**Name:** Jagoda Kaszowska-Mojsa
**Date of birth:** 28 Jan 1987
**Marital status:** Married with a child[1]

**Languages:**
- English (advanced, TOEFL iBT)
- Spanish (advanced, DELE Superior C2)
- Polish (native speaker)

## Affiliations

1) **Associate at the Institute for New Economic Thinking, University of Oxford, Oxford, UK**
2) Postdoctoral researcher, Institute of Economics, Polish Academy of Sciences, Warsaw, Poland
3) Lecturer in Economics, Cracow University of Economics, Cracow, Poland
4) Economic Expert, Macroprudential Research Division, Financial Stability Department, National Bank of Poland

## Main research areas

Macroeconomics, quantitative methods, monetary economics, financial stability, household and consumer finance, macro-modelling, agent-based modelling, simulation methods, networks, stress-testing methods, multi-dimensional inequality, financial mathematics, complex systems, dynamical systems, public policy

## Education

**21.01.2019** **PhD in Economics (with distinction)**, Cracow University of Economics, Cracow, Poland
Thesis: "The role of systemic risk in the origin, course and effects of financial crisis in the EU countries" (in English), prepared under the supervision of Prof. Dr. Hab. Andrzej Wojtyna
This thesis will be published by Routledge in 2025 (the publication and open access founded by the "Perfect Science" [Doskonała Nauka II] programme, founded by the Ministry of Education and Science).

**18.12.2018** Public defence of the PhD thesis
**23.12.2017** PhD thesis submitted at Cracow University of Economics, Cracow, Poland (under review during one year)

**04.01.2017-** **Fulbright Junior Advanced Research Award – visiting researcher** at Michigan State University
**30.06.2017** (East Lansing, MI, USA) & courses at New England Complex Systems Institute, (Boston, MA, USA)

**01.10.2012-** **PhD studies** at Cracow University of Economics, Poland
**30.09.2016** The programme covered Public and Corporate Finance, Macroeconomics, Microeconomics, Econometrics, Mathematics. All of the exams that were to be taken within three years were passed in two years, after which two years were devoted to carrying out research (National Science Centre's project).
Please note that the applicant finished her PhD studies and research (NCN's project) within 4 years, but she decided to submit her PhD dissertation after carrying out additional research in the United States (Fulbright scholarship).

PhD thesis was under review from 23.12.2017 to 08.11.2018. The degree was formally awarded in January 2019 (Nomination to the Prime Minister Award in 2020; Award of the President of the Central Statistical Office for the outstanding doctoral dissertation in 2020; Award of Prof. Wacław Wilczyński for doctoral dissertation - 1st prize; Award in the name of F. Skarbek of the Polish Academy of Sciences).

**01.10.2012-** **Master degree in Mathematics**, degree specialisation: Financial Mathematics, Jagiellonian University (Institute of Mathematics and Computer Science), Cracow, Poland.
**30.09.2016**

**15.09.2008-** **"Licenciatura en Economía"**, University of Alcalá, Madrid, Spain – five-year-long programme in Economics completed in three years with very good academic results.
**26.09.2011**

**01.10.2006-** **Bachelor's degree in Economic International Relations** from Cracow University of Economics, Cracow, Poland. (Final grade: very good)
**30.09.2009**

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[1] 09.2020-12.2020 sick leave - high risk pregn., 01-09.2021 maternity break

## Research and professional experience (projects, grants)

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| **12.2023-**<br>**12.2025** | Ministry of Education grant ("Doskonała Nauka II"), MONOG/SP/0110/2023/01 |
| **10.2023-**<br>**12.2023** | Grant of the Swedish Supervisory Agancy (Finansinspektionen) to write an expert report about the welfare effects of macroprudential policies (jointly with Prof. John Muellbauer, Oxford University) |
| **10.2021-**<br>**10.2023** | Marie Skłodowska-Curie Individual Fellowship, H2020-MSCA-IF-2020, grant no. 101023445 "Investigating new policies for financial stability that do not create inequality" (MACROPRU), funded by European Commission (Horizon 2020), **principal investigator** under the supervision of Prof. J. Doyne Farmer, implemented at the University of Oxford (Mathematical Institute/INET Oxford). |

**Since**
**01.10.2019**    **Lecturer, Cracow University of Economics,** Cracow, Poland

**Teaching:** Macroeconomics, Applied Economics/Quantitative Methods.

**Since**
**01.07.2018**    **Researcher, Institute of Economics, Polish Academy of Sciences,** Warsaw, Poland

**Projects:** "Differentiation of innovation strategies of Polish manufacturing firms as an effect of changes in macroeconomic conditions" (**auxiliary investigator** under the supervision of Prof. dr hab. Anna Wziątek-Kubiak, which was funded by the National Science Centre, grant no. 2015/17/B/HS4/02742)

"Analysis of changes in prudential policies and regulation in Japan between 1990-2018" (MNiD grant for young researchers) (**principal investigator**)

**07.01.2017-**   **Researcher at Michigan State University**, East Lansing, MI, USA
**30.06.2017**

**Project:** "Systemic risk measurement and modelling" (**principal investigator** under the supervision of Prof. James M. Chen)

**Since**
**23.12.2015**    **Economic Expert, Macroprudential Research Division, Financial Stability Department, National Bank of Poland**, Warsaw, Poland

01.01-30.06.2017 unpaid leave at the National Bank of Poland to carry out research in the United States as a Fulbright scholar.

**Projects:** "Assessment of the impact of macroprudential policies on the financial system" (**principal investigator** under the supervision of Prof. dr hab. Mateusz Pipień)
"Forecasting loans' quality" (**auxiliary investigator** – data scientist in the project of Prof. SGH dr hab. Dobromił Serwa)
"Identification and synchronisation of business and financial cycles" – (**auxiliary investigator** in the project of Prof. dr hab. Mateusz Pipień and Prof. UŁ dr hab. Piotr Wdowiński)

**07.01.2015-**   **Internship of the Governor of the National Bank of Poland Marek Belka**, Macroprudential
**23.12.2015**    Research Division, Financial Stability Department, Warsaw, Poland
**Project:** "The use of experimental methods in systemic risk assessment" (**principal investigator**, under the supervision of Prof. dr hab. Mateusz Pipień)

**21.02.2014-**   **Researcher, Cracow University of Economics**, Cracow, Poland
**20.02.2016**    **Project:** "Analysis of systemic risk in the EU countries after the crisis emergence. Implications for Poland" (**principal investigator**, under the supervision of Prof. dr hab. Andrzej Wojtyna, in cooperation with Dr Juan L. Santos, funded by National Science Centre, grant no. 2013/09/N/HS4/03740)

**2013**        **15.07.2013- Internship (as a PhD student) at the Polish Embassy** in Madrid, Spain
         **15.09.2013**

**02.07.2012-**   **Internship in Research and Public Policy Department, Santander Bank**, Madrid, Spain
**16.09.2012**    **Project:** "Aggregate credit and non-performing loans under different macro scenarios" (student project under supervision of Dr G. de Cadenas Santiago)

**01.07.2010-**   **Internship in CB Richard Ellis**, Asset Management Department, Madrid, Spain
**30.09.2010**

## Awards and funding

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| **05.2023** | Award of the Institute of Economics, Polish Academy of Sciences |
| **11.2022** | Award in the name of F. Skarbek, Polish Academy of Sciences |
| **06.2022** | Excellence in Artificial Intelligence Award, Perspektywy Women in Tech Summit |
| **04.2022** | Award for the best doctoral dissertation in name of Prof. W. Wilczyński |

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| **02.2021** | MSCA EF Individual Fellowship, European Commission, Horizon 2020 (grant no. 101023445), University of Oxford. |
| **30.12.2020** | The NAWA Bekker scholarship to carry out project at the University of Oxford. |
| **30.03.2020** | Nomination for the Prime Minister Award for the best doctoral dissertation in Poland |
| **30.09.2020** | The Central Statistical Office's Award for the best doctoral dissertation in statistics |
| **21.03.2019-24.03.2019** | Western Economic Association International funding to attend an Early Career Researcher Workshop in Tokyo |
| **21.01.2019** | PhD with distinction, Cracow University of Economics |
| **16.03.2016** | Fulbright Junior Advanced Research Award (for PhD students) (2016/17) |
| **07.01.2015-23.12.2015** | National Bank of Poland funding (Internship of the Governor of the Polish Central Bank) |
| **21.02.2014-20.02.2016** | Funding from the National Science Centre (grant no. 2013/09/N/HS4/03740) |
| **01.10.2012-30.09.2016** | Scholarship for outstanding PhD students, Cracow University of Economics |
| **23.02.2012** | Award for the 2nd best academic result at the Dept. of Economics, University of Alcalá, Madrid, Spain (15.09.2008-26.09.2011) |
| **15.09.2011-31.08.2012** | Scholarship of the Centre for Financial and Monetary Studies |
| **15.09.2008-30.10.2009** | EMBS consortium scholarship for studies in Spain |
| **01.10.2007-30.06.2009** | Scholarship for outstanding students, Cracow University of Economics |
| **4.05.2006** | European Commission award for the Socrates Comenius project "Democrisis" (award for a consortium in which the applicant participated with other colleagues from her high school in Katowice) |

## Selected publications

**The high quality of the researcher's publications is demonstrated by**:

● metrics that exist to measure the quality of publications such as journal impact (all papers after the completion of the doctoral dissertation in 2019 have been published or accepted for publication in high impact journals, i.e. with impact factor > 2.49); all journals indexed in Scopus or Web of Science, book accepted by well-known publishers (Routledge - Taylor & Francis Group),

● high altmetrics which are used to measure impact, commonly tracking media and social media mentions (very high number of new reads on ResearchGate, LinkedIn, journal webpages; high number of searches in Google)

● citations in specialized Polish (including central banking journal) and international journals and books (to mention a few: in the International Monetary Fund publications such as Anderson, R., Danielsson, J., Baba Ch., Das, U., Kang. H., Segoviano, M. (2018). Macroprudential Stress Tests and Policies: Searching for Robust and Implementable Frameworks; Alla, Z., Espinoza R., Li Q, Segoviano, M. (2018), Macroprudential Stress Tests: A Reduced-Form Approach to Quantifying Systemic Risk Losses; or in Sotnik, G. (2018). The SOSIEL Platform: Knowledge Based, Cognitive and multi-agent, Biologically Inspired Cognitive Architectures, 26, Elsevier; and the Bank of International Settlements (BIS)'s Handbook on Macroprudential Policies, *forthcoming.*).

● **the research was promoted by the University of Oxford, for examples see:**

Assessing the COVID-19 prevention and control schemes

Jagoda Kaszowska-Mojsa - INET Oxford Associate

Win at the Women in Tech Summit

Excellence in Artificial Intelligence Award

● **the research was promoted in media, for examples see:**

Book after the Women in AI Summit

Science in Poland Nauka w Polsce]

and many more!

**Published:**

● Wiese. S., Kaszowska-Mojsa, J., Dyer, J., Moran, J., Pangallo, M., Lafond, F., Muellbauer, J., Calinescu, A., Farmer, J.D. (2024), Forecasting Macroeconomic Dynamics using a Calibrated Data-Driven Agent-based Model, INET Working Paper No. 2024-06.

● Muellbauer, J., Kaszowska-Mojsa, J. (2023). The effects of borrower-based measures. Expert Report for Finansinspektionen.

● Kaszowska-Mojsa, J., Włodarczyk, P., Szymańska, A. (2022), Immunity in the ABM-DSGE Framework for Preventing and Controlling Epidemics—Validation of Results, Entropy, 24(1), IF = 2.738, Scopus Q1

● Kaszowska-Mojsa, J. (2021), Innovation strategies of Polish manufacturing companies through the business cycle, Ekonomista, 2(21).

● Kaszowska-Mojsa, J. (2020), Włodarczyk, P., To Freeze or Not to Freeze. Epidemic Prevention and Control

in the DSGE Model Using an Agent-Based Epidemic Component, Entropy, 22(12), IF = 2.738. Scopus Q1
- Kaszowska-Mojsa, J., Pipień, M. (2020). Macroprudential Policy in A Heterogeneous Environment - An Application of Agent-Based Approach in Systemic Risk Modelling, Entropy, 22(2), IF = 2.738.
- Kaszowska-Mojsa, J. (2020), Innovation Strategies of Manufacturing Companies during Expansions and Slowdowns, Entrepreneurial Business and Economics Review, 8(4), IF = 3.8, Scopus Q1.
- Kaszowska, J., Santos, J.L., Pablo-Martí, F. (May 2019). Assessment of policies using the 'core' and 'periphery' macroeconomic models in the post-crisis environment, Argumenta Oeconomica 1(42), IF = 0.3.
- Pipień, M., Wdowiński, P., Kaszowska, J. (2018). Identyfikacja cech cyklu finansowego i analiza jego synchronizacji z cyklem koniunkturalnym [Identification of financial cycle and its synchronisation with the business cycle], Materiały i Studia [National Bank of Poland Working Paper], no. 332.
- Santos, J.L., Kaszowska, J. (2018). Systemic risk: cause or effect of the financial crisis in the Euro Area? The Case of Spanish Banking System Bailouts, Olsztyn Economic Journal 13 (4/2018).
- Kaszowska, J., Santos, J.L. (2017). Rola percepcji ryzyka i niepewności w ocenie ryzyka systemowego. Podejście symulacyjne ABM. [The role of risk perception and uncertainty in systemic risk assessment], Ekonomista, no. 4.
- Pablo-Martí, F., Santos, J.L., Kaszowska, J. (2015), An Agent-Based model for population dynamics for the European regions, Emergence: Complexity and Organisation Journal, 17(2).
- Santos, J.L., Mancha, T., Kaszowska, J. (2014), Microsimulación de dinámicas urbanas y estrategias de localización empresarial. [Microsimulation of urban dynamics and strategies of firms' location], UAH.
- Kaszowska, J., Santos, J.L. (2014). The role of Risk Perception in the Systemic Risk Generation and Amplification: Agent-Based Approach, Spec. Issue ACRN Journal of Finance and Risk Perspectives, 3(4).
- Santos, J.L., Kaszowska, J., Mancha, T. (2017). An Agent-Based Model to Forecast the Inflation Rate in the Eurozone, [in:] Ianole, R., Applied Behavioral Economics Research and Trends.

**Reviewer to:** Journal of Economic Dynamics and Control (JEDC), Journal of Economic Behavior & Organization (JEBO), Computational Statistics (COST), Entrepreneurial Business and Economics Review (EBER).

## Additional professional activities

**Presentations:**

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| **13.02.24** | The effects of borrower-based measures, Finansinspektionen (jointly with J. Muellbauer). |
| **02.11.23** | Cloud-Powered Insights: Unveiling the Effects of Macroprudential Policy in a Small Open Economy, University of Oxford |
| **30.07-02.08.23** | Complex System Approaches to 21st Century Challenges: Inequality, Climate Change, and New Technologies, Santa Fe Institute, US (co-organizer with Oxford University, World Bank, CENTAI) |
| **06.2023** | Presentation of the MACROPRU model, Macro-modelling group, University of Oxford |
| **25.09.2022** | Data-Driven Economic Agent-Based Models (DDEABM), Pisa, Italy (by invitation) |
| **19-20.09.2022** | 4th IMA Conference on The Mathematical Challenges of Big Data, University of Oxford |
| **23-27.08.2022** | 7th Lindau Meeting of the Laureates of the Sveriges Riksbank Prize in Economic Sciences, August 2022 (I was nominated by the European Commission; by invitation) |
| **07-12.08.2022** | Santa Fe & World Bank Workshop: How Can Complexity Economics Give More Insight Into Political Economy, Santa Fe Institute, USA, August 2022 (by invitation) |
| **6-7.06.2022** | Perspektywy Women in Tech Summit, Warsaw, June 2022 (I was awarded the Excellence in AI Award) |
| **19.01.2022** | University of Oxford ("Agent-based macro modelling") |
| **15-18.11.2021** | 47th MACROMODELS 2021, in person conference, Wieliczka 2021 ("Immunity in the ABM-DSGE Framework for Preventing and Controlling Epidemics—Validation of Results" & "Investigating new policies for financial stability that do not create inequality") |
| **19-21.12.2020** | CFE-CMStatistics 2020, virtual conference, London 2020 ("To Freeze or Not to Freeze. Epidemic Prevention and Control in the DSGE Model Using an Agent-Based Epidemic Component") |
| **25-26.11.2019** | National Bank of Poland Workshop on Forecasting ("Loan quality forecasting" - "by invitation") |
| **27-28.06.2019** | 16th International Conference: Developments in Economic Theory and Policy, Bilbao, Spain ("Differentiation of innovation activities of the Polish manufacturing companies during economic expansion and slowdown") |
| **25-26.06.2019** | 2nd Workshop on Macroeconomic Research 2019, Cracow, Poland ("Assessment of welfare effects of macroprudential policies" – "by invitation") |
| **22.03.2019** | 15th International Conference, Western Economic Association International, Tokyo, Japan. ("The Use of Macroprudential Tools and Changes in Financial Regulation in Japan since 1990s.") |

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| **21.03.2019** | Early Career Researcher Workshop, Keio University, Tokyo, Japan. ("Macroprudential policies in Heterogeneous Environment – An Agent-Based Approach to Systemic Risk Modelling") – the presentation was supervised by Dr Jinill Kim |
| **28.06.2018** | Symposium of Interdisciplinary Physics, Economics and Social Sciences, Faculty of Physics, University of Warsaw, Warsaw, Poland ("Calibration of macroprudential tools" – "by invitation") |
| **08.06.2018** | The Society for the Study of Emerging Markets EuroConference, Łódź, Poland ("Macroprudential policies in Heterogeneous Environment") |
| **25-29.06.2017** | 92nd Annual Conference, Western Economic Association International, San Diego, CA, USA. ("Macroprudential Policies in DSGE and ABM Approaches") |
| **12.04.2017** | Michigan State University Seminar, East Lansing, MI, USA ("Systemic Risk in Space and Time" – "by invitation" |
| **23-25.03.2017** | 83rd International Atlantic Economic Conference, Berlin, Germany. ("Application of dynamic Bayesian networks to risk assessment on the OTC derivatives market in the European Union"; "Systemic risk and taxation"). |
| **23.06.2016** | Symposium of Interdisciplinary Physics, Economics and Social Sciences, Warsaw University of Technology, Warsaw, Poland ("Systemic risk assessment using ABM" – "by invitation") |
| **16-17.10.2015** | Conference on Complex Scenarios, Amsterdam, Netherlands. ("Agent-based modelling foundation and validation") |
| **22-24.09.2014** | FRAP 14: Finance, Risk and Accounting Perspectives, University of Oxford, UK ("The role of risk perception in the systemic risk generation and amplification") |
| **19.09.2014** | Summer School on Complex Networks, Lucca, Italy (Flash-talk: "The role of perception of risk in the amplification mechanisms: ABM approach"). |
| **06-04.08.2014** | Business Research Conference, Imperial College, London, UK ("The role of risk perception in the systemic risk generation") |

**Relevant courses:**

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| **19-23.11.2018** | "Macroprudential tools", Bank of England and Joint Vienna Institute-IMF, Vienna, Austria. |
| **11.06.2017-**<br>**16.06.2017** | "Computer Programming and Complex Systems", "Building Models and Mapping Networks", New England Complex Systems Institute, Boston, MA, USA. At the end, we presented the results of the project: "Altering agents' perception and behaviour" (Kaszowska, J., Tregonning, G., Jaimes, R.) |
| **07-18.12.2015** | "Course on External Vulnerabilities – Early Warning Exercise", JVI-IMF, Vienna, Austria |
| **12-15.02.2014** | "Systemic risk and Prudential Policies", Executive Course for Central Bankers, GSE, Barcelona. |

**Participation in conferences and seminars without a presentation:**

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| **10.2021-06.2023** | 70 seminars at INET & Mathematical Institute, University of Oxford (mostly Complexity Group meetings & INET seminars) |
| **13.02.2017** | Workshop on Complexity and Law (University of Michigan, Center for the Study of Complex Systems) (Lansing, MI, USA); |
| **07-09.02.2017** | Academic Research Colloquium for Financial Planning (Washington DC, US); |
| **04.06.2015** | INET Oxford Martin School – Seminar on "Bayesian inference in ergodic agent-based models" (University of Oxford, UK); |
| **22-23.04.2015** | "Risk and Stochastic Conference" at LSE and Royal Statistical Society (London, UK); |
| **2015-2018** | More than 30 seminars at the National Bank of Poland (lecturers inter alia Gadanecz (BIS); Nikolov (EBC); Moessner (BIS); Prasad (Cornell University); Dworczak (Stanford); Cincotti (University of Genoa); Hałaj (EBC), Russo (Università Politecnica delle Marche)). |

**Teaching and mentoring activities:**

My experience at Oxford demonstrates how incredibly important the role of mentors is in setting feasible goals. Hence, my current involvement in **teaching** (340 hours per year), **mentoring**: TopMinds program, in collaboration with the Fulbright Committee & Innovators500; collaborating with the Perspektywy Foundation; and holding **sessions** for high-school student (FLEX, ZDOLNI). I am **supervising** the theses of 6 students and I collaborated with S.Wiese on his PhD thesis and our join research project at Oxford University (see (6)). I have **organised sessions at conferences** (WEAI and IAES, SFI).

**Organisation of conferences, promotion of scientific research:**

In 2023, I was a co-organiser of the conference at Santa Fe Institute with the University of Oxford, World Bank and CENTAI with over 70 participants (inter alia from Stanford University, MIT, Cambridge University) and

international founders and tech companies representatives (Amazon).

In 2017 I co-organised a session with Professor James M. Chen at the 83rd International Atlantic Economic Conference in Berlin, Germany ("The Cannons of Taxations").

I also attended a Fulbright Enrichment Seminar in Atlanta, GA, USA, where she participated in community service (in a public primary school) and meetings with scholars from around the world.

In 2018 I attended meetings with BA and MA/MSc students (Science Club on Macroeconomics) after being invited by Dr Jakub Janus.

I was invited to participate in a reception of K. Hassett, Chairman of Economic Advisors in US, in Warsaw, Poland by the Ambassador of the United States in Poland, G. Mosbacher in May 2019.

**Additional activities:**

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| **Since 2022** | Member of Scientific Committee, Polish Academy of Sciences ("Rada Naukowa INE PAN") |
| **Since 27.08.2018** | Member of the Polish-US Alumni Association (as a former Fulbright scholar) |
| **11.05.2015-31.12.2016** | National Bank of Poland representative to the European Systemic Risk Board Joint ASC ATC Expert Group on Interconnectedness (JEGI), EBC, Frankfurt, Germany (inc. assessing projects on the EMIR derivatives' market) |
| **2015-16** | Member of the International Banking Research Network (led by C. Buch (Deutsche Bundesbank) and L. Goldberg (Federal Reserve Bank of New York)) after the meeting in Rome (25-26.06.2015) |
| **2016-2017** | Evaluated the research projects of the Brussel's think tank "Bruegel" (as a National Bank of Poland employee) |
| **2014-2015** | Member of the Complex System Society |

**Other relevant info**

Dr Kaszowska-Mojsa has undergone many trainings in didactic and preparation of classes (including modern technologies in teaching) at the University of Oxford. She also worked with undergraduate and PhD students during their MSCA post doc fellowship at the University of Oxford.

Dr Kaszowska-Mojsa cooperates intensively with the sector of new technologies and the banking sector (e.g. ING Tech, Amazon). She even received an award for research on artificial intelligence (Perspektywy Women in Tech - Top 10 Women in AI). Her recent collaboration on the global ABM model was patented.

An example of collaboration with Amazon High Performance Computing (HPC):

https://aws.amazon.com/blogs/hpc/rigor-and-flexibility-the-benefits-of-agent-based-computational-economics/

https://aws.amazon.com/blogs/hpc/how-agent-based-models-powered-by-hpc-are-enabling-large-scale-economic-simulations/

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