

DESCRIPTION
of scientific achievements and professional accomplishments

dr Joanna Rutecka-Góra

(prev. Joanna Rutecka, Joanna Owczarek)

1. Education and employment

Education:

- 2010 – Doctoral degree in Economics from the Collegium of Socio-Economics, Warsaw School of Economics (SGH). Doctoral dissertation title: “**The Scope of Income Redistribution in An Insurance Old-Age Pension System**” [orig.: *Zakres redystrybucji dochodowej w ubezpieczeniowym systemie emerytalnym*]; supervisor: Prof. dr hab. Tadeusz Szumlicz, reviewers: Prof. dr hab. Andrzej Sławiński, Prof. dr hab. Maciej Żukowski.

The dissertation was awarded **first place in the category of doctoral dissertations in in the tenth competition for the best work in the field of social and economic insurance** organized by the Polish Insurance Ombudsman, the Insurance Education Foundation, and *Gazeta Ubezpieczeniowa* [The Insurance Gazette] (2011).

Based on the doctoral dissertation, in 2012 the monograph *The Scope of Income Redistribution in An Insurance Old-Age Pension System* [orig.: *Zakres redystrybucji dochodowej w ubezpieczeniowym systemie emerytalnym*] was published by Oficyna Wydawnicza SGH with funding from the Rector of SGH. The current number of citations for this publication is 17 (according to Google Scholar, as of 24 March 2019).

- 2003 – Postgraduate Studies in Pedagogy, Warsaw School of Economics (SGH).
- 2002 – Master’s degree with distinction (grade of excellent). Major concentration: Finance and Banking, Warsaw School of Economics (SGH). Graduated from the “Insurance” study track. Master’s Thesis title: *Concepts of Pension Benefits Payment in the Second Pillar of the Pension System in Poland* [orig.: *Koncepcje wypłaty świadczeń emerytalnych w filarze drugim systemu zabezpieczenia emerytalnego w Polsce*], supervisor: Prof. dr hab. Tadeusz Szumlicz, reviewer: Prof. dr hab. Adam Kurzynowski.

The thesis was awarded **second place in the competition for the best master’s thesis in the field of insurance organized by the organized by the Polish Insurance Ombudsman, the Insurance Education Foundation, and *Gazeta Ubezpieczeniowa*.**

Between 2010-2017, I also participated in a number of internal and external training courses to improve my qualifications in the area of preparing research grant applications, leading a research team, effectiveness in transferring research results to various target groups as well as

preparing articles in English. The full information is enclosed in the list of scientific, teaching and organizational achievements.

Employment:

- 2013 - present – Assistant Professor (*adiunkt*), Demography Unit, Institute of Statistics and Demography, Collegium of Economic Analysis, Warsaw School of Economics (SGH),
- 2010-2013 – Assistant Professor (*adiunkt*), Department of Social Insurance, Collegium of Socio-Economics, Warsaw School of Economics (SGH),
- 2002-2010 – Research and Teaching Assistant (*asystent*), Department of Social Insurance, Collegium of Socio-Economics, Warsaw School of Economics (SGH).

Short description of educational and professional development

From 1997-2002, I studied Finance and Banking at the Warsaw School of Economics (SGH). During my master's studies, I already began to work with the Department of Social Insurance at the Warsaw School of Economics, following an individualized course of studies under the direction of Prof. Tadeusz Szumlicz and concentrating on gaining the broadest possible knowledge in the field of insurance and pension funds, in particular in the area of the pension system operating in Poland. As an active member and later president of the Student Scientific Circle for Insurance and Pension Funds, I participated in many student projects (meetings with experts, workshops, away seminars) co-organized by the Department. These activities led to an offer of the position of assistant trainee in the Department of Social Insurance while still a student. At that time, I participated in the preparation and conduct of lectures and exams. I actively participated in meetings called the *School of Social Insurance*, during which I deepened my knowledge in the field of insurance and social policy. I also participated in scientific research in the Department as a co-author of the script *Lectures in Insurance Knowledge* that was prepared at that time. In the fourth year of my studies, I was among the best students and was awarded the “Top Ten” award for outstanding academic achievements.

In February, 2002, I defended my master's thesis entitled *Concepts of Pension Benefits Payment in the Second Pillar of the Pension System in Poland*, written under the supervision of Prof. dr. hab. Tadeusz Szumlicz, and completed my studies in Finance and Banking with a final grade of excellent (degree with distinction, grade point average 5.0/5.5). I also completed the Insurance track of studies. My master's thesis took second place in the competition for the best master's thesis in the field of insurance organized by the Polish Insurance Ombudsman, the Insurance Education Foundation, and *Gazeta Ubezpieczeniowa*.

Starting in April 2002, I worked as a teaching and research assistant in the Department of Social Insurance, preparing and conducting classes in the area of insurance and pension funds, participating in statutory research and conducting my own research in the area of the functioning of the social insurance system. I also improved my teaching skills by completing a two-semester Postgraduate course in Pedagogy at the Warsaw School of Economics in 2002-2003. In addition, I ran the office of the “Insurance” study track and was a member of the Commission for Interim Evaluation in the Collegium of Socio-Economics of the Warsaw School of Economics (2007-2008). From 2007-2011, I was the secretary of the Postgraduate Insurance Studies programme in the Collegium of Socio-Economics of the Warsaw School of Economics (XII-XV edition of the programme) and the secretary of the programme in Postgraduate Studies in Personal Financial Management (2006).

At the same time, from May 2002 to May 2008, I worked with the Insurance Ombudsman as an expert on social security. I advised on representing and protecting the interests of members of open pension funds (*otwarte funduszy emerytalne* - OFE) and participants in employee (occupational) pension programmes (*pracownicze programy emerytalne* - PPE), provided opinions on draft legislation in the area of the functioning of pension funds and PPEs, and took part in the work of parliamentary committees. I also analysed and gave my opinion on social security documentation for meetings of the Insurance and Pension Fund Supervisory Commission (KNUiFE). On behalf of the Insurance Ombudsman, I took part in symposia, meetings and conferences. I also was involved in the creation of a web portal and in advising OFE account holders. At the request of the Insurance Ombudsman, I prepared economic and legal analyses of several dozen unit-linked life insurance contracts, which on the one hand made it possible to compare the market offer, and on the other - identified irregularities (abusive clauses) or solutions that were unfavourable to insured. In 2004, I was appointed an arbitrator of the Arbitration Court in the Office of the Insurance Ombudsman.

In the first years of my academic work, I actively participated in insurance and pension education, cooperating with the Insurance Ombudsman and other financial market institutions. In 2004, I wrote the scripts of quizzes for the NBP Economic Education Portal, and in 2005 I cooperated with the Insurance and Pension Fund Supervisory Commission (KNUiFE) in the area of substantive verification of materials on insurance products prepared by students of the Warsaw School of Economics for the online Service for the Insured. In the following year I actively participated in the Insurance Academy for Journalists organized by the ING Group.

In 2008-2009 I worked with the Polish Chamber of Pension Funds (IGTE) as a coordinator of the project *Report on the Operating Conditions of Pension Funds in Central and Eastern Europe* and coordinator of the international conference *Investments and Payouts in Funded Pension Systems* organized by IGTE and the International Federation of Pension Fund Administrators (FIAP) in Warsaw in May 2009. At that time, I also worked with FIAP in the area of pension systems analysis and statistics on pension funds.

On September 23, 2010 I defended my doctoral thesis entitled *The Scope of Income Redistribution in An Insurance Old-Age Pension System*, and on 30 September 2010 I was awarded the degree of Doctor of Economics by a resolution of the Council of the Collegium of Socio-Economics of the Warsaw School of Economics. My doctoral dissertation won first place in the doctoral thesis category in the tenth competition for the best works in the field of economic and social insurance organized by the Polish Office of the Insurance Ombudsman, the Insurance Education Foundation and *Gazeta Ubezpieczeniowa* (2011). It was also published in the form of a monograph by Oficyna Wydawnicza SGH.

From 1 December 2010 to 31 October 2013, I was employed as an assistant professor in the Department of Social Insurance of the Collegium of Socio-Economics at the Warsaw School of Economics. I conducted classes in the areas of insurance, social security, pension funds and investment portfolios. At the same time, I conducted my own research in the area of the functioning of social insurance systems, the Polish basic pension system and supplementary pension provision, insurance awareness and education, as well as consumer protection on the insurance market. From October 2010 to May 2011, I was a member of the Recruitment Committee for second-cycle studies, and then served as Vice-Chairperson (May 2011-October 2011) and Chairperson (October 2011-March 2013) of this Committee.

At the same time, from November 2010 to February 2012, I worked with the Polish Chamber of Pension Funds (IGTE) in the area of the informational and educational activities of the Chamber concerning the functioning of the pension system in Poland (preparation of press

releases, materials for the web portal and work on the information campaign regarding the pension system in Poland).

Since 2012, I have been working with the Insurance Ombudsman as an external expert in social security and life insurance. I was commissioned by the Insurance Ombudsman to prepare several important views in court cases concerning individual and group unit-linked life insurance (UFK), including structured insurance product, and additional group insurance against permanent health impairment caused by heart attack or intracerebral haemorrhage. The development of these documents allowed me to use my previous knowledge and experience in a new, complementary area of professional activity.

Since November 2013 I have been employed as an assistant professor in the Demography Unit at the Institute of Statistics and Demography, Collegium of Economic Analysis at the Warsaw School of Economics, where I conduct classes in insurance, social security and household insurance and conduct research projects in the area of basic and supplementary pension provision, projects that are funded by the Ministry of Science and Higher Education (statutory research) and the National Science Centre.

Since June 2016, I have also been working with the Office of the Financial Ombudsman and the Insurance Education Foundation as the editor-in-chief of the academic journal *Rozprawy Ubezpieczeniowe. Konsument na rynku usług finansowych (Journal of Insurance Financial Markets and Consumer Protection*, ranked on List B of the Ministry of Science and Higher Education) (from September 2012 to May 2016 I was Deputy Editor-in-Chief and thematic editor of the journal “Rozprawy Ubezpieczeniowe”). I extended the profile of the journal, made significant changes to the scientific requirements of the published articles, editorial process and layout of the quarterly. I appointed new Scientific Board that consists of researchers from renowned scientific institutions and got external funding (the Ministry of Science and Higher Education) for the publication of English-language issues of the journal in 2017-2018.

2. Synthetic description of scientific interests and research work conducted before and after a doctoral degree

One of the main areas of my scientific interest is the functioning of social security systems, in particular pension systems and markets for individual financial products, with particular emphasis on the situation and protection of the interests of the weaker party, i.e. individual consumers of financial services.

2002–2010 (prior to earning the doctoral degree)

In the first period of my scientific career, I focused on the issues of awareness and prudence regarding insurance, institutionalisation of the insurance market, the functioning of life insurance and reforms to pension systems and the functioning of funded pension systems. As a teaching and research assistant in the Department of Social Insurance at the Collegium of Socio-Economics of the Warsaw School of Economics (SGH) in 2002-2007 I took part as a researcher in the Department’s cycle of statutory research entitled “Polish citizens’ awareness and prudence regarding insurance”, led by Prof. dr hab. Tadeusz Szumlicz. I also conducted my own scientific analyses, using, among other things, the knowledge and experience concerning the functioning of the insurance and pension fund market I earned through cooperation with the Insurance Ombudsman.

The effect of this research was 30 publications, among which I want to mention a few presented below (the full list is enclosed in the Analysis prepared by the SGH Library).

1. *Ustawa o organizacji i funkcjonowaniu funduszy emerytalnych. Komentarz do projektu nowelizacji ustawy*, „Fundusze Emerytalne” nr 10, 2002.
2. *Rozwój ubezpieczeń życiowych w świetle reformowania systemu emerytalnego*, in: *Procesy integracyjne w Europie a ubezpieczenia w Polsce*, ed. K. Ortyński, Instytut Ubezpieczeń i Prewencji Politechniki Radomskiej, Radom 2003, p. 144-153.
3. *System emerytalny w Grecji*, in: *Systemy emerytalne w krajach Unii Europejskiej* (ed. T. Szumlicz, M. Żukowski), Twigger, Warszawa 2004, p. 133-148.
4. *Praktyczny poradnik ubezpieczeniowy*, Oficyna Wydawnicza Branta, Warszawa 2005 (co-autors: A. Daszewski, A. Dąbrowska, M. Kawiński i T. Wróblewski).
5. *Instytucja reprezentacji interesów słabszej strony w ubezpieczeniach społecznych*, in: *Społeczne aspekty ubezpieczenia*, ed. T. Szumlicz, Oficyna Wydawnicza SGH, Warszawa 2005, p. 85-99 (co-author: S. Rogowski).
6. *Problemy rynku ubezpieczeń w świetle skarg konsumentów skierowanych do Rzecznika Ubezpieczonych w latach 1995-2005*, „Forum dyskusyjne ubezpieczeń i funduszy emerytalnych” Nr 6/2006 (co-author: M. Kudlak).
7. *Rola i miejsce urzędu Rzecznika Ubezpieczonych w systemie ochrony uczestników systemu emerytalnego*, "e-Finanse", numer 3/2007, www.e-finanse.com
8. *Ochrona konsumenta na rynku ubezpieczeń i funduszy emerytalnych*, in: *Ubezpieczenia osobowe*, ed. Ewa Wierzbicka, Oficyna Wolters Kluwer Polska, Warszawa 2008, s. 183-206.
9. *Funkcjonowanie kapitałowej części obowiązkowego systemu emerytalnego w świetle doświadczeń Rzecznika Ubezpieczonych*, in: *Przyszłość rynku otwartych funduszy emerytalnych – wnioski wynikające z doświadczeń i oczekiwane kierunki rozwoju. Analizy, diagnozy, inicjatywy*, ed. J. Hozer, PTE Polsat S.A., Instytut Analiz, Diagnoz i Prognoz Gospodarczych w Szczecinie, Warszawa-Szczecin 2008, p. 115-123.

My research interests then evolved towards the functioning of the market for insurance products that complement the basic pension system (unit-linked life insurance) and the possibility of applying pension insurance methods to pension insurance, and in the period 2006-2010 they focused on income redistribution in pension systems. In 2007, I formally opened my doctoral proceedings in the Collegium of Socio-Economics of the Warsaw School of Economics. Between May 2008 and October 2009, I also was awarded a doctoral scholarship from the Rector of the Warsaw School of Economics.

Since 2007 I have been conducting my own research financed by the Ministry of Science and Higher Education (funding for statutory research of Collegium of Socio-Economics), managing the following projects: „The role and scope of income redistribution in old-age pension systems” (2007, research No. 02/E/0024/07), „Income redistribution in Polish old-age pension system” (2008, No. 02/E/0027/08), „The impact of redistribution on benefits from Polish mandatory old-age pension system” (2009, No. 02/E/0014/09).

The effect of this research was my doctoral dissertation as well as the following scientific publications:

1. *Problem redystrybucji dochodowej w systemie zabezpieczenia emerytalnego*, in: *Polityka społeczna w życiu społeczno-gospodarczym kraju*, ed. A. Rączaszek i W. Koczur, Akademia Ekonomiczna w Katowicach, Katowice 2007, p. 419-427.
2. *Przyczyny i rodzaje redystrybucji w systemach emerytalnych*, „Studia i Prace Kolegium Ekonomiczno-Społecznego”, nr 15, 2008.
3. *Redystrybucyjność bazowego systemu emerytalnego w Polsce*, „Rozprawy Ubezpieczeniowe”, nr 7, 2009.
4. *Redystrybucja dochodów w polskim systemie emerytalnym*, „Studia i Prace Kolegium Ekonomiczno-Społecznego”, nr 18, 2009.

5. *Wpływ redystrybucji na wysokość świadczeń z polskiego bazowego systemu emerytalnego o zdefiniowanej składce*, „Kwartalnik Kolegium Ekonomiczno-Społecznego. Studia i Prace”, nr 1, 2010.

The results of this research were presented at national and international scientific conferences.

I also organise, as a member of the Organising Committee, the following scientific conferences:
- “Społeczne aspekty ubezpieczenia” [Social Aspects of Insurance], conference in celebration of the tenth anniversary of the founding of the Department of Social Insurance, Warsaw School of Economics, Bobrowiec 2005.

- “Społeczne aspekty rozwoju rynku ubezpieczeniowego” [Social Aspects of the Development of the Insurance Market], conference in celebration of the fifteenth anniversary of the founding of the Department of Social Insurance, Warsaw School of Economics, Zegrze 2010.

In September 2010 I defended my doctoral thesis entitled *The Scope of Income Redistribution in Insurance Pension Systems*. My Ph.D. thesis contributed to the development of the understanding of income redistribution occurring in pension insurance systems. The reviewers considered the main achievements of the work to be the creation of a set of instruments for the study of income redistribution in pension systems, owing to the development of a methodology for assessing the scale of this phenomenon and the creation of a substantive basis for a discussion of the scope and tools used for income redistribution in pension systems. Singled out for praise was my ability to draw links and to synthesize, as well as my detailed knowledge of solutions functioning in pension systems in different countries. The empirical part of the dissertation presented a comparative analysis of the scope and level of income redistribution in the “old” and the new pension system in Poland. This is the first and, to my knowledge, only such study on redistribution in the basic Polish pension system. My doctoral dissertation won first prize in a competition organised by the Insurance Ombudsman, the Insurance Education Foundation and the *Gazeta Ubezpieczeniowa* [The Insurance Gazette]. In 2012, Oficyna Wydawnicza SGH published a monograph entitled *The Scope of Income Redistribution in Insurance Pension Systems* on the basis of my dissertation.

2010–2019 (after earning the doctoral degree)

After defending my doctoral thesis, from December 2010 to October 2013, I worked as an assistant professor in the Department of Social Insurance at the Warsaw School of Economics, conducting research on the evolution of pension and social security systems and guarantees in pension systems, continuing the analysis of income redistribution in pension systems and studying the functioning of sovereign wealth funds with a pension purpose. During this period, I participated in several research projects, mainly as a leader and main researcher.

The first area of the research, i.e. the evolution of pension protection was carried out as part of the research:

- “Second wave of pension reforms vs modified multipillar pension system model of World Bank” [*Druga fala reform emerytalnych w świetle zmodyfikowanej wielofilarowej koncepcji Banku Światowego*] (2010), principal investigator, Socio-Economic Collegium, Warsaw School of Economics, funding: Ministry of Science and Higher Education (Funding for Young Researchers), (No. 02/E/0013/10),
- “The construction of old-age pension systems vs coverage of supplementary pension plans” [*Konstrukcja systemów emerytalnych a powszechność uczestnictwa w dodatkowym zabezpieczeniu emerytalnym*] (2012), principal investigator, Socio-Economic Collegium,

Warsaw School of Economics, funding: Ministry of Science and Higher Education (Funding for Young Researchers), (No. 02/BMN/0007/12),

- “Old-age pension crisis - reasons and countermeasures” [*Kryzys emerytalny: przyczyny i możliwości przeciwdziałania*] (2012), investigator, Warsaw School of Economics, funding: scientific grant financed by Rector of Warsaw School of Economics (grant No. 89/E/02/12),
- “Evolution of occupational pension plans in times of demographic changes and financial crisis - trends and main challenges” [*Ewolucja pracowniczego zabezpieczenia emerytalnego w świetle przemian demograficznych oraz załamania na rynkach finansowych – tendencje zmian i główne wyzwania*] (2013), principal investigator, Socio-Economic Collegium, Warsaw School of Economics, funding: Ministry of Science and Higher Education (Funding for Young Researchers), (No. 02/BMN/0001/13),
- “Polish citizens’ awareness and prudence regarding insurance” [*Badanie świadomości i przeczności ubezpieczeniowej Polaków*] (2013), project leader: prof. dr hab. Tadeusz Szumlicz, funding: Ministry of Science and Higher Education, statutory research, (No. KES/S/04/13), I conducted the research on “Supplementary social insurance in rationalization of the social security system” [*Doubezpieczenie społeczne w racjonalizowaniu systemu zabezpieczenia społecznego*].

The results of these studies are presented in publications [1.1] [2.1] [2.1] [2.2] [2.3] [4.2.] [4.3] [4.4]. I also conducted research in the broader area of transformations of social security systems, participating as a researcher in the project “The Socially Responsible University” [*Spolecznie Odpowiedzialna Uczelnia*] (2009-2011, in the Social Policy working group), conducted by Janusz Korczak Pedagogical University in Warsaw [*Wyższa Szkoła Pedagogiczna TWP w Warszawie*] and financed with European Union funds (Program: POKL, Priority IV. Higher education and science, Measure 4.2. Development of qualifications of R&D system staff and raising awareness of the role of science in economic development). The aim of the project was to develop innovative approaches to social services, and my participation in it resulted in publications [4.1] and [4.8].

Continued research on income redistribution and the area of guarantees offered by pension systems has resulted in publications [1.1] [5.1] and [5.2].

The next research stream was conducted within the framework of the study entitled “Sovereign wealth funds in financing old-age pensions” [*Państwowe fundusze majątkowe w finansowaniu systemu zabezpieczenia emerytalnego*] (2011-2012, Socio-Economic Collegium, Warsaw School of Economics, funding: Ministry of Science and Higher Education, Funding for Young Researchers, No. 02/BMN/0006/11), in which I acted as the principal investigator. This project resulted in four publications: [6.1] [6.2] [6.3] and [6.4].

Since November 2013, I have been employed as an assistant professor in the Department of Demography in the Institute of Statistics and Demography at the Collegium of Economic Analysis of the Warsaw School of Economics. In the last five years, my research interests have been focused on research into the adaptation of pension systems to the needs of individual recipients, the effectiveness and efficiency of supplemental pension provision, protection of the weaker party in the pension market, as well as questions of financial education and information policy in the pension market. I pursued these with the following research projects (funding for statutory research, Ministry of Science and Higher Education):

- “Pension benefits vs changing needs in old age - Are the existing formulas adequate?” [*Świadczenia emerytalne a zaspokojenie zmieniających się potrzeb w okresie dezaktywizacji*]

- zawodowej – analiza adekwatności stosowanych rozwiązań] (2014-2015), principal investigator (No. KAE/S14/12/15),
- „Guarantees in supplementary pension plans in CEE countries” [*Podział ryzyka i zakres gwarancji w dodatkowych planach emerytalnych w krajach Europy Środkowo-Wschodniej*] (2015-2016), principal investigator (No. KAE/S15/27/15),
 - “Assessment of supplementary pension plans from individual participant’s perspective” [*Potrzeby, możliwości i problemy ewaluacji dodatkowych planów emerytalnych z punktu widzenia indywidualnego odbiorcy*] (2016-2017), principal investigator (No. KAE/S16/15/16),
 - “Pension awareness and information asymmetry on Polish supplementary pension market” [*Świadomość emerytalna i asymetria informacyjna na rynku dodatkowych produktów emerytalnych w Polsce*] (2017-2018), principal investigator (KAE/S17/01/17),
 - „Effects of tax incentives in supplementary old-age pension system in Poland” [*Efekty zachęt podatkowych w dodatkowym zabezpieczeniu emerytalnym*] (2018-2019), principal investigator (KAE/S18/32/18).

The results of these studies were included in publications [2.5] [2.7] [2.8] [4.9] [4.10] [8.2].

In the past several years, I have also continued research into income redistribution in pension systems, developing an international comparative analysis as part of the project “Income adequacy, redistribution and efficiency in pension systems. Comparative analysis with the application of quantitative methods” [*Adekwatność dochodowa, redystrybucja oraz efektywność w systemach emerytalnych. Analiza porównawcza z wykorzystaniem metod ilościowych*] (2014-2016), in which I was the main researcher (project leader: dr hab. Filip Chybalski, source of funding: NCN, OPUS 5, grant No. DEC-2013/09/B/HS4/01516). The results of the conducted research were presented in publications [5.3] [5.4] [5.5] [5.6].

Pursuing my academic interests in the area of the effectiveness of supplementary pension provision, from 2014 I participate in subsequent rounds of the projects “Study on Private Pensions” and “Real Returns of Pension Savings”, run by *Better Finance* (formerly *EuroFinUse, European Federation of Investors and Financial Services Users*), partly financed by the European Commission. The aim of the project is to analyse the effectiveness of supplementary pension provision in European countries, taking into account both nominal and real rates of return, as well as the impact of fees and taxation on the investment results of pension plans. My contribution consists in preparing part of the report concerning the effectiveness of Polish supplementary pension plans. The results of my research in this area in 2014-2018 were published in reports [7.3] [7.4] [7.5] [7.6] [7.7].

Confirmation of my knowledge and competence in conducting research on the functioning of supplementary pension provision was provided when I was entrusted with leading the team preparing the report presented and discussed during the debate organized by the President of the Republic of Poland, entitled *The Future of the Polish Pension System in the European Union. The Supplemental Pension Provision System in Poland – Diagnosis and Recommended Changes* [*Dodatkowy system emerytalny w Polsce – diagnoza i rekomendacje zmian*]. The results of the work of the whole team were published in 2014 in the publication [7.1].

The most recent area of my scientific activity is research into the functioning of supplementary pension products and deficiencies of the pension market from the point of view of the individual participant. I have been pursuing my interests in this area since 2017, leading the project “The Readability, transparency and efficiency of individual pension products” [*Zrozumiałość,*

przejrzystość i efektywność indywidualnych produktów emerytalnych] (2017-2020) funded by NCN (grant no. 2016/21/D/HS5/03905, Sonata 11). The results of the project will be published in 2019 and 2020. The first article has already been accepted for publication [8.2] and the second [7.8] is currently being peer-reviewed.

In 2019 I will participate, as an investigator, in the project “Pension risk and the predicted changes in the demand for goods and services of older Poles” [*Ryzyko emerytalne w świetle prognozowanych zmian zapotrzebowania na towary i usługi konsumpcyjne seniorów w Polsce*] (project leader: dr Kamila Bielawska, funding: NCN, OPUS 12, grant nr 2016/23/B/HS5/03768).

3. Scientific achievements submitted for assessment (pursuant to Art. 16. Paragraph 2 of the Act of 14 March 2003 on Scientific Degrees and Titles as well as Degrees and Titles in the Arts (Journal of Laws No. 65 item 595 as amended)

Presented below is the cycle of thematically-related publications, which I am presenting for evaluation entitled “Institutional Factors and their Impact on the Development of Private Pension Plans from the Individual Participant’s Perspective” [*Czynniki instytucjonalne i ich wpływ na rozwój prywatnych planów emerytalnych z punktu widzenia indywidualnych uczestników*]. It consists of a series of nine scientific articles and two book chapters. Three of these articles were published in English, one in a journal on the JCR list.

Table 1. List of publications contributing to the scientific achievement “Institutional Factors and their Impact on the Development of Private Pension Plans from the Individual Participant’s Perspective”.

No.	Publication	My share	IF according to Web of Science	MNiSW points
1. ARTICLES PUBLISHED IN THE JCR LISTED JOURNALS (A LIST)				
1.1	Kawiński M., Stańko D., Rutecka J. (2012), <i>Protection mechanisms in the old-age pension systems of the CEE countries</i> , „Journal of Pension Economics and Finance”, Volume 11, Issue 04: 581-605, DOI: http://dx.doi.org/10.1017/S147474721200008X	20%	0,418	15
2. ARTICLES PUBLISHED IN OTHER JOURNALS				
2.1	Rutecka J. (2014), <i>Doubezpieczenie emerytalne w racjonalizowaniu systemu zabezpieczenia społecznego</i> [Supplementary pension insurance in rationalization of the social security system], "Rozprawy Ubezpieczeniowe", nr 16 (1/2014), p. 43-53.	100%		3
2.2	Góra M., Rutecka J. (2013), <i>Elastyczny system emerytalny a obecne i przyszłe potrzeby jego uczestników</i> [Flexible Pension System Aiming at Needs of Its Participants], "Ekonomista", nr 6: 735-753.	50%		10
2.3	Rutecka J. (2014), <i>Dodatkowe zabezpieczenie emerytalne - charakterystyka i czynniki rozwoju</i> [Supplementary old-age pension security – basic characteristics and main factors of its growth], "Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu", nr 342: 256-266.	100%		7

2.4	Rutecka-Góra J. (2017), <i>Ewolucja pracowniczych programów emerytalnych a przemiany demograficzne</i> [Reforming occupational pension programmes in times of demographic change], "Studia Ekonomiczne. Zeszyty Naukowe Uniwersytetu Ekonomicznego w Katowicach", nr 309: 143-153.	100%		10
2.5	Rutecka-Góra J. (2016), <i>Evolution of supplementary old-age pension systems in selected CEE countries</i> , "Zarządzanie i Finanse", nr 4: 149-162.	100%		10
2.6	Rutecka J. (2015), <i>Realokacja czy nowe oszczędności? – O efektach zachęt podatkowych w dodatkowym oszczędzaniu na starość w Polsce</i> [Reallocation or new savings? – Tax incentives' effects in polish supplementary old-age pension system], "Rozprawy Ubezpieczeniowe", nr 18 (1/2015): 66-79.	100%		7
2.7	Rutecka-Góra J., Vostatek J., Turner J.A. (2018), <i>Extending pension coverage: Tax versus non-tax incentives</i> , "ACTA VŠFS Ekonomicke studie a analyzy", 2/2018, vol. 12: 107-124, https://www.vsfs.cz/periodika/acta-2018-2.pdf	33%		4
2.8	Cichowicz E., Rutecka-Góra J. (2017), <i>Świadomość Polaków dotycząca dodatkowego oszczędzania na starość - próba oceny oraz identyfikacji niezbędnych działań</i> [Poles' awareness regarding supplementary old-age saving – assessment and identification of necessary actions], „Problemy Polityki Społecznej. Studia i Dyskusje” nr 38 (3): 89–103.	50%		11
3. CHAPTERS IN BOOKS				
3.1	Pieńkowska-Kamieniecka S., Rutecka J. (2014), <i>Problematyka decyzji i kompetencji finansowych osób starszych w ujęciu ekonomicznym</i> [Financial decisions and competencies of older adults from economic perspective], in: <i>Systemy zabezpieczenia społecznego wobec wyzwań demograficznych i rynkowych</i> , ed. M. Szczepański, T. Brzęczek, M. Gajowiak, Wydawnictwo Politechniki Poznańskiej, Poznań, p. 141-151.	50%		4
3.2	Rutecka J. (2013), <i>Ewolucja pracowniczych programów emerytalnych w reakcji na kryzys finansowy - tendencje zmian</i> [Evolution of employee pension plans after the financial crisis – main tendencies], in: <i>Współczesne zabezpieczenie emerytalne. Wybrane aspekty ekonomiczne, finansowe i demograficzne</i> , red. F. Chybalski, E. Marcinkiewicz, Politechnika Łódzka, Łódź, p. 114-125.	100%		4

The aim of these publications was to examine broadly understood institutional factors and their impact on the functioning of private pension plans. The motivation to undertake this research was the desire to understand what determines the level and pace of the development of private pension plans, what tools are used to disseminate these systems and which of them produce the best results. In the course of my research, I have also identified obstacles which hinder or even prevent the proper functioning of supplementary pension markets, with consideration given in particular to the situation of the weaker party, i.e. the individual consumer in these markets. Below I present a brief description why I devoted my research to this field of study, including literature review and identifying its limitations that led me to focus my research on institutional

factors that influence development of supplementary pension markets from the individual savers' perspective.

Old-age pensions have been the subject of heated public debate and intensive research for at least three decades. This is a consequence of the need for reforms of pension systems forced mainly by changes in the population and the need to ensure the long-term financial sustainability of these systems. Most countries are looking for ways to reduce fiscal imbalances in the basic public pension system through increasing the contribution or retirement age, tightening the conditions for minimum benefits, lowering the relative level of pension benefits and making these dependent on demographic factors (e.g. the retirement age or indicators of the burden on the pension system from older people). Pension reforms aim to provide adequate benefits from the pension system in a broader perspective than has been the case, taking both the public and mandatory parts of the system into account, as well as additional measures to raise pension income up to the expected level. At the same time, the boundary is blurred between mandatory, state-run basic pension plans and voluntary, privately managed supplemental elements. Employee pension programmes (Netherlands, Switzerland, United Kingdom) and individual pension plans (New Zealand), have also become mandatory or quasi-mandatory, often as a consequence of the introduction of automatic enrolment in supplementary pension plans (auto-enrolment). The use of compulsion in a system regarded as supplementary results from the inadequate pension income offered by the basic public system managed by the state and the need for it to be supplemented universally with elements financed by other sources. This raises the question of whether these arrangements should be formally treated as supplementary plans that augment basic income, or as elements that provide the basic required income. In particular, since the underlying public pension plans increasingly use funded plans, usually in the form of the introduction of mandatory pension funds that invest part of mandatory pension contributions (Sweden, Italy and Estonia, among others). In addition, some elements of the underlying plans take on voluntary features in some countries (the voluntary option to exit the state-operated system, i.e. to opt-out, and to transfer contributions to voluntary pension funds), which leads to a reduction in the role of the state in the direct management of the basic system, without, however, excluding these elements from the public plan and giving them the features of supplementary programmes. It is therefore no longer possible to speak of a clear boundary between basic and supplementary pensions, and the specific contours of this boundary should be analysed with regard to the objectives of meeting the needs of individual pension plan members.

Due to the blurring of the boundary between basic and supplementary pension provision, elements of public plans are sometimes analysed together with supplementary plans in international comparative analyses. An example are the OECD publications on private pension plans (2009, 2011, 2013, 2015, 2017), from which erroneous conclusions can be drawn as to the level of the universality of private pension plans and the extent to which the needs of participants in them are met. Indeed, the discussion of private (privately managed) pension plans includes both mandatory (or until recently mandatory) pension plans that are part of the basic public system (e.g. open pension funds in Poland and their equivalents in other CEE countries) as well as mandatory or voluntary supplementary pension plans (employee and individual). Meanwhile, the functioning of basic (public) systems, regardless of the method by which they are financed, and supplementary pension plans should be analysed separately, if only because of their different aims, the level of guarantees used and the way in which risks are shared, the scope of regulations applied or the complexity of the system. Significant here is the nature of participation in the system and the type of tools used to achieve universality (compulsion, automatic enrolment or tax incentives). Each tool requires a different set of

regulations and may lead to different problems from the point of view of the individual participant.

A pension system is public when it is mandatory, established and supervised by the state, irrespective of the type of entity that actually manages pension savings (rights) [2.1, p. 739]. This is the basic system, i.e. it provides coverage of basic needs in retirement. The purpose of supplementary plans is to supplement pension income to the level desired by the individual. In contrast, the division into private and public plans is mainly technical in nature and uses the criterion of the managing entity (private entities or public institutions).

Reforms that have been introduced, both systemic and parametric, reduce the generosity of the basic pension systems, expanding the field for complementary private pension plans (European Commission 2010, 2012a, 2012b, OECD 2012, 2014, 2018a, Barr & Diamond 2014). Reducing the relative level of basic pension benefits makes it necessary to supplement them with other sources, including solutions offered as institutionalised supplementary pension provision. Supplementary pension plans include programmes organised and financed by the employer and by individuals. They can be based on a defined contribution (DC) or defined benefit (DB) formula, while individual solutions usually use the latter. Supplementary pension insurance operates in various forms, with the most frequently used being investment and pension funds and life insurance with unit-linked life insurance.

To date, supplementary pension plans have been the subject of studies and analyses by many institutions and experts (e.g. Holzmann i Guven 2009, European Commission 2010, 2012a, 2012b, OECD 2012, 2014, 2018, Pallares-Miralles, Romero i Whitehouse 2012). These studies mainly concerned reforms of old-age pension systems (OECD 2012, 2014, 2018a), the level of participation in supplementary pension plans and the level of benefits (European Commission 2010, 2012a, OECD 2011, 2013, 2015, 2017, Antolin, Payet i Yermo 2012) or the characteristics and effects of tax incentives in selected countries (Ayuso, Jimenoy i Villaneuvaz 2007, Börsch-Supan 2004, Kuper & Schmidt 2016, OECD 2018b). In most analyses, however, **detailed descriptions of the reforms and the architecture of supplementary pension systems were not compared with the actual and changing needs of individual pension system participants.**

Previous research has also referred to individual saving behaviours in some countries, focusing on aggregated saving levels and saving rates (e.g. for Poland: Liberda 2015,) and an assessment of the relationship between declared savings and the traits of individual savers (Rószkiewicz 2008, Marcinkiewicz 2018). Some studies also included an assessment of financial literacy and motivations in the area of pension planning and attitudes towards security in old age (Rószkiewicz 2008, Białowąs 2013, OECD 2015, Olejnik 2016). **However, they did not address the problem of matching market offer to the possibilities, needs and behaviours of individual savers.**

In researching the development of supplementary pension systems, the focus was on macroeconomic analyses using data on GDP levels, replacement rates in the basic systems, the number of supplementary pension programmes and the assets accumulated in them. Some of the analyses referred to the description of tax incentives applied and their effectiveness in achieving the universality of supplementary pension plans (Ayuso, Jimenoy i Villaneuvaz 2007, Börsch-Supan 2004, Kuper & Schmidt 2016, OECD 2018b). **Analysed only relatively rarely**

is the subject of pension plan participants exposure to risk and the impact of financial education and pension awareness on the proper functioning of pension markets.

Due to its long history of functioning, research into supplementary pension provision is **dominated by analyses of group and individual pension plans in developed countries** (m.in. OECD 2011, 2013, 2015; Holzmann & Guven, 2009). **Only a few analyses cover the functioning of supplemental pension provision in Central and Eastern European countries** (Szczepański 2010, Andersen et al. 2018, Marcinkiewicz 2018). This is due to problems with the availability of data on the functioning of supplementary pension systems on a micro scale and individual pension decisions made by participants in the system. The differences in the architecture of pension systems in CEE countries and the different characteristics of the mechanisms they apply also have a significant impact.

The accomplishment presented for evaluation is the result of my participation in several research projects, mainly as a project manager and principal investigator. The results presented in the publications are **my contribution to research on the functioning of private pension plans that enriches the understanding of voluntary and obligatory solutions in this area.** In my research, I tried **to explain which factors and how they influence the development of private, individual and group supplementary pension provision, with special focus on the position of an individual saver.** I created a basis for drawing qualitative and quantitative conclusions regarding the effectiveness of specific tools in the supplemental pension system, which were used in recommendations for social policy in this area.

My research works presented in the publications cycle submitted for assessment focus on the given below areas:

- 1) the role of supplementary pension plans in contemporary pension provision,**
- 2) risk exposure in private pension plans,**
- 3) factors influencing the level of development of private pension plans,**
- 4) effects of tax incentives in supplementary pension plans**
- 5) the role of education and pension literacy in reducing information asymmetries in the pension market.**

Below is a brief summary of my achievements in the areas mentioned above. The aspects concerning the respective research fields are described as key subject in some publications, while being also discussed as factors influencing other research areas. Hence some publications are assigned to more than one research area.

- (1) The role of supplementary pension plans in contemporary retirement provision - publications [2.1] [2.2]**

Pension reforms introduced around the world over the past few decades are a response to population changes, forcing the rationalisation of pension systems towards defined contributions, limiting the adequacy of the basic elements of the system and increasing the importance of supplementary pension provision. Limiting the role of the state in these systems causes that, from the point of view of ensuring adequate income for old-age, these need to be regarded comprehensively, i.e. with the necessary care for the development of supplementary elements of pension provision.

In publication [2.1] I showed that supplementary pension plans are growing increasingly complex and their architecture includes both group and individual solutions. The first of these, employee pension programmes organised and offered by an employer to its employees, are company, inter-company or even sector-wide solutions, whereby the majority of solutions in

this area use equity financing (with the exception of some solutions for the public sector). Individual pension plans in contrast are not usually linked to employment with a particular employer, and in some plans, it is now possible for employers to make contributions to these. They are thus an example of the blurring of the boundary between employee and individual protection in old age.

Pension savings may be financed through various sources: employer contributions, employee contributions, or both (increasingly often on the basis of the employer's obligation to supplement the contribution paid by the employer, the so-called matching contribution) and in the form of subsidies from the state budget. There is also a growing variety of product forms (the main types are unit-linked life insurance agreements, investment funds, pension funds, bank deposits, employer accounting reserves) and pension formulas – aside from the pure formula of a defined contribution and a defined benefit, there are also mixed solutions.

I drew attention to the growing level of the pensions gap, which may be filled by the available supplementary pension plans addressed to individual recipients (including through an employer). The level of the pensions gap has long been analysed by international institutions (e.g. OECD 2011). The comparative approach however does not reflect the actual level of the pensions gap in each country, as the same level of the replacement rate is used as a benchmark, irrespective of the wealth and economic development of the country in question. I pointed out that the data published in international comparative reports present the size of the gap in a highly simplified manner, which is probably dictated by the objective of comparability of indicators but does not provide information on the actual level of pension income that needs to be filled. I also stressed that the size of the pensions gap for specific participants in the pension system varies, as it depends on their individual needs and expectations. Therefore, the area of potential supplementary retirement insurance should also be analysed more frequently from a micro perspective.

I emphasised that with the reduction in the generosity of pension systems and the change in pension formulas towards defined contributions (DC), the use of the insurance method in rationalising the pension protection system is becoming increasingly important. The previously developed basic systems offered participants protection against most risks. The new, reformed systems assume increased responsibility of individuals for adequate retirement benefits and assume greater exposure of participants to risks, primarily to investment risk, inflation and longevity (a smaller part of retirement income is paid in the form of an annuity). In order to at least partially close the resulting difference in risk exposure and guarantee reduction in the basic system, the widening pensions gap should be largely covered by insurance products that protect individual participants against risk. I pointed out that insurance can be used in ways other than at the pay-out stage to cover longevity risks. It can also provide protection against inflation risk and investment risk. However, for this to happen, instruments must be available in the market for financial institutions to hedge against these risks (inflation-linked or mortality-based bonds). I stressed that broad discussion and education in this area is essential for individual savers to understand, want and be able to manage risks by choosing appropriate instruments.

In publication [2.2], together with Marek Góra, we proposed a flexible approach to the pension system as a whole, including additional retirement savings, the allocation of which should better reflect the changing needs after retirement (in the active, peaceful, and infirm stages of old age). This approach lends a completely new dimension to the comprehensive pension system. Thanks to this, better adjustment of the entire system to individual needs and saving decisions can be achieved. We pointed out that the general basic pension system is only supposed to offer basic security in old age. The remaining part of the greater whole must be determined by the interested

parties themselves, using additional elements, i.e. supplementary pension plans, which correspond to their needs and preferences. Individual pension decisions should in this case consider areas such as 1) family security for the period of old age (having children), 2) the timing of ending professional activity, 3) postponement of consumption in order to accumulate retirement savings. Using the construction of the pension calculator, we examined the relationships between three variables: the contribution rate, the age at which benefits began to be paid out and the replacement rate. The obtained results are particularly relevant in the context of the question as to how high the contribution should be (if the mandatory contribution is to be supplemented) in order to maintain a certain standard of living in retirement? We found, for example, that a replacement rate of 60%, assuming that economic activity ends at the age of 60, requires an additional contribution of 15 p.p., whereas in the case of extending activity by fifteen years and retirement at the age of 75 - an additional contribution at the level of “only” about 8% of the salary is required. We pointed out that the functioning of the flexible pension system relies to a large extent on the individual and conscious choice of retirement age (with a lower limit in the form of a minimum retirement age) and deciding about the level of the total pension contribution (with a lower limit at the level of mandatory contributions), with acceptable assumptions concerning the level of pension benefits.

We proposed a broader look at the possibility of using “beyond-mandatory” retirement savings in addition to the basic objective of maintaining consumption after retirement, indicating the following goals: 1) financing the maintenance of employability or professional retraining, 2) mitigating the drop in income level in case of gradual withdrawal from the labour market (partial retirement), 3) financing the period of professional deactivation before reaching the minimum retirement age in the public system (individual bridging pension), 4) covering increased expenditures in the period of actual infirm old age. We emphasized that verification of the objectives of allocating additional savings is necessary not only due to the evolution of pension systems and their formulas, but also the transformation of the labour market, the changing needs of system participants and the evolving nature of the risk of old age itself.

We pointed out, that the public system, due to its mandatory nature and accepted principles of solidarity and social justice, does not allow for individualisation of pension parameters. However, the model, universal solution does not meet the needs and expectations of the majority of individuals. In such cases, the system as a whole may gain flexibility and the desired adjustment to individual needs through appropriate construction of supplemental pension provision. The concept of a flexible pension system we presented in the article [2.2] in fact makes it possible to adjust to individual preferences the moment of retirement, the method of limiting economic activity and the amount of benefits due in periods of inactivity. This is also important in regard to the growing needs in the final years of life (Błędowski 2012), with the replacement rate from the public pension system decreasing with age (for more, see: Rutecka 2013 - publication [4.9]). If this is to be a mass solution, it must be regulated in terms of readability, transparency and cost-effectiveness, and must be accompanied by effective financial education.

(2) Risk exposure in private pension plans – publications [1.1] [2.1] [2.4] [2.5] [3.2]

From the point of view of the participants of pension system, old-age risk management consists of two phases - the stage of the accumulation of funds and the period in which they are consumed. At the stage of the accumulation of funds, the aim is to accumulate sufficient retirement capital, and at the stage of payment - to provide adequate benefits for the entire retirement period (for life). In private pension plans, the accumulation of funds is mainly based on the savings method and funded by means of a defined contribution formula (with the exception of employee pension programmes based on the DB formula), while at the

decumulation stage, the following solutions are possible: a lump sum, programmed withdrawals, or a life annuity. From the point of view of a participant in a private pension plan, the most important risks to which she is exposed include (Rocha, Vittas & Rudolph 2011) investment risk, inflation risk, liquidity risk, market timing risk, inheritance risk, risk of outliving one's savings, risk of a substantial decline in consumption and living standard, longevity risk and bankruptcy risk of the plan provider. At the accumulation stage, exposure to particular risks depends on the form of pension plans and the guarantees applied in them.

In publication [1.1], together with Marcin Kawiński and Dariusz Stańko, we showed that the changing role of the state in pension systems and the introduction of elements of capital funding and private management have necessitated a redefinition of the scope of guarantees and a change in the type of mechanisms to protect pension plan members from a range of risks. We stressed that demographic changes have forced a wave of corrections not only to mandatory systems, but also to supplementary pension plans. We found that pension reforms implemented in CEE countries (the analysis included Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Serbia, Slovakia, Slovenia and Hungary) transferred to individual participants a number of risks related to the functioning of private pension plans (I showed it also in publication [2.5]). At the accumulation of assets stage, the main risks are investment risk and inflation risk, but through the individualisation of the system and the introduction of wider opportunities for choice, the risk of choosing the wrong time to retire (market timing risk) has also grown in significance. We described the “risk of making a poor retirement decision”, rarely addressed in the literature, referring to the choice of a product or pension fund, its investment profile and the period of leaving the labour market. This risk has not yet been addressed by legislators or regulators. On the other hand, at the benefit payment stage, we identified longevity risk and inflation risk as the most important. We found that while mandatory private pension plans pay benefits in the form of life annuities (Bulgaria, Croatia, Lithuania, Latvia, Poland, Hungary), supplementary systems (Czech Republic) allow a choice of the form of payment from a wider range of options. We emphasized that in the case of less-developed annuity markets in CEE countries, the burden of creating appropriate solutions and stimulating their development lies with the state. We also pointed out that the introduction of additional guarantees, both at the stage of saving and of payment, reduces the calculated benefit. On the other hand, we stressed that limiting the role of the state in pension systems, viewed comprehensively, should not result in a reduction of solutions providing protection against systemic risks.

We also established that, in private pension plans in CEE countries, exposure to the risk of inadequate benefits and the risk of inflation is limited by the following guarantees: a minimum pension (fixed or earnings-related), indexation of pension benefits (price, salary, price and salary, or growth-related) and by offering other benefits to pensioners (including social assistance benefits and allowances). We showed that guarantees may depend on the level of earned income and may be financed from contributions or taxes.

Regarding exposure to the risk of insolvency of the provider, we established that the most important guarantees in this area relate to the legal separation of the pension fund and the managing entity, the requirement that activities of pension funds be licenced, the establishment of depositary bank entities and the regulation of supervision and information policy (obligations to both public institutions and supervisory entities, as well as to individual participants). Investment limits and asset concentration limits play a key role in reducing investment risk. We found that these were not only a reflection of the desired level of pension fund risk set by the supervisory entity, but also the opportunities and preferences of local financial markets and economic policies in individual countries. We explained that investment risk in private pension

plans in CEE is or has been reduced by use of nominal guarantees (Czech Republic, Romania, Slovakia), real (Hungary) or relative rates of return (Bulgaria, Croatia, Poland and Romania) or by offering funds (products) with different risk profiles in order to adapt them to age, financial literacy, family situation or preferences regarding risk aversion. The second way to limit investment risk, i.e. offering a greater number of funds with different risk profiles, occurs in the basic pension systems of Estonia, Lithuania and Slovakia. We pointed out that multi-funds are commonly found in voluntary pension funds but are not offered together with a minimum return guarantee (except in Romania). I also confirmed it by the findings presented in publication [2.5].

In publication [2.1] I pointed out that in most voluntary pension plans there is no guarantee as to the rate of return and the maintenance of the real value of the pension capital, resulting in full exposure of individual participants to inflation and investment risk. Guarantees must be provided in mandatory systems because of the need for long-term participation in pension provision and the obligation to pay a regular contribution. Although mandatory participation is relatively rare in supplementary pension plans, more symmetric risk-sharing tools should be considered, at least because of the use of costly tax incentives. I established that benefit guarantees are mainly found in employee pension programmes in Western European and Scandinavian countries, primarily through the use of a defined benefit formula. I emphasised that a number of risks (inflation risk, investment and longevity risks) to which savers are exposed relate to the benefit payment stage, and the level of exposure to them depends on the forms of capital decumulation offered (annuity, lump sum payment or instalments). I established that the countries of Central and Eastern Europe (Poland, Romania, Hungary, Slovakia) are a group distinguished by the application of a pure defined contribution principle at the stage of pension capital saving and by a much less frequent use of lifetime annuities at the stage of decumulation. I pointed out that this is due to the weak development of the annuities market. I emphasized that only the insurance form of payment protects savers against the risk of longevity. Therefore, it plays a key role in mandatory and quasi-mandatory systems, and in voluntary pension systems it is indicated as a desirable solution, especially when their functioning is accompanied by tax incentives. I pointed out that, under certain conditions, the insurance method can be effectively applied at every stage of old-age risk management. Protection against investment and inflation risks occurring at the stage of both the accumulation and payment of pension funds can be provided by offering insurance with capital funds offering a minimum guaranteed rate of return or by including a technical rate of return (which, from the point of view of insured persons, is a type of guaranteed return) in the calculation of benefits. I proposed that at the decumulation stage, the risk of longevity and inflation may be limited by annuities indexed to inflation. The space available for rationalisation is therefore multidimensional. I emphasized that the development of an insurance offer that would assume a more symmetrical division of risk is not possible without the emergence of financial instruments on the market that would allow insurance companies to protect themselves against the risks taken from individual savers.

In publication [2.4] I analysed the impact of population changes on the functioning of employee pension programmes (PPE) with different pension formulas and financing methods and I determined the direction and scope of changes in these programmes in the face of population changes. I examined not only the impact of the risk of longevity, which refers to the possibility that if a person lives long enough, resources may be exhausted before their death, but also the whole group of risks linked to the general trend of increasing life expectancy and increasing dependency ratios, resulting, *inter alia*, in a reduction in long-term rates of return. I pointed out that the reason for the loss of long-term stability of PPEs is the imbalance between the length

of the contribution period and the length of the benefit period. Demographic processes adversely affect balancing, i.e. maintaining a balance between assets and liabilities, in employee pension programmes offered under the DB formula, while for defined-contribution schemes they lead directly to lower rates of return and, consequently, lower value of pension savings. I found that extension of the period of drawing a pension (while maintaining the age of entitlement to benefits) and a decrease in long-term rates of return resulted in the need for employers to make additional payments, to tighten length of service requirements, to reduce the indexation of rights and pensions, to limit the DB formula in favour of defined-contribution solutions and to transfer a large part of the consequences of demographic risk to individual programme participants. However, it turned out that this solution, while an excellent remedy for the problems of the functioning of the PPE from the point of view of the employer financing the programme, is an imperfect tool from the point of view of providing protection to individual participants against the risk of inadequate pension income. I emphasized that permanent changes in the structure of the population and the transformation of financial markets demand the development of new ways of managing demographic risk in pension plans and distributing it more symmetrically. The changes in the functioning parameters of PPEs that have been observed in recent years, sometimes including a reduction in benefits, have undermined public and employer confidence in these plans.

Publication [2.5] presents a comparative analysis of the architecture and particulars of the functioning of supplementary pension plans in the following CEE countries: Bulgaria, Czech Republic, Poland, Romania, and Slovakia. I found that the architecture of all analysed pension systems is based on the World Bank conception from 1994. The consequence of this model is a large individualisation of systems, in both the basic and supplementary pillars, resulting in high risk exposure and greater individual responsibility for retirement decisions. All countries have individual supplementary pension plans, while employee pension programmes have only been introduced in Bulgaria and Poland. All supplementary pension plans use the defined contribution formula and operate mainly in the form of pension funds (with the exception of Poland with a dominant share of plans in the form of unit-linked life insurance). I found that none of the analysed supplementary systems had introduced guarantees to limit the risks to which savers are exposed. This means extremely asymmetrical risk-sharing that jeopardises the adequacy of benefits paid out of additional pension savings. I noted that the risk of inadequacy of benefits is influenced not only by investment risk, inflation risk and exposure to longevity risk, but also by the level of accepted limits on contributions related to tax incentives and the length of the saving period (including the required period and age of obtaining the right to capital disbursement).

I established that tax incentives applied in all the analysed countries have not been effective in reducing the risk of inadequate supplementary pension benefits. Even if these increased participation to 60% (as in the Czech Republic), the low level of contributions as a consequence of the introduction of low limits of contributions given maximum tax preference and allowing for a maximum subsidy from the budget, resulted in low amounts of funds accumulated in individual savers' accounts.

I pointed out that the possibilities for limiting investment risk include only the ability to choose a fund with the desired risk profile (with the exception of Bulgaria), which, however, requires appropriate financial literacy preceded by effective education and does not limit the responsibility of savers for decisions made in this area.

I also found that the operating model of maximum individual choice and the actual lack of investment limits did not lead to satisfactory investment results (only Poland stands out positively in this respect). Moreover, savings have been reduced by a large number of fees, most of which are not linked with investment performance, which completes the picture of extreme asymmetrical risk sharing in supplementary pension systems in CEE countries.

The consequences of high exposure to investment risk in employee pension programmes are also the subject of publication [3.2]. I determined what was the impact of the financial crisis on the functioning of PPEs in the short and long term. Based on data from the OECD, the European Commission and EFRP (currently *Pensions Europe*), I established that the financial crisis of 2008 resulted in a large discount of assets in PPE portfolios in all European countries. The value of assets was quite quickly restored to pre-crisis levels through the regular influx of funds through new pension contributions. However, it took nearly a decade to make up for investment losses. I pointed out that the size of losses depended on the level of exposure to the equity market. In DB programmes, the crisis led to deficits and a significant reduction in funding levels. This phenomenon has been exacerbated by a reduction not only in actual but also in projected long-term rates of return. This forced employers to recalculate pension benefits and look for ways to cover deficits, including through additional fees, increasing pension contributions, suspending or limiting the indexation of benefits, extending the period of work required or ultimately reducing the level of benefits. Restoration of full capitalization took from several years to well over a decade. It also forced significant changes in pension formulas, the closure of DB programmes and the introduction of a wider range of DC or mixed solutions that transfer the greater part of the risk to individual participants.

I pointed out that in defined contribution schemes, the financial crisis translated directly into a significant fall in assets, which was particularly acute for participants retiring during or shortly after the crisis. In such cases, the negative consequences of the “bad date” risk, i.e. the wrong timing of retirement, came to pass – people leaving the labour market had no chance to rebuild their pension capital and received significantly diminished benefits. In the selected countries, the period during which an employee was obliged to purchase benefits with the funds accumulated in the PPE was extended. I also noticed that, regardless of the pension formula applied, the financial crisis had led to a decline in public confidence in capital solutions. The discussion has also resumed regarding the acceptability of a pure DC formula and the introduction of minimum guarantees for rates of return, as well as a more symmetrical distribution of risks associated with the functioning of occupational pension plans.

(3) Factors influencing the level of development of supplementary pension plans – publications [1.1] [2.3] [2.5] [2.6] [2.7] [3.2]

The level of development of supplementary pension provision depends on a number of factors. In publication [2.3] I showed that these include the amount of the benefits from the basic system, the level of wealth and propensity to save, the extent and type of participation of the employer and the state in supplementary pension plans, tax incentives and the level of financial education of participants and the state of development of the financial market in a given country. Basic pension schemes vary widely in terms of the amount of benefits (from those offering only a minimum pension to generous income-based pensions) and the way in which they are determined (pension formulas), despite the common objective of providing basic income during old age.

Supplementary pension plans, both mandatory and voluntary, are intended to supplement the basic income and the space to be filled is the level of the pension gap, i.e. the difference between the desired benefit and the income offered by the base system. Using OECD data (2011), I assessed that the highest pension gaps in Europe appear in Ireland, the UK and Belgium, while the lowest are in Portugal, Norway and the Czech Republic, which affects the level of participation in supplementary pension provision, with the obligation or quasi-obligation to participate in supplementary pension schemes playing a significant role.

I pointed out that a relatively high level of participation in supplementary pension plans occurs in the Czech Republic, Germany, Belgium, Ireland and Iceland. A positive correlation between the low level of benefits from the basic pension system and the high level of participation in the additional system was not observed in the majority of CEE countries, mainly due to the relatively low level of income (wealth) of citizens, the relatively short period the new multi-pillar systems have been functioning and the lack of a tradition of saving and experience of the functioning of financial markets. I confirmed this observation also in publication [2.5].

Regarding fiscal tools, I pointed out [2.3] that, especially in systems that are relatively young or operating in low-income societies, the development of additional pension protection may be stimulated by tax relief and exemptions, as well as subsidies from the state budget. Well-targeted incentives may increase participation in supplemental retirement plans for people from lower income groups and have the effect of postponing consumption in time (the income effect) as opposed to the less desirable shift of savings from other forms (the reallocation effect). I emphasized that incentives, however, are costly, and errors in their construction may result in an unintended redistribution towards wealthier individuals, who save for retirement more often and to a greater extent, or towards financial institutions, if they are not accompanied by appropriate policies and regulations limiting the risk of individual savers choosing the wrong pension product [2.6]. Moreover, I pointed out that they may not be effective in reducing the risk of inadequacy of pension benefits if their sole aim is to increase the level of participation, without looking after the adequate amount of retirement capital and proper construction of the pension product [2.5] [2.7]. The ineffectiveness of tax incentives may also result from barriers to participation in supplementary pension schemes on the supply side and not on the demand side, which incentives are supposed to affect. This occurs e.g. in the situation of a mismatch between products and the individual needs of savers [2.7].

Stimulating the development of supplementary pension provision may also apply to the functioning of employee pension programmes organised and financed by employers. Then the incentive for the development of these schemes from the point of view of individual savers is the simple act of paying a contribution by the employer, even if this is linked with an obligation on the part of the employee to pay a contribution as well. In recent years, in some countries (Great Britain, the United States, Poland, and in 2020 also Ireland) mechanisms have been introduced which assume automatic inclusion of employees in programmes created as obligatory by the employer (auto-enrolment) with the ability to withdraw from the programme at the employee's request. These solutions are usually accompanied by a mechanism of a mandatory supplement to the contribution paid by the employee with a contribution financed from the employer's funds or the state budget (matching contribution). In publication [2.7], together with John A. Turner and Jaroslav Vostatek, we pointed out that such a solution, based on inertia, may be effective in reducing barriers to the introduction of additional pension protection among people who have not yet been saving for retirement due to insufficient

knowledge about the ways of accumulating funds for old age and a lack of the financial knowledge needed to make individual investment decisions. We found that automatic enrolment in employee pension plans, introduced in the UK in October 2012, resulted in an increase in the level of participation in private pension plans for the lowest earners from 35% to 65% over the period 2012-2015. In addition, this solution has contributed to an almost complete elimination of the participation gap between women and men. We showed that the inertia effect is highly effective - the opt-out rate in the UK is only 9%.

In publication [1.1] we (together with Marcin Kawiński and Dariusz Stańko) pointed out that the introduction of additional tax and non-tax tools to private pension plans forces the application of stricter regulations in the area of the functioning of pension protection (I stressed it also in publication [2.6]). These usually have to do with forms of saving, contribution limits, ways in which funds are disbursed or a minimum period for accumulating capital. However, regulations that reduce the exposure of individual participants to risks by offering guarantees or limiting the level of costs are rarely applied. We stressed that the regulator's task in this case is to ensure appropriate levels of competition and transparency in financial markets.

Products offered on the supplementary pension market should be understandable to individual savers, transparent and efficient, both as investments and in terms of cost. They should allow their parameters to be adaptable to the needs of individual recipients, including the possibility for early use of pension funds for other important purposes (home purchase, education), [2.7]. Moreover, the “fair” sharing of risk that savers are exposed to is of great importance ([1.1] [3.2]). I also pointed out that making the best decisions in the area of supplementary pension provision is conditioned by individual savers having adequate financial literacy and pension awareness [2.3].

(4) Effects of tax incentives on supplementary pension provision – publications [2.5] [2.6] [2.7]

One of the tools most frequently used to increase participation in supplementary pension schemes is tax incentives. They are costly to use, but the effects are almost immediately visible in comparison to other mechanisms to stimulate additional savings for old age. Tax relief in supplementary pensions can take very different forms and may operate at the stage of saving or of paying out pension benefits. Moreover, they may lead to desired effects, i.e. increasing the savings rate and creating new savings (the income effect), as well as undesirable effects, i.e. only a shift of savings between different product forms (reallocation effect) and unintended redistribution of income from poorer to wealthier people.

In publication [2.7] we compared the effectiveness of tax incentives and non-fiscal tools (a quasi-mandatory enrolment in the plan and making the rules for joining and operating the plan more attractive from the point of view of individual needs) to stimulate the development of supplementary pension plans. We showed that the countries with the highest level of participation in supplementary pension plans (Czech Republic about 60% and Germany over 50%) offer an extensive system of tax incentives. We stressed that tax incentives in the form of a deduction of contributions from the tax base or from the actual tax then may not be effective in increasing the level of participation among the poorest people (e.g. the United States) if they do not pay tax (an effect of the amount of tax-exempt income and the use of a number of deductions, including for children). Some countries then apply direct subsidies to their pension accounts and facilitate access to schemes, including automatic enrolment with the ability to opt-out. A barrier to effectiveness in this case is also a smaller pension gap, which results from the

relatively higher compensation of previous earnings by means of a benefit from the basic system.

We found that in Germany, the additional pension security (*Riester-Rente*) operates under the EET tax regime (only benefits are taxed), and the incentives are in the form of a base amount of state subsidies plus additional subsidies depending on the number of children. We pointed out that subsidies that depend on the number of children significantly reduce the amount of the required contribution financed the individual saver's own funds (the sum of the contribution and subsidies must amount to min. 4% of the annual gross salary in order for the saver to be eligible to benefit from state subsidies). The individual contribution is deductible from the tax base, which increases the attractiveness of the solution. Tax incentives addressed in this way are effective in encouraging additional savings among people with a greater number of children. To date, studies have not shown their effectiveness in increasing participation in plans among people with the lowest incomes. We pointed out that a relatively high level of participation in private pension plans was achieved only after several years. In the first years of the *Riester-Rente*, the development of the market was hampered by excessively burdensome regulations and a guarantee of a positive nominal rate of return (guarantee of return on capital) introduced in these products, resulting in lower rates of return. We established that the costs of the incentives applied constitute a significant burden on public finances (EUR 3.5 billion in 2010).

In the Czech Republic, the high level of participation in individual pension plans was achieved thanks to progressive state matching contributions, which in the initial years amounted to 30-50% of the contributions paid and were then reduced to 23-30% of the amount paid by individual savers. In addition to employee contributions and supplementary contributions from the state budget, pension plans can be funded by employer contributions, which are however not mandatory. We pointed out that the Czech supplementary pension plan is one of the most generous in terms of tax benefits. Assuming the payment of a benefit in the form of a lifetime annuity, no tax is collected at any stage of the accumulation and disbursement of funds (EEE regime), and in the case of disbursement of funds in another form, only the deferred tax on capital gains is collected (ETE or EEpT tax regime). We established that these discounts have led to a high level of participation (60% in 2014). However, the problem is the low level of contributions (the average contribution rate is 2% of earnings), resulting from the use of the supplementary pension system primarily to reduce taxes rather than to accumulate long-term retirement savings. Contributions do not normally exceed the amount that makes it possible to take advantage of the maximum state subsidy. This results in a low level of accumulated assets and low balances in individual pension accounts. We also showed that the system of benefits has proved ineffective in encouraging young people to postpone retirement (more than half of participants are over 60 years old). The high level of overall participation in the supplementary pension scheme was achieved in this case at a price of CZK 18 billion (2015), corresponding to 41% of the value of contributions paid by savers and their employers.

The system of tax incentives used in supplemental pension provision in the Czech Republic was also the subject of the analysis I presented in publication [2.5], including a comparison of the functioning of supplementary pension protection systems in selected CEE countries (Bulgaria, Czech Republic, Poland, Romania, Slovakia). I found that tax incentives are applied in all the CEE countries analysed. The level of participation in supplemental pension plans depends on the generosity of tax incentives offered. The highest level of participation in third-pillar solutions was recorded in the Czech Republic (60%) and Slovakia (35%). In the remaining cases, participation in employer pension programmes and individual plans remains

at a low level. I pointed out that significant fiscal incentives have proved effective in bringing individual savers into the supplementary pension system but have not produced the expected results in terms of the volume of assets accumulated to finance adequate pensions in old age. This is a result of the low level of contributions to individual plans (Czech Republic) and low rates of active participation in plans (e.g. Poland), as well as the low investment and cost efficiency of pension products offered in this element of old age security.

The effects of the use of tax incentives in Polish supplementary pension provision are the subject of publication [2.6]. I preceded a detailed analysis of taxation of the Polish supplementary pension system by a comprehensive classification of the types of tax incentives and tax regimes used, with an assessment of the impact of the timing of tax collection on the savings effect. During a review of pension security solutions, it found that the most frequently used regimes are TEE (taxation only on payments) and EET (tax collected only on the payment of a benefit), which from an economic point of view lead to the same effects. However, the effectiveness of their impact on the willingness to save more varies, which is due to the preference of individuals for current consumption – in order to encourage them to save, an immediate stimulus is needed in the form of the ability to deduct contributions from the tax base or tax amount. I pointed out that the assessment of the effects of tax incentives in supplementary pension schemes is inconclusive. Studies to date have shown that incentives increase the level of long-term pension savings, but this may be the result of a shift of previously accumulated savings (the reallocation effect) or a reduction in current consumption (the income effect). In most countries mixed effects occur, with wealthier people typically reallocating savings and those with low and middle incomes giving up current consumption, increasing the savings rate. Affluent people who are of preretirement age also accumulate new savings. The effects of incentives depend to a large extent on the age and level of income of those taking advantage of them. I pointed out that in the case of people with low and middle incomes, the most effective tool for creating new savings is a subsidy.

In Poland, tax incentives operate in each of the elements of additional pension provision: employee pension plans (PPE), individual pension accounts (IKE) and individual pension security accounts (IKZE). I showed that these are, however, of a different nature, which results in the application of different tax regimes under this part of the system - taxation of contributions and exemption from taxation of other parts (TEE regime applicable to PPEs and IKEs), and exemption of contributions from taxation, exemption from investment gains tax and preferential taxation of benefits (the EEpT model applicable to IKZE). I found that incentives did not turn out to be effective in increasing the level of participation in additional plans – in PPEs, IKEs and IKZEs, only about 2 to 5% of economically active people participated (2014). It noted that the active participation rates were even lower, as only one in three IKEs and one in six IKZEs received contributions in a given year. Using data obtained from the Ministry of Finance, I assessed the effects of tax incentives applied to IKZEs. This is the first study of this type conducted for the Polish supplementary pension system. I found that in the first year of operation (2012), IKZEs were opened mainly by the wealthiest people (48% of those benefiting from the deduction belonged to the top 10% in terms of income). They also made the highest contributions, which was partly a consequence of the limits determined by the level of income in the previous tax year. I estimated that two thirds of people taking the deductions for IKE contributions belong to the top 10% of earners, and the deductions made by them account for 90% of the decrease in PIT revenue on this account. Individuals from lower income groups (the lowest 60%) constituted only 10.6% of the total number those taking a deduction. These results

indicate a redistribution toward the wealthiest individuals affected by incentives in the supplementary pension scheme. Drawing on the results of research conducted in other countries, this may indicate the dominance of the reallocation effect over the rather negligible income effect. Taking into account the low effectiveness of the applied solutions in encouraging the poorest people to save more, I proposed that the existing relief be replaced with an incentive in the form of a state subsidy or degressive tax relief.

Moreover, I emphasized [2.6] that despite the expense and described weaknesses of the tax incentives applied, what should be appreciated is their impact on financial education and raising retirement awareness among individuals and supporting the establishment of long-term savings (even if they result from the reallocation of funds), that support economic development.

(5) The role of education and pension awareness in reducing information asymmetry on pension market – publications [2.1] [2.8] [3.1]

The proper development and functioning of the supplementary pension market depend to a large extent on the range of pension products offered by financial institutions. These products should be understandable, transparent and inexpensive, which is possible only with an appropriate level of competition, implementation of appropriate regulatory and supervisory solutions and appropriate financial education of individuals [2.1]. As Barr and Diamond (2014) pointed out, effective financial education is a major challenge and its possibilities are limited. Individual savers face problems not only with access to information, but also with assimilation of incomprehensible but usually complete information on the operating principles of pension products.

Pension awareness is an element of broader financial awareness and cannot be analysed in isolation from the latter, especially when the pension system is viewed comprehensively, i.e. considering supplementary solutions that are usually based on classical financial instruments.

In publication [2.8], together with Ewa Cichowicz, we made an attempt to assess the awareness about voluntary retirement savings in Poland. Based on expert publications, research reports and bulletins from research agencies, we determined that the pension awareness of Poles is low, especially in the area of forms of retirement security. The majority of Poles do not save for old age, pointing to wages that are too low as the main obstacle. At the same time, about half of the respondents (Kronenberg Foundation 2015) were not able to assess the amount of their future pension from the basic pension system. We found that the majority of respondents were not aware about the amount of contributions or capital that they need to accumulate in order to receive the benefit in retirement they desire.

Every fifth respondent (TNS Polska 2014) would like to receive several hundred zlotys in monthly pension from pension capital amounting to several thousand zlotys. We established that this is due to ignorance of the basic principles of financial planning and the simplest financial mathematics, as well as the lack of internalisation of the operating principles of the basic pension system. One in two respondents is not aware that prolonged professional activity causes a substantial increase in the pension from the basic system (Czapiński and Góra 2016). We showed that a low-level of knowledge about the functioning of the public pension system may have a negative impact on behaviour regarding additional savings for old age. Especially in the situation where the majority of Poles are not able to name any institutional form of saving in the third pillar on their own, and when choosing from among several proposals, open pension funds are most often named.

In addition, we was found that among the factors taken into account when deciding which pension product to choose, the greatest role is played by returns, flexibility (the possibility of early withdrawal and temporary suspension of payments) and a guarantee of a return on the capital invested. The rate that would encourage saving was indicated as 7% p.a. or higher. We regarded savers' expectations as far from what the market can offer and the level of long-term interest rates.

Previous research on the economic knowledge of Poles and their attitudes towards saving has indicated the existence of gaps in knowledge about retirement in the following areas: the level of long-term interest rates, the amount of capital necessary to achieve the desired monthly pension benefit, products dedicated to supplementary retirement savings, the rules of calculating pension benefits and the rules of taxation of supplementary pension plans. Low pension knowledge translates into a high level of information asymmetry, which is one of the basic weaknesses of supplementary pension markets and leads to the phenomenon of passivity or the purchase of products not adapted to individual preferences of savers (misseling). Both negative effects are further exacerbated by the excessive complexity of products and the incomprehensibility of the language used in pension product contracts.

In article we pointed out that in the face of low pension awareness, it is essential that educational measures be taken to reduce the risk of poor retirement decisions. This education must meet the conditions of the understandability and repeatability of the content and be tailored to the individual preferences of the recipients. Most current financial education is short-term in nature, however, while only measures with a long-term time horizon can lead to a significant reduction of the gaps in pension awareness and financial competence.

The issue of the decisions and financial literacy of older people is the subject of the analysis presented in publication [3.2]. Together with Sylwia Pieńkowska-Kamieniecka, we emphasized that in view of the increasing use of the defined contribution formula in pension systems, financial security in retirement will increasingly depend on the individual choices of seniors made based on their financial literacy. We pointed out that the majority of the most significant financial decisions are now taken by people aged between 50 and 60, and the risk of making poor financial decisions (research findings for the United States) is the lowest for people around 53 years of age. The curve of errors accompanying financial decisions with age is U-shaped (Agarwal et al. 2008). We noticed that the effectiveness of financial decisions (financial competencies) decreases smoothly after the age of 60, while the sense of confidence and subjective assessment of one's own financial literacy increases (Finke, Howe and Huston 2011). On the basis of research by the Kronenberg Foundation, we established that a similar relationship also exists in Poland.

We pointed out that in Poland as well, older people are a growing group of potential investors in financial markets, and the average disposable income per person in retired households is higher than in the households of working people. Therefore, they should not be ignored when constituting the range of financial products offered. We found that older people more often have savings, but at the same time feel a lack of appropriate financial literacy the most and admit to having very poor knowledge of the possibilities for saving and investing in financial markets. Moreover, older people in Poland are characterised by an aversion to investment risk and a preference for simple products that are well-known and guarantee a return on invested capital. Therefore, the growing level of complexity of dedicated financial products for households does not fully meet their preferences and may lead to the purchase of inappropriate products by older people or their financial exclusion, if the market does not offer products tailored to the needs of seniors. We stressed the necessity of an information and education campaign dedicated to the elderly that primarily uses traditional media.

To summarise, my contribution to research on private pension plans presented in the scientific publications cycle submitted for assessment is the following:

- (1) I have identified how **the role of supplementary pension plans in pension provision** has changed, in particular with regard to reformed basic pension systems, taking into account the architecture of multi-pillar old-age pension systems and the functions assigned to their different components,
- (2) I have identified the **main risks that occur in private pension plans from the point of view of individual participants and assessed the risk-sharing arrangements** applied in these plans and their consequences, taking into account population changes and the financial crisis,
- (3) I have provided additional knowledge of **the factors influencing the level of development of supplementary pension plans**, with a particular focus on supplementary pension plans in the countries of Central and Eastern Europe,
- (4) I have examined **the effects of the use of tax incentives** in voluntary supplementary pension plans, with a particular focus on the Polish pension system,
- (5) I have made **an assessment of the role of education and pension literacy in reducing information asymmetries** in the private pension market, which can lead to mis-selling and the functioning of inefficient and inappropriate products for the needs of individual savers.

In the coming years, I intend to continue my research in the area of the mismatch between pension products and the needs of individual customers, as well as the assessment of the weaknesses of the supplementary pension products market in Poland. I am currently pursuing these goals by managing a research project financed by the National Science Centre “Readability, transparency and efficiency of individual pension products” (contract no. 2016/21/D/HS5/03905), which will end in 2020. The results of the study will be published in the years 2019-2020.

4. Description of other scientific and research achievements

In addition to the cycle of publications described above, my remaining research activity after my doctorate can be attributed to the following research strands:

- 1) the evolution of pension systems and changes in social security,
- 2) income redistribution in pension systems,
- 3) sovereign wealth funds in financing old-age pensions,
- 4) the effectiveness and efficiency of supplementary pension plans,
- 5) consumer protection, information policy and information asymmetry in the market for supplementary pension products.

In the recent years my research focuses mainly on the last mentioned area due to its growing role and importance in proper functioning of pension and financial markets.

4.1. The evolution of pension systems and changes in social security

In the first stream, I conducted my own original research on the evolution of pension systems around the world as part of leading the projects: “Second wave of pension reforms vs modified multipillar pension system model of World Bank” [*Druga fala reform emerytalnych w świetle zmodyfikowanej wielofilarowej koncepcji Banku Światowego*] (2010, Funding for Young Researchers, Ministry of Science and Higher Education, No. 02/E/0013/10), “The construction

of old-age pension systems vs coverage of supplementary pension plans” [*Konstrukcja systemów emerytalnych a powszechność uczestnictwa w dodatkowym zabezpieczeniu emerytalnym*] (2012, Funding for Young Researchers, Ministry of Science and Higher Education, No. 02/BMN/0007/12) and “Evolution of occupational pension plans in times of demographic changes and financial crisis - trends and main challenges” [*Ewolucja pracowniczego zabezpieczenia emerytalnego w świetle przemian demograficznych oraz załamania na rynkach finansowych – tendencje zmian i główne wyzwania*] (2013, Funding for Young Researchers, Ministry of Science and Higher Education, No. 02/BMN/0001/13). I analysed changes in Polish old-age pension system with special focus on benefit adequacy, pay-out forms and the impact of demographic changes on pension security when I participated in the projects: “Pension benefits vs changing needs in old age - Are the existing formulas adequate?” [*Świadczenia emerytalne a zaspokojenie zmieniających się potrzeb w okresie dezaktywizacji zawodowej – analiza adekwatności stosowanych rozwiązań*] (2014-2015, principal investigator, funding: Ministry of Science and Higher Education, statutory research, No. KAE/S14/12/15), “Old-age pension crisis - reasons and countermeasures” [*Kryzys emerytalny: przyczyny i możliwości przeciwdziałania*] (2012, investigator, funding: scientific grant financed by Rector of Warsaw School of Economics, grant No. 89/E/02/12, project leader: prof. Marek Góra) and “Polish citizens’ awareness and prudence regarding insurance” [*Badanie świadomości i przezorności ubezpieczeniowej Polaków*] (2013, investigator, project leader: prof. dr hab. Tadeusz Szumlicz, funding: Ministry of Science and Higher Education, statutory research, No. KES/S/04/13).

Transformations of the area of social security services I examined by taking part in a project financed by the European Social Fund, *The Socially Responsible University* [*Społecznie Odpowiedzialna Uczelnia*] (2009-2011, TWP Teachers College in Warsaw, funding by: POKL, Priority IV. Higher education and science, Measure 4.2. Development of qualifications of R&D system staff and increasing awareness of the role of science in economic development). In this project, I was an expert in the Social Policy working group, whose task was to develop a new approach to social services.

The effect of my scientific work in the area of the evolution of pension systems and changes in social security is most of the publications included in the cycle presented for assessment, i.e. publications [1.1] [2.1] [2.2] [2.2] [2.3] [2.4] [2.5] [3.2], and the following articles in scientific journals and monographs:

- [4.1] Owczarek J., Plak J. (2011), *Usługi w obszarze ubezpieczeń społecznych*, in: *Przeobrażenia sfery usług w systemie zabezpieczenia społecznego w Polsce*, ed. M. Grewiński, B. Więckowska, Wyższa Szkoła Pedagogiczna TWP w Warszawie, Warszawa.
- [4.2] Owczarek J. (2011), *Druga fala reform emerytalnych w świetle zmodyfikowanej wielofilarowej koncepcji Banku Światowego*, „Rozprawy Ubezpieczeniowe”, nr 10 (1/2011).
- [4.3] Rutecka J. (2012), *Wyplata świadczeń emerytalnych z kapitałowej części systemu emerytalnego w Polsce*, „Wiadomości Ubezpieczeniowe”, nr 4/2012, p. 81-99.
- [4.4] Góra M., Rutecka J. (2013), *System emerytalny*, in: *Rynek pracy wobec zmian demograficznych*, red. M. Kielkowska, „Zeszyty Demograficzne”, nr 1, Instytut Obywatelski, Warszawa, p. 160-175.
- [4.5] Rutecka J. (2013), *Pomysły na wypłatę emerytur ze środków zgromadzonych w otwartych funduszach emerytalnych*, „Ubezpieczenia społeczne. Teoria i praktyka”, nr 6 (111), p. 9-17.
- [4.6] Rutecka J. (2014), *System emerytalny po zmianach od 2014 r.*, „Ubezpieczenia społeczne. Teoria i praktyka”, nr 1 (118), p. 2-7.
- [4.7] Pieńkowska-Kamieniecka S., Rutecka J. (2014), *System emerytalny w Niemczech - analiza aktualnych tendencji na tle dotychczasowego procesu reformowania*, „Ubezpieczenia społeczne. Teoria i praktyka”, nr 6 (123), p. 19-33.

- [4.8] Rutecka J., Więckowska B. (2015), *Rynkowa polityka społeczna*, in: M. Grewiński, A. Karwacki (ed.), *Innowacyjna polityka społeczna*, Wydawnictwo Wyższej Szkoły Pedagogicznej im. Janusza Korczaka w Warszawie, Warszawa, p. 132-146.
- [4.9] Rutecka J. (2015), *Świadczenia emerytalne a zaspokojenie zmieniających się potrzeb w okresie dezaktywizacji zawodowej*, "Praca i Zabezpieczenie Społeczne", nr 8/2015 (article on CD-ROM), p. 181-199.
- [4.10] Rutecka-Góra J. (2018), *Wysokość emerytur z nowego systemu emerytalnego a akceptacja społeczna dla wprowadzonych zmian*, in: *Diagnoza systemu ubezpieczeniowego w Polsce dwie dekady po reformach*, ed. J. Rodzinka, T. Skica, Polskie Stowarzyszenie Ubezpieczenia Społecznego, Jasło, p. 26-41.

Research in this area will also be continued in the coming years, e.g. by participating, as a researcher, in the project "Pension risk and the predicted changes in the demand for goods and services of older Poles" [*Ryzyko emerytalne w świetle prognozowanych zmian zapotrzebowania na towary i usługi konsumpcyjne seniorów w Polsce*], led by dr Kamila Bielawska and financed by the National Science Centre (2017-2020, OPUS 12, contract no. 2016/23/B/HS5/03768).

4.2. Income redistribution in pension systems

In the first years after earning my doctorate, I also continued my research in the area of pension redistribution, focusing on the effects of the redistributive tools applied (e.g. minimum pensions) and assessing redistribution with an international comparative approach. These comparative analyses were related to my participation as the main researcher in the project "Income adequacy, redistribution and efficiency in pension systems. Comparative analysis with the application of quantitative methods" [*Adekwatność dochodowa, redystrybucja oraz efektywność w systemach emerytalnych. Analiza porównawcza z wykorzystaniem metod ilościowych*] (2014-2016, project leader: dr hab. Filip Chybalski, source of funding: NCN, OPUS 5, grant No. DEC-2013/09/B/HS4/01516). The results of this second research stream I published in the following titles:

- [5.1] Owczarek J. (2010), *Problemy redystrybucji dochodowej w systemach zabezpieczenia emerytalnego*, in: *Społeczne aspekty rozwoju rynku ubezpieczeniowego*, ed. T. Szumlicz, Oficyna Wydawnicza SGH, Warszawa.
- [5.2] Więckowska B., Owczarek J. (2011), *Ryzyko dopłaty do emerytury minimalnej w nowym systemie emerytalnym w Polsce*, „Zeszyty Naukowe UE w Poznaniu”, nr 181.
- [5.3] Rutecka J. (2015), *Progresywność europejskich systemów emerytalnych - ujęcie porównawcze*, in: *Współczesne problemy systemów emerytalnych. Wybrane zagadnienia*, ed. F. Chybalski, E. Marcinkiewicz, Wydawnictwo Politechniki Łódzkiej, Łódź, p. 28-39.
- [5.4] Rutecka J. (2016), *Redystrybucja*, in: *Adekwatność dochodowa, efektywność i redystrybucja w systemach emerytalnych. Ujęcie teoretyczne, metodyczne i empiryczne*, ed. F. Chybalski, Wydawnictwo C.H. Beck, Warszawa, p. 43-53.
- [5.5] Rutecka J. (2016), *Redystrybucja: pomiar i ocena*, in: *Adekwatność dochodowa, efektywność i redystrybucja w systemach emerytalnych. Ujęcie teoretyczne, metodyczne i empiryczne*, ed. F. Chybalski, Wydawnictwo C.H. Beck, Warszawa, p. 120-135.
- [5.6] Rutecka J. (2016), *Czy porządki emerytalne różnią się pod względem redystrybucji?*, in: *Adekwatność dochodowa, efektywność i redystrybucja w systemach emerytalnych. Ujęcie teoretyczne, metodyczne i empiryczne*, ed. F. Chybalski, Wydawnictwo C.H. Beck, Warszawa, p. 201-213.

4.3. Sovereign wealth funds in financing old-age pensions

The third research stream had to do with conducting scientific analysis as part of the project “Sovereign wealth funds in financing old-age pensions” [*Państwowe fundusze majątkowe w finansowaniu systemu zabezpieczenia emerytalnego*] I led in years 2011-2012 (funding: Ministry of Science and Higher Education, Funding for Young Researchers, No. 02/BMN/0006/11). The aim of the project was to examine the legitimacy of creating and, above all, to determine the advisability of maintaining resources within the sovereign wealth funds in the pension system and to answer the question, given the current problems with financing pay-as-you-go systems, whether the creation of public reserve pension funds is justified. The study analysed the functioning of pension reserve funds in Norway, Ireland, New Zealand and Poland. The results of the analysis are presented in publications:

- [6.1] Rutecka J. (2012), *Państwowe fundusze majątkowe o celu emerytalnym – charakterystyka i zasady funkcjonowania*, „Rozprawy Ubezpieczeniowe”, nr 13 (2/2012).
- [6.2] Rutecka J. (2013), *Funkcjonowanie państwowych funduszy rezerwowych o celu emerytalnym – analiza doświadczeń Irlandii i Nowej Zelandii*, „Rozprawy Ubezpieczeniowe”, nr 14 (1/2013).
- [6.3] Rutecka J. (2013), *Fundusz Rezerwy Demograficznej – analiza działalności oraz konsekwencje przedterminowego wykorzystania aktywów*, „Studia i Prace Kolegium Ekonomiczno-Społecznego”, nr 3 (15), Szkoła Główna Handlowa w Warszawie.
- [6.4] Rutecka J. (2014), *Funkcjonowanie państwowych funduszy rezerwowych o celu emerytalnym na przykładzie doświadczeń Norwegii*, „Kwartalnik Kolegium Ekonomiczno-Społecznego STUDIA i PRACE”, nr 4(20).

4.4. The effectiveness and efficiency of supplementary pension plans

The most recent period of my scientific activity I have devoted to a large extent to research on the functioning of supplementary pension systems, in particular their effectiveness and the efficiency of the mechanisms applied. I have conducted analyses of the functioning of supplementary pension provision in Poland, as well as comparative studies covering selected European countries, as well as the United States and New Zealand. These are distinguished by their perspective on the functioning of pension plans from the point of view of the individual participant, his or her interests, needs and preferences. My scientific activity in this area was connected to two scientific projects carried out as part of statutory research, i.e.: „Guarantees in supplementary pension plans in CEE countries” [*Podział ryzyka i zakres gwarancji w dodatkowych planach emerytalnych w krajach Europy Środkowo-Wschodniej*] (2015-2016, principal investigator, No. KAE/S15/27/15) and „Effects of tax incentives in supplementary old-age pension system in Poland” [*Efekty zachęt podatkowych w dodatkowym zabezpieczeniu emerytalnym*] (2018-2019, principal investigator, KAE/S18/32/18). I am also the scientific editor of one multi-author scientific monograph [7.2], which is characterized by a broad, multidimensional approach to the issue of long-term savings.

Since 2014, I have also taken part in cyclical, annual research on the efficiency of supplementary pension plans conducted within the projects „Study on Private Pensions” and „Real Returns of Pension Savings” conducted by Better Finance (European Federation of Investors and Financial Services Users), financed in part by the European Commission. The effect of these works are monographs on the efficiency of supplementary pension plans in the European Union countries, presenting the variety of products and mechanisms offered, types and effects of tax incentives, as well as nominal and real rates of return, including fees and taxation. My participation consists in the preparation of the part of the report concerning the efficiency of the Polish supplementary pension system. So far, I have participated in five annual rounds of this study.

I also studied the effectiveness of solutions applied in supplementary retirement security in Poland by leading the team that prepared a report [7.1] presented and discussed during a debate organised by the Chancellery of the President of the Republic of Poland. This report contains the first comprehensive diagnosis of the supplementary pension system in Poland. Thanks to data obtained from the Ministry of Finance, we were able to assess the effects of tax incentives and to determine the directions of income redistribution through tax incentives offered to holders of Individual Retirement Security Accounts (IKZE). It also includes recommendations for changes that could limit the negative phenomena currently appearing on the supplemental pension market (a low rate of participation by people from lower income groups and the reallocation effect generated by the vast majority of savers).

Evaluation of the efficiency of individual pension products is also one of the elements of the project “Readability, Transparency and Efficiency of Individual Pension Products” [*Zrozumiałość, przejrzystość i efektywność indywidualnych produktów emerytalnych*], which I have been conducting since 2017 as the manager of the NCN-funded grant (Sonata 11, grant no. 2016/21/D/HS5/03905). The publication with the partial results of this project [7.8] is currently in the peer review process with a scientific journal.

The results of my research in the area of effectiveness and efficiency of supplementary pension systems are presented in [2.6] [2.7], which are part of the cycle presented for assessment, as well as in the following publications:

- [7.1] Rutecka J. (ed.) (2014), *Dodatkowy system emerytalny w Polsce - diagnoza i rekomendacje zmian*, report prepared by the team led by J. Rutecka, Towarzystwo Ekonomistów Polskich, Warszawa, 104 pp.
- [7.2] Rutecka-Góra J. (ed.) (2016), *Długoterminowe Oszczędzanie. Postawy, strategie i wyzwania*, Oficyna Wydawnicza SGH, Warszawa, 354 pp.
- [7.3] Berthon J., Davydoff D., Gabaut L., Klages M., Prache G., Rossi M., Rutecka J., Struwe K., Viver J.M. (2014), *Pension Savings: The Real Return. 2014 Edition*, The European Federation of Financial Services Users, Brussels, 194 pp.
- [7.4] Berthon J., Christoff L., Davydoff D., Fulea F., Gabaut L., Gunnarsdottir J., Houdmont A., Klages M., Kortessluoma N., Mujagić E., Prache G., Rossi M., Rutecka J., Šebo J., Silva F., Struwe K., Virdzek T., Viver J.M. (2015), *Pension Savings. The Real Return. 2015 Edition*, Better Finance, Brussels, 388 pp.
- [7.5] Berthon J., Christoff L., Davydoff D., Fulea F., Gabaut L., Gunnarsdottir J., Houdmont A., Kavanagh A., Mujagić E., Prache G., Rossi M., Rutecka J., Šebo J., Struwe K., Virdzek T., ADICAE (2016), *Pension Savings. The Real Return. 2016 Edition*, Better Finance, ed. S. Allgayer, M. Klages & A.R. Toscano, Brussels, 420 pp.
- [7.6] Allgayer S., Christoff L., Davydoff D., Gabaut L., Hagen J., Houdmont A., Klages M., Mączyńska A., Mujagić E., Nielsen M., Prache G., Toscano A.R., Rutecka-Góra J., Šebo J., Vial M., Voicu Ş. (2017), *Pension Savings: The Real Return. 2017 Edition*, Better Finance, Brussels, 518 pp.
- [7.7] Andersen C., Christoff L., Davydoff D., Diaz M., Gabaut L., Hagen J., Herrero F., Houdmont A., Mączyńska A., Marchionni L., Mešťan M., Mujagić E., Naacke G., Prache G., Rutecka-Góra J., Šebo J., Voicu Ş.D., Strandvåg Nagell L. (2018), *Pension Savings: The Real Return. 2018 Edition*, Better Finance, Brussels, 498 pp.
- [7.8] Rutecka-Góra J. (2019), *The efficiency of supplementary old-age pension system – the case of Polish Voluntary Pension Funds* (article submitted to a scientific journal).

4.5. Consumer protection, information policy and information asymmetry in the market for supplementary pension products

The last of the main areas of my research activity is the issue of consumer protection in the supplementary pension market, with particular emphasis on information policy and the fundamental weaknesses resulting from information asymmetry. I developed my research interests in this area thanks to the completion of two projects financed by the Ministry of Science and Higher Education for statutory research: “Assessment of supplementary pension plans from individual participant’s perspective” [*Potrzeby, możliwości i problemy ewaluacji dodatkowych planów emerytalnych z punktu widzenia indywidualnego odbiorcy*] (2016-2017, principal investigator, No. KAE/S16/15/16) and “Pension awareness and information asymmetry on Polish supplementary pension market” [*Świadomość emerytalna i asymetria informacyjna na rynku dodatkowych produktów emerytalnych w Polsce*] (2017-2018, principal investigator, KAE/S17/01/17). In 2017 I started a broad and interdisciplinary research project “Readability, Transparency and Efficiency of Individual Pension Products” [*Zrozumiałość, przejrzystość i efektywność indywidualnych produktów emerytalnych*] (2017-2020, principal investigator and project leader, funding: National Science Centre in Poland, Sonata 11, grant no. 2016/21/D/HS5/03905). The aim of the project is to assess the transparency of construction, the comprehensibility of language and the efficiency of individual pension contracts offered in Poland. The study is of great social importance as it is the first project of its kind to comprehensively analyse the individual pension products offered, taking into account both economic and linguistic factors (the level of complexity of the content of contracts and the degree of comprehensibility of the language). It may contribute to the formulation of a theory combining the level of understandability of financial services contracts offered to individuals with the level of profitability and expense of these products. The project will be completed by 2020.

The effect of undertaking a new research stream in the area of consumer protection and the position of the consumer in the supplementary pension market were publications [2.8] [3.1], which are included in the main cycle, as well as the titles presented below. Further articles will be published in the coming years, especially after the completion of the NCN project.

- [8.1] Owczarek J. (2010), *Reprezentacja konsumenta na rynku ubezpieczeń w Polsce*, w: *Społeczne aspekty rozwoju rynku ubezpieczeniowego*, ed. T. Szumlicz, Oficyna Wydawnicza SGH, Warszawa.
- [8.2] Rutecka-Góra J. (2019), *Supplementary Pension Schemes: Need, Possibilities and Problems with Evaluation from the Perspective of An Individual Saver*, „Problemy Polityki Społecznej. Studia i Dyskusje”, No. 44 (1).

Summary of publishing accomplishments

My publishing output after earning my doctoral degree includes 20 articles published in ranked scientific journals (including five as co-author, one in a journal on the JCR list, four in English, and two review articles), one scientific monograph (which was based on my doctoral dissertation), twelve chapters in scientific monographs (including four as co-author) and the scientific editorship of one multi-author monograph.

Moreover, I published six articles in non-ranked journals, and was the co-author of six monographs, five of which were reports and one was a handbook.

The parametric evaluation of my entire output after earning my doctoral degree (as of 6 March 2019) is presented in the table below.

Table 2. Parametric assessment of scientific achievements after a doctoral degree

	Number of citations	H-Index
Google Scholar	204	8
Web od Science CC	2	1
Scopus	3	2
BazEkon	136	6

Total number of Ministry of Science and Higher Education (MNiSW) points for publications (without correction for co-authorship): **212**.

Awards for scientific and research activities

I was the recipient of the following awards for scientific activity:

- Rector’s Study Grant, Warsaw School of Economics (SGH) (2017) for exceptional scientific achievement, for obtaining external funding for SGH as research project manager (“Readability, Transparency and Efficiency of Individual Pension Products” [*Zrozumiałość, przejrzystość i efektywność indywidualnych produktów emerytalnych*], 2017-2020, funding: National Science Centre in Poland, Sonata 11, grant no. 2016/21/D/HS5/03905),
- Rector’s Study Grant of the Rector, Warsaw School of Economics (SGH) (2013) for publishing an article in a top-ranked journal (Góra M., Rutecka J., 2013, *Elastyczny system emerytalny a obecne i przyszłe potrzeby jego uczestników* [Flexible Pension System Aiming at Needs of Its Participants], "Ekonomista", nr 6: 735-753),
- Rector’s Award, Warsaw School of Economics (SGH) (2013), for scientific work, for publishing an article in 2012 in a journal listed in Journal Citation Reports (Kawiński M., Stańko D., Rutecka J., 2012, *Protection mechanisms in the old-age pension systems of the CEE countries*, „Journal of Pension Economics and Finance”, Volume 11, Issue 04: 581-605),
- Rector’s Group Award, Warsaw School of Economics (SGH) (2011), second-degree award for achievements in the area of science (for a book *Społeczne aspekty rozwoju rynku ubezpieczeniowego* [Social Aspects of the Development of Insurance Market], Oficyna Wydawnicza SGH, Warszawa 2010),
- Rector’s Individual Award, Warsaw School of Economics (SGH) (2011), second-degree award for achievements in the area of scientific activity (for the Ph.D. dissertation
- Professor Tadeusz Sangowski Honorary Award, “Debiut Ubezpieczeniowy [Insurance Debut]” (2011) awarded by the Chamber of Insurance and Risk Management (IGUiOR) for distinguished scientific publications, significant achievements in insurance practice as well as cooperation with IGUiOR.

Scientific conferences

I have actively taken part in several dozen national and international scientific conferences, presenting papers of which I was the author or co-author. The full information on conferences is enclosed in the “List of scientific achievements” [*Wykaz dorobku habilitacyjnego*, attachment No. 6]. I regard the following 9 local, 9 international and 2 foreign conferences in years 2012-2018 as the most important:

1. Rutecka-Góra J., *Seniorzy na rynku finansowym - stan wiedzy, asymetria informacyjna i działania zmierzające do jej ograniczenia*, 5th International Conference ESPANet POLSKA 2018 "Demographic change, public finance, social service: Bermuda Triangle of social policy?", Warszawa, 26-28 September 2018.
2. Rutecka-Góra J., *Świadomość emerytalna i asymetria informacyjna na rynku dodatkowych produktów emerytalnych w Polsce*, VIII International Scientific Conference „Wyzwania rynku pracy, ubezpieczeń i polityki senioralnej w kontekście starzenia demograficznego”, Olsztyn 17-18 September 2018.
3. Rutecka-Góra J., *Polityka informacyjna instytucji emerytalnych w Polsce – realia a potrzeby oszczędzających*, XXXV Social Politicians' Conference „Współczesne wyzwania polityki społecznej”, Olsztyn, 5-7 June 2017.
4. Pieńkowska-Kamieniecka S., Walczak D., Rutecka-Góra J., *Willingness to redistribution in the society - evidence from the solidarity game*, ENRSP seminar "Pensions, Justice and Culture", Poznań , 22 September 2017 (presented by: D. Walczak and S. Pieńkowska-Kamieniecka),
5. Rutecka-Góra J., Turner J., *Extending Pension Coverage: Tax Versus Non-Tax Incentives*, ENRSP seminar "Pensions, Justice and Culture", Poznań , 22 September 2017 (presented by: J.A. Turner),
6. Rutecka J., *Podział ryzyka w dodatkowych planach emerytalnych w krajach Europy Środkowo-Wschodniej*, II International Scientific Conference „PENSION SECURITY” [Zabezpieczenie emerytalne], Wrocław, 3-4 November 2016.
7. Rutecka J., Cichowicz E., *Świadomość Polaków w zakresie dodatkowego oszczędzania na starość - próba oceny oraz identyfikacji niezbędnych działań*, III International Conference ESPANet Poland 2016 "Social Investment and Development", Warszawa 22-24 September 2016 r.
8. Rutecka J., *Efektywność dodatkowego zabezpieczenia emerytalnego w Polsce*, Social Policy Congress, Warszawa, 13-15 June 2016.
9. Rutecka J., *Zachęty podatkowe w dodatkowym oszczędzaniu na starość*, scientific conference „Ubezpieczenia wobec wyzwań XXI wieku”, Rydzyna, 16-18 May 2016.
10. Rutecka J., *Old-age pension benefits in Poland - do they meet changing needs of the retired?*, International Pension Conference “Systemy zabezpieczenia społecznego wobec wyzwań demograficznych, ekonomicznych i technologicznych”, Poznań 24-25 September 2015.
11. Rutecka J., *How redistributive are old-age pension systems in the EU?*, ENRSP Seminar „Security, responsibility and property of pensions”, Leuven, 10-11 September 2015.
12. Rutecka J., *Zachęty podatkowe w dodatkowym oszczędzaniu na starość*, XXXIII Social Politicians' Conference "Współczesne koncepcje w polityce społecznej - wyzwania i realia", Toruń, 17-19 June 2015.
13. Rutecka J., *Ewolucja pracowniczych programów emerytalnych w obliczu przemian demograficznych*, scientific conference „Państwo, regiony i miasta wobec przemian demograficznych”, Opole-Kamień Śląski, 12-15 May 2014.
14. Rutecka J., *Potrzeby, możliwości i problemy ewaluacji dodatkowego zabezpieczenia emerytalnego*, XXXII Social Politicians' Conference „Polityka społeczna w cyklu życia. Teoria-Badania-Praktyka”, Brzeziny 16-18 June 2014.
15. Rutecka J., *Ewolucja pracowniczych programów emerytalnych w reakcji na kryzys finansowy - tendencje zmian*, III Pension Conference, Piotrków Trybunalski, 5-6 November 2013.
16. Rutecka J., *Tax incentives in supplementary old-age pension systems in CEE countries*, ENRSP Seminar “Complexity in choice of pension provisions”, Münster, 25 October 2013.
17. Rutecka J., *Supplementary old-age pension systems in the CEE countries*, International Scientific Conference “Pension Reforms in post-socialist and other countries – comparison and evaluation”, Poznań University of Technology, Poznań, 12-13 September 2013.
18. Rutecka J., *Dodatkowe zabezpieczenie emerytalne – charakterystyka i czynniki rozwoju*, VII Scientific Conference „Ubezpieczenia wobec wyzwań XII wieku”, Rydzyna, 20-22 May 2013.
19. Rutecka J., *Income redistribution in Polish old-age pension system*, ENRSP seminar “Old Age Crisis and Pension Reform – Where do we stand?”, Poznań University of Technology, Poznań, 13-14 September 2012..
20. Rutecka J., *Ewolucja roli państwa w zabezpieczeniu emerytalnym w obliczu przemian demograficznych*, XXX Social Politicians' Conference „Polityka społeczna w dobie postępu i rozwoju społeczno-gospodarczego”, Łochów, 14-16 May 2012.

I am highly engaged in integrating the scientific community I was the main organizer (chair of the organizing committee) of two national scientific conferences:

- “Long-Term Saving [Długoterminowe Oszczędzanie]” Scientific Conference, Warsaw School of Economics (SGH), Warsaw, June 2016,
- “Financial Education [Edukacja Finansowa]” Scientific Conference, Warsaw School of Economics (SGH), Warsaw, September 2017.

I am currently organizing the second “Financial Education” conference, which will be international in nature and take place at the Warsaw School of Economics (SGH) in September 2019.

In 2014, working with the Polish Pension Group SGH (PPG-SGH) and the Institute for Structural Research, I co-organized the research seminar, “Pensions for the XXI century”. This was international in nature, with top pension researcher from other EU countries and around the world.

I also co-organized, as the representative of the Polish Pension Group SGH, the International Scientific Conference „Social security systems in the light of demographic, economic and technological challenges” that took place at the Poznań University of Technology on 24-25 September 2015.

Reviews of articles and research projects

Since earning my doctorate, I have been a double-blind reviewer for 17 scientific articles in scientific journals listed on the Ministry of Science and Higher Education B List as well as JCR: *Sustainability*, *Studia Oeconomica Posnaniensia*, *e-Finanse*, *Optimum*, *Studia Ekonomiczne*, *Ekonomia*, *Rynek, gospodarka, społeczeństwo*, *Management and Business Administration*, *Central Europe*, *Rozprawy Ubezpieczeniowe*, *Wiadomości Ubezpieczeniowe*, *Foundations of Management* and *Poznań University of Economics Review*. I also reviewed manuscripts (6 in total, double-blind reviews) for the scientific journals: *Ubezpieczenia społeczne. Teoria i praktyka* and *Internetowy Kwartalnik Antymonopolowy i Regulacyjny*.

In 2013, I conducted a ‘scientific research by young scientists’ review (Dr. Ewa Cichowicz, *Functions Performed by the Family in the Context of the Process of Shaping Human Capital within its Framework* [Funkcje pełnione przez rodzinę w świetle procesu kształtowania w jej ramach kapitału ludzkiego], Collegium of Socio-Economics, Warsaw School of Economics, study number: 02/BMN/0001/12).

In 2017, I evaluated the applications of young scientists for scientific internships financed by La Caixa Foundation (*Postdoctoral Fellowship Programme "la Caixa" Junior Leader*). I was an expert evaluating applications at the first stage of selection (number of applications evaluated: 11).

Membership in editorial committees and advisory boards of scientific journals

As a sign of appreciation of my position in the scientific community, in 2016 I was appointed Editor-in-Chief of the scientific journal *Rozprawy Ubezpieczeniowe. Konsument na rynku usług finansowych* (*Journal of Insurance, Financial Markets and Consumer Protection*), having previously served as Deputy Editor-in-Chief of the journal (from September 2012 to May 2016). I have introduced significant changes in the operation of the journal in the areas of the requirements published articles should meet, rules for reviewing and editorial work, as well as the journal’s graphic design. I have convened a new Scientific Board, in which the majority are

now representatives of renowned scientific institutions. I have obtained external funding (the Ministry of Science and Higher Education competition for activities to disseminate science, DUN) for the publication of English-language issues of the journal in 2017-2018. Currently, the journal is being prepared for evaluation of the possibility of indexation in the Scopus database.

Expert analysis

Since earning my doctorate, I have worked with non-academic institutions in the financial and pension markets, such as the Polish Financial Ombudsman (formerly the Insurance Ombudsman), the Insurance Education Foundation, Better Finance, Chamber of Pension Funds (IGTE) and the Social Insurance Institution (ZUS). On their request, I have prepared several expert opinions on the pension system, saving and the functioning of the insurance market. The full list is presented in the list of habilitation achievements.

5. Teaching, popularization of science and organizational accomplishments, as well as information regarding international cooperation

I am a founding member of the Polish Pension Group SGH (Polish Pension Group SGH PPG-SGH) and a founding member of the North-Eastern Branch of the Polish Social Insurance Association (PSUS). Since 2008 I have been a member of the Polish Society for Social Policy (*Polskie Towarzystwo Polityki Społecznej, PTPS*) also serving in 2008-2009 as vice-chair of the member Arbitration Board.

In 2011, I joined the European Network for Research on Supplementary Pensions (ENRSP). I have taken part in several annual meetings of the group, seminars and network conferences, presenting papers of which I was the author or co-author.

As part of my teaching work, I have conducted lectures, tutorials, and diploma seminars at the Warsaw School of Economics. These included undergraduate, master's and postgraduate studies, both in full-time and extramural (afternoon) mode, as well as Saturday and Sunday classes. I conducted classes in the following subjects:

- *Insurance* (lectures and tutorials in all modes of study),
- *Social Insurance* (lectures in all modes of study),
- *Household Insurance* (lecture for full-time studies),
- *Investment Portfolios* (tutorials for students in full-time and afternoon-extramural studies).

I have been the supervisor for 28 bachelor theses and 29 master theses at the Warsaw School of Economics, written by students in the programmes in “Finance and Accounting”, “Economics” and “Quantitative Methods and Information Systems”. Four of the bachelor theses written under my supervision won awards in the competition of the Insurance Ombudsman for the best theses in the field of social and commercial insurance.

Since October 2018, I have served and coordinator of the subject *Social insurance* in second-cycle studies.

I have coordinated students' work with the Social Insurance Institution (ZUS) as part of the completion of a project evaluating the ZUS Electronic Services Portal, which resulted in preparation of the report “PUE not just for ZUS” [*PUE nie tylko dla ZUS*].

I have taken active part in the organizational activities of the Warsaw School of Economics. From 2007-2011 I was the secretary of the Postgraduate Insurance Studies programme in the Collegium of Socio-Economics of the Warsaw School of Economics (editions 12-15 of the programme). From 2011-2013, I chaired the Recruitment Committee for second degree studies (earlier, starting in October 2010, I was a member, and then the vice-chair of this committee).

I actively participate in insurance and pension education and popularization of knowledge on the functioning of pension protection and the insurance market. I have taken part in several seminars and industry conferences (as an invited speaker) and cooperated in creating materials addressed to the general public, mainly published in *Gazeta Prawna* and *Rzeczpospolita* or placed on thematic Internet portals (e.g. the Infor Next portals). In 2013, I published a series of pension columns on the “My retirement [Moja emerytura]” site, which is an online service of the daily newspaper *Rzeczpospolita*. As a member of the PPG-SGH, I take an active part in the public debate on the shape of the pension system, developing, together with other members of the group, positions and opinions on the current shape and changes to the pension system in Poland.

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