advisor in CFA Institute Research Challenge — since 2020

Other
- Authorship of studies commissioned by enterprises (investment projects) — since 2012

International Experience

Erasmus+ Teaching Mobility
- Université de Bretagne Occidentale — 2021
- VŠB - Technical University of Ostrava — 2020
- University of Maribor — 2019
- Mendel University in Brno — 2017
- University of Szeged — 2017, 2019

Projects

Internationalisation, initiatives to establish a new source of researchers and graduates and development of knowledge and technological transfer as instruments of intelligent specialisations at Széchenyi István University, EFOP-3.6.1-16-2016-00017 — 2019

Seminars

Theory and Practice of Financial Markets, Investment Assessment of Commercial and Infrastructural Projects – seminar for researchers and representatives of National Bank of the Republic of Belarus and commercial banks, Palessie State University in Pinsk — 2020

Research Projects

Funding from Polish National Science Centre

Identification, implementation, and evaluation of adjustments in the methodology of estimating the fractal dimension of financial time series based on the variation method (main researcher) — 2020

Funding from Polish Ministry of Science and Higher Education

Fractal portfolio (main researcher)	2021
Efficiency of investing in socially responsible enterprises (main researcher)	2020
Influence of fractal dimension on investment efficiency – comparative analysis (main researcher)	2019
Sustainable investments (research team member)	2018-2020
Fractal dimension vs. classical risk measures (main researcher)	2017
Problems of estimating fractal dimension in investment risk quantification (main researcher)	2016

Honours and Awards

Winner of the *Competition for the Best Ph.D. Dissertation devoted to Financial Markets Defended in 2016* (The Polish Financial Supervision Authority)	2017
Winner of the *Competition for the Best Ph.D. Dissertation Defended in 2016 - Finance* (International Consortium PROGRES 3)	2017
Rector's Individual Award for the Ph.D. dissertation	2017
World Silver Medallion and Country Gold Medallion for Pearson LCCI Certificate Level 3 English for Business - Pass with Distinction, CEF C1	2017
Award for the paper *Agricultural commodities prices fluctuations from a fractal point of view* (conference *Wyzwania współczesnej gospodarki w perspektywie badań młodych naukowców*, Faculty of Economics, Warsaw University of Life Sciences)	2015
Scholarship of the National Bank of Poland Fund for Ph.D. students	2013
M.A. graduation – best student at Faculty of Finance and Insurance	2011

Laureate of the *Grasz o staż* competition 2011

Winner of the *Experience PwC* competition 2010

Award of the Director of National School of Public Administration – *Competition for Case Studies in Economics* 2009

Teaching

Bachelor, master and postgraduate studies (Polish and English programmes): courses devoted to problems connected with risk measurement, portfolio management, financial mathematics, investment efficiency appraisal, investment models and strategies, valuation of enterprises

Student Supervision

Bachelor and master theses (in Polish and in English) since 2017

Organisational Activities

Vice-chair of Organizing Committee for International Scientific Conference *Sustainable Finance and Investment* at University of Economics in Katowice 2018

Membership in Organisations

Polish Economic Society since 2015

Main Publications

M. Foltyn-Zarychta, R. Buła, K. Pera: Discounting for Energy Transition Policies—Estimation of the Social Discount Rate for Poland. "Energies" 2021, 14(3), 741, doi.org/10.3390/en14030741.

R. Buła: Transition matrix and stochastic kernel for repeatability assessment of performance of Polish open pension funds. "Entrepreneurship and Sustainability Issues" 2020, 8(2), 60, doi.org/10.9770/jesi.2020.8.2(60).

R. Buła: Implikacje teorii rynku fraktalnego dla oceny ryzyka inwestycji finansowych [*Implications of the fractal market theory for financial investment risk assessment*]. Urząd Komisji Nadzoru Finansowego, Warszawa 2019, doi.org/10.5281/zenodo.4532619.

R. Buła: Analiza wymiaru fraktalnego spółek notowanych na Giełdzie Papierów Wartościowych w Warszawie - aspekty metodyczne [*Analysis of fractal dimension of shares traded at the Warsaw Stock Exchange – methodical issues*]. „Nauki o Finansach", nr 1/2017, doi.org/10.15611/nof.2017.1.01.

R. Buła, K. Pera: Применение концепции фрактальной размерности для оценки инвестиционного риска на финансовых рынках [*Idea of fractal dimension analysis in investment risk assessment in financial markets*]. [In:] В. В. Иванов, Д. Н. Колесов, Д. А. Львова, А. Н. Лякин (eds.):

Международный экономический симпозиум 2015 – Сборник статей. СПГУ, Санкт-Петербург 2015, doi.org/10.5281/zenodo.4533155.

R. Buła: Efektywność informacyjna a zachowanie cen akcji tworzących indeks WIG20 [*Behavior of WIG20 index components prices from efficient capital markets theorist viewpoint*]. „Studia Ekonomiczne", nr 177/2014, doi.org/10.5281/zenodo.4533270.

K. Pera, R. Buła, D. Mitrenga: Modele inwestycyjne [*Investment models*]. Wydawnictwo C. H. Beck, Warszawa 2014, doi.org/10.5281/zenodo.4533279.

Main Conference Speeches

(In) Efficient capital markets? Efficient Market Hypothesis – The First Pillar of Asset Pricing
Seminar in the Theory and Practice of Financial Markets, Investment Assessment of Commercial and Infrastructural Projects, Palessie State University in Pinsk, 2020

Relationships between fractal dimension and chosen non-fractal measures of risk – correlation analysis
15th International Scientific Conference "European Financial Systems", Masaryk University in Brno, 2018

Analiza wymiaru fraktalnego spółek notowanych na Giełdzie Papierów Wartościowych w Warszawie SA – aspekty metodyczne
Ogólnopolska Konferencja Naukowa „Finanse – Statystyka – Badania Empiryczne", Wroclaw University of Economics and Business, 2016

Fluktuacje cen towarów rolnych w świetle analizy fraktalnej
Wyzwania współczesnej gospodarki w perspektywie badań młodych naukowców, Warsaw University of Life Sciences, 2015

Ryzyko inwestycji a wymiar fraktalny
Inwestowanie w aktywa rzeczowe i finansowe, University of Economics in Katowice, 2013