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RESEARCHERS' PENSION LANDSCAPES

Pension Provision of mobile researchers:
European Pension Landscapes and Reports on the "FindyourPension"-Project

Pension Provision of mobile researchers: European Pension Landscapes and Reports on the „FindyourPension“- Project

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Abstract

The publication "Pension Provision of mobile researchers: European Pension Landscapes and Reports on the „FindyourPension"- Project" summarizes the overall project results and gives an overview on pension systems and landscapes in Europe especially relevant for the target group of the project, mobile researchers and scientists working in the public sector. Authors are staff members of the project and of the VBL Division International Affairs and Association Activities.

The FindyourPension project was provided by the VBL and sponsored by the Federal Ministry of Education and Research from 2011 to 2018 in the context of the EU- Initiative called European Partnership for Researchers. The aim was to develop and operate a pension portal for mobile researchers in order to support the target group in dealing with and building up their personal pension biographies, as well as to explore and promote opportunities for cooperation among employers and pension institutions or providers in the EU/EFTA region. In the framework of the so called FYP Initiative, a network of editors was set up in order to deliver and maintain comprehensive as well as up-to-date information on pension systems.

Chapter one of the study contains an introductory description and preparation of the typology and taxonomy of pension systems in the framework of the existing pension landscapes in Europe. The approach and relevance for the information available on the FYP website is deduced.

The second chapter describes the pension landscapes of a large number of countries that were selected according to the number of researchers employed there. The systems are presented alongside to the existing pillars of pension provision and special features of occupational pension provision for researchers. In addition, mobility issues concerning the systems are discussed. Chapter 3 summarizes the existing obstacles to mobility in the area of old-age provision and describes the results of the project; some of which have already been implemented, particularly with regard to improving information on individual pension entitlements.
An outlook is given with regard to the further exploitation of the results in particular of the pension portal „FindyourPension" within the framework of the EU-funded ETS project.

The second part of the study contains the results of a scientifically accompanied evaluation of the FYP website and the project. According to the evaluation, the project and website is been highly apprciated by the target group and seen as a viable and useful instrument to fulfill its goals.

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Editorial

Pension information and the challenges for mobile researchers

Mention ‘pensions’ to researchers, and don’t be surprised to see either a look of panic or resignation in their eyes. Most researchers move around, and every country in which they have lived and worked has its own pension landscape and system. The state pension is still there to protect standards of living during old-age. However, there is no European pension system. This leads to mobile employees acquiring separate pension claims in different countries, and to eventual pension payments coming from different sources. The different pension sources, known as pillars, also differ from country to country.

In short: the topic is very complicated at first sight. And without some basic knowledge, it is difficult to plan for one’s own old-age. Often the first question is: can I be exempted from the pension scheme when I do not intend to stay on in the country? The background to this question is that some think they’ll be losing whatever entitlement they have acquired when leaving the host country. Therefore, the second question on the list is: can I have a refund of my contributions or transfer my claim to another pension system in the country I’m moving to or returning to? When it becomes clear that pension payments are made abroad, and that in the case of EU/EEA countries, totalisation/recognition of state pension insurance times takes place, the next question often is, whether the pension will be enough to live on or maintain living standards.

Researchers are exactly like other professionals and employees in this regard. Young people in particular do not give much thought to old-age provisions and pensions. Thus, it is not surprising that they also know very little about it. Also at school, or while studying, the subject is absent, unless dealt with in the areas of finance and economic studies. Only when they have to start paying contributions do questions arise. However, the correct answers are not always easy to understand or might only be available in a foreign language. And so pension questions are moved to the back burner for as long as possible.

About the FindyourPension project

Understanding the domestic pension scheme is not an easy task for nationals, but it is even more difficult for internationally mobile employees due to the diversity of pension landscapes in Europe. In 2017, over 17 million EU citizens worked and lived in an EU country other than their own (=4.1 % of total employment in EU). One of the most mobile groups are researchers. Due to their fragmented work biographies resulting from specific circumstances of a career in research or academia, they are affected much more than other professions.

The FindyourPension (FYP) portal is a website about European pension systems and institutions and was developed as one of the results of a project sponsored by the Federal Ministry of Research and Education in Germany (since 2011). Goal is to assisting researchers in Europe in dealing with the abovementioned difficulties, and actively pursuing their own pension biography (Personal Pension Management).

The initiative was started by the VBL (Versorgungsanstalt des Bundes und der Länder) – occupational pension scheme for the German public sector – and has developed into a network of science employers, pension institutions and other key players within research. Together with many partners such as EAPSPI (European Association of Public Sector Pension Institutions), ESIP (European Social Insurance Platform), European pension providers, research employers and other European research representatives the FYP platform provides currently general information from 59 pension providers from 19 countries and 527 employees. The pension platform is a lively example of employers and pension providers working together to improve pension knowledge and literacy of employees.

FYP is a combined information and tracking tool. The portal aims to be an educational service and shall be used parallel to the different career stages. This way it supports workers in dealing with their different pension claims and better plan their retirement income. You will find the following information on the portal:

★ Orientation and Classification of the different sources of pensions
★ Find your provider service for researchers in the public sector
★ Getting precise information about the relevant pension schemes
★ MyTrack the individual career- and pension biography

Basis for the abovementioned work was a compilation of pension systems of first and second pillar, researchers may be affiliated to. Built on this compilation the following report was composed. The second part contains results of interviews and other consultations among users of the services offered. Part I of this report includes three chapters, wherof the first chapter describes the typology of the pension pillars, followed by an overview of the different pension systems and landscapes in Europe, and the last chapter possible solutions how mobility can be encouraged and the overall project results. Part II focuses on the scientifically-based evaluation on the FYP website accompagnied by Prof. Dr. Marlene Haupt.

Thanks to all our project partners and editors for the cooperation so far. The positive feedback of users is a great motivation and we are glad to continue the work.

The FindyourPension Team,

Karlsruhe, 29th of January 2020

Part I.
Overview on pension systems and landscapes in Europe and the overall project results

Chapter 1

Typology of pension systems: pillars, tiers and the FindyourPension approach

1 Introduction

‚Sorry, I am not sure if VBL is a private pension system or part of the German national pension…' With these words ended the inquiry of a young scientist who, having repeatedly changed her workplace, wanted to know how her future pension would shape out. With the higher demand for mobility, the number of requests with regard to the pension topic is steadily growing. These consist of questions from scientists who are overwhelmed by the various pension systems they have been involved in. The researchers have neither the time nor the patience to study each pension institution or pension provider's individual webpage or array of informative brochures. And it is not a matter of course that this information will be in English either.

Hence, the conclusion is that comprehensive information on this topic needs to be established, and the furtherance of pension literacy is necessary. This has been the main objective of the information portal called FindyourPension since day one.

As a measure in reaching and informing the target group of researchers, the FindyourPension team has been participating in consultation days at various universities throughout Germany. During these events we have noticed the massive lack of orientation when it comes to this specific topic and the high rate of confusion concerning the pillars and the corresponding institutions. The researchers approach us with topics such as: Transferability, Acknowledgement of service times, Refunds on contributions, Application procedures. Depending on the pillar in question, the answer takes it shape from there, relying heavily on the legal framework and conditions involved or applicable. And most certainly the myriad rules and principles applicable to the different systems cannot be understood when one does not distinguish between the pillars.

Why is differentiation and orientation hard to achieve and how we try to explain this matter?

Each Member State of the European Union has got its own pension landscape, consisting of different pillars, tiers and levels in relation to the history, the economic situation of the countries and other aspects. In countries with the generous statutory pensions, occupational pension schemes often are often not wide spread. This is quite different in states whose statutory system only offers a basic or flat-rate pension, sometimes even linked to residential requirements. Here, occupational pension systems traditionally belong to the old-age-provision concept and the coverage rate is much higher than in other countries. Additional criteria to help distinguishing different kinds of systems are:

Replacement level

The main objective of pension systems is to provide financial security during old-age. But the level of financial security differs within the countries. It ranges from a guaranteed minimum level that is comparable with the level of social aid to the security level of the current living standard – according to the so-called Bismarckian model[1]. Some pension systems provide public minimum pension benefits for the elderly, whereas other countries focus more on maintaining the standard of living or on both principles altogether.

[1] CESifo, „Bismarck versus Beveridge: A Comparison of Social Insurance Systems in Europe", CESifo DICE Report 4/2008, http://www.cesifo-group.de/ifoHome/facts/DICE/Social-Policy/Basic-Protection/Guaranteeing

Financing methods and sustainability

One important aspect of old-age provision concepts is the financing method along with the question of sustainability of pension systems. The financing is affected by political decisions and economic developments. One element is the idea of solidarity which is based on the attempt that richer people in society support the poorer ones. In most countries this redistribution is limited by an assessment ceiling for contributions.

Due to aging societies in Europe, the sustainability of pension systems has become more and more important in the past two decades. Economic crises, national debt and demographic changes imposed pressure on many European Member states to reform their pension system. While payas-you-go schemes have been questioned, private funded supplementary pension schemes have been promoted. This increased the density of private pension institutions and led to more diversification of the pension system. But the ongoing economic crises has also weakened the funded systems and declined the value of their assets. One question often is arosen: who can better bear the responsibility for sufficient pension benefits in the future, a state-run pension system or private pension provisions? It is the opinion of many experts that old-age provision should rely on different sources.

Legal frameworks of pension systems and schemes

A country’s pension system is also considerably dependent on its legal basis. Besides statutory pension legislation, collective bargaining agreements on pensions and employment or insurance contracts diversify the pension system and the risk pooling. Accordingly, pension schemes can be either mandatory or voluntary, they can be funded, pay-as-you-go or hybrid.

The diversity of the pension landscapes makes it increasingly difficult to classify the single pension schemes into predetermined categories. Because of different objectives and opinions there is no uniform classification model. In order to better understand the pension systems this chapter explains the different methods of pension classifications. To classify pension schemes also improves the comparability of pension systems throughout Europe. Mobile workers – like researchers – often have different pension entitlements in different countries and schemes. It is a matter of fact that they can better deal with their rights if they have comprehensive background information.

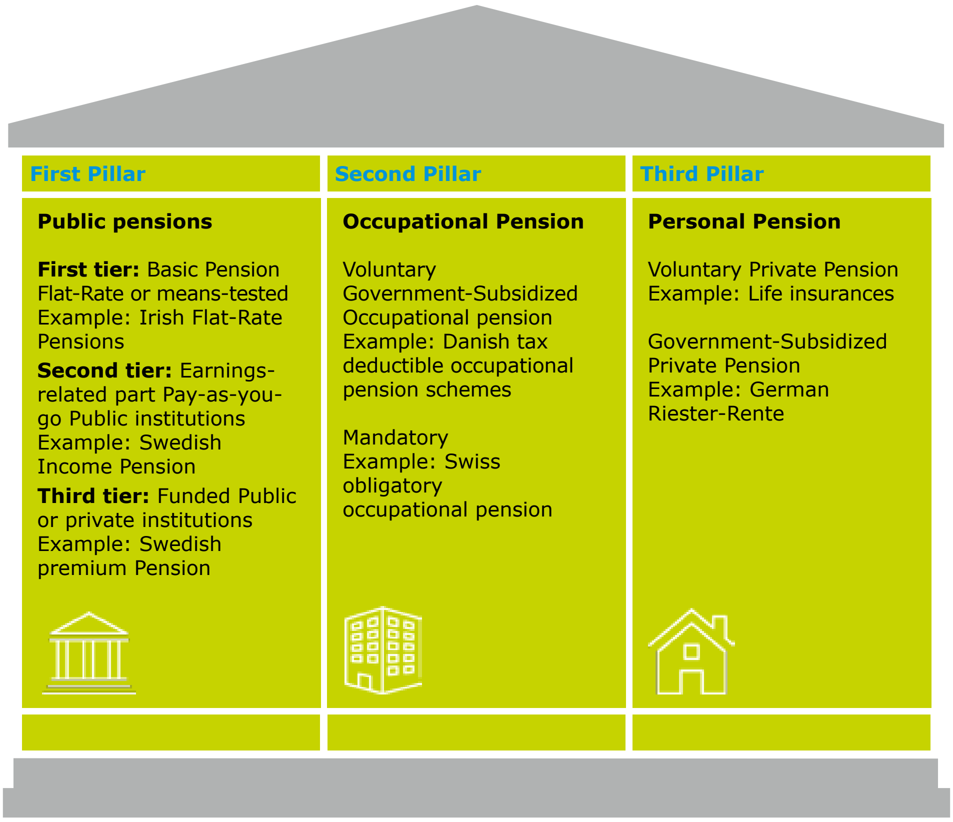
Therefore, the following sections describe some alternative models of pension typology and how this study classifies pensions.

2 Overview on classification efforts

2.1 Traditional typology

The traditional typology, as it is represented by European scholars, differentiates between three pension pillars. The traditional classification into the pillars depends on the “initiator” or provider of the pension scheme. The first pillar is defined as statutory pension schemes established by the states, the second pillar encompasses occupational pensions initiated by employers and finally the third pillar includes private pensions based on the free choice of the individual. In order to describe the different components, as well as the different types of benefits, scholars have further fragmented the first pillar into three tiers.

Sufficient-Resources/bismarck-beveridge-dicereport408-db6/fileBinary/bsimarck-beveridge-dicereport408-db6.pdf.



Source: Immergut, Anderson and Schulze (2007)[4], examples where amended.

Classification and the European legal framework for pension provision

This classification also focuses on the applicability of EU legislation. In 1972, the EU Regulation No. **1408/71 – on the application of social security schemes to employed persons and their families moving within the community – came into effect. The central idea was that obstacles concerning the free movement of workers should be diminished by sustaining the pension entitlements in case of relocating to another Member State, EEA country or Switzerland. In the meantime, the regulation was replaced by the EU Regulation No. 883/2004 on the coordination of social security. The regulation still is an important legal** framework for mobile researchers because it aggregates insurance periods accumulated in different Member States.

According to the traditional classification model as shown above only European pillar schemes are subject to coordination. On the other hand, until today there are no prudential rules on first pillar social security systems – regardless of the financing method.

The Institutions for Occupational Retirement Provision Directive (IORP) of the European Union determines minimum standards on funded pension schemes of the second pillar. It also concerns the types of investments a fund may make, and permits cross-border management of occupational pension plans. The regulation is not applicable to funded pension vehicles that are defined as part of the first pillar systems because they are not under the scope and are solely under their competence.

[2] Immergut and Anderson, The Handbook of West European Pension Politics, Editor's Introduction: The Dynamics of Pension Politics. 2007.

Furthermore, the Directive 2002/83/EC concerning life insurances and the Undertakings for Collective Investment in Transferable Securities Directive 93/22/EEC (UCITS) lay down rules for some second and third pillar pension schemes.

Due to the demographic changes and economic development pension systems in many European countries are subject to ongoing reforms. New models and vehicles challenge the traditional typology. The "traditional" classification into a three pillar system and the application of the EU legislation on pensions have become less manageable. New public pension systems managed by public or private institutions have been introduced. For example, schemes that are mandated by law, fully funded and freely chosen by the insured (e.g. Personal Pensions in Sweden, Open Pension Funds in Poland and Private Pension funds/joint Stock companies in Romania) fall under the scope of the regulation No. 883/2004 and avoiding the prudential rules of the IORP II directive. At the same time, very similar mandatory but supplementary pension schemes are not covered by the regulation. Therefore, some schemes are subtracted from coordination rules and there might be some gaps in the EU legislation coverage and in the protect pension rights of mobile workers.[3]

Alternative concepts

Apart from the traditional typology that classifies pension schemes according to the "initiator", new approaches on the classification of pension systems have been made. This leads to the question if the classic taxonomy itself needs modification. This question was also posed by the European Social Observatory[4]. Therefore we introduce in this study alternative concepts or approaches for the taxonomy of pensions.

Among others where the classification of pensions is structured according to:
★ the type of governance,
★ the different objectives of funding and managing of old-age provision and
★ the function or purposes of systems.

2.2 Ebbinghaus and Wiß's typology (2011)

In the article "*The governance and regulation of private pensions in Europe*"[5] Ebbinghaus and Wiß proposed a new categorization of private pension schemes based on the type of governance. Pension schemes are classified according to the question on who decides if provision takes place, the state, the employer or the individual. The approach considers, in particular, the relationship between the provider and the beneficiary. Although the concept itself was mainly developed for private pension schemes it can be extended to also cover state-run schemes.

According to this taxonomy state-run pensions allow no decision by the individual regardless of the financing method. Occupational pensions are divided into collective and employer sponsored schemes. Collective pensions are based on negotiations between the employer and the employee representatives, whereas the employer-sponsored occupational pension requires the decision by the company. Personal pensions, instead, are in whole or in part the voluntary decision of the individual.

[3] European Commission, White paper on Pensions „An Agenda for adequate, safe and sustainable pensions", 12 July 2012, p. 80 https://ec.europa.eu/social/BlobServlet?docId=11067&langId=en
[4] European Social Observatory (OSE), Chapter 3: Does the Eu need a more coherent Taxonomy? (2011), page 64.
[5] Ebbinghaus, Bernhard & Wiß, Tobias. (2011), The Governance and Regulation of Private Pensions in Europe. 10.1093/acprof:oso/9780199586028.003.0013.

The categorization of Ebbinghaus/Wiß shows again how difficult it is to find a coherent taxonomy of the pension landscape.

State-run pension: no decision by individual	**Collective occupational pension: negotiation between employer and emplo-yee representatives**	**Employer-sponsored occupational Pension: decision by firm**	**Personal pension: individual decision (in whole or in part)**
★ Mandatory public *All member states* ★ Mandatory public for certain categories, pay-asyou-go e.g. for unhealthy or heavy professions ★ Mandatory public for certain categories, funded e.g. for unhealthy or heavy professions	★ Mandatory, quasipublic *Example: French com-plementary pension; Finland earnings-rela-ted pension* ★ Sector-wide, funded *Example: occupational pension in The Nether-lands*	★ various arrangements, usually funded (excep-tion: book reserve), sometimes opt-out	★ Mandatory *Example: Swedish Pre-mium Pension (decision where to invest)* ★ Voluntary *Example: German Riester-Rente* ★ Opt-out *Example: Czech Pension Savings*

2.3 World Bank's multi-pillar approach

The original 1994 World Bank proposal on pensions is also based on three pillars. The World Bank model focuses on the financing of pension systems. The objective is to bring the importance of redistribution, saving and insurance into a balanced relation. Therefore, a country's pension system should provide for all three functions in order to guarantee multiple financing and managing. The model demands a mandatory, fully funded, privately managed, second pillar provision alongside the mandatory, publicly managed first pillar and the voluntary third pillar.[6]

Following the important work of the mid-1990's, "Averting the Old Age Crisis" that established key principles and concepts, the Bank's attention has increasingly focused on refining system designs to adapt these principles to widely varying conditions and better address the needs of diverse populations to manage the risks in old-age.[7]

As of 2008, the Bank has proposed a conceptual framework that is based on the importance of individual country conditions and the flexible application of **a diversified five pillar model** for pension systems in formulating its analysis and policy recommendations. **The Bank believes that a Multi-pillar approach towards pension system modalities is best able to address the needs of the main target populations and provide security against the multiple risks facing pension systems.[8]**

[6] World Bank. 1994. Averting the old age crisis: policies to protect the old and promote growth (English). Washington DC; World Bank. http://documents.worldbank.org/curated/en/973571468174557899/Avertingthe-old-age-crisis-policies-to-protect-the-old-and-promote-growth

[7] Holzmann, Robert; Paul, Richard Hinz; Dorfman, Mark. 2008. Pension systems and reform conceptual framework (English). Social Protection discussion paper; no. SP 0824. Washington, DC: World Bank. http://documents.worldbank.org/curated/en/716871468156888545/Pension-systems-and-reformconceptual-framework

[8] World Bank. 2017. The World Bank annual report 2017: End extreme poverty, boost shared prosperity: Main report (English). Washington, D.C. : World Bank Group. http://documents.worldbank.org/curated/en/132951507537966126/Main-report

The overall framework includes (1) a n*on-contributory "zero pillar"*, that has got a poverty alleviation objective in order to provide all elderly people with a minimal level of protection. For example in the form of social pensions or social assistance. (2) *appropriately sized mandatory "first pillar"* with the objective of replacing some portion of lifetime pre-retirement income through contributions linked to earnings, and which is either partially funded or financed on a pay-as-yougo basis; (3) *a funded mandatory defined-contribution "second pillar"* that typically provides privately-managed individual savings accounts establishing a clear linkage between contributions, investment performance and benefits, supported by enforceable property rights and which may be supportive of financial market development[9]. (4) *a funded voluntary "third-pillar"* taking many forms and (5) *a non-financial fourth pillar* includes access to informal support or other formal social programs such as housing or family support.

In the World Bank Annual report from 2017, these five pillars are still maintained and become even more important in order try to avoid poverty worldwide and to outline the issues involved in attempting in designing a "good" social security pension system.[10]

Some new EU Member State reforms have implemented mandatory individual, defined-contribution accounts according to the World Bank's proposal. One example is the Open Pension Funds in Poland. These are mandatory by law, but the funds are managed by private institutions.[11]

Pillar	**Zero Pillar: Universal or residual**	**1rst pillar: Mandatory publicly managed**	**2nd pillar: Mandatory privately managed**	**3rd pillar: Voluntary**	**4rd pillar: Voluntary**
Objectives	Poverty prevention	Redistributive plus coinsurance	Savings plus coinsurance	Savings plus coinsurance	Elderly poverty protection
Form	Demogrant, social pension, general social assistance	Means-tested, minimum pension guarantee or flat-rate pension	Personal savings plan or occupational plan	Personal savings plan or occupational plan	Access to informal social programs (e.g. Health, Homeownership)
Financing	Local or Governmental revenues	Tax financed	Regulated, fully funded	Fully funded	Financial and non-financial assets

Source: World Bank (2008)[12]

[9] World Bank. 2008. The World Bank pension conceptual framework (English). World Bank pension reform primer series. Washington, DC: World Bank. http://documents.worldbank.org/curated/en/389011468314712045/The-World-Bank-pension-conceptualframework

[10] Holzmann, Robert; Paul, Richard Hinz; Dorfman, Mark. 2008. Pension systems and reform conceptual framework (English). Social Protection discussion paper; no. SP 0824. Washington, DC: World Bank. http://documents.worldbank.org/curated/en/716871468156888545/Pension-systems-and-reformconceptual-framework

[11] Holzmann, Robert; Paul, Richard Hinz; Dorfman, Mark. 2008. Pension systems and reform conceptual framework (English). Social Protection discussion paper; no. SP 0824. Washington, DC: World Bank. http://documents.worldbank.org/curated/en/716871468156888545/Pension-systems-and-reformconceptual-framework

[12] The World Bank (2008), The World Bank Pension Conceptual Framework", page 4, https://openknowledge.worldbank.org/handle/10986/11139?locale-attribute=en

2.4 OECD's functional perspective

The OECD criticized the World Bank's proposal because it is prescriptive and proposes a model to be attained rather than being solely a descriptive typology.[13] Furthermore, the proposal ignored the category of occupational or employer-led pension plans. Therefore, in recent reports the OECD classifies retirement income provisions according to their role and aim. It suggests two mandatory "tiers" like for instance an adequacy part and an earnings-related part. The third tier is is the voluntary provision that could be individual or employer-provided.

Within this tiers, the shemes are further classified into:
★ the provider (public or private) and
★ the way benefits are determined

The first tier is public, universal and redistributive and benefits are further classified basic and minimum pension and social assistance. Resource-tested or social assistance plans function as a social safety net for people with no or low income. This fulfils the primary objective of pension system, Minimum pensions instead are not affected by income from savings and secure a minimum pension amount. Basic pensions are either flat-rate or depend on years of work; former earnings are not taken into account.[14] The mandatory insurance-based second tier distinguishes between public and private provisions; and further between defined-contributions (DC), defined-benefits schemes (DB) as well as notional accounts and points models.[15] They take an important role in achieving the coverage objective. DC arrangements establish a direct link between the value of the accumulated assets and the level of retirement income, so they are the most effective method of smoothing consumption and provide the greatest incentive to contribute. However, the OECD warns that members of individual DC pension plans are exposed to more risks (like for instance inflation, returns on investments, interest and discount rates,…) than members of DB or NDC plans, as the responsibility for financial security is transferred onto the individual.[16]

The third tier includes voluntary pensions. This comes up, if funded pensions are introduced. Funded pensions could be mandatory or voluntary, or a combination. Voluntary provision is less likely to Disort labour markets and may be the only possibility in countries without the institutional capacity to establish mandatory pensions.[17]

The OEDS taxonomy aims to cover the largest possible number of countries. The term "pillar" was avoided because other international organizations such as the World Bank use a similar terminology but propose a different typology.[18]

[13] OECD, Pensions at a Glance 2019, Design of pension systems: Chapter 3: Design of pension systems, page 86, https://www.oecd.org/pensions/oecd-pensions-at-a-glance-19991363.htm
[14] OECD, Pension at a Glance 2019, OECD and G20 Countries, Chapter 3: Design of pension systems page 86. https://www.oecd.org/pensions/oecd-pensions-at-a-glance-19991363.htm
[15] OECD, Pension Outlook 2018, The role of supplementary pension provision in retirement, p.30 https://www.oecd.org/finance/oecd-pensions-outlook-23137649.htm
[16] OECD, „Roadmap for the Good Design of DC Pension plans", June 2012, https://www.oecd.org/finance/private-pensions/50582753.pdf
[17] OECD, Pension Outlook 2018, The role of supplementary pension provision in retirement, p.30, https://www.oecd.org/finance/oecd-pensions-outlook-23137649.htm
[18] OECD, Pensions at a Glance 2019, Chapter 1: Pension-system Typology, page 29. https://www.oecd.org/pensions/oecd-pensions-at-a-glance-19991363.htm

3 Classification in the study and within the FindyourPension portal[19]

The country reports in this study and the information on the FindyourPension portal for mobile researchers follow the traditional typology of pension systems. The aim of pension typology is to make it easier for a consumer – who is not an expert in pensions – to understand and to compare pension systems throughout Europe. We decided to use the traditional classification in order to help researchers sort and classify their pension schemes. In our opinion the mobile employee is interested to learn about the "initiator" or provider responsible for his/her future pension income rather than the academic question on how a pension system should be modeled. Therefore, the focus in the study and on the portal lies more on the initiator or provider than on financing aspects and financial sustainability. These are interesting for political or economic decisions, but do not necessarily make the pension systems transparent to the insured person.

3.1 Taxonomy in the study "Researcher's Pension Landscape"

Pension provision by means of the pillars according to the "ideal" World Bank proposal should make systems financially stable and sustainable. But the model does not reflect the actual European pension landscape as it is today. Most countries do not have fully funded privately managed pension schemes that are mandatory by law.

The OECD classification is complicated because a fairly high standard of knowledge is needed. For example the reader has to be familiar with the terms "resource-tested" or "defined benefit" in order to sort the pension schemes into the tiers.

Another reason for using the traditional system is that the study and the FindyourPension website include only pension schemes in European countries. Many of these schemes are subject to European legislation, and the attempt of the traditional taxonomy is not only the classification itself but also to determine which pension schemes are covered by the particular EU regulation or directive. As already mentioned only first pillar, public pension schemes are covered by the EU Regulation No. 883/2004 on the coordination of pension systems.

With the Ebbinghaus/Wiß typology, instead, it is not easy to determine whether a pension scheme is subject to the EU Regulation on coordination because also schemes that are classified as personal pension, e.g. the Swedish Premium Pension are subject to this regulation.

Therefore, the taxonomy requires an easy to define basis for employees. By using the traditional three pillar classification it is easy to determine who is responsible for paying pension benefits. In general, this is the "initiator" or provider of the pension scheme. Only the funded pension schemes in the first pillar's third tier are not necessarily provided by public institutions. Nevertheless, they are the result of government pension reforms and therefore part of the first pillar.

[19] www.findyourpension.eu

3.2 Icons on the FindyourPension website

On the FindyourPension website icons are used to identify state-run, occupational and private pension plans. The ancient building is the symbol for the statutory, state or public pension scheme. The schemes are usually administered by government institution or by other public sector bodies such as social security institutions. The membership is mandatory by law for employees and in many cases also for self-employed. Some public schemes are residence-based and cover all citizens. In some European countries recent reforms of the pension system established, on the initiative of the government, a funded scheme managed by private institutions that is mandatory by law. In these countries those schemes are considered to be part of the "second pillar". This is because the government followed the approach, e.g. of the World Bank, that proposes a second mandatory and privately managed pillar. But according to the traditional taxonomy and the taxonomy used in this study and on the website, these schemes are still part of the first public or statutory pension pillar because the government has made them mandatory by law.

The office building represents the occupational pension that is connected to an employment contract. It can be based on a collective bargaining agreement between the employer and the employee representative, or solely on the employer's choice. There is always a professional connection between the employer, as the plan sponsor, and the insured person. The pension plan can be established and managed either directly by the plan sponsor or by an independent (legal) entity.

Finally, the private house is the icon for private pension savings. These are managed by private institutions and it is the individual's choice to be covered by a private pension plan. In most cases contributions to these schemes are solely made by the employee.

Part II.
Scientifically-based evaluation of the FYP website

Chapter 2

Pension Landscapes of European Countries

AUSTRIA

Summary

The Austrian pension landscape is dominated by the statutory pension system. Demographic changes and the generosity of the state pensions led to reforms within all pillars. Measures, such as the introduction of equal retirement ages for men and women by 2033 or changes in early retirement conditions, were taken in order to strengthen the equivalence of the contributions and the benefits and to make the state pension system more sustainable. Furthermore, the former split pension systems for different occupational groups such as farmers, civil servants and others are gradually being harmonized as of 2005. Recent changes concern pension bonus to increase the "minimum pension" for long-term insured people from January 2020.

Occupational and private pensions play only a subordinate role. Since 2013 Austria has adopted important regulations with regard to the occupational pension schemes with the aim to make occupational pensions more attractive.

1 Statutory Pension Scheme

The statutory pension system used to be split up into separate schemes for different occupational groups. Pension system reforms in the past decade have harmonized the system, meaning that civil servants appointed after 2004 and those born in or after 1976 are insured in the staturtory pensin system as well. The new harmonized pension system is applicable to almost everyone in gainful employment (including self-employment) who were under the age of 50 on 1 January 2005. Since then, all relevant information to calculate a pension is recorded in a personal, notional pension account for the whole working population.

The Austrian pension insurance institution *"Pensionsversicherungsanstalt"* provides the pension for most employees. Pension insurance is not obligatory for persons with an annual income of less than the annual minor employment threshold of EUR 446.81 per month in 2019.[20]

Under certain conditions low-income pensioners are entitled to an income tested and tax-financed top-up, the so called *"Ausgleichszulage"*, that ensures a minimum income.

In July 2019 the National Council agreed on a pension bonus that will increase the "minimum pension" for pensioners with 40 years of contributions. From January 2020 singles will receive a pension of EUR 1 200 net per month, couples EUR 1 500.[21]

Financing

The state pension is a pay-as-you-go, mandatory, earnings-related, defined benefit pension. It is financed through contributions and by public means. The total contributions amount to 22.8 % of the employees' wage. This amount consists of 12.55 % employer contribution and 10.25 % employee contribution which are directly deducted from gross earnings.[22] There is an assessment ceiling of EUR 5 220 (2019) per month.[23] Self-employed persons basically pay 18.5 % of the average monthly profits made, but limited by a ceiling.[24]

Benefits

The statutory pension system provides old-age, disability and survivors' pensions. Old-age pensions require a certain qualifying period. For persons born after 1955, without any insurance month prior to 2005, 180 months (15 years) of insurance with a minimum of 84 months (7 years) acquired through gainful employment are needed to qualify for a pension.[25]

[20] Pensionsversicherungsanstalt, Aktuelle Werte 2019, last updated 1.1.2019 / 2. edition, page 3, (Available at: http://www.pensionsversicherung.at/cdscontent/load?contentid=10008.636766&version=1548056580)
[21] Republik Österreich, Parlamentsdirektion, Nationalrat: Breite Mehrheit für 1.200 € Mindestpension bei zumindest 40 Arbeitsjahren, https://www.parlament.gv.at/PAKT/PR/JAHR_2019/PK0758/#XXVI_NRSITZ_00084, (Accessed 12 September 2019).
[22] Pensionsversicherungsanstalt, Beitragshöhe, https://www.pensionsversicherungsanstalt.at/cdscontent/?contentid=10007.7077F78&viewmode=content, (Accessed 29 May 2019).
[23] Pensionsversicherungsanstalt, Aktuelle Werte 2019, loc. cit.
[24] SVA, Beiträge Pensions-, Kranken- und Unfallversicherung, https://www.svagw.at/cdscontent/load?contentid=10008.587456&version=1546869304, (Accessed 6 June 2019).
[25] Pensionsversicherungsanstalt, Alterspension, https://www.pensionsversicherungsanstalt.at/cdscontent/?contentid=10007.707664&viewmode=content, (Accessed 29 May 2019).

Calculation Method

For all persons born on or after 1 January 1955 the pension is calculated according to the new rules of the pension account system. This is expected to make the pension calculations simpler and easier to understand. Key factors for the pension amount are income level, insurance perio and retirement age. The overall pension formula is '80/65/45' which means that retirement at the age of 65 (for men) after an insurance period of 45 years should result in a gross pension amount of 80 % of the individual lifetime-average pensionable earnings.[26]

Since 2014 the yearly accrued pension credit and the complete (total) pension entitlements are recorded in the new individual pension account. Each year 1.78 % of the annual assessment base is credited on this individual pension account as a so called 'partial credit' *(Teilgutschrift)*.[27] The maximum partial credit for each year is 14 times the monthly maximum assessment ceiling (in 2019 EUR 73 080).[28] The sum of the partial credits of all previous insurance years is adjusted annually according to a factor that represents the development in wages and salary. The total credit *(Gesamtgutschrift)* is the sum of all adjusted partial credits for previous years plus the credit for the current calendar year.[29] In order to calculate the monthly old-age pension upon standard retirement age the total credit that has been accrued is divided by 14.[30] Pensions are payed 14 times per year.

Pensionable Age/Early and Late Retirement

The standard retirement age is currently 60 for women and 65 for men. By 2033 it will be 65 regardless of gender.

Along with the pension system harmonization in 2005, Austria has introduced a corridor-pension *("Korridorpension")* which entitles the insured person to choose retirement at age 62 provided that a minimum of 480 insurance months have been credited on the personal pension account. Furthermore, the pensioner may no longer be in gainful employment that is subject to compulsory insurance or be engaged in an employment with monthly earnings above a defined minimum threshold.[31] The deduction for the corridor-pension is 5.1 % a year for pensioners born in on or after 1 January 1955. This early retirement possibility will be relevant for women no earlier than from 2028.

Early retirement remains also possible according to the *"Hackler"*-pension-rule, a pension subject to very long insurance contributions. It requires 540 contribution months (45 years) and a minimum retirement age of 62 (men).[32] For each year of early retirement the deduction is 4.2 %. For pensioners who have been performing physically hard work more favourable conditions for early retirement exist.

[26] Michael Reingruber, Questionnaire Austria - peer review on Pension information, Spain 2013, The right to retirement pension information (Madrid, 02-03 July 2013), page 2.
[27] Pensionsversicherungsanstalt, Wovon hängt die Höhe der Pensions ab?, http://www.pensionsversicherung.at/portal27/pvaportal/content?contentid=10007.707675&viewmode=content, (Accessed 6 Junie 2019).
[28] DINALLY Management & IT Consulting GmbH, Das Pensionskonto, http://www.pensionskonto.at/, (Accessed 6 June 2019).
[29] Pensionsversicherungsanstalt, Pensionen – Voraussetzungen, Pensionskontoberechnung, last updated 1 January 2019, page 31, (Available at http://www.pensionsversicherung.at/cdscontent/load?contentid=10008.577795&version=1550502388).
[30] Pensionsversicherungsanstalt, Pensionen – Voraussetzungen, Pensionskontoberechnung, page 40.
[31] Pensionsversicherungsanstalt, Pensionen – Voraussetzungen, Pensionskontoberechnung,page 11.
[312] Pensionsversicherungsanstalt, Pensionen – Voraussetzungen, Pensionskontoberechnung,page 8.

Late retirement after standard retirement age increases the pension by 4.2 % a year.[33]

It is possible to continue working whilst receiving a regular old-age pension. An employment that is subject to compulsory pension insurance is rewarded by an additional insurance value.[34]

2 Occupational Pension Schemes

The Company Pension Act *("Betriebspensionsgesetz")* which was introduced in 1990, includes the necessary, minimum labour standards for employers' pension provisions and secures the benefits of occupational pensions. The Austrian government has undergone several efforts to increase the coverage rate of occupational pension schemes in order to maintain the financial security of older people. The 2013 reform of occupational pension funds aims to attract more members, e.g. by setting up a "security pension pool" for multi-employer pension funds and by improving the information on asset allocation, cost and projections for the future.

The Company Pension Act encompasses occupational pensions provided through four different vehicles: pension funds, occupational pension group insurances ("BKV"), book reserves of the employer and life insurance contracts.[35] The plans can be either defined-benefit or defined-contribution in nature.

The implementation of these pension provision methods can be based on company agreements or on collective bargaining agreements negotiated by the representatives of the employees and the employer or on a special agreement with the employee.[36]

Specific rules apply concerning the vesting periods of pension entitlements and other characteristics of the different kinds of provision. There is no general regulation defining a vesting period. But e.g. provision via a pension fund allows the regulation of vesting periods for pension entitlements based on employer contributions in a company agreement or collective agreement. The possible duration of those periods has been shortened by the 2013 reform to a maximum period of up to three years for employment starting 2013 or later. The pension entitlements based on employee contributions become vested immediately after terminating the employment.[37]

[33] Pensionsversicherungsanstalt, Pensionsberechnung im Überblick, last updated, page 10 (Available at: http://www.pensionsversicherung.at/cdscontent/load?contentid=10008.577831&version=1520001855).
[34] Pensionsversicherungsanstalt, Pensionen – Voraussetzungen, Pensionskontoberechnung,page 7.
[35] § 2 Betriebspensionsgesetz as of 22 December 2018.
[36] Bundesministerium Arbeit, Soziales, Gesundheit und Konsumentenschutz, Betriebspension, https://www.sozialministerium.at/site/Arbeit_Behinderung/Arbeitsrecht/Entlohnung_und_Entgelt/Betriebspen sion/Betriebspension, (Accessed 12 June 2019).
[37] § 5 Sec. 1 Betriebspensionsgesetz as of 22 December 2018.

Pension Funds

Today most companies' occupational pensions have moved away from the traditional balance sheet reserve in favour of pension funds. These pension funds take the legal form of a joint stock company.[38] This pension fund model compares with the systems of other countries. The pension fund law *(Pensionskassengesetz)* defines the legal framework for pension funds.

In Austria many pension plans provided by pension funds used to follow a pure defined-contribution promise. This means that the employer is obliged to pass a certain monthly amount into a pension fund and is not liable to guarantee neither the amount of accumulated contributions nor a certain return on investment. In 2012 Austria's pension funds had to announce repeatedly that they had to reduce the current pension payments due to too low investment returns in 2011.[39] In 2012[40] and 2013[41] they could generate positive returns on investment again. In order to meet customer demands the pension fund law was reformed and allows defined-contribution plan members to choose a new pension model, a so called 'safety pension'. This new vehicle does not establish a guaranteed return on investment but features that the pension amount calculated at the event of retirement cannot be reduced. Furthermore the pension is hedged every five years.[42]

Mandatory severance pay system

Besides occupational pensions there also exists a mandatory severance pay system in Austria that is managed by company provident funds *("Abfertigungskassen" or "betriebliche Vorsorgekassen")*. Employees have the option to withdraw their savings in case of termination of work contract or to keep the savings until retirement.

3 Private Pension Schemes

The Austrian pension market includes individual, state-sponsored retirement provisions called *"prämienbe-günstigte Zukunftsvorsorge (PZV)"*, which were introduced in 2003. This kind of saving is possible either in the form of pension insurances or as pension investment funds.[43] Contribution levels and benefits are determined in the contract between the individual and the provider. A capital guarantee promising the repayment of the individual and state-funded contributions is obligatory.

BOther forms of private pension vehicles, such as life insurances, exist as well.

[38] § 6 Sec. 1 Pensionskassengesetz as of 22 december 2018.
[39] Die Presse, 19 January 2012, Pensionskassen: Zwei von drei Zusatzrenten gekürzt, http://diepresse.com/home/wirtschaft/economist/725271/Pensionskassen_Zwei-von-drei-Zusatzrentengekurzt, (Accessed 12 June 2019).
[40] Wirtschaftskammer Österreich – Fachverband Pensionskassen, 17 January 2013, Österreichische Pensionskassen erwirtschafteten 2012 gesamt 8,39 % Ertrag für ihre Kunden, http://www.ots.at/presseaussendung/OTS_20130117_OTS0102/oesterreichische-pensionskassenerwirtschafteten-2012-gesamt-839-ertrag-fuer-ihre-kunden, (Accessed 12 June 2019).
[41] Wirtschaftskammer Österreich – Fachverband Pensionskassen, 15 January 2014, Österreichische Pensionskassen erwirtschafteten 2013 ein Plus von 5,14 Prozent, http://www.ots.at/presseaussendung/OTS_20140115_OTS0057/oesterreichische-pensionskassenerwirtschafteten-2013-ein-plus-von-514-prozent, (Accessed 12 June 2019).
[42] § 12aPensionskassengesetz as of 22 December 2018; WKO Pensionskassen, Sicherheits-VRG, https://www.wko.at/branchen/bank-versicherung/pensionskassen/sicherheits-vrg.html, (Accessed 12 June 2019).
[43] Bundesministerium für Finanzen, Altersvorsorge, https://www.bmf.gv.at/finanzmarkt/altersvorsorge/ueberblick-altersvorsorge.html, (Accessed 13 June 2019).

4 Position of Researchers

4.1 Work conditions

Austria has stepped up its efforts in recent years to attract the best researchers possible to work in their universities and in their public research projects. Third country nationals usually do have to go through a process of applying for residency and visas but this is considerably less comprehensive when the researcher will be residing in Austria for less than 6 months. This option is important for attracting foreign researchers as it affords them a good opportunity to work on a short term basis or to get a sense of the country and their surroundings before applying for full working and residency rights.[44]

4.2 Details of Researcher's Pension Provision

The conditions for the employment of researchers at Austrian universities are outlined in the collective agreement for employees at the universities *("Kollektivvertrag für ArbeitnehmerInnen der Universitäten")* or – for those employed before 2004 – in the additional collective agreement on old-age provisions *("Zusatz-Kollektivvertrag für die Altersvorsorge")*. Both were negotiated between the umbrella association of the universities and the trade unions. They set the minimum occupational pension provision which must be provided for all university employees. Every university is obliged to conclude a company agreement (Betriebsvereinbarung) defining the concrete benefit plan applicable for their workers.[45] The provision is administered by the chosen pension fund to be contracted after a tendering procedure.

In 2009, the Austrian universities finished negotiations on occupational pension provision and shortly thereafter the universities began procuring pension funds *("Pensionskassen")* to provide these pensions for their employees. As of September 2011, Valida had been very successful in procuring a lot of the universities[46] but other pension funds have obtained procurements as well. The main pension funds that manage the occupational pension of researchers at universities presently are Valida, VBV and APK.

According to the collective agreement and the company contracts, employees have to be insured after 24 months of employment (waiting period).[47] This is a disadvantage for researchers working on short term contracts. However, once the employment exceeds 24 months, the researcher will be insured retroactively from the beginning of the employment.[48]

[44] Austrian Agency for International Cooperation in Education and Research, Miriam Forster and Izeta Dzidic, Research in Austria, Guide to Residence and Employment of International Researchers, last updated 1 January 2018, page 4, (Available at: https://oead.at/fileadmin/Dokumente/oead.at/KIM/Nach_Oesterreich/Einreise_und_Aufenthalt/Informationsbroschueren/Englisch/Leitfaden_fuer_internationale_Forscher_en.pdf.).
[45] Kollektivvertrag für die ArbeitnehmerInnen der Universitäten 2019, § 71 sec. 1 and 3.
[46] Jonathan Williams, 1 September 2011, Austria's Valida Pension wins further University Provider Contract, http://www.ipe.com/news/austrias-valida-pension-wins-further-university-providercontract_41906.php?s=valida, (Accessed 13 June 2019).
[47] Kollektivvertrag für die ArbeitnehmerInnen der Universitäten 2019, § 71 sec. 2 No. 2.
[48] Kollektivvertrag für die ArbeitnehmerInnen der Universitäten 2019, § 73 sec. 5.

For professors whose employment began after 2003 the collective agreement for university employees requires that the university pays a contribution of at least 10 % of monthly gross earnings. For all other employees there is a minimum 3 % share on income up to the maximum contributions rate as defined under the social insurance law and a 10 % share for all income above that.[49] Additional voluntary employee contributions are possible. The contributions become vested immediately with their payment.[50] The earliest retirement age for an old-age pension is 60 years of age.[51]

5 Cross-border Portability/Mobility

EU rules coordinate national social security systems of the 1st pillar to make sure that moving to another EU/EFTA Member States does not result in a loss of social security rights.[52] Hence, insurance periods that are covered by the statutory pension schemes in another EU/EFTA State are taken into account when applying for a pension in Austria, for example in order to fulfill the 15 years qualifying period.

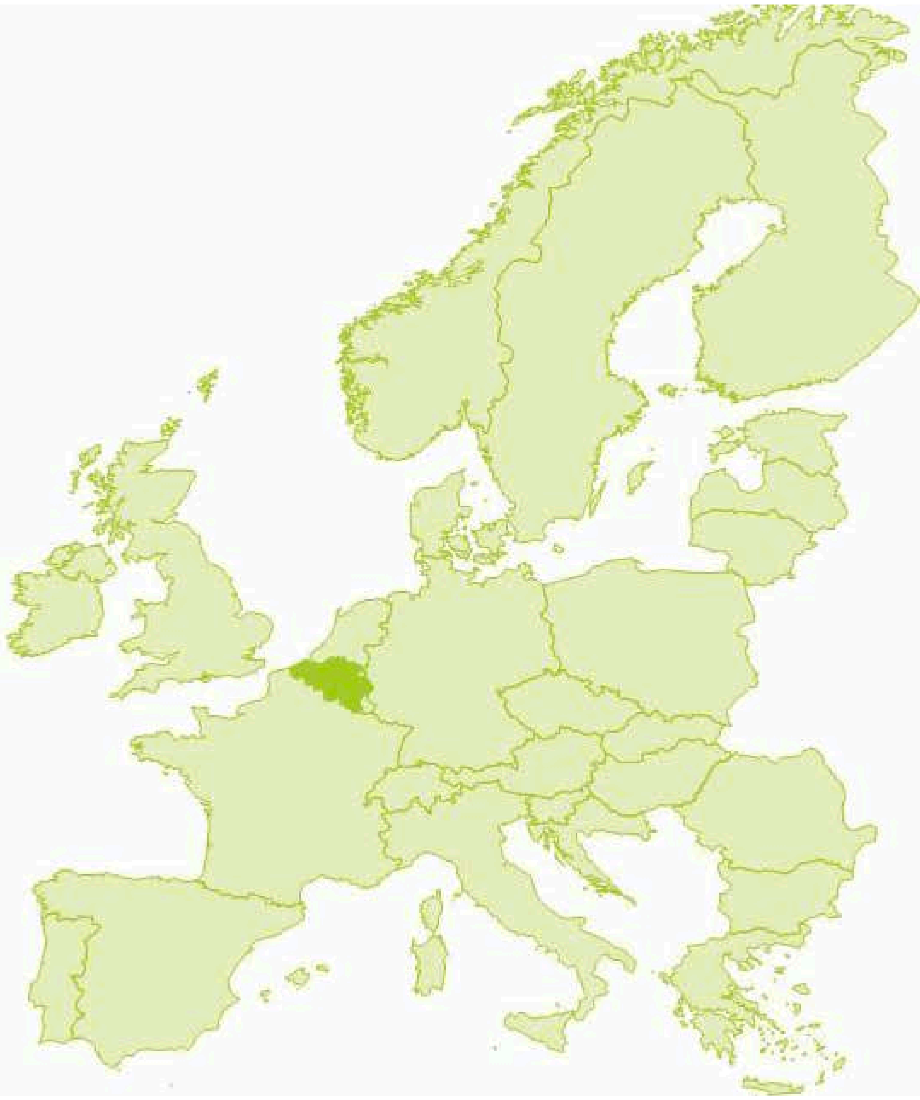
Austria has also concluded several bilateral social security agreements that offer a limited coordination.

The conditions for transfers of occupational pension rights are set out in the Company Pension Act *("Betriebspensionsgesetz")*. If the employment ends, vested pension rights of a pension fund can be

- transferred to the pension fund or occupational group insurance of the new employer in Austria or
- transferred to a foreign occupational pension provider of the new employer abroad.[53]

Austria is one of the few countries where cross-border transfers of occupational pension rights are defined as possible by law.

[49] Kollektivvertrag für die ArbeitnehmerInnen der Universitäten 2019, § 73 sec. 1.
[50] Kollektivvertrag für die ArbeitnehmerInnen der Universitäten 2019, § 75 sec. 1.
[51] Kollektivvertrag für die ArbeitnehmerInnen der Universitäten 2019, § 72 sec. 1.
[52] Regulation (EC) No. 883/2004 of the European Parliament and of the Council of 19 April 2004; Regulation (EC) No. 987/2009 of the European Parliament and the Council of 16 September 2009.
[53] § 6c Betriebspensionsgesetz as of 22 December 2018.



BELGIUM

Summary

In **Belgium** the prevailing pension system is the statutory pension system, but also occupational pension provision is widespread. The Belgian state pension system is known for its idea of solidarity with no limit on contributions but with a ceiling on benefits. However, the introduction of a new way of calculating pensions based on a "notional points system" is being discussed. Employees with employment contracts, self-employed and civil servants each have their own pension scheme. The pension entitlement in the salaried workers pension scheme depends mainly on the length of career, the gross wages of each career year and the family situation at retirement.

In order to extend supplementary occupational pensions Belgium has passed a general law on complementary pensions in 2003 to provide a unified framework for company pension plans and sector pension schemes for workers.

1 Statutory Pension Scheme

The Belgian government has agreed on a gradual harmonisation between the various pension schemes for employees, civil servants and self-employed persons. In general, the same pensionable age and the same conditions for early retirement as mentioned below apply. However, the retirement age can be higher for certain categories of civil servants. The calculation method for retirement benefit still differs depending on the scheme.

1.1 Statutory Pension Scheme for Salaried Persons

Salaried persons are registered automatically with the Belgian statutory pension scheme managed by the Federal Pension Service.

Financing

The pension scheme is a pay-as-you-go, earnings-related system. Because of an overall financial management the National Office for Social Security is responsible for collecting the total social security contribution. For the pension insurance the employee has to pay 7.50 %. The employer contribution for the pension scheme is 8.86 %.[54] There is no assessment ceiling on the contributions but pension benefits are limited by an annual ceiling regarding the maximum salary that is taken into account in order to calculate the pension.

Benefits

There is no qualifying period for pension entitlements in the Belgium statutory pension scheme for salaried persons.

The benefits are based on career years, indexed gross salaries and family situation. Career years are the qualifying years in the pension calculation. These include periods of contribution payment and assimilated periods such as unemployment, maternity leave or recognizable study periods. For the assimilated periods a fictive salary is taken into account.

Calculation Method

The pensions are calculated by summarizing the entitlements for each year to one complete pension amount.

The formula for one career year is:

$$\text{Pension per year} = \frac{\text{salary adapted to inflation}}{45} \times 60\ \%\ \text{(single person) or } 75\ \%\ \text{(with dependent spouse)}$$[55]

[54] Federal Public Service, June 2017, Social Security - Everything you have always wanted to know, page 22, (Available at: https://socialsecurity.belgium.be/en/publications/everything-you-have-always-wanted-knowabout-social-security).
[55] Federal Public Service, June 2017, Social Security - Everything you have always wanted to know, page 75.

The salaries that are relevant for the pension calculation are at first revaluated in line with the consumer price index and then adapted to the general welfare level.[56] However, only the salary up to an annual ceiling is taken into account and thereby limits the pension to a maximum amount. In 2016 this ceiling was EUR 54 648.70.[57] The pension for a single equals 60 % of the calculation result, a pensioner with a dependent spouse receives 75 %. A full pension is paid after 45 career years.

In case of low earnings-related pensions or part-time work stages throughout the career a minimum pension might be calculated, either through minimum annual credit or as a minimum earnings-related pension or both. Insured persons with low incomes or periods of part-time work are credited with an annual guaranteed minimum income (June 2016: EUR 23 374.55) for the pension calculation as mentioned above.[58] This calculation requires at least 15 career years with each year equaling at least one-third of full-time employment. This pension is subject to a ceiling. The minimum earnings-related pension on the other hand is a fixed amount equivalent to EUR 14 024.74 (single person, June 2016)) or 17 525.38 (with dependent spouse, June 2016) for pensioners having fulfilled the contribution conditions of 45 years. If the pensioner has fulfilled at least 2/3 of a full career a proportion of the full minimum pension is paid.[59] The beneficiary will receive the higher pension out of these two minimum pension types.

Pensionable Age/Early and Late Retirement

The legal standard retirement age is 65 for both men and women. In July 2015 a reform was adopted by parliament that will gradually increase the retirement age to 67 by 2030. An early retirement without actuarial reduction is possible from the age of 63 and 42 career years. A pension can be drawn even earlier if the pensioner has a very long career length.[60]

It is possible to defer the pension and continue working after the age of 65. The Belgian pension system also allows the combination of pensions and employment, usually within limits. For pensioners who have reached age 65 or have a career of 45 years when their first retirement pension commences the income from work earned by pensioners is not subject to limitation.

1.2 Special Pension Scheme for Appointed Civil Servants

The pension scheme for appointed civil servants is managed by the Pension Service for the Public Sector (SdPSP/PDOS). It covers appointed civil servants of various public bodies and public companies such as the state, the local governments or Council of State. The civil servants must be appointed on a permanent basis or be on preappointment probation period. Public sector employees who are not appointed on a permanent basis are covered by the general scheme of Social Security.

[56] Federal Public Service, June 2017, Social Security - Everything you have always wanted to know, page 77.
[57] Federal Public Service, June 2017, Social Security - Everything you have always wanted to know, page 77.
[58] OECD, *Pensions at a Glance 2017: Country Profiles - Belgium*, page 2.
[59] OECD, *Pensions at a Glance 2017: Country Profiles - Belgium*, page 2.
[60] Federal Public Service, June 2017, *Social Security - Everything you have always wanted to know*, page 73.

The pension scheme for appointed civil servants is a pay-as-you-go, earnings-related scheme. For the pension insurance 7.50 % had to be paid by the civil servant. For most civil servants there is no employers' contribution since pensions are financed by the state budget. The National Office for Social Security (ONSS/RSZ) is responsible for collecting the pension contribution of the civil servants of the federal government, the three communities and the three regions. The contributions of local government civil servants are collected by the institution ONSSAPL/RSZPPO.

The pension formula is:

$$\text{Pension per year} = \frac{\text{pensionable salary x number of credited years of service}}{60}$$

The pensionable salary is – in dependence of age – the annual average index linked salary of the last 5 or 10 years. The value of a pensionable year is in general 1/60th of the pensionable salary but can be more favourable (1/55, 1/50, 1/48) for certain professional groups.

The relative maximum for the pension is ¾ of the reference salary, the absolute maximum equals a fixed maximum gross amount (June 2017: EUR 6 537,80).[61] The pension paid cannot be lower than the minimum guaranteed amount (e.g. for a single EUR 1.285,85 per month) which is tested against all other income.

2 Occupational Pension Schemes

The statutory pension of a private or self-employed worker can be topped up by an occupational pension. Among new retirees the coverage rate is getting higher.

Occupational pension plans are not compulsory by law but mandatory if they are based on collective bargaining agreements. Traditionally, most occupational pension schemes were defined-benefit systems, but defined-contribution systems and hybrid system are increasing with more than 50 % being defined-contribution plans.[62] There are three types of occupational pension schemes: collective company pension schemes for a group of employees, individual pension promises for a specific employee and sector pension schemes. Salaried employees and white-collar workers are usually insured with company pensions. Pensions for blue-collar workers are not very widespread and only a few company pensions are provided, often via a sector plan.[63] According to changes in the Belgian Supplementary Pension Act that took effect in 2014, discriminiation of blue and whitecollar workers needs to be avoided in the long term. Since 2015 any new occupational pension scheme shall no longer distinguish between blue and with-collar workers. From 2025 onwards all future supplementary pension rights should not display any differences.

[61] Federal Public Service, June 2017, *Social Security - Everything you have always wanted to know*, page 78.
[62] European Actuarial & Consultancy Services (EURACS), Belgium Pension Summary, http://euracs.eu/summaries/belgium-pension-summary/, (Accessed 14 June 2019).
[63] European Actuarial & Consultancy Services (EURACS), Belgium Pension Summary, ibid.

The "Vandenbroucke Law" of 28 April 2003 introduced important rules for occupational pension schemes. According to these rules the terms and provisions for sector pension plans have to be negotiated by collective bargaining agreements. Collective company or sector-wide pension schemes may offer a special 'social pension' for all workers included in the solidarity part of the plan covering e.g. disability or death. Furthermore, the solidarity clause may state – for example – that during unemployment periods pension entitlements can be accrued as well.[64] In exchange, these plans profit from special tax advantages.

Until 31 December 2015 defined-contribution plans had the legal obligation to guarantee a minimum average return of 3.75 % for employee contributions and 3.25 % for employer contributions.[65] Since 2016 this minimum return rate was reduced to 1.75 % p.a.[66] The retirement age is usually 65 year of age. Pensions can be paid as an annuity or a lump sum.

In general, an occupational pension scheme does neither exist for contracted civil servants nor for appointed civil servants. Only at the local government level a modest scheme has been introduced in 2010.

3 Private Pension Provisions

Voluntary individual pension plans are quite widespread in Belgium because of tax reliefs for life insurances, pension insurances and pension saving plans. A choice can be made between pension savings, long-term savings or a combination of both. Contributions are tax-deductible up to a certain limit.

4 Position of Researchers

4.1 Work conditions

The European Commission's Researchers' Report of 2013 shows that Belgium has a fairly high rate of researchers working on fixed-term contracts.[67] However, in comparison to many other European countries, the statutory pension system has no qualifying period so that even researchers on fixed-term contracts are able to accrue vested pension entitlements.

[64] Art. 20 Law on Complementary Pensions as of 28 April 2003.
[65] Wilmington plc, *Pension Funds Online – Pension System In Belgium*, http://www.pensionfundsonline.co.uk/content/country-profiles/belgium/121, (Accessed 14 June 2019).
[66] Muriel Lejour, KPMG, *Belgian Pensions Accounting Survey 2018*, https://home.kpmg/be/en/home/insights/2018/10/belgian-pensions-accounting-survey-2018.html, (Accessed 14 June 2019)
[67] European Commission & Deloitte, Researchers' Report 2014, *Country Profile: Belgium*, page 4.

4.2 Details of Researchers' Pension Provision

Occupational pension plans are not common in the public sector. Therefore, the following remarks focus on the 1st pillar pension coverage of researchers in Belgium.

Salaried researchers such as research associates with an employment contract have full social security coverage and are insured with the statutory pension scheme as explained above.[68] In general, researchers with a postdoctoral grant or doctoral students with a doctoral scholarship are subject to social security. But nationals from non-EU/EEA countries with which Belgium has not concluded a bilateral social security agreement are only subject to partial social security coverage. This means that they are covered for health, occupational hazard and occupational illness and entitled to child allowances but do not build up any unemployment or pension rights.[69]

Professors may be appointed as civil servants and accrue public sector pension entitlements in the civil servants pension scheme (SdPSP). Foreign researchers are rarely appointed civil servants and only citizens of Belgium, of an EU/EEA Member State or Switzerland have the opportunity to be appointed.

5 Cross-border Portability/Mobility

Between EU/EEA Member States the insurance periods are coordinated in order to ensure that required qualifying periods in the Member States can be fulfilled to a greater extend.[70] However, in Belgium there is no qualifying period for a statutory pension. The rights become vested immediately.

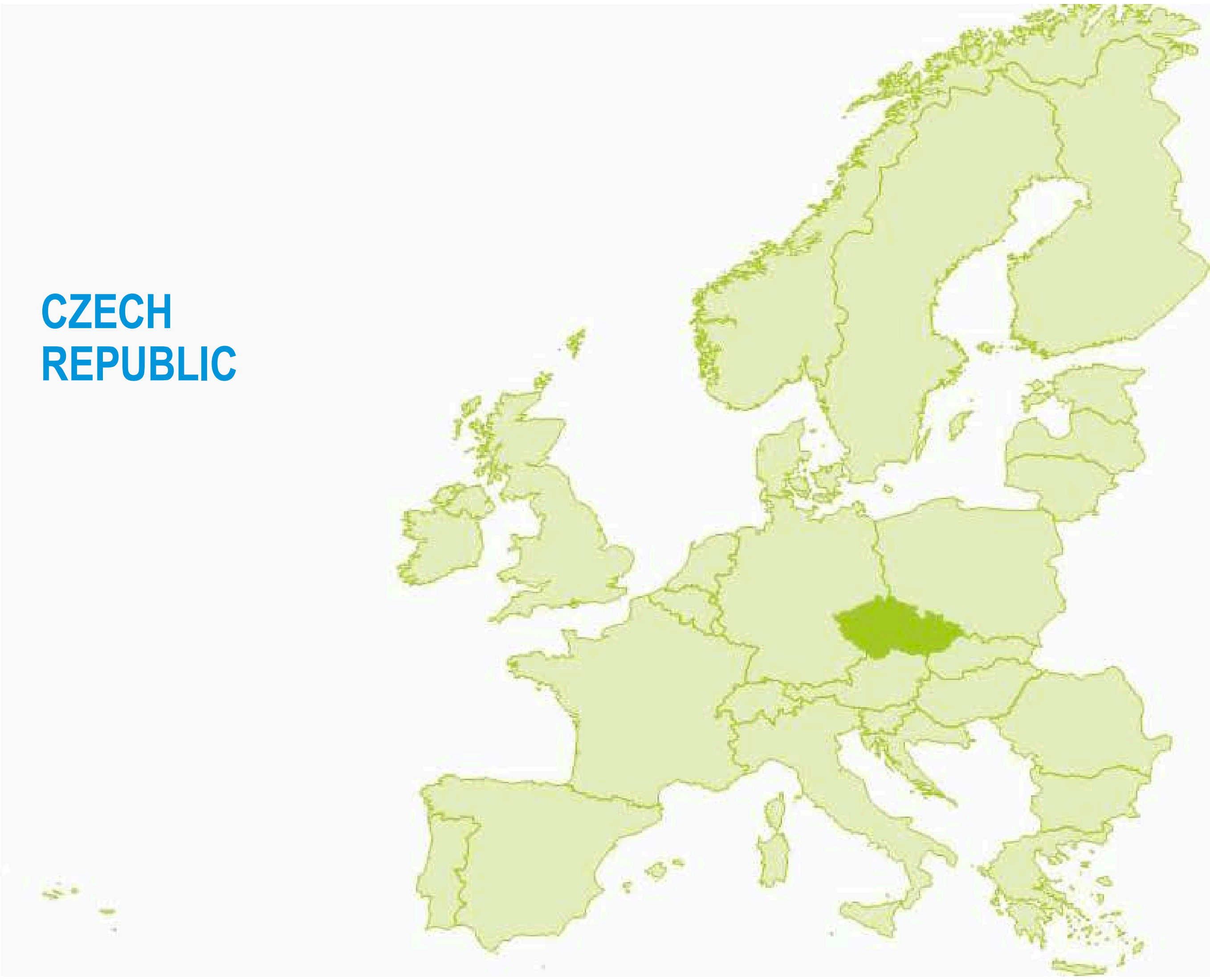
Belgium has also concluded several bilateral social security agreements that offer a limited coordination.

[68] KU Leuven, Postdoctoral researchers, http://www.kuleuven.be/english/services/insurances/researcher.html, (Accessed 14 June 2019).

[69] KU Leuven, *Students with a scholarship*, http://www.kuleuven.be/english/services/insurances/scholarship.htm; *Postdoctoral researchers*, http://www.kuleuven.be/english/services/insurances/researcher.html, (Accessed 14 June 2019).

[70] Regulation (EC) No. 883/2004 of the European Parliament and of the Council of 19 April 2004; Regulation (EC) No. 987/2009 of the European Parliament and the Council of 16 September 2009.

CZECH REPUBLIC



Summary

The **Czech** pension system used to be dominated by the 1st pillar statutory pension provision. However, demographic changes weakened the financial viability of the system. To solve the expected problems, the Czech Republic passed several reforms with the aim to stabilize the system and to promote the diversification of the old-age pension system. From 2013 until 2015 persons insured with the statutory pension scheme had the opportunity to a partial opt-out of the 1st pillar by transferring a share of their social security contribution to a so-called personal pension savings scheme.

Occupational pension schemes are not common in the Czech Republic. Participation in voluntary private pension plans of the long-established third pillar is quite widespread.

1 Statutory Pension Scheme

In general, the statutory public pension scheme is mandatory for all employees and self-employed persons. Special schemes do exist, e.g., for the police or military personnel. Voluntary insurance coverage is possible. The pension is administered and provided by the Czech Social Security Administration.

The statutory retirement pension has two elements: the basic pension which is identical for all persons who become entitled to a pension, plus an individual, earnings-related pension percentage.

Financing

The statutory pension scheme is a pay-as-you-go, defined-benefit system. The employer contribution to the statutory pension system is 21.5 % of the gross salary. The regular contribution of an employee is 6.5%.[71] There is an annual maximum assessment ceiling for (employees') contributions of four times the average wage (in 2019 CZK 1 569 552 – approx. EUR 61 615).[72]

Benefits

An old-age pension entitlement requires a certain qualifying period upon reaching retirement age. For individuals who retire after 2018 the minimum qualifying period is currently 35 years of coverage.[73] Periods, e.g., for childcare of children under the age of 4, or shorter periods of unemployment are taken into account to meet this requirement. A pension is also paid if at least 30 years of contributory periods have been accumulated. However, individuals with at least 20 years of coverage are entitled to a so-called "proportional" old-age pension when they are at least five years older than the standard retirement age.[74]

Calculation Method

The statutory retirement pension is calculated out of two elements: the basic pension and an individual, earnings-related pension percentage.

The **basic pension** is independent on earnings and is the smaller part of the pension. It is a fixed amount defined by law, and paid to everyone entitled to a pension. The amount is determined as a relation to the average nationwide income, e.g., 10 % thereof. In 2019 the monthly amount of the basic assessment is CZK 3 270 (approx. EUR 128).[75]

The **earnings-related** part of the pension depends on years of insurance plus income level, and has a progressive benefit formula. For each year of insurance the pension accrues at 1.5 % of the calculation base.[76]

The calculation base depends on the income to be taken into account. Earnings are taken into account by 100 % up to a defined threshold. Above that, earnings are only recognised up to a fixed percentage.

[71] Czech Social Security Administration, *Insurance rates from the assessment base for social insurance in the Czech Republic valid from 1.1. 2016 (%)*, https://www.cssz.cz/web/en/insurance-rates, (Accessed 18 June 2019).
[72] Czech Social Security Administration, *Maximum calculation base*, https://www.cssz.cz/web/en/maximumcalculation-base, (Accessed 18 June 2019).
[73] Czech Social Security Administration, *Old-age Pension*, https://www.cssz.cz/web/en/old-age-pension, (Accessed 18 June 2019); Section 29 (1) of the Pension Insurance Act.
[74] Czech Social Security Administration, *Old-age Pension*, loc. cit.; Section 29 (2) and (3) of the Pension Insurance Act.
[75] Czech Social Security Administration, *Old-age Pension*, loc. cit.
[76] Czech Social Security Administration, *Old-age Pension*, loc. cit.

The earnings which are relevant for the pension calculation are adjusted to average earnings growth, added together and divided by the insurance years. The result is the final calculation base.

People with low income may be entitled to a minimum pension composed of a minimum earnings-related pension credit of CZK 770[77] per month, plus the basic pension amount.

Pensionable Age/Early and Late Retirement

The retirement age for individuales born after 1971 is 65 years of age.[78]

Early retirement – with a reduced old-age pension – is possible, but no earlier than three years before the standard retirement age provided that the qualifying period of 35 years (or 30 years without non-contributory periods is fulfilled.[79]

A deferral of the pension is possible, and leads to a pension raise by an increased accrual factor for each 90-day period of deferral.

A person may combine a standard old-age pension and working without any earnings limits. Receiving the full pension increases the pension by 0.4 % for each 360 days of work, persons who claim only half the pension receive a pension which is increased by 1.5 % for every 180 days of work.[80]

2 Occupational Pension Schemes and Personal Pension Savings Scheme

Although the EU Pension Directive was finally implemented in 2011, employers make little effort to provide occupational pension plans.

The so-called "second pillar" personal pension savings schemes that were introduced in 2013 were already abolished with effect of 1 January 2016 because none of the providing pension companies met the CZK 50 million minimum legal capital requirement.[81] Persons insured with the statutory pension scheme had the opportunity to a partial opt-out of the first pillar by transferring a share of their social security contribution to a personal pension savings plan along with a 2 % addition contribution from gross earnings. At the end of 2013 only 83 960 members had opted for private pension savings. By comparison, the third pillar had some 5 million members.[82]

[77] Czech Social Security Administration, *Old-age Pension*, https://www.cssz.cz/web/en/old-age-pension, (Accessed 18 June 2019).
[78] Czech Social Security Administration, *Old-age Pension*, loc. cit.
[79] Czech Social Security Administration, *Old-age Pension*, loc. cit.
[80] OECD, *Pensions at a Glance 2017: Country Profiles – Czech Republic*, page 2.
[81] Wilmington plc, *Pension Funds Online – Pension System In Czech Republic*, https://www.pensionfundsonline.co.uk/content/country-profiles/czech-republic (Accessed 18 June 2019).
[82] Krystyna Krzyzak in: Investment & Pensions Europe, *Czech minister confirms closure of second pillar by 2016*, 4 February 2014, https://www.ipe.com/news/regulation/czech-second-pillar-pension-system-to-closeby-january-2016/10004774.fullarticle, (Accessed 18 June 2019).

3 Private Pension Provisions

In 2013 the existing voluntary pension planes (renamed as "transformed funds") were closed for new clients in favour of new voluntary pension plans, the so called "participating funds". It was expected that with these new mutual funds higher yields than in the former pension plans could be achieved. The funds are defined-contribution plans run by pension companies. Payments can be received no earlier that at age 60, provided that the member fulfills a minimum qualifying period.[83]

The state has created financial incentives for participants in funds, including state contributions and tax relief. The payment of state matching contribution requires that the member is either a permanent resident in the Czech Republic or a residende of an EU/EEC member state and simultaneously participates in one of the following: the statutory pension insurance, the health insurance or receives a retirement pension from the Czech statutory pension insurance.
In order to benefit from state contributions the minimum monthly member contribution has to amount to at least CZK 300 (EUR approx. 11.80). In this case the state adds CZK 90 (EUR ~ 3.50) per month plus 20 % of the amount exceeding CZK 300. The maximum monthly state contribution is CZK 230 for members paying CZR 1000 (EUR approx. 29) or more.[84] As of 2016 the maximum tax deductible limit for contributions of the member is CZR 24 000 (EUR approx. 940). Employers may contribute to the fund as well. Employer contributions of up to CZK 50 000 (EUR approx. 1 960) are subject to personal income tax excemptions for the employee.[85]

Other private pension products – such as life insurances – are also available.

[83] Wilmington plc, *Pension Funds Online – Pension System in Czech Republic*, https://www.pensionfundsonline.co.uk/content/country-profiles/czech-republic, (Accessed 19 June 2019).

[84] Edyta Marcinkiewicz, 2018, *Supplementary pensions: what can we learn from Czech, Spanish and Portuguese experiences?*, „Journal of Insurance, Financial Markets & consumer Protection No 28 (2/2018)", page 56, (Available at: http://rf.gov.pl/join/wp-content/uploads/2018/10/RU28-5.pdf); Jaroslav Vostatek, 2016, *Czech Private Pension Systems: A Review*, „Insurance Review 4/2016", page 148, (Available at: https://piu.org.pl/wp-content/uploads/2017/05/WU-2016-04-10-Vostatek-en.pdf); Penzijní Společnost České Pojišťovny, Supplementary Pension Savings in General, https://www.pfcp.cz/english, (Accessed 19 June 2019).

[85] Jaroslav Vostatek, 2016, *Czech Private Pension Systems: A Review*, „Insurance Review 4/2016", page 151, (Available at: https://piu.org.pl/wp-content/uploads/2017/05/WU-2016-04-10-Vostatek-en.pdf).

4. Position of researchers

4.1 Work conditions

Compared to other European Countries the percentage of researchers working on fixed-term contracts is fairly high in the Czech Republic. This could be due to an increasing share of projectbased funding which implies that relatively stable long-term jobs are replaced by fixed-term contracts.[86]

4.2 Details of Researchers' Pension Provision

There is no special legislation dealing with researchers' social security. Researchers with an employment contract are automatically insured with the statutory insurance scheme, regardless of the researcher's nationality.[87] Occupational pension provision is not in place. The personal pension saving schemes introduced in 2013 offered a partial opt-out of the statutoty pension scheme. They were abolished at the end of 2016.

5. Cross-border Portability/Mobility

EU rules coordinate national social security systems of the 1st pillar to make sure that moving to another EU/ EFTA Member States does not result in a loss of social security rights.[88] Hence, insurance periods that are covered by the statutory pension schemes in another EU/EFTA State are taken into account when applying for a pension in the Czech Republic. Due to the high qualifying period for statutory old-age pensions in the Czech Republic this is of great importance. In addition, the Czech Republic has bilateral agreements on social security with Australia, Croatia, Israel, Canada, Québec and the USA.

[86] European Commission & Deloitte, Researchers' Report 2014, *Country Profile: Belgium*, page 4 and 11.
[87] European Commission & Deloitte, Researchers' Report 2014, *Country Profile: Belgium*, page 11.
[88] Regulation (EC) No. 883/2004 of the European Parliament and of the Council of 19 April 2004; Regulation (EC) No. 987/2009 of the European Parliament and the Council of 16 September 2009.

DENMARK

Summary

Denmark was one of the first European countries to take a multi-pillar approach to pension provision. The system consists of the statutory pension scheme, quasi-mandatory occupational pension schemes based on collective agreements and voluntary individual pension savings plans. As other Nordic countries, the first pillar statutory pension scheme has two components: the noncontributory, residence-based national state pension called Folkepension and a supplementary earnings-related scheme. Most employees are affiliated with the fully funded Supplementary Labour Market Pension (Arbejdsmarkedets Tillægspension- ATP) for employees.

More than 90 % of of Danish wage-earners are covered by compulsory occupational pension schemes in addition.

1 Statutory Pension Scheme

The two tiers of the 1st pillar statutory pension system are the residence-based, flat-rate *Folkepension* and the Supplementary Labour Market Pension known as *ATP Livslang Pension*.

Folkepension

The *Folkepension* is financed from general taxation on a pay-as-you-go basis. It aims to secure the basic needs. It encompasses a basic pension paid as a flat-rate amount, an income-tested pension supplement and a means-tested supplementary pension benefit.

The *Folkepension* is in general a pension paid to Danish citizens residing in Denmark. The qualifying period is three years of residence after the 15th birthday.

There are specific conditions for pension payment to foreign national living in Denmark or abroad. For example citizens of an EU/EFTA Member State or Switzerland who live in an EU/EFTA Member State or Switzerland and have resided in Denmark for at least one year benefit from the coordination of insurance periods spent abroad and thus fulfil the three year qualifying period as well. For pensioners living outside an EU/ETFA Member State or Switzerland as well as for citizens of other countries the conditions may be less favourable.

Benefits

Benefits consist of a **basic pension paid as a flat-rate amount** and an **income-tested pension supplement**. A full old-age pension requires 40 years of residency in Denmark. Otherwise a prorata pension is granted.

The monthly full basic pension amount in 2019 is DKK 6 327 (approx. EUR 848) for all pensioners. The basic pension amount can be reduced if the insured person continues to work after retirement and has annual earnings that exceed DKK 329 600 (approx. EUR 44 168). No basic pension is paid if the earnings exceed DKK 576 400 (approx. EUR 77 241) a year.[89]

Pensioners are entitled to a pension supplement. The supplement is tested against all sources of income, including the ATP Livslang Pension and occupational pension. The full supplement (approx. EUR 928 for a single and EUR 463 for each person in a couple) is only paid if the income remains between certain income thresholds. For example no supplement at all is paid if the annual income of a single person exceeds DKK 356 700 (approx. EUR 47 800).[90]

There is also a means-tested supplementary pension benefit paid once a year to pensioners receiving very low income.

[89] Borger.dk, *Før du går på folkepension*, https://www.borger.dk/pension-og-efterloen/Folkepensionoversigt/foer-du-gaar-paa-folkepension, (Accessed 24 June 2019).
[90] Borger.dk, *Før du går på folkepension*, https://www.borger.dk/pension-og-efterloen/Folkepensionoversigt/foer-du-gaar-paa-folkepension, (Accessed 24 June 2019).

Pensionable Age/Late retirement

The statutory retirement age in Denmark is 65 but will be gradually increased to 68.[91] From 2025 onwards, the retirement age will be linked to life expectancy.

It is possible to defer the pension for up to ten years provided that the pensioner is employed for around 14 hours a week (750 hours a year). In this case the future pension benefit will be increased.

ATP Livslang Pension

The vast majority of individuals working in Denmark must pay contributions to the Supplementary Labour Market Pension *(Arbejdsmarkedets Tillægspension-ATP)*. It covers all wage earners who work at least 9 hours a week and are at least 16 years of age. Certain recipients of social security benefits such as unemployment benefits or maternity benefits are also required to pay contributions to ATP. For self-employed persons the membership is voluntary.

The *ATP Livslang Pension* is a statutory, fully funded defined-contribution scheme. The contribution to be paid is a fixed amount regardless of individual income and depends solely on the numbers of hours worked. For a full-time employee in the private sector the monthly total contribution is DKK 284 (approx. EUR 38).[92] Thereof the employee pays 1/3 whereas the employer's share is the other 2/3. For employees of the public sector the contribution level depends on the collective agreement the employee is covered by.

Benefits

The ATP Livslang Pension will be paid out upon reaching the statutory retirement age which is currently gradually being increased from 65 to 68. There is no qualifying period. The pension can be paid out as an annuity or as a lump sum depending on the amount. It is possible to defer the pension.

Due to the fact that the contribution level depends on the numbers of hours worked, the pension amount is independent of the salary earned. Compared to the overall pension income, the ATP Livslang Pensions represent a fairly small part, especially for high earners.

The pension amount depends on the accumulated capital on the individual's account, the contribution period, and the average life expectancy. As of 2008 a new ATP pension accrual system was introduced that is based on swap interest rates. Pension rights are accrued on a "what-you-pay-is-what-you-get" basis.[93]

[91] Borger.dk, *Før du går på folkepension*, https://www.borger.dk/pension-og-efterloen/Folkepensionoversigt/foer-du-gaar-paa-folkepension, (Accessed 24 June 2019).
[92] Virk, *ATP-satser 2016-2019 – privat virksomhed*, (Available at: https://indberet.virk.dk/sites/default/files/atp-satser_2016-2019_privat_virksomhed.pdf); ATP-Satser 2016-2019 – offentlig virksomhed, (Available at https://indberet.virk.dk/sites/default/files/atp-satser_2016-2019_offentlig_virksomhed.pdf).
[93] OECD, *Pensions at a Glance 2017: Country Profiles – Denmark*, page 2.

2 Occupational Pension Schemes

Membership of Denmark's occupational pension schemes is mainly based on collective bargaining agreements that cover nearly the entire workforce. Some 90 % of the employed workforce is covered.[94]

The schemes are fully funded and defined-contribution in nature. Contributions are made by the employees and the employer alike and typically range between 9 % and 17 %. Contributions are tax deductible but pension benefits are taxed as normal income. The schemes operate on a "withprofit" basis. The pension capital increases depending on the return on assets and mortality experience.[95] Pensions are usually paid as life-long annuities upon reaching statutory retirement age. However, many schemes also allow lump-sum withdrawals and early retirement.

Many researchers are covered by the *MP Pension* scheme. This scheme will be described in detail in section 4.4.

3 Private Pension Provisions

Third pillar pension schemes in Denmark are managed by banks, life insurance companies and other financial institutuions. Contributions are subject to certain tax reliefs whereas benefits are liable for taxation.

4 Position of Researchers

4.1 Work conditions

Almost all Danish university employees are employed under the terms of a centrally negotiated collective agreement between the academics' central trade union and the state. As part of this agreement they are, in general, insured with an occupational pension scheme.

4.2 Details of Researchers' Pension Provision

Foreign professors and scientists in the public sector are employed in accordance with the Collective Agreement on Academics in the State. The university degree and the professional group determines which occupational pension fund is responsible for the employee's insurance.

Researchers with a Master of Art, a Master of Science or a Ph.D who are employed at public universities and upper secondary schools are covered by the *MP Pension* scheme, the scheme for scientists in the pension administration body *Unipension*. The pension fund also admits members from the private sector with academic degrees in the above-mentioned areas. Foreign researchers who were recruited directly from outside Denmark and work on fixed-term employment contracts of no more than 5 years have the possibility to achieve exemption from the occupational pension fund insurance.[96] In this case they are only covered by the mandatory group life insurance that provides coverage in case of critical illness or death.

[94] OECD, *Pensions at a Glance 2017: Country Profiles – Denmark*, page 3.
[95] OECD, Pensions at a Glance 2017: Country Profiles – Denmark, page 3.
[96] University of Copenhagen, December 2016, *Danish Pension*, page 6, (Available at: https://ism.ku.dk/contact/brochures-checklists/brochures/). Fixed-term contract of six years, if agreed with trade union representative and university department.

4.3 The pension scheme MP Pension

The contribution according to the Collective Agreement on Academics in the State amounts to 17.1 % whereof a share of 1/3 is paid by the professor or researcher and 2/3 by the employer.[97] However, the collective agreement allows for 0.3 % of the total 17.1 % pension contribution being paid as salary.[98] Pension contirbutions are excempt from taxation whereas the tax will be deducted from the future pension. However, it is possible to choose the so called "section 53A pension scheme" of the Pension Taxation Act. In this case the pension contribution will be taxed but the pension savings can be withdrawn without paying any additional taxes.

Members will be allocated basic coverage automatically. It encompasses old-age annuity pension as well as insurance coverage (disability, spousal pension, children's pension). Each person insured in the scheme has the option of taking flexible coverage that allows to adapt the insurance cover to one's own need.[100]

Benefits

For pension provisions set up from January 2018 the earliest pensionable age for persons born after January 1963 is 65 years of age.[101]

MP Pensions offers an Average Rate Scheme and a Market Rate Scheme. Under the Average Rate Scheme the pension is calculated on the average interest principle. Broadly speaking, the fund puts money aside in years with good yields to average out years with lower yields. The pension consists of a guaranteed basic pension payment and a supplementary pension. Since 2017, new members shall be registered with the Market Rate Scheme. With the new Market Rate Scheme product, the actually achieved return will be added to the member's account one-to-one. The payments are calculated as an average of the return for the past ten years.[102]

Persons who have resigned from employment have the choice to stay covered for disability and death coverage for up to 12 months. This coverage is financed by their own pension savings. Upon leaving Denmark, foreign citizens may also request a cash payment of their accumulated pension savings.

97 Overenkomst for akademikere i staten, 2015, § 10 Stk. 1.
98 Overenkomst for akademikere i staten, 2015, § 10 Stk. 2.
99 Researchers of an EU/EFTA Member State or researcher with a work permit may be eligible for favourable tax treatment under the researcher taxation scheme.
100 MP Pension, JØP, DIP, Pension for academic employees at universities and similar institutes, page 1, (Available at: https://mppension.dk/globalassets/pdfer/english/brochure---pension-for-academic-employeesat-universities-and-similar-institutes_chp.pdf).
101 MP Pension, *Pensionsalder*, https://mppension.dk/pension/pensionswiki/pensionsalder/, (Accessed 26 June 2019).
102 MP Pension, *About MP Pension – Average Rate Schemeor Market Rate Scheme*, https://mppension.dk/english/, (Accessed 26 June 2019).

5 Cross-border Portability/Mobility

In general, the Folkepension requires at least three years of residence for Danish citizens in order to be entitled to a pension. For nationals of an EU/EFTA Member State or Switzerland the EU law coordinates insurance periods completed in Denmark with those spent in another EU/EFTA Member States. However, at least one year of residence has to be completed in Denmark. Nationals of other countries have to meet more restricted requirements.

Denmark has also concluded several bilateral social security agreements that offer a limited coordination.

In general, occupational pension savings can be withdrawn upon leaving Denmark. Each occupational pension scheme has its own rules concerning transfers of pension capital.

FINLAND

Summary

The statutory pension of the first pillar is the pre-dominant and most important part of the Finnish pension system. It has three components: the employment-based earnings-related pension, the residence-based national pension and a guarantee pension. In Finland the statutory earnings-related pension is exclusively managed by private institutions and neither has a ceiling on contributions nor on benefits. Even though the average pension replacement rate of people retiring on an earnings-related pension is quite high, actual replacement rates vary greatly.

Since the statutory pension secures a reasonable income during retirement, supplementary occupational or private pension schemes are not of great importance.

1 Statutory Pension Scheme

1.1 Earnings-related Pension

All employees between the age of 17 and 68 with a monthly minimum income of EUR 59.36 (2019)[103], as well as self-employed persons and recipients of earnings-related social security benefits, are covered by the mandatory earnings-related pension system. The earnings-related pension is a defined-benefit system regulated by a comprehensive legal framework. Each act covers a certain group of employees. Although the earnings-related pension scheme is part of the statutory public pension system, it is decentralized and administered by authorized private pension insurance companies, industry-wide pension funds or company pension funds. The employer chooses the appropriate provider for its employees. The majority is, however, insured by a pension insurance company. The joint cooperation body is the Finnish Centre for Pensions (ETK).

The most comprehensive earnings-related pension for wage earners is the one offered under the Employees Pension Act (TyEL). The following information deals only with this pension scheme.

Financing

The statutory earnings-related pension system is financed both on a pay-as-you-go and partially funded basis. Around 80 % of the pension expenditure is pay-as-you-go financed and another 20 % is funded. The earnings-related contributions are paid by employer and employee.

In 2019, the total pension insurance contribution was 24.40 % of gross wages. There the employee’s share on the employee’s age: 6.75 % for employees under 53 or over 63 and 8.25 % for employees between 53 and 62 years of age.[104] There is no assessment ceiling on contributions.

Benefits

Finland has neither a qualifying period for the earnings-related pension nor a ceiling for pension benefits.

The earnings-related pension depends mainly on earnings, insurance period and age at retirement. It‘s determined separately for each year. The relevant income of each insurance year is first adjusted to the income and price level at retirement. Since the 2017 pension reform, the pension accrues at a standardized rate of 1.5 % of adjusted annual gross earnings with a transition period until the end of 2025. During that transition period the accrual rate for employees between the age of 53 and 62 will be 1.7 %.[105] The accrued pension amount is multiplied by a life expectancy coefficient which adjusts the old-age pension amount to changes in life-expectancy. To offset the life expectancy coefficient the employee needs to retire at the so called targeted retirement age which is higher than the earliest eligibility age.[106]

[103] Finish Centre for Pensions, *The employees pensions act is the most comprehensive earnings-related pension act*, https://www.etk.fi/en/the-pension-system/pension-security/pension-coverage-andinsurance/wage-earners/, (Accessed 28 June 2019).
[104] Finnish Centre for Pensions, 2019, *Your Guide to Earnings-related Pensions*, page 12, (Available at: https://www.etk.fi/en/julkaisu/guide-earnings-related-pensions/).
[105] Finnish Centre for Pensions, 2019, *Your Guide to Earnings-related Pensions*, page 16.
[106] If the earliest retirement age is e.g. 65 years, the targeted retirement age could be 66 years and 10 months.

The formula for one year is:

Pension for one year = earnings x accrual rate x life expectancy coefficient

The whole earnings-related pension is always awarded and paid by the last pension provider that collects the relevant pension "pieces" of the insured's working career.

Pensionable Age/Early and Late Retirement

The earnings-related pension system has no fixed retirement age but a flexible retirement age. For persons born after 1955, the earliest eligibility age for the old-age pension will gradually increase from 63 to 65. For persons born between 1962 and 1964 the minimum retirement age will be 65 and the insurance obligation ends at 70 years of age. For those born after 1965 the minimum retirement age will be linked to life expectancy which will be determined at age 62.[107]

A deferral of the pension will increase the pension by 0.4 % per month. It is also possible to draw a pension while continuing to work at the same time. Engaging in gainful employment while on an old-age pension accrues a new pension that can be drawn once the insurance obligation ends.

As part of the 2017 pension reform two new pension types: the partial old-age pension and the years-of-service-pension. The partial old-age pension entitles to a 25 % or 50 % pension and allows an early withdrawal three years before reaching the earliest eligibility age. The part of the pension taken prior to the minimum retirement age is subject to a deduction of 0.4 % for each month while it increases by 0.4 % per month between the minimum retirement age and the start of the pension payment.[108] The years-of-service-pension requires mentally of physically hard work of at least 38 years.

1.2 National Pension

The residence-based national pension is managed by the Social Insurance Institution *Kela*. The national pension provides a minimum flat-rate basic pension for persons without or with only a low earnings-related pension.

The earnings-related pension and the national pension complement each other. The amount of the earnings-related pension affects the national pension in a way that high earnings-related pensions lead to a lower or even no national pension. Other pension income (even from abroad) may affect the national pension as well.[109]

Approximately 50 % of all pensioners receive a national pension.[110]

[107] Finnish Centre for Pensions, 2019, *Your Guide to Earnings-related Pensions*, pages 21 and 22, (Available at: https://www.etk.fi/en/julkaisu/guide-earnings-related-pensions/).
[108] Finnish Centre for Pensions, 2019, *Your Guide to Earnings-related Pensions*, page 26.
[109] E.g. an earnings-related pension paid from an EU Member State reduces in general the amount of the national pension.
[110] Finnish Centre for Pensions, *National and Guarantee Pensions*, https://www.etk.fi/en/the-pensionsystem/pension-security/national-pension/, (Accessed 2 July 2019).

Financing

The national pension is financed by the State via tax revenues. A small buffer fund, the National Pension Insurance Fund, has to contain assets worth at 3.5 % of the total annual expenditure for national pensions.[111]

Benefits

The national and the earnings-related pension guarantee a minimum standard of living for old-age, and also provide cover in the event of disability, unemployment or death.

In principle the National Pension may be granted to persons who are covered by the Finnish social security system and who have lived in Finland for at least three years after reaching the age of 16. However, persons living in another EU/EFTA Member State or in a country that has a social security agreement with Finland may also be entitled to a National Pension.

The amount of a national pension depends on the time of residence in Finland, marital status and the amount of other pension income. For a retiree who is single the full pension amounts to EUR 628.85 a month in 2019 (couples EUR 557.79).[112] The national pension is paid only proportionally even though the residence requirements are met if the applicant has only resided in Finland for less than 80 % between the age of 16 and the start of pension payment. Other pension income – in particular the Finnish earnings-related pension but also pensions from abroad – may reduce the national pension.

Pensionable Age/Early and Late Retirement

The retirement age will rise along with the earnings-related pension scheme. An early old-age pension with a monthly reduction of the pension amount is possible until the retirement age of the earnings-related pension reaches age 65. A deferred pension increases the pension amount slightly.

Guarantee Pension

The guarantee pension ensures a minimum security to low income pensioners. In 2019, the pension income limit for the guarantee pension was EUR 784.53 per month.[113] Other pensions from Finland or abroad affect the guarantee pension. The pensions is provided by the Social Insurance Institution *Kela*.

[111] ETK, *Financing of national pensions*, https://www.etk.fi/en/the-pension-system/pension-financing-andinvestments/financing-principals/financing-national-pensions/, (Accessed 29 July 2019).
[112] Finnish Centre for Pensions, *National and Guarantee Pensions*, https://www.etk.fi/en/the-pensionsystem/pension-security/national-pension/, (Accessed 2 July 2019).
[113] Finnish Centre for Pensions, *National and Guarantee Pensions*, https://www.etk.fi/en/the-pensionsystem/pension-security/national-pension/, (Accessed 2 July 2019).

2 Occupational Pension Schemes

Due to the fact that the statutory pension is adequate for most people in Finland, the occupational pensions' level is rather small. Group pensions make up less than four percent of pensions paid.[114] The vehicles for a supplementary second pillar occupational pension are company pension foundations or industry-wide pension funds as well as group insurance schemes. The latter is the most important form of occupational pension schemes since Finland's supplementary pension market is highly insurance-oriented.[115] Employee contributions to occupational pension schemes are subject to tax deductions up to a certain limit.

3 Private Pension Provisions

Private pensions are not very widespread because the statutory pension secures a reasonable income during retirement. There are some tax incentives, so some people do take out a 3rd pillar private pension for the purposes of supplementing their retirement benefits. The insurance contract may be signed by the employee or – as a fixed-term insurance – by the employer as policyholder. In the latter case the insured person is not allowed to pay contributions.[116]

4 Position of Researchers

4.1 Work conditions

A large number of researchers in Finland work at the universities. With the implementation of the 2009 Universities Act, the universities were provided with independent legal status either as corporations under public law or foundations under the Foundations Act. The personnel of the universities used to be civil servants who were insured with the earnings-related pension scheme of *Keva*. With the new Universities Act, the staff of the universities is no longer employed by the government. Therefore, researchers are employees of the universities with a private employment contract. Persons who were already employed at the Universities in 2009 and born before 1980 are still governed by the State Pensions Act. All other existing and new employees of the universities are now governed by the Employees Pensions Act (TyEL).[117] Since the earnings-related pension under the Employees Pensions Act is administrated by private pension institution, the universities had the possibility to choose an appropriate provider. In 2010 *Varma* has been awarded to manage the earning-related pension but this may change due to the universities decisionmaking.

[114] ETK, *Financing of national pensions*, https://www.etk.fi/en/the-pension-system/pension-financing-andinvestments/financing-principals/financing-national-pensions/, (Accessed 29 July 2019).
[112] Finnish Centre for Pensions, *National and Guarantee Pensions*, https://www.etk.fi/en/the-pensionsystem/pension-security/national-pension/, (Accessed 2 July 2019).
[113] Finnish Centre for Pensions, *National and Guarantee Pensions*, https://www.etk.fi/en/the-pensionsystem/pension-security/national-pension/, (Accessed 2 July 2019).
[114] Finnish Centre for Pensions, *Employer arranges collective occupational pensions*, https://www.etk.fi/en/the-pension-system/pension-security/total-income-of-pensioners/supplementarypensions/occupational-pensions/, (Accessed 3 July 2019).
[115] Wilmington plc, *Pension Funds Online – Pension System In Finland*, https://www.pensionfundsonline.co.uk/content/country-profiles/finland, (Accessed 3 July 2019).
[116] Finish Centre for Pensions, *Individual pension insurance and long-term savings*, https://www.etk.fi/en/thepension-system/pension-security/total-income-of-pensioners/supplementary-pensions/individual-pension/, (Accessed 3 July 2019).
[117] Act on the Implementation of the Universities Act 559/2009, Section 11 - Pension security of the personnel.

Researchers who are recipients of scientific grants or scholarships are not considered as employees. Since 2009, grant and scholarship recipients can be insured with *Mela* on the basis of the Farmers' Pension Insurance Act (MYEL). To be insured with Mela further requirements have to be fulfilled as mentioned below. Mela offers the statutory pension insurance as well as occupational accident and short-term sickness insurance.

4.2 Details of researchers' pension provision

Researchers are entitled to an earnings-related pension from *Keva, Varma or Mela*. Since the essential principles for earning-related pensions are stipulated by law and already mentioned above, only some provider-specific rules are mentioned in this section.

KEVA

Only employees who already worked for the university in 2009 and were born before 1980 are still covered by the former state pension provider *Keva*. All other employees are insured with Varma. The pension entitlements built up after 2005 are regulated by the State Employees Pensions Act (VaEL), whereas entitlements built up until 2004 are determined according to the former rules. The provisions of the State Employees Pensions Act (VaEL) were aligned to the Employees Pensions Act (TyEL) and therefore Keva provides similar pensions.

VARMA

Varma Mutual Pension Insurance Company is the largest earnings-related pension insurer for private sector employees and self-employed persons in Finland. It provides pensions in accordance with the Employees Pensions Act (TyEL) as outlined in section 1. The earnings-related pensions of 16 universities are managed by *Varma*.

For the earnings-related pension of Varma there is no qualifying period for pension rights. The benefits are calculated according to the method applicable to earnings-related pensions mentioned above in section 1.

MELA Security for grant and scholarship recipients

Since 2009, recipients of scientific and artistic grants or scholarships awarded from Finland have become Mela customers. The pension obligaton for grant or scholarship recipients is stipulated in the Farmers' Pensions Act (MYEL). To be insured with *Mela*, the following requirements have to be met:

- the grant or scholarship was awarded from Finland during or after 2009,
- the recipient is eligible for Finnish social security,
- the grand or scholarship has been granted for at least four months with earnings of at least EUR 1 300 (2019) for these months which is equivalent to EUR 3 900 (2019)[118],
- there is no employment contract with the institution that awarded the grant or scholarship,

The insurance obligation does not apply to studies for a vocational qualification, polytechnic degree or upper or lower level university degree.

[118] Mela, *Pension insurance*, https://www.mela.fi/en/grant-and-scholarship-recipients/pension-insurance, (Accessed 3 July 2019).

Persons from an EU/EFTA Member State are covered by the Finnish social security system if they work in Finland for at least four months. Persons from other countries are required to reside and work in Finland permantently before they are covered by Finnish social security. For grant or scholarship recipients this obligation is assumed ones they have received the grant or scholarship for the second year.

The contributions are paid by the grant or scholarship recipients. The contribution rate depends on the age and the earnings of the insured person. In 2019, it ranged from around 13.01 % to 25.60 %.[119] The benefits are calculated according to the method applicable to earnings-related pensions mentioned above in section 1.

5 Cross-border Portability/Mobility

EU rules coordinate national social security systems of the 1st pillar to make sure that moving to another EU/EFTA Member States does not result in a loss of social security rights.[120]

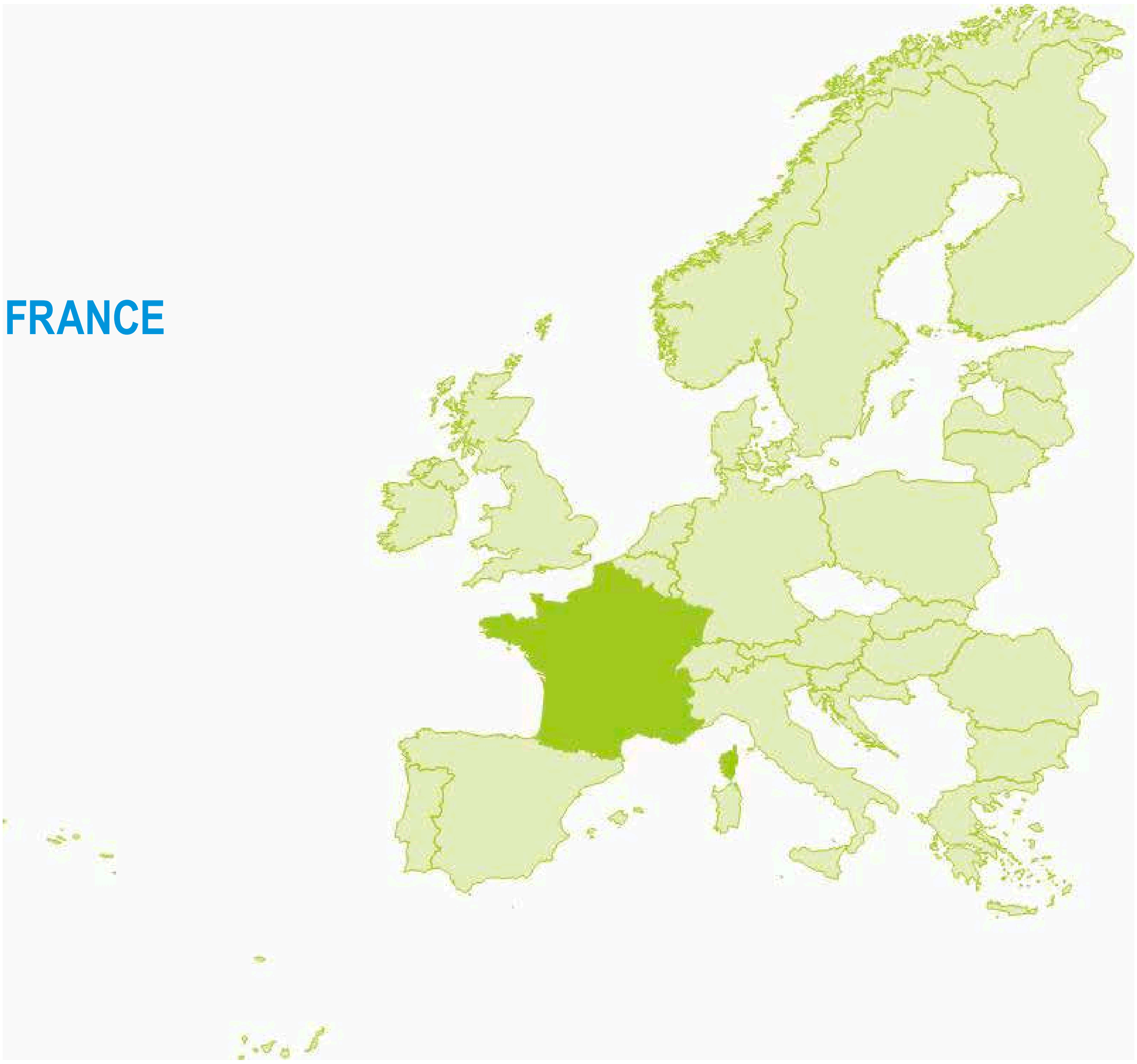
For the **earnings-related pension** there is no waiting or vesting periods, therefore the pension entitlements are accrued from day one and no benefits are lost in the event of a job change. Insurance times in other countries are not relevant for an earnings-related pension entitlement in Finland. However, in accordance with the EU Regulation 883/2004, insurance times completed in Finland are taken into account in other EU/EFTA Member States that require a qualifying period for the 1st pillar entitlement.

An employee who has worked for more than one Finnish employer can be entitled to several pieces of pension from different pension providers. In order to facilitate the administration of pension rights, the "principle of last pension institution" applies. The pension provider of the last employer collects all pension "pieces" and pays the monthly pension. In a clearing system the liabilities of all pension providers are registered and allocated.[121]

In principle the **National Pension** may be granted to persons who are covered by the Finnish social security system and who have lived in Finland for at least three years after reaching the age of 16. The national pension may also be awarded to persons living in another EU/EFTA Member State. Insurance periods earned in an EU/EFTA Member State are taken into account according to EU Regulation 883/2004. Some social security agreement also cover national pensions.

119 Mela, *MYEL Premium amount*, https://www.mela.fi/en/grant-and-scholarship-recipients/premiums-andinvoicing/myel-premium-amount, (Accessed 3 July 2019).
120 Regulation (EC) No. 883/2004 of the European Parliament and of the Council of 19 April 2004; Regulation (EC) No. 987/2009 of the European Parliament and the Council of 16 September 2009.
121 EAPSPI, 18 October 2012, *Report Mobility and Pensions Part 1: Actual statuts of Portability withing EAPSPI*, page 25 and 26, (Available at: http://portal.versorgungskammer.de/portal/page/portal/eapspi/en/download/report_mobility_part1.pdf).

FRANCE



Summary

The **French** pension landscape is quite complex and diverse, with pensions being managed by a variety of pension schemes. One component of the statutory pension system is the basic pension. It is complemented by compulsory occupational pension schemes that are considered as part of the 1st pillar of the pension system. Within the statutory pension system, each occupational category (e.g. state and local government employees, liberal professionals, farmers) is assigned to pension insurance schemes that offer the basic pension and the complementary pension. According to the objective to assure that one euro of contributions gives the same pension rights, no matter when it has been paid and whatever the status of the person, the government is working on a pension reform which aims to unify 42 different schemes into a single, points-based system.

Besides the basic scheme, voluntary supplementary occupational pension schemes and voluntary individual retirement provisions exist.

1 Statutory Pension Scheme

The French statutory pension system consists of two components: the basic pension *(retraite de base)* and the compulsory complementary pension *(retraite complémentaire)*. The system is split into several schemes according to the occupational category. The table below gives an overview of the pension schemes in respect of salaried employees and civil servants. Almost 70 % of the working population in France is however covered by the national general pension scheme (régime général) managed by National old-age insurance fund *(Caisse natioanle d'assurance vieillesse – CNAV)* that provides for a basic pension.[122]

There are efforts by the government to unify the pension stystem into a single, points-based system.

<table>
<tr><th colspan="2" rowspan="2">Occupational category</th><th colspan="2">Compulsory pension</th></tr>
<tr><th>Basic schemes</th><th>Complementary</th></tr>
<tr><td rowspan="6">Salaried employees</td><td>Farm workers, employees and excecutives</td><td>MSA</td><td rowspan="2">ARRCO or AGIRC for executives</td></tr>
<tr><td>Workers, employees and excecutives of industry, commerce and services</td><td rowspan="3">CNAV</td></tr>
<tr><td>Civil aviation flight personnel</td><td>CEPN</td></tr>
<tr><td>State and local government employees without civil servant status</td><td>IRCANTEC</td></tr>
<tr><td>Public sector manual workers</td><td colspan="2">FSPOEIE</td></tr>
<tr><td>Employees in companies or professions with special status</td><td colspan="2">Social Security Special Schemes</td></tr>
<tr><td rowspan="3">Civil servants</td><td>State officials, magistrates and military</td><td>Service des Retraites de l'Etat</td><td rowspan="2">RAFP</td></tr>
<tr><td>Local authorities and hospitals officials</td><td>CNRACL</td></tr>
<tr><td>Officials of Parliament</td><td colspan="2">Caisse de retraite des agents de l'assemblée nationale, Caisse de retraite des agents du senat</td></tr>
</table>

[122] Caisse nationale d'Assurance vieillesse, *La retraite du régime general*, https://www.lassuranceretraite.fr/portail-info/home/qui-sommes-nous/le-premier-regime-de-retraite/laretraite-du-regime-general.html, (Accessed 5 July 2019).

1.1 General Pension Scheme for Salaried Workers managed by CNAV

The general pension scheme *(régime général)* that awards a basic pension to most employees is managed by the National old-age insurance fund (CNAV) and its regional organisations (Carsat, CGSS, CSS).

Financing

The basic pension schemes in France are financed on a pay-as-you-go basis. In 2019 the contribution rate for old-age insurance was 15.45 % up to an annual assessment ceiling of EUR 3 377 € per month. Thereof the employee pays 6.9 % and the employer 8.55 %. If the earnings exceed the aforementioned limit an additional contribution out of the total earnings has to be paid. It is split into a 0.4 % employee contribution and a 1.9 % employer contribution.[123]

Benefits

The general pension scheme is defined-benefit and provides pensions in case of old-age and death. Survivors' pensions are only provided for widows or widowers. Orphans receive other social benefits called *allocation familiale*. Disability is not covered by the pension system but allocated to the health insurance system.

Calculation Method

The old-age pension benefits depend mainly on average annual salary, payment rate and insurance period. This in mind the pension formula for the gross pension per year is as follows:

$$\text{Average annual pensionable salaray} \times \text{Payment rate} \times = \frac{\text{Insurance period in the general scheme}}{\text{Qualifying period of insurance for a full payment rate}}$$

The **average annual pensionable salary** is the average of the individual's 25 best annual salaries on which contributions where paid. However, the sum may not exceed the amount of the annual assessment ceiling for contributions for each year counted. The relevant salary is valorized in line with price inflation.

The **payment rate** reflects the percentage that is applied to the average annual pensionable salary to calculate the pension. The payment rate is between 37.5 % and 50 % of the average annual pensionable salary. In order to qualify for a full rate of 50 %, the retiree

- must have reached the pensionable age for a full old-age pension or
- must have fulfilled the qualifying period of insurance of between 165 to 172 trimesters under all pension schemes combined (depending on the birth cohort) or
- has to belong to a specific category (e.g. severly disabled).

The payment rate of retirees who do not qualify for a full payment rate is reduced by a discount *(décôte)*.

[123] Centre des liaisons européennes et internationales de sécurité sociale, *Social Security and unemployment contribution rates*, https://www.cleiss.fr/docs/regimes/regime_france/an_a2.html, (Accessed 5 July 2019).

The **total period of insurance** is expressed in trimesters (quarters of the year). One trimester is credited for earnings of at least 150 times the relevant hourly rate of the minimum wage (in 2019 it is 150 x 10.03 € = 1 504.50 €).[124]

There is a pension top up *(minimum contributif)* for pensioners qualifying for a full rate pension. It is paid to pensioners whose pension amount of the compulsory pension schemes does not exceed EUR 1 177.44 (2019).[125]

There is also a means-tested, non-contribuitory Solidarity Allowance for the Elderly.

Pensionable Age/Early and Late Retirement

The statutory retirement age is 62[126]. From this age on people may receive a full rate pension only if the above mentioned qualifying period is met. An automatic entitlement to a full rate pension arises after having reached the relevant qualifying retirement age of 65 to 67[127], depending on the birth cohort.

Early retirement without any reduction is possible under specific conditions (e.g. because of arduous work). In addition, a part-time retirement program called PRP is in operation. It offers the opportunity to retire earlier while continuing to work part-time provided further conditions are met.

Individuals who continue working after statutory retirement age and fulfil the qualifying period for a full pension, receive a bonus on their pension entitlement (surcôte). Individuals having reached the full rate retirement age but not the full qualifying period can increase their pension by delaying their retirement beyond that age.

1.2 Other Basic Pension Schemes

There are special pension schemes for certain occupational groups such as civil servants, liberal professionals, salaried workers in the agricultural sector or self-employed persons. Because of the alignment and harmonization of the relevant regulations the differences between the *régime general* and the special schemes have become less stressed.

There is a single pension claim for aligned schemes.[128]

[126] For those born 1 January 1955 or later.
[127] 67 for those born 1 January 1955 or later.
[128] „Liquidation unique des régimes alignés (Lura).

1.3 Compulsory Complementary Pension Schemes

The basic pension of the statutory pension scheme is topped up by a compulsory complementary pension. According to law, a complementary pension is compulsory for all persons insured with the statutory pension scheme. The rules, the implementation and the supervision of the complementary pension institutions are regulated in collective bargaining agreements.

The complementary pension schemes are administered by complementary pension institutions. For the employees of the private sector the most important complementary pension schemes were ARRCO and AGIRC. While ARRCO used to cover all employees, AGIRC was an additional pension scheme solely for executives *(cadres)* who accrued extra pension entitlements. The two schemes merged on 1 January 2019 to Agirc-Arrco.[129]

Tranche 1	up to the assessment ceiling (in 2019 from EUR 1 to EUR 3 377 a month)	7.87 %	3.15 % employee	4.72 % employer
Tranche 2	1 to 3 times the assessment ceiling (in 2019 from EU 3 377 to EUR 27 016 a month)	21.59 %	8.64 % employee	12.95 % employer

Financing

The complementary pension scheme Agirc-Arrco is financed on a pay-as-you-go basis. The contribution system is split into two *"tranche"*[130]:

Besides, there are additional contributions, for example the overall balance contribution that is intended to offset the expenses resulting from retirements before the age of 67.

Benefits

The pensions are calculated according to a points-model. The sum of pension points reflects the length of employment, the salary level and the contributions paid. After the fusion of ARRCO and AGIRC in 2019 the value of one pension point euqals one ARRCO-pension piont.[131] For 80 % of the employees, the pension points account did not change due to the merger of the two schemes.

The gross pension amount is calculated by multiplying the total number of points by the value of a pension point. Since 2019 the value for one pension point is EUR 1.2588.[132]

[126] For those born 1 January 1955 or later.
[127] 67 for those born 1 January 1955 or later.
[128] „Liquidation unique des régimes alignés (Lura).
[129] Agirc-Arrco, *Ce que change en 2019*, https://www.agirc-arrco.fr/ce-qui-change-au-1er-janvier-2019/, (Accessed 5 July 2019).
[130] GIE Agirc–Arcco, Vous êtes en activité, https://www.agirc-arrco.fr/ce-qui-change-au-1er-janvier-2019/vous-etes-en-activite/, (Accessed 5 July 2019).
[131] GIE Agirc–Arcco, Vous êtes en activité, https://www.agirc-arrco.fr/ce-qui-change-au-1er-janvier-2019/vous-etes-en-activite/, (Accessed 5 July 2019).
[132] Centre des liaisons européennes et internationales de sécurité sociale, Social Security and unemployment contribution rates, https://www.cleiss.fr/docs/regimes/regime_france/an_a2.html, (Accessed 5 July 2019).

The retirement age for a full pension corresponds to the retirement age in the basic pension scheme as outlined in section 1.1.

Since the reform of 2019, Arrco-Agirc offers a temporary pension increase system for members who continue working beyond the age on which they qualify for a full-rate pension.

2 Voluntary Occupational Pension Schemes

In France, employer-financed voluntary occupational pension plans are not offered on a broad scale. However, many companies have set up company savings plans for their employees or offer life insurance products.

The company pension savings plan *PERE (plan d'épargne retraite entreprise)* – better known as "Article 83" plans – is a group insurance offered to all employees of a company or to a specific category of employees. The plan is managed by insurance companies, provident institutions or mutual societies. It is common that the employer contributed to the plan as well. The employee pay defined contributions that are deductible from income tax up to a certain limit. The members are entitled to annuity payments at retirement age. Lump sum payments are only possible under certain conditions.

In 2003, French law established the group retirement savings plan *PERCO (plan d'épargne pour la retraite collectif)* for employees of the private sector. Once the employer has set up a PERCO scheme all employees are covered. There may be a waiting period for membership of no more than three months of employment. The *PERCO* schemes are funded and either based on a defined-benefit or a defined-contribution system. The plan has to offer at least three investment vehicles with different management options. Pension rights become vested immediately. Unlike the *PERE* plans mentioned above there is no defined-contribution rate for employees. However, voluntary contributions are capped at 25 % of gross annual earnings. The employer may also contribute to the plan. Thus, there are tax incentives for both the employer and the employee. Benefits can be drawn as annuities or as a lump-sum payment.

3 Private Pension Schemes

Private pension schemes are not very widespread in France. The so called P*ERP (plan d'épargne retraite populaire)* is an individual retirement plan for salaried workers insured with the statutory general pension scheme. The scheme is subject to tax incentives on contributions.

The *PRÉFON (Caisse Nationale de prévoyance de la Fonction Publique)* is a supplementary, funded scheme reserved for public servants and employees, their spouses and all those who have belonged to the public service during their career. Only the insuree can contribute to the scheme with a minimum contribution of EUR 19.00 per month.[133] The plan is subject to the same taxation rules as the *PERP*. It can be considered an occupational pension scheme in so far as registration is limited to (former) public sector employees or their spouse. On the other hand the posility to get affiliated to the scheme even as a private sector employee with a former public sector career and the fact that only the insuree may contribute are characteristics of a private pension scheme. The benefits are determined on a points-system.

[133] Préfon-Retraite, *Cotisation et liberté*, https://www.prefon-retraite.fr/public/La-rente-Prefon-Retraite/Cotisation-et-liberte , (Accessed 5 July 2019).

4 Position of Researchers

4.1 Work conditions

Many public sector researchers in France work for the C*entre National de la Recherche Scientifique (CNRS)*, a government funded public research organization under the authority of the French Ministry of Higher Education and Research. It is important to note that the CNRS is not just one single research institute but has several branches with its employees spread all over France. In 2019 CNRS had 1 144 research laboratories in France and abroad.[134]

In France, researchers are employed as public servants *(fonctionnaires de l'État)* and as employees on permanent or fixed-term contracts.

4.2 Details of researchers' pension provision

Researchers with employment contracts enjoy full social security that includes sickness, unemployment and pension protection. Doctoral and post-doctoral candidates have only partial social security coverage that provides benefits in case of sickness and unemployment.[135]

Researchers with social security coverage for old-age receive a basic and a complementary pension under the statutory pension scheme. The basic pension of researchers with civil servants status is managed by the *Service de retraite de l'Etat (SRE)* whereas employed researchers are mostly covered by the general pension scheme (régime general) mananged by the National old-age insurance fund *(CNAV)*.

The compulsory complementary pension for researchers with civil servant status is provided under the French public service additional pension scheme *(RAFP)*. It is a points-based additional pension fund for state civil servants, military personnel, public servants in hospitals and/or local authorities. The pension is calculated by multiplying the accrued pension points by the service value of one pension point. The minimum retirement age is 62 provided that the insured person receives a basic pension as well.

Researchers without civil servant status are covered by other compulsory complementary pension schemes depending on their professional category. Researchers working as employees of the public sector acquire complementary pension rights with IRCANTEC. It operates on a pay-as-you-go basis and calculates the pensions according to a points-model. A full pension can be drawn at age 62 if the qualifying period is met. Otherwise the retirement age for a full pension is gradually being increased to 67 years of age.

[134] CNRS, *The CNRS*, http://www.cnrs.fr/en/cnrs, (Accessed 5 July 2019).
[135] European Commission & Deloitte, Researchers' Report 2014, *Country Profile: France*, page 18.

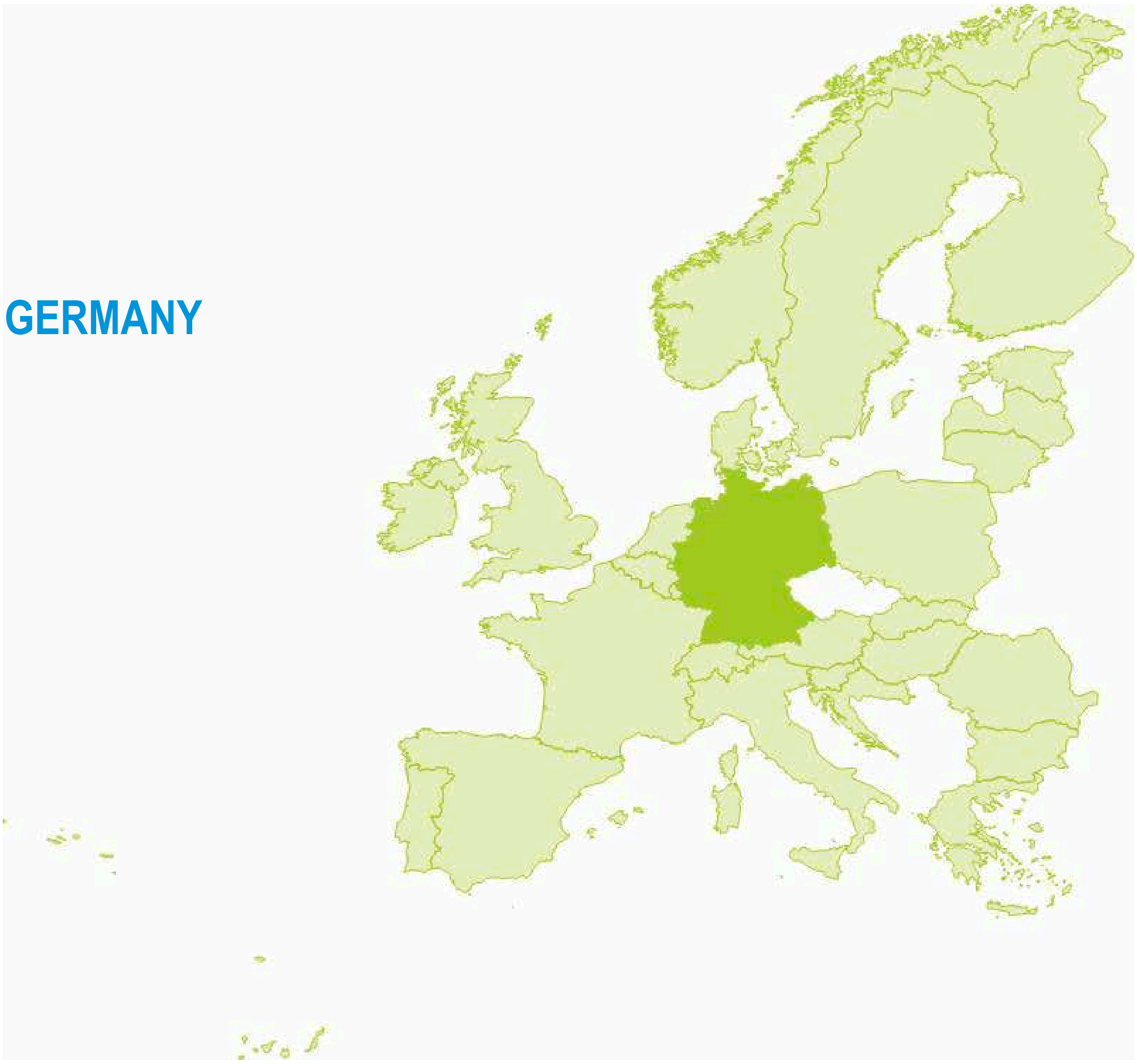
5 Cross-border Portability/Mobility

EU rules coordinate national social security systems of the 1st pillar to make sure that moving to another EU/EFTA Member States does not result in a loss of social security rights.[136] Hence, insurance periods that are covered by the statutory pension schemes in another EU/EFTA State are taken into account when applying for a pension. In France, the full payment rate for the basic pension under the statutory system requires a qualifying period of insurance that takes into account also periods notified by other countries where the EU regulations apply.

Since the complementary pension schemes (e.g. Agirc-Arrco, Ircentec) are financed on a pay-as-you-go basis, there is no transferability. A capital transfer from a voluntary pension fund might be possible.

136 Regulation (EC) No. 883/2004 of the European Parliament and of the Council of 19 April 2004; Regulation (EC) No. 987/2009 of the European Parliament and the Council of 16 September 2009.

GERMANY



Summary

In **Germany** pensions from the statutory pension scheme are the main source of retirement income for employees. The system is earnings-related and mainly financed on a pay-as-you-go basis. Recent reforms have aimed to stabilise the level of pension payments until at least 2025.

Occupational pension provisions are quite widespread and the coverage is intended to grow. At the end of 2017 some 55.6 % of the employees covered by the German social security system had an active occupational pension entitlement.[137] A 2017 reform introduced a new, previously nonexisting vehicle, the so called 'social partner model', which is a purely defined-contribution scheme. In the context of this new scheme type, the pension provider may not guarantee employees any benefits. Voluntary private pension savings are possible via life insurance products, bank saving plans or as private equity investments. Both in the 2nd and the 3rd pillar of the pension system, state support known as 'Riester"-subsidy is available, but expectations associated with the introduction in 2002 have not yet been met.

[137] BMAS, Januar 2019, Trägerbefragung zur Verbreitung der betrieblichen Altersversorgung 2017, page 15.

1 Statutory Pension Scheme

The statutory pension scheme is managed by the German Pension Insurance *(Deutsche Rentenversicherung)* that provides its service through 16 independent agencies. The insurance is compulsory for all employees during their time of employment in Germany and for some groups of self-employed persons. Under certain conditions, voluntary converage is possible. Freelancers such as physicians, lawyers, architects or pharmacists are not covered by the statutory pension scheme. They have their own occupational associations and pension funds *(Berufsständische Versorgungswerke)*.

Civil servants are covered by a special pension system. Due to the federal structure, the German Länder has got its own special pension scheme for appointed civil servants.

Financing

The German statutory pension scheme is a pay-as-you-go system financed through contributions and federal subsidies. The total compulsory insurance contribution of 18.6 % of gross earnings is paid by both the employer and the employee in equal shares. Contributions are only levied up to the assessment ceiling which, in 2019, amounts to EUR 6 700 per month in West-Germany and to EUR 6 150 per month in East-Germany.[138]

Benefits

The German statutory pension scheme provides pensions in the event of old-age, invalidity and death. There is a qualifying period of five years for a standard old-age pension, a pension for reduced earnings capacity or a survivors' pension. Other benefits such as the old-age pension for long-term insured persons require longer qualifying periods that take into account non-contributory or child-raising periods as well.

Calculation Method

The most important parameters for the pension amount are the level of pensionable earnings and the years of insurance.

For the monthly gross pension the following formula applies:

Pension = Pension points x Pension points value x Access factor x pension type factor

The contributions paid are converted into personal **pension points** *(Entgeltpunkte)*. The pension points are collected over the entire insurance period. They are determined by dividing the individual earnings by the average earnings of all insured persons (in 2019 EUR 38 901).[139] Thus, an insured person receives one pension point for contributions paid on average earnings of all insured persons. Due to the fact that earnings in East Germany are still lower than in West-Germany, the earnings in the eastern states are adjusted to the western level.

[138] Deutsche Rentenversicherung, Ihre Beiträge zur Rente, https://www.deutscherentenversicherung.de/Allgemein/de/Navigation/2_Rente_Reha/01_Rente/03_vor_der_rente/02_ihre_beitraege_zur_rente/00_ihre_beitraege_zur_rente_node.html, (Accessed 8 July 2019).

[139] Deutsche Rentenversicherung, Aktuelle Daten 2019, page 2, (Available at: https://www.deutscherentenversicherung.de/cae/servlet/contentblob/238644/publicationFile/63798/07_aktuelle_daten_2014.pdf).

The actual **pension point value** *(aktueller Rentenwert)* represents the monthly old-age pension for an average earner who has paid contributions for one year. The value is adjusted annually to the changes in the earnings development. From July 2019 onwards the value equals EUR 33.05 in West-Germany and EUR 31.89 in East-Germany.[140]
The **access factor** *(Zugangsfaktor)* reflects the deductions and bonuses with regard to the pension amount. A pension without deductions or bonuses has an access factor of 1.0.

In order to determine the monthly gross pension, all accumulated earnings points are multiplied by a **pension type factor** *(Rentenartfaktor)* that indicates the target of the specific benefit, for example an old age pension serves as a complete earnings replacement and therefore has the factor 1.0, whereas a pension in case of partial reduction in earning capacity has the factor 0.5.

A career of 45 years at the relevant average income for pension points results in a gross pension amount of around EUR 1 418 (2018).

Pensionable Age/Early and Late Retirement

The standard retirement age used to be 65 for both men and women but is currently grandually increased until it reaches 67 in 2031.

Early retirement on a full pensionis possible for long-term insured persons born between 1949 and 1963 with 35 years of insurance. For individuals born after 1964 the eligibility age for an retirement without deductions will gradually rise from 65 to 67 (standard retirement age). The pension long-term insured persons can be drawn at age 63, but with deduction of up to 14.4 %. Since 2014 there has been a deduction-free early retirement pension for especially long-term insured persons (45 years of insurance). The retirement age for this pension will gradually increase from 63 to 65.

In case of early or late retirement the pension is reduced or increased by applying a lower or higher access factor. Since July 2017 the options for a flexible retirement were strengthened *(Flexi pension)*. It is possible to continue working whilst receiving an old-age pension. Pensioner's retiring on a standard old-age pension while continuing to work can decide whether they want to pay contributions to the statutory pension scheme. A deferral of the pension after the standard retirement age increases the pension amount by 0.5 %. In addition the pension increases due to the further payment of contributions. In case the pension is drawn before reaching standard retirement age, an income limit applies. Pensioners retiring early can earn EUR 6 300 extra per year without any deductions in the pension amount. Pensioners on an early retirement pension may contribute to the pension insurance voluntarily from age 50 in order to fill gaps.

[140] Deutsche Rentenversicherung, *Wesentliche Ergebnisse der Modellrechnung für die allgemeine Rentenversicherung*, https://www.deutscherentenversicherung.de/Allgemein/de/Navigation/6_Wir_ueber_uns/02_Fakten_und_Zahlen/02_kennzahlen_finanzen_vermoegen/3_mittelfristige_finanzentwicklung/wesentliche_ergebnisse_allgemeine_rv_node.html, (Accessed 8 July 2019).

2 Occupational Pension Schemes

For most retirees the statutory pension is the main source of income. But occupational pensions supplement the statutory pension of private and public sector employees. The first occupational pension schemes date back to the 19th century. In the 1920s occupational pension schemes in the public sector (German Postal Service, Railway) were established.

The coverage is non-obligatory by law. However, in many sectors collective bargaining agreements oblige employers to provide occupational pension provisions. In the public sector, many employees receive an occupational pension on the basis of the Collective Labour Agreement on Pensions *(Tarifvertrag Altersversorgung – ATV)*. One of largest provider for occupational pensions of public service employees is the VBL *(Versorgungsanstalt des Bundes und der Länder)*. Another 24 institutions for supplementary occupational pensions cover municipal and church employees.

Besides that, employees have a legal right to participate in an occupational pension scheme through salary conversion *(Entgeltumwandlung)*. In this case the employer has to transfer a fixed amount of the employee's salary to an occupational pension scheme.

Vehicles

According to the Occupational Pensions Act the employer has the choice between six occupational pension vehicles:

★ book reserves *(Direktzusage)*,
★ support funds *(Unterstützungskasse)*,
★ direct insurance *(Direktversicherung)*,
★ pension funds *(Pensionskasse)* and
★ pension investment funds *(Pensionsfonds)*.

In the past, the Occupational Pensions Act solely allowed defined-benefit plans. Nowadays, the vehicles provide, inter alia, different benefit guarantees and are subject to different tax and accounting treatments.

With the 2017 reform a new vehicle, a purely defined-contribution (DC) scheme, was introduced as part of the Act to Strengthen Occupational Pensions. According to the new DC-model, the employer is only liable to pay the contributions to the pension provider. The pension provider is not obliged to guarantee any benefits. Thus, the new scheme type allows disadvantages associated with guarantees to be avoided.[141] However, the new system can only be established under the condition of a corresponding collective agreement.

Financing and Benefits

The contributions to an occupational pension plan are subject to tax incentives for both the employer and the employee. Members of a pension fund *(Pensionskasse)*, pension investment funds *(Pensionsfonds)* or direct insurance *(Direktversicherung)* are eligible for state subsidies called "Riester"-bonuses and tax-deductible special expenses.

[141] Federal Financial Supervisory Authority (BaFin), 1 August 2017, Occupational pensions – Act on the pure defined-contribution scheme passed, https://www.bafin.de/SharedDocs/Veroeffentlichungen/EN/Fachartikel/2017/fa_bj_1707_Betriebsrenten_en.html, (Accessed 9 July 2019).

With the exception for entitlements based on salary conversion that have to become vested immediately, accrued entitlements become vested after three years of employment with the same employer.[142]

3 Private Pension Provisions

Private pension plans include, inter alia, life insurance products, bank saving plans or fund investment. State subsidies (‵Riester-bonus) and special tax deductions are available for authorised pension plans that can be offered to employees who are covered by the social insurance system and subject to full tax liability.[143]

4 Specific Aspects of Researchers' Old-age Provision

4.1 Work Conditions

In principle, most researchers are insured with the German statutory pension scheme.
Since the statutory pension insurance is linked to employment, researchers solely working on a grant or scholarship without having an employment contract are excempt from social insurance coverage. However, they are free to pay voluntary contributions to the statutory pension scheme. Professors with the status of civil servants are eligible for a pension from the civil servants pension scheme of the concerned regional government.

Many researchers with an employment contract are also covered by an occupational pension scheme. If they are considered as public service employees and work at a university or publicly funded research institution of the Federal Republic of Germany or of one of the federal states, they are usually insured with the VBL *(Versorgungsanstalt des Bundes und der Länder)*.

4.2 Details of Researchers' Pension Provision

Employees in the public sector benefit from compulsory pension provisions under the Collective Labour Agreement on Pensions *(Tarifvertrag Altersversorgung – ATV)*. Most researchers at universities or public research facilities are insured with the *Versorgungsanstalt des Bundes und der Länder (VBL)*.

The VBL provides the mandatory insurance *VBLklassik* as well as a voluntary insurance product called *VBLextra*. Unlike the VBLklassik, the voluntary insurance product does not require any qualifying period for a pension entitlement. Originally, the voluntary insurance was meant solely as an additional pension provision to an already existing mandatory insurance VBLklassik. For researchers with temporary employment contracts the qualifying period in the mandatory insurance is still an obstacle for future pension entitlements comparable to those of employees with permanent contracts. Since 2003, researchers on temporary contracts of less than 5 years, who have not been previously insured with *VBLklassik* or a similar pension scheme, have therefore been able to choose between the two insurance types *VBLklassik* and *VBLextra*. In this case the *VBLextra* functions as a quasi-mandatory insurance.

[142] § 1b sec. 1 and 5 of the Occupational Pensions Act (Betriebsrentengesetz - BetrAVG) as of 19 december 2018.
[143] Authorisation according to the law „Altersvorsorge-Zertifizierungsgesetz".

VBLklassik

The VBLklassik is a defined-benefit scheme. The pension benefits are accrued according to a points model. In the financing pool for West-Germany the pension is financed on a pay-as-you-go basis. The employer premium is 6.45 %, the premium of the employee is 1.81 %. The financing pool of the Eastern Länder uses hybrid financing vehicles. Thus, the employer pays a 1 % premium to the pay-as-you-go part of the scheme and 2 % to the capital funded part. The employee contributes 4.25 % to the capital funded scheme.[144] Capital-funded entitlements based on the employee contributions become vested immediately.[145]

To be eligible for benefits, the minimum qualifying period has to be fulfilled. Until the end of 2017 pension entitlements in the VBLklassik became vested only after a qualifying period of five years of insurance. A consecutive employment with the same employer is not required. With the implementation of the EU Mobility Directive a vested entitlement is already acquired after three years of continuous employment with the same employer. Nonetheless, the qualifying period in the compulsory VBLklassik is still an obstacle for many scientists on short-term contracts.

The amount of the occupational pension under the VBLklassik depends on the number of pension points collected. The pension point for each year depends on age and pensionable income. The VBL calculates the pension points using age factors based on interest rates of 3.25 % during the savings phase and 5.25 % during the pension phase. In order to calculate the monthly pension all pension points are added up and multiplied by a base factor of EUR 4.

The formulas are as follows:

$$\text{Pension points for one year} = \frac{\text{1/12 of annual pensionable salary}}{\text{Reference contribution (1 000 €)}} \times \text{age factor}$$

$$\text{Monthly pension} = \text{Pension points} \times \text{point value (4 €)}$$

VBLextra for researchers

Researchers with temporary employment contracts of less than 5 years and no previous insurance with *VBLklassik* or a similar pension scheme have the choice to opt for the *VBLextra* insurance for researchers as a quasi-mandatory insurance. It is fully funded and an entitlement to a pension requires no minimum qualifying period. In West-Germany the contribution of 4 % is paid solely by the employer, whereas in East-Germany the 4% contributions is paid in equal halves by both the employer and the employee.

An insurance with *VBLextra* requires no qualifying period for a pension entitlement and researchers become eligible for a future pension with the first contribution paid. However, the guaranteed pension entitlement is lower and there are no social components that lead to additional pension points.

[144] VBL, *Finanzierung in der VBLklassik*, https://www.vbl.de/de/die_vbl/vermoegensanlage/finanzierung/, (Accessed 8 July 2019).
[145] § 3 sec. 2 No. 4 and sec. 5 Occupational Pensions Act (Betriebsrentengesetz - BetrAVG) as of 19 December 2018.

The pension amount depends on income, duration of insurance and age at retirement. It is also based on a points-model.

$$\text{Pension points for one year} = \frac{\text{Total annual contributions}}{\text{Reference contribution (1 200 €)}} \times \text{age factor}$$

For the monthly pension, the total pension points are multiplied by the value of one pension point (EUR 4).

5 Cross-border Portability/Mobility

Statutory pension scheme

EU rules coordinate national social security systems of the 1st pillar to make sure that moving to another EU/EFTA Member States does not result in a loss of social security rights.[146] Hence, insurance periods that are covered by the statutory pension schemes in another EU/EFTA State are taken into account when applying for a pension in Germany. Germany's statutory pension insurance scheme requires a five year qualifying period that can be completed through the coordination with insurance periods abroad.

A refund of contributions paid to the statutory pension system when moving abroad may be possible, in principle, if there is no compulsory insurance in the German statutory pension insurance, no right to voluntary insurance in the German statutory pension insurance and at least 24 months have passed since the de-registration from the German statutory pension insurance. Whether a refund of contributions can be claimed or not depends on various factors, e.g. your nationality or country of residence.

Occupational pension schemes

Domestic transfers of capital values from an occupational pension scheme to the new employer's scheme are possible according to § 4 of the Occupational Pensions Act. Cross-border transfers are not explicitly prohibited by law. Despite the fact that there is no legal obligation, the occupational pension provider for the public sector, VBL, that covers many researchers, executes transfers only with Austria. However, transfers take only place with regard to the capital-funded VBLextra and only to another occupational pension fund. Transfers to or from a UK occupational pension fund to the VBL are no longer an option due to the uncertainties around the timing and nature of 'Brexit' and higher requirements for tax-privileged transfers.

A refund of the contributions to the VBLklassik depends on the section where pension entitlements were accrued, due to the different financing methods in western and eastern "Länder". For employees of the western "Länder", only the employee's share of contributions can be refunded if the qualifying period of 60 months has not been fulfilled. Employees insured with the section for the eastern "Länder" are still entitled to a pension of VBLklassik based on their employee premiums, even if the required qualifying period of 60 months has not been fulfilled. Therefore, a refund of employee contributions in this financing pool is not possible.

[146] Regulation (EC) No. 883/2004 of the European Parliament and of the Council of 19 April 2004; Regulation (EC) No. 987/2009 of the European Parliament and the Council of 16 September 2009.

GREECE

Summary

Due to the traditionally strong role of the statutory pension provision in **Greece**, the second and third pension pillar are not widespread. As a result of the country's debt and financial crisis the pension system had to undergo several changes in order to meet the requirements of the 5 year austerity plan (2011-2015) concluded with the so-called "Troika". Prior to the reforms, the public pension system had been quite generous. In order to ensure medium and long term sustainability, one of the main objectives was the reduction of the public pension expenditure by reducing the benefits through, inter alia, a gradual increase in retirement age, a lower accrual rate and the change to lifetime earnings in the pension calculation. Furthermore, the ongoing pension payments were reduced repeatedly. In addition, a public sector pension reform was passed which aligns the pension system for civil servants to that of the private sector pension system.

1 Statutory Pension Schemes

The Greek pension system has predominantly been based on a generous statutory pension pillar. The pension was provided by various primary and auxiliary pension funds. Prior to the Greek pension reforms, the IKA-ETAM scheme – which covered private sector employees – had a theoretical net replacement rate of 109 % (in 2008) with regard to a standard worker at age 65, after a career of 40 years of contributions and with average earnings. However, due to the average insurance periods of only 25 years for men and 21 for women[147], in reality a level of only around 65 % was achieved. From 2010 and onwards, pension reforms aimed to strengthen the link between contributions and benefits, and to ensure the sustainability of a system that faced a high increase of pension expenditure. Between 2010 and 2012 the Greek government has phased in severe pension cuts as part of the austerity measures agreed upon with international lenders.[148] According to the Ministry of Employment and Social Security, 43 % of pensioners currently receive a pension of less than EUR 660 per month.[149]

A new pension reform came into effect in May 2016. It is considered to be one of the most far reaching. It provides for the integration of all public primary pension funds into one Single Agency of Social Insurance (EFKA) that has been in operation since January 2017 and the integration of the public auxiliary pension and lump sum benefit funds into the "Integrated Fund for Supplementary Pensions and Lump Sum Benefits" (ETEAEP).[150] The new law also abolishes all special arrangements, unifies pension rules and introduces equal pension rights.

The new main pension is made up of two parts: the national pension, a state-funded basic flat-rate pension, and a proportional, contributory pension. It covers employees in the private sector and certain self-employed persons.

1.1 National Pension

The national pension is financed from the State Budget and equals the annual poverty threshold for a single person. The minimum requirement is a residence and contributory period of at least 15 years in the public pension system. The full rate is set at EUR 384 per month (figure of 2019, annual adjustments possible) and requires 40 years of residency from the age of 15 until retirement and at least 20 years of contributions. The amount is reduced

- by 2 % for every year which falls short from 20 to 15 years of contributions,
- by 2.5 % for each year of residence below 40 years and
- by 0.5 % for each month the insured is younger than the standard retirement age.

[147] European Commission, Joint Report on Pensions - Country Profile: Greece, Joint Report on Pensions, page 42, (Available at: http://ec.europa.eu/economy_finance/publications/occasional_paper/2010/pdf/ocp71_country_profiles_en.pdf).
[148] Wilmington plc, Pension Funds Online – Pension System In Greece, https://www.pensionfundsonline.co.uk/content/country-profiles/greece, (Accessed 25 September 2019).
[149] Financial Times, 17 February 2017, Article by Effie Achtsioglu, Greece's pensioners already have barely enough to live on, https://www.ft.com/content/f6be12b2-f3ae-11e6-8758-6876151821a6, (Accessed on 25 September 2019).
[150] European Commission, Dimitris Ziomas and Menelaos Theodoroulakis, July 2016, The new Greek pension refomr: improving governance and ensuring sustainablility, page 1, (Available at: https://ec.europa.eu/social/BlobServlet?docId=16179&langId=en).

The new pension legislation contains a sustainability clause which applies if long-term projections show that the rise in public pension expenditure – between the years 2009 and 2060 – will exceed 2.5 % of the gross domestic product (GDP). In this case, the relevant parameters of the pension system will be adjusted in order to bring the rise of expenditure below this threshold.[151]

Until 2019 transitional arrangements were in place. From 2019 onwards, new pensions are calculated based entirely on the new rules for the whole insurance period.

1.2 Earnings-related Contributory pension

The contributory pension is mandatory for most people. Those insured after 1 January 2014 receive a pension calculated according to the new rules. All pensions granted up to 31 December 2014 are re-calculated according to the new rules.

Financing

The contributory pension is based on a pay-as-you-go, notional definded contributuion system. It is financed by both the employer and the employee.

In 2019, the contribution amounts to a common rate of 20 % for old-age pensions. Thereof the employee pays 6.67 % and the employer pays 13.33 %.[152] Provisions are made for transitional arrangements until 2021. For workers in arduous or heavy professions the contribution rates are slightly higher. There is a monthly minimum and a maximum level of pensionable earnings on which contributions are paid. Currently, the minimum is set to EUR 650 of gross earnings and the maximum to EUR 6 500 gross on a monthly basis payable 14 times per year.[153]

In 2010, the Greek government introduced a solidarity contribution for pensioners with pensions higher than EUR 1.400 per month. These contributions, ranging from between 5 % to 10 %, are kept in a separate account in order to cover deficits in the basic national pension system.[154]

[151] European Commission, Economic Policy Committee, Ageing Working Group, Ageign Projection Exercise 2018, *Greek Pension System Fiche*, page 4, (Available at: https://ec.europa.eu/info/sites/info/files/economyfinance/final_country_fiche_el.pdf).
[152] iefimerida, *Insurance. At 20 % employer-employee contributions*, https://www.iefimerida.gr/news/243951/asfalistiko-sto-20-oi-eisfores-ergodoton-misthoton-analytika-tiprovlepetai (in greek), (Accessed 26 September 2019).
[153] KPMG, *Greece - Various Modifications to Income Tax System*, https://home.kpmg/xx/en/home/insights/2019/04/flash-alert-2019-084.html, (Accessed 25 Septembber 2019). The maximum contribution ceiling is ten times the elgal monthly minimum wage of a single employee over 25 years of age (10 * EUR 586,08).
[154] Reuters, 10 May 2010, Factbox-Greece's pension reform bill, http://www.reuters.com/article/2010/05/10/greece-pension-idUSLDE63E12Z20100510, (Accessed 26 September 2019).

Benefits

The contributory pension is awarded under the prerequisite of receiving a main pension. An entitlement requires at least 15 years of contributions. A full pension is paid after 40 years of contributions at statutory retirement age. The pension calculation is based on the whole career average earnings with different accrual rates that depend on length of service time. For each year of insurance, the pension accrues at a minimum rate of 0.77 % of pensionable earnings for up to 15 years of insurance and a maximum rate of 1.5 % 39 years or more of insurance.[155]

Since the pension calculation takes into account only the pensionable earnings on which contributions were paid, there is de facto a maximum pension amount.

1.3 Means-tested benefit (EKAS)

The means-tested social solidarity grant (EKAS) was paid to already existing pensioners with low income. It is completely eliminated from 2020 onwards.

Pensionable Age/Early and Late Retirement

The statutory retirement age is 67. As of 2021, the statutory retirement age will be adjusted to changes in life expectancy of the Greek population. This will be done every three years. The reforms have also increased the minimum early retirement age to 62 years and have abolished the possibility for workers in arduous and heavy professions to retire even earlier. In case of an early retirement, the basic national pension is reduced by 1/200 (0.5 %) for each missing month until the age of 67.

2 Occupational Pension Schemes

Although a law on occupational pensions was adopted in 2002, occupational pensions are not very widespread. Existing occupational pension plans are defined-contribution in nature. The schemes are managed by private insurance funds or group insurances on a funded basis. Contributions to group insurance schemes used to be tax-deductible but the strained economic environment in Greece led to more and more tax-breaks disappearing.[156]

In 2017, 17 occupational pension funds have been operating in Greece.[157] Pension funds must be set up as separate legal entities and can be operated as single employer or professional-wide funds. They must have a minimum funding level, and in case of certain benefit or return guarantees, have to establish an adequate re-insurance for these risks. There is a tendency to offer different investment option according to varying risk preferences.[158]

[155] OECD, *Pensions at a Glance 2017: Country Profiles – Greece*, page 1.
[156] Wilmington plc, Pension Funds Online – Pension System in Greece, https://www.pensionfundsonline.co.uk/content/country-profiles/greece, (Accessed 25 Septemerb 2019).
[157] Hellenic statistical Authorithy, Workforce 2017.
[158] Wilmington plc, *Pension Funds Online – Pension System in Greece*, https://www.pensionfundsonline.co.uk/content/country-profiles/greece, (Accessed 25 Septemerb 2019).

3 Private Pension Schemes

Private pension schemes are mostly offered as life insurances based on a defined contribution system. The benefits are usually paid out as lump-sums. Sometimes employers support their employees' private insurance by paying contributions.

4 Position of researchers

4.1 Working conditions

There is no specific legislation framework dealing with researchers. Even inside one organization the employment status of researchers can vary in dependence of their contract or the programme they are involved in. The employment status of young mobile researchers is even less clear and depends inter alia on the type of contract, the host institution and the remuneration.[159] While higher education institutions mainly offer stipends, fellowships or employment contracts to mobile researchers who have been recruited via the European Commission-funded projects, research institutions initially offer fixed-term employment contracts.[160]

4.2 Details of researchers' pension provision

National legislation does not deal specifically with the social security coverage of researchers. Reseachers with an employment contract, as well as researchers on stipends/grants, are usually covered by social security. But the type of benefits they receive depends on the type of grant agreement with the host institution.[161]

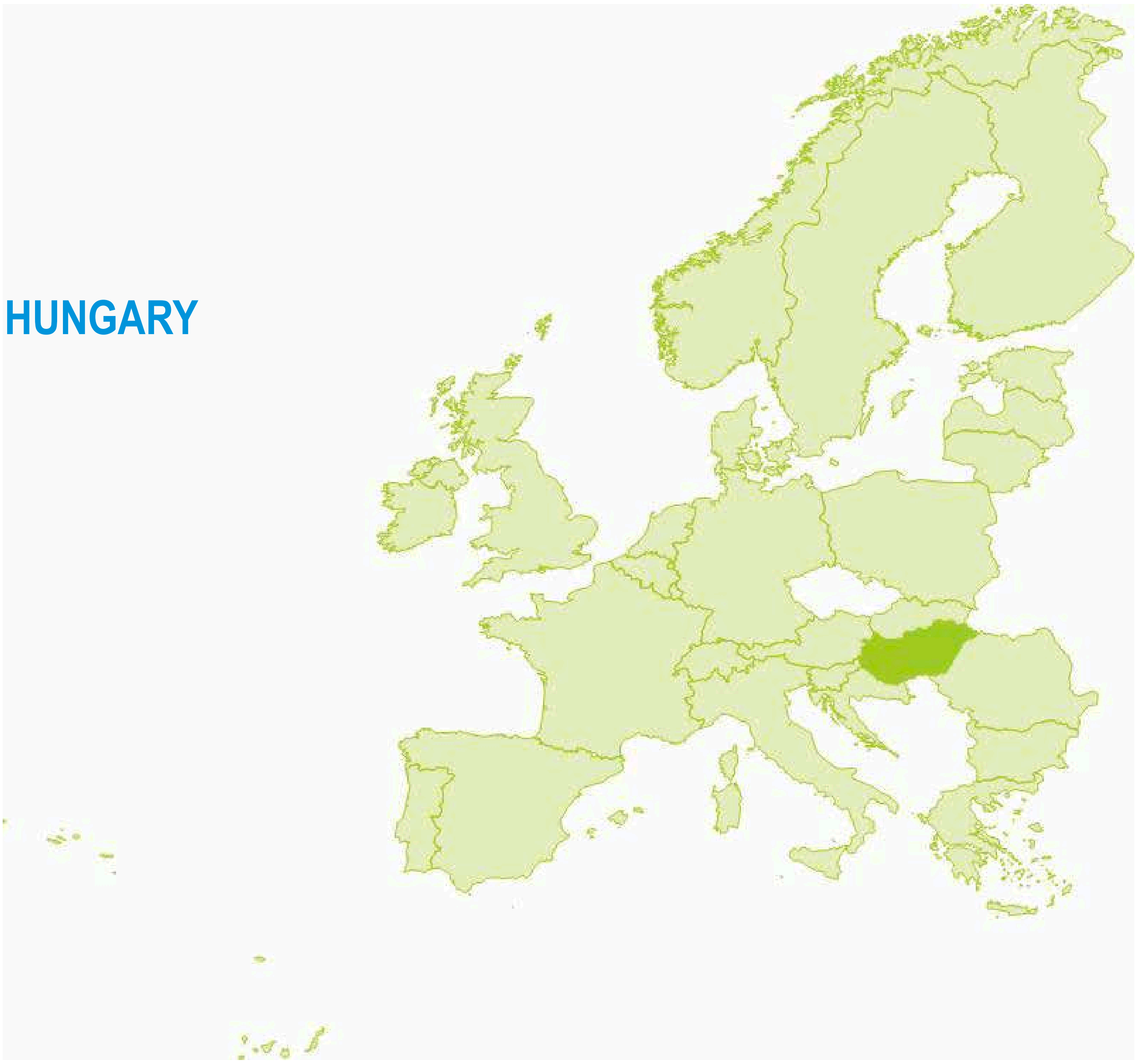
5 Portability/Mobility

In order to be entitled to an old-age pension, the Greek statutory pension insurance requires at least 15 years of contribution. However, according to EU rules, insurance periods spent in another EU/EFTA Member State are taken into account if necessary. This process makes it easier for researchers to qualify for pension benefits in one or more EU/EFTA Member States that require a certain insurance period for pension entitlements.

Greece has also concluded several bilateral agrements on social security with other countries to ensure eligibility to a pension benefit.

[159] European Commission, *Researchers' Report 2014 – Country Profile: Greece*, page 11.
[160] European Commission, *Researchers' Report 2013 – Country Profile:* Greece, page 9.
[161] European Commission, *Researchers' Report 2014 – Country Profile:* Greece, page 12.

HUNGARY



Summary

The **Hungarian** pension system is a one-pillar statutory scheme supplemented by the voluntary private pension scheme established in 1993 and by several other pension saving schemes. The statutory pension scheme is a mandatory, defined-benefit scheme financed on a pay-as-you-go system.

Following the 1997 reform, a capital-funded 2nd tier of the mandatory old-age provision in Hungary had been introduced. Initially the funded scheme was intended to cover 1/4 of the future pension benefits. Meanwhile, the reform was nearly revoked and the role of the second tier was pushed back. This led to a "reform of the reform" in the years 2010 – 2012: The mandatory participation in the private pension schemes was closed for new employees and all members of the private pension schemes had to decide whether they want to be solely insured in the public pension system. 97.6 % of the private pension scheme members took a step-back in favor of a statutory pension and the assets were transferred.[162]

[162] Central Administration of National Pension Insurance, *Structure*, https://www.onyf.hu/en/structure.html, (Accessed 24 September 2019).

1 Statutory Pension Scheme

The statutory social security pension insurance is mandatory for all employees and self-employed persons. As a basic principle only insurance periods for which contributions have been paid can be recognized as service time. Service time includes the disbursement period of child raising or unemployment benefits, and also periods covered by agreements concluded with the purpose of acquiring service time. However, certain periods acquired prior to 1 Januaray 1998 can be deemed as service time, even if no contributions were paid. Such periods are, first of all, those spent in full time higher education and compulsory military service.

The Central Administration of National Pension Insurance (ONYF) is the central pension insurance administration body. The Pension Payment Directorate disburses pensions and the allowances for people with disabilities, along with other regular cash transfers falling in its scope. In international pension-related cases the 8th District Office of the Municipal Gvernment Office of Budapest is the competent authority.[163]

Financing

The social security pension scheme is a pay-as-you-go, defined benefit system. In April 2013 a law introduced individual accounts that register all contributions starting from 1 January 2013 and onwards. This is supposed to lead to increased transparency.

The contributions are paid by both the employer and the employee. The employee's social security contribution is 18.5 % of gross salary (10 % pension contribution, 7% health insurance contribution and 1.5 % unemployment contribution). From 1 July 2019, the overall employers' social security contribution rate (so called social tax) is 17.5 %.[164]

Voluntary contributions are possible in different ways. In order to qualify for a pension, a person may enter into an agreement for the purpose of obtaining service time in order to achieve a full old-age benefit or a partial retirement pension. The pension contributions shall be paid in one lump-sum. However, no more than five calendar years can be obtained. Similar agreements with the purpose to purchase service time can be concluded for full time study in higher education as of 1 January 1998 or for residents without compulsory insurance.

Benefits

The Hungarian pension benefits encompass old-age pensions and survivors' pensions. An old-age pension can be claimed upon having reached standard retirement age, having obtained the required qualifying period and having ceased gainful activity.

Hungary's pension system requires a minimum qualifying period of 15 years of service for a partial pension. A full penions benefit requires 20 years of service and the pension will be under the safeguarding net of the old-age pension minimum. As a basic principle, only insurance periods for which pension contributions have been paid can be recognized. This includes contributions paid during gainful employment as well as contributions paid e.g. on benefits for child care or unemployment. Certain periods, in particular years of higher education or compulsory military service completed prior to 1 January 1998, can be treated as service time without any paid contributions.

[163] Central Administration of National Pension Insurance (ONYF), Organisational changes effective as of 1 January 2017 in the Hungarian social security system, (Available at: https://www.onyf.hu/m/2017/nemzetkozi/english.pdf)
[164] PwC, Hungary Individual – Other taxes, http://taxsummaries.pwc.com/ID/Hungary-Individual-Othertaxes, (Accessed 24 September 2019).

Calculation Method

The pension amount depends on valorized, average salary and length of service. The average salary is to be calculated from salaries and incomes received from 1 January 1988 to the date of retirement, but the calculation period will gradually increase to salaries of the whole lifetime. The average salary is determined on the basis of the net amount of income gained in each year. The pension amount is calculated as a percentage of the individual's average salary according to a scale determined by length of service.

Years of service	accrual rate for each year	% of average income after……years of service
1 – 10	33 %	after 15 years of service: 43 % after 20 years of service: 53 %
11 – 25	2 %	
26 – 36	1 %	after 36 years of service: 74 %
37 – 40	1.5 %	after 40 years of service: 80 %
more than 40	2 %	after 50 years of service: 100 %. No further increase.

Persons having fulfilled 20 years of service are entitled to a minimum pension. The government determines the relevant minimum amount annually.

Pensionable Age/Early and Late Retirement

The retirement age is 64 years of age but is gradually being increased to 65 in 2022.

Early retirement is only possible for women with an eligibility period of at leat 40 years regardless of age, which was introduced in 2011. Eligibility period includes only the enabling period of performing gainful activity (at least 32 years) and the disbursement period of child raising benefits. A late retirement is possible for persons with 20 years of service. For every extra service time of at least 30 days the pension amount increases by a bonus of 0.5 % of the awarded pension per each 30 days. Pensioners may, in general, also combine work and retirement.

Mixed statutory pension system from 1998 – 2011

The capitalized private pension scheme was regarded as part of the statutory pension scheme from 1998 to 2011. Participation was mandatory for all those who entered the labour market after 30 June 1998. Those who had already accumulated insurance periods in the 'old' system had the opportunity to voluntarily join it and automatically waived ¼ of their pension rights already accumulated prior to this date. The funded schemes were financed by an employee contribution of approximately ¼, whereas around ¾ was paid into the statutory pension system.

Meanwhile, due to fiscal reasons in the context of the Hungarian debt crisis, the two-pillar statutory pension system failed to meet the requirements and the reform was nearly revoked. In October 2010, the Hungarian government had announced to suspend the flow of contributions to the funded schemes for 14 months by transferring the contributions to the state budget. Membership to the private pension scheme was no longer mandatory for new employees. This measure was followed by a structural legal reform of the pension system which was gradually implemented in 2010 – 2012, imposing the obligation to members of the funded schemes to make a decision until end of January 2011 whether they wanted to be covered by the public pension system or retain their accounts in the private pension scheme. Membership of those who did not make any decision ceased automatically by 1 March 2011. The full contributions were redirected to the public pension system and pension entitlement will be paid solely by the statutory pension scheme. Those who declared to remain in the private pension scheme had to face threats that when remaining in the funded schemes they would lose their entitlements in the state run system. Thus, 97.6 % of the private pension scheme members took a step-back in favour of a statutory pension and the assets were transferred. Only 74,000 remained in the funded system.[165] Since the reform, the former mandatory private pension schemes continue to operate on a voluntary basis only.

2 Occupational Pension Schemes

Since the reform of 2012, Hungary has a two pillar pension system consisting of a statutory pension scheme and voluntary private pension schemes. Occupational pension schemes are not very common and there are no real occupational schemes in the strict sense of the term.

3 Private Pension Schemes

The former mandatory private pension funds continue to operate as voluntary private pension schemes. However, the number of operating pension funds has declined due to the concentration process. The funds can be divided into supplementary private pension funds, pre-retirement saving accounts and products of private insurance. Voluntary private pension funds are defined-contribution in nature. Contributions can be paid by the employer, the employee or both. As an incentive to sign a private pension contract the members are entitled to claim tax relief in the form of a tax refund on payments made to a voluntary private pension fund. The tax refund is equivalent to 20 % of contributions made, up to a limit.[166]

[165] Central Administration of National Pension Insurance, *Structure*, https://www.onyf.hu/en/structure.html, (Accessed 24 September 2019).
[166] OECD, 2015, *The tax treatment of funded private pension plans*, OECD and EU Country Profiles, page 37, (Available at: https://www.oecd.org/daf/fin/private-pensions/tax-treatment-pension-plans-countryprofiles.pdf).

4 Position of Researchers

Compared to EU-27 average it seems that quite a high number of researchers in Hungary work on permanent contracts.[167]

Researchers with an employment contract are automatically insured with the statutory social security pension scheme and are entitled to full social security benefits. PhD students when receiving state fellowships are not covered by the old-age pension provision. However, they can sign a specific agreement with the Central Administration of National Pension Insurance in order to be covered for old-age benefits for this period.[168]

5 Cross-border Portability/Mobility

Hungary's statutory pension system requires a qualifying period of at least 15 years of service. EU rules coordinate national social security systems of the 1st pillar to make sure that moving to another EU/EFTA Member States does not result in a loss of social security rights.[169] Hence, insurance periods that are covered by the statutory pension schemes in another EU/EFTA State are taken into account when applying for a pension in Hungary.

Hungary has also concluded several bilateral Social Security Agreements with other countries.

A refund of contributions that were paid to the statutory pension system cannot be claimed when leaving Hungary.

[167] European Commission, *Researchers' Report 2014 – Country Profile: Hungary*, page 3, (Available at: http://ec.europa.eu/euraxess/pdf/research_policies/country_files/Hungary_Country_Profile_RR2013_FINAL.pdf).
[168] European Commission, *Researchers' Report 2013 – Country Profile: Hungary*, page 12, http://ec.europa.eu/euraxess/pdf/research_policies/country_files/Hungary_Country_Profile_RR2013_FINAL.pdf.
[169] Regulation (EC) No. 883/2004 of the European Parliament and of the Council of 19 April 2004; Regulation (EC) No. 987/2009 of the European Parliament and the Council of 16 September 2009.

IRELAND

Summary

The **Irish** statutory pension system has a contributory State Pension paid as a basic, flat-rate amount and a means-tested, non-contributory State Pension. It is administered by the government and funded through social insurance contributions and tax revenues. The aim of the State Pension is to provide an adequate basic standard of living for pensioners.

In addition, occupational pension schemes have broad coverage in Ireland. The pensions of the State Pension (Contributory) scheme and the occupational pensions are co-ordinated. Furthermore, private pension provisions do exist.

1 Statutory Pension System

The Irish State Pension comprises two alternative benefits: a basic flat-rate pension known as State Pension (Contributory) for everyone who meets the contribution requirements and a means-tested pension for those not entitled to a contributory pension.

1.1 State Pension (Contributory)

The State Pension (Contributory) is mandatory for all employees and self-employed persons from age 16 onwards. It provides flat-rate benefits if the requirements are met. Annual earnings of the insured persons are not relevant for the benefit calculation.

Financing

The State Pension (Contributory) is a pay-as-you-go system. It is based on the so called Pay Related Social Insurance contributions (PRSI) financed by both the employee and the employer. The contributions depend on the employee's earnings and occupation. There are currently 11 fidderent PRSI classes.[170] The contributions are paid into the national Social Insurance Fund. There is no earnings ceiling on contributions.

Benefits

The qualifying conditions for the flat-rate benefit are complex and encompass several requirements as well as exceptions. Different to most other European Countries that require qualifying periods (years or months of insurance), the entitlement to an Irish State Pension depends crucially on weeks of paid contributions. Annual earnings are not relevant for the future benefit level.

An entitlement to a State Pension (Contributory) requires that the insured person
- ★ has started paying social insurance contributions before a certain age (currently 56) and
- ★ has paid a certain number of social insurance contributions[171]
- ★ has a certain average number of contributions paid over the years.[172]

Whether the pensioner receives a full, pro-rata or minimum pension depends on the yearly average of weekly contributions. The yearly average is determined by dividing the paid weekly contributions and credits by the total contribution years.

[170] The classes of contributions in detail can be found on: http://www.welfare.ie/en/Pages/PRSI---Pay-Related-Social-Insurance---Contributions-and-Clas.aspx#classes.
[171] For those reaching age 66 on or after April 2012 it sat least 520 weeks of full-rate social insurance contributions at retirement age. The condition is also met, if 260 weeks of full-rate employment contributions were paid and the remaining 260 weeks are made up by full-rate voluntary contributions. There is only one exception.
[172] For the detailed conditions see: Welfare.ie, *State Pension (Contributory)*, http://www.welfare.ie/en/Pages/860_State-Pension-Contributory.aspx, (Accessed 10 July 2019).

The full pension amount of EUR 243.30 per week (2018) is paid if at least a yearly average of 48 weeks of contributions has been paid or credited to the individual's social insurance record throughout the working life.[173] At least 10 weekly full-rate contributions must have been paid in order to qualify for the minimum payment rate of EUR 97.20 per week (2018).[174] In case the insured person has only a yearly average of 5-9 of weekly contributions, a special partial pension is paid only.

In addition to a pension, retirees may be entitled to benefits-in-kind and additional allowances such as household benefits or carer's allowance.

Pensionable Age/Early and Late Retirement

The standard retirement age is 66. According to the Social Welfare and Pensions Act 2011, the retirement age will increase to 67 in 2021 and 68 in 2028.

The State Pension cannot be claimed before standard retirement age. Individuals that become redundant or unemployed before standard retirement age are only entitled to redundancy lump-sum or jobseeker's benefits and allowances. A person can receive a State Pension (Contributory) and continue to work. It is not possible to defer the pension.

1.2 State Pension (Non-Contributory)

The second part of the State Pension is a means-tested payment for those who do not qualify for a State Pension (Contributory). It is financed through general taxation and tested against all cash income, capital value and property, except for the private home. For people between aged 66 and under 80 the maximum rate per week in 2019 was EUR 237. The personal rate from age 80 onwards is EUR 247.[175] Increases are available for a qualified adult or child. The retirement age of the State Pension (Non-Contributory) will increase in line with the State Pension (Contributory).

2 Occupational Pension Schemes

There is no legal obligation for the employer to provide an occupational pension scheme but if no occupational pension scheme is set up, the employer needs to offer some other kind of pension arrangement, e.g. a Personal Retirement Savings Account. Private sector occupational pension fund are usually set up under trust. The occupational pension schemes of the public sector are set up by legislation.

173 Welfare.ie,April 2018, *Qualifying for State Penion (Contributory)*, (Available at: http://www.welfare.ie/en/downloads/Qualifying-for-State-Pension-Contributory.pdf).
174 Welfare.ie, April 2018, *Qualifying for State Penion (Contributory)*, (Available at: http://www.welfare.ie/en/downloads/Qualifying-for-State-Pension-Contributory.pdf).
175 Citizens Information Board, *State Pension (Non-Contributory)*, https://www.citizensinformation.ie/en/social_welfare/social_welfare_payments/older_and_retired_people/state_pension_non_contributory.html, (Accessed 10 July 2019).

Primarily, only larger employers in Ireland sponsor occupational pension plans. They can be defined-benefit or defined-contribution in nature but there is a tendency to provide DC schemes. Hybrid pension schemes exist as well. Most occupational pension schemes are funded. The most notable exception is the public service pension arrangement.[176]

The members of occupational pension schemes get tax relief on contributions up to a maximum level. The percentage limit depends on the age of the insured person and gets more generous with increasing age. Contributions to a DC-scheme have to be made regularly by both the employer and the employee. The benefits of an occupational pension scheme may be drawn as (tax free) lump-sums or as a pension. A transferral of the retirement savings to an Approved Retirement Fund[177] or an Approved Minimum Retirement Fund[178] is also an option. Many defined-benefit schemes take into account the State Pension for their benefit level. This is known as integration or coordination. Normal retirement age in occupational pension schemes is generally between 60 and 70.

To increase future pension rights the employee can make Additional Voluntary Contributions (AVCs) to a pension scheme, either to an AVC fund as part of the employer's main pension scheme, to a separate AVC plan or to a Personal Retirement Sabings Account. The AVCs are invested in investment funds.

3 Private Pension Provisions

In Ireland, there exist two types of private pension provisions: Retirement Annuity Contracts (RAC) and Personal Retirement Savings Accounts (PRSA). They are managed by life insurances or investment companies. In general, only the employee contributes to the plan but the employer may decide to contribute as well. The contributions may attract tax relief up to a certain limit whereas benefits are taxed.

The Personal Retirement Savings Accounts (PRSA) were introduced in 2003 with the objective to provide a pension vehicle for people not yet covered by existing pension schemes. For employees not eligible to join an occupational pension fund within six month of joining the company, the employer is required by law to offer access to at least one PRSA. Furthermore, an employer must offer a PRSA for Additional Voluntary Contributions (AVCs) if the occupational pension rules do not provide for such a purpose. PRSA are defined-contribution plans managed by investment managers, insurance companies or credit institutions. In general, benefits can be drawn no earlier than from age 60.

Retirement Annuity Contracts (RAC) are insurance contracts can only be taken out by individuals without access to an occupational pension plan. The RAC are defined-contribution schemes that offer different investment strategies.

On retirement the pensioner can purchase an annuity or invest the fund in an Approved Retirement Fund or an Approvend Minimum Retirement Fund[179].

[176] Citizens Information Board, *Occupational Pension*, https://www.citizensinformation.ie/en/money_and_tax/personal_finance/pensions/occupational_pensions.html, (Accessed 10 July 2019).
[177] A personal retirement fund that keeps the pension fund invested as a lump sum after retirement. The money can be withdrawn regularly.
[178] A fund for people under 75 with a retirement income of less than EUR 12 700. Operates as an Approved Retirement Fund, but the original capital cannot be withdrawn until reaching age 75.
[179] See footnotes 186 and 187.

4 Position of researchers

4.1 Work Conditions

Irish public sector research is concentrated in the seven main universities throughout the country. The majority of the PhD candidates work on stipends that do not provide them with social security coverage. However, researchers on employment contracts are entitled to full social security and pensions.[180] They are insured with the statutory State Pension (Contributory).

Since January 2013 new public sector employees will become members of the occupational Single Public Service Pension Scheme. It was introduced by the Public Service (Single Scheme and Other Provisions) Act 2012 and replaces the Model Superannuation Scheme 2004 which used to be the statutory framework for the occupational pension plans of most public service and semi-state bodies in Ireland.

4.2 Details of researchers' pension provision

Single Public Service Pension Scheme

The Single Public Service Pension Scheme is a defined-benefits scheme financed on a pay-as-you-go basis. It provides benefits according to a career average earnings formula. The scheme covers all public servants recruited from 1 January 2013 including university staff and therefore all of Ireland's researchers working in the public sector.

Financing

In general, contributions are paid solely by the member of the scheme. For most members the contribution rate is 3.5 % of net pensionable remuneration. The net pensionable remuneration is the pensionable remuneration minus twice the annual rate of the State Pension (Contributory) for a single adult. An additional 3 % is paid on the gross remuneration.[181] In addition, a purchase of notional years of service is possible.

Benefits

Eligibility for retirement benefits requires an insurance period of at least two calendar years.[182] If these two years are not fulfilled the former member can claim a refund of the contributions.

The Single Public Service Pension Scheme is a career-average scheme. The benefits depend on average-salary and on years of insurance. Pension benefits include pension annuities and a lump-sum payment. Each of them will be accrued separately for each year of employment in the public sector. The benefits of the Single Public Service Pension Scheme are coordinated with the State Pension (Contributory) which means that the State

[180] European Commission & Deloitte, Researchers' Report 2014, *Country Profile: Ireland, page 19.*
[1801] Department of Public Expenditure and Reform, November 2017, *Single Public Service Pension Scheme*, page 10, (Available at: https://singlepensionscheme.gov.ie/wp-content/uploads/2017/12/Scheme-Booklet.pdf).
[182] Department of Public Expenditure and Reform, November 2017, *Single Public Service Pension Scheme*, page 5, (Available at: https://singlepensionscheme.gov.ie/wp-content/uploads/2017/12/Scheme-Booklet.pdf).

Pension (Contributory) is taken into account Thus, the accrual rates and the contributions are affected by the availability of the State Pension (Contributory). The lump-sum payment, however, is not affected by that.

The **annuities** accrue at a rate of 0.58 % of gross pensionable remuneration up to a ceiling of 3.74 times the State Pension (Contributory) at that time (currently EUR 45,000). Above that level the pension accrues at 1.25 % of gross pensionable remuneration. The **lump-sum amount** accrues at a rate of 3.75 % of gross pensionable remuneration. During the scheme membership the amounts accrued each year are adjusted annually to reflect the increase of the consumer price index between the current year and retirement.[183] At retirement the total annual pension and the lump-sum will equal the total of these adjusted amounts.

Retirement Age

The minimum retirement age is linked to the statutory pension retirement age (currently 66) and rises to 68 in 2028. Retirement is compulsory at age 70 for most members of the scheme. A person can retire from age 55 with actuarially reduced benefits.

5 Cross-border Portability/Mobility

State Pension

An entitlement to an Irish State Pension crucially depends on weeks of paid contributions. In accordance with the EU Regulation 883/2004, insurance times completed in another EU/EFTA Member State are taken into account in order to qualify for State pension (Contributory) in Ireland.

In addition, Ireland has concluded several bilateral social security agreements that deal with pensions.

Occupational Pension Schemes and Personal Retirement Savings Accounts

A transfer to an overseas pension plan is possible provided that the conditions are met. The conditions are detailed in The Occupational Pension Schemes and Personal Retirement Savings Accounts (Overseas Transfer Payments) Regulations 2003 (S.I. 716 of 2003). These include inter alia that

- the overseas arrangement provides 'relevant benefits' as defined in the Taxes Consolidation Act 1997
- the overseas arrangement has been approved by the appropriate regulatory authority in the country concerned and
- the arrangement in an EU Member State is managed by an Institution for Occupational Retirement (IORPS) and the scheme's administrator is resident in an EU Member State or, in case of a non EU arrangement, the employee/member is currently employed in that country.[184]

In certain circumstances a refund of the member's contributions less tax can be claimed depending on the type of pension arrangement and the rules attached to refunds of contributions.

[183] Department of Public Expenditure and Reform, November 2017, *Single Public Service Pension Scheme*, page 16, (Available at: https://singlepensionscheme.gov.ie/wp-content/uploads/2017/12/Scheme-Booklet.pdf).
[184] Irish Life, *Overseas transfers from occupational pension schemes*, https://www.irishlifecorporatebusiness.ie/overseas-transfers-occupational-pension-schemes, (Accessed on 10 July 2019).

ITALY

Summary

Traditionally, the national social security system is the main provider of pensions in **Italy**. However, the 1995 "Dini Reform" was the starting point for the replacement of the former generous earnings-related defined-benefit system in favour of a system based on notional defined-contribution accounts. Regarding eligibility requirements, Italy has passed several pension laws in the recent years.

Compared to other European countries, supplementary pensions still have a subordinated status in Italy. The first law on supplementary pensions was passed in 1993 followed by further legislation. In order to boost occupational pensions, Italy did not only provide further fiscal incentives but also introduced the automatic transfer of the Trattamento di fine Rapporto (a severance pay which is paid at the end of employment) to an occupational pension scheme unless the employee declares his or her contrary wish.

1 Statutory Pension Scheme

The Instituto *Nazionale della Previdenza Sociale (INPS)* manages the general statutory pension scheme. Until the end of 2011 there were two further separate pension institutions: the INPDAP that managed schemes for numerous civil servants and public employees, and the ENPALS for workers in the field of art, sport or entertainment. Both were merged with INPS in 2012 which inherited all assets and liabilities.

The general statutory pension scheme is mandatory for all employees of the private and public sector as well as for the majority of self-employed persons. Besides, INPS also manages a special fund called "gestione separata" for semi-subordinate workers and students holding a fellowship at an Italian university.

The notional defined-contribution system that was introduced in 1995 applies in full to employees without 18 contribution years at the end of 1995. Other employees were subject to a fairly long phasing-in period of this system. The 2011 pension reform called "Save Italy" introduced further changes to the statutory pension system with the objective to make it more efficient and sustainable.[185] Measures taken were, inter alia, the significant increase of the pensionable age alongside with a periodic automatic adjustment in line with increases in average life expectancy as well as a shorter phasing-in period for the notional defined-contribution accounts. It thoroughly harmonized the calculation rules for benefits across generations. The pension reforms of the recent years also defined new age-of-retirement-specific transformation coefficients up to the age of 70. The coefficient values are higher the later the pension is drawn.

Financing

The statutory pension scheme is a pay-as-you-go system financed by employer and employee contributions. The total contribution rate for private and public employees is 33 % of gross salary, whereof the employee pays 9.19 % and the employer 23.81 %.[186] There is an annual assessment ceiling on contributions of EUR 102 543 (2019) but some employees may opt for contribution payments without a ceiling.[187] Voluntary contributions (contribuzione volontaria) are possible either in order to increase the pension amount or, for those who are not obliged to pay contributions, to be entitled to a future pension at all.

Benefits

Italy distinguishes between two types of pension: the old-age pension *(pensione di vecchiaia)* and the early pension *(pensione anticipate)*, the latter one being described in the section "Pensionable Age/Early and Late Retirement".

Those who entered the job market after December 1995 are entitled to an old-age pension if

- they have reached a certain minimum retirement age,
- they have fulfilled 20 years of contributions and
- the contributions are sufficient enough to provide an amount of 1.5 times the old-age social allowance for the current year. The latter condition is not required with regard to people retiring at the age of 70 and 3 months with at least five years of contributions.[188]

[185] Carlo Marino, European Pension Bulletin 3/2012, *Recent Reforms of Welfare in Italy: a Super-INPS was born"*, page 19 (Available at: https://www.academia.edu/2050532/RECENT_REFORMS_OF_WELFARE_INSTITUTIONS_IN_ITALY_A_SUPERINPS_WAS_BORN).

[186] INPS, *Obbligo contributivo*, https://www.inps.it/nuovoportaleinps/default.aspx?itemdir=45815#,(Accessed 17 July 2019).

[187] INPS, *Lavoratori della PA: esclusione opzionale dal massimale contributivo*, https://www.inps.it/nuovoportaleinps/default.aspx?itemdir=52863, (Accessed 16 July 2019).

[188] INPS, *Altersrente*, https://www.inps.it/nuovoportaleinps/default.aspx?sPathID=%3b0%3b46474%3b46477%3b&lastMenu=46477&iMenu=102&iNodo=46477&p4=2, (Accessed 16 July 2019).

Under the new system rules the pensions are calculated according to the contribution-related system *(Sistema Contributivo)*. Since January 2012 the notional defined-contribution method has been applied only "pro-rata" for employees with 18 insurance years at the end of 1995.

Calculation Method

In order to calculate the pension amount according to the contribution-related rules, the accumulated contributions on the individual notional accounts are revaluated annually at the average growth rate in GDP over the previous five years. This amount is called the *montante contributivo*. In a second step, an age-related transformation coefficient (for 2016-2018 a divisor between 23.556 at age 57 and 15.678 at age 70) is applied to the *montante contributivo*. These coefficients are equal to a value of between 4.246 % at age 57 and 6.378 % at age 70.[189] Special coefficients can apply for people performing hazardous work or mothers. The transformation coefficients are revised every three years according to the changes in life expectancy at retirement age and GDP growth rates.

The new pension system does not provide a minimum or maximum pension amount. Pensions are paid 13 times a year and adjusted annually according to the increase in cost of living. The adjustment of pensions is progressive. It is more generous with regard to lower than to higher pensions. People with low or no contributory pension can claim a means-tested social assistance.

Pensionable Age/Early and Late Retirement

The actual statutory pension system distinguishes between the eligibility to an old-age pension and an early pension. The law of 22 December 2011 increased the pensionable age significantly. The minimum retirement age for the old-age pension *(pensione di vecchiaia)* was linked to changes of the retirement age to changes in life expectancy. In 2019 it reached 67 for many pensioners. However, In April 2019 the government agreed on a reform called "quoat100". The reform will lower the early retirement age within the period of 1 January 2019 and 31 December 2021 and abolish the automatic adjustment of the retirement age due to increases in life expectancy. People with 38 years of contributions will be able to retire already at age 62. The government's aim is to extend the reform after 2021 by allowing anyone with 41 years of contributions to retire, regardless of age.

The introduction of a so called early pension *(pensione anticipate)* replaced the former pre-retirement and seniority pension. Early retirement is possible regardless of age once a contributory period of at least 42 years and 10 months for men and 41 years and 10 months for women (2019) has been fulfilled. The early retirement conditions are subject to adjustments according to changes in life expectancy as well. Alternatively, workers insured entirely under the contribution-related system (new employees since 1996), can retire early up to three years before reaching statutory retirement age (64 in 2019) provided that contributions have been paid for 20 years and the accumulated benefits amount to at least 2.8 times the social pension in 2012 (pension amuunt of EUR 1 200 per month in 2012), indexed with the five-year-average of the nominal GDP.[190]

The system guarantees that retirement can be deferred up to age 70. In this case higher transformation coefficients increase the pension.

[189] INPS, *Coefficiente di trasformazione*, https://www.inps.it/nuovoportaleinps/default.aspx?itemdir=49950, (Accessed 16 July 2019).
[190] IPNS, *Pensione anticipate*, https://www.inps.it/nuovoportaleinps/default.aspx?itemdir=50308, (Accessed 15 July 2019).

2 Occupational Pension Schemes

In Italy, there are several collective bargaining agreements that introduced an obligation for employers to set up specific pension funds for the relevant industry. But employers may also set up their own pension fund, either in addition to an industry fund or where no such fund exists. Occupational pension schemes can take the form of closed pension funds that are managed by the social partners or open pension funds with collective affiliation managed by financial institutions.

Usually contributions to the plan are paid by both the employer and the employee. They are fairly low and amount to 1-2 % for each party. Employer contributions can have a vesting period of up to five years. The fund's benefits are calculated according to a defined-contributions system. Advanced payments, e.g. for purchasing a house or for medical expenses are possible. At retirement the pensions can be drawn either as annuities or as (partial) lump-sums. Retirement age is the same as in the statutory pension system.

Closed pension funds

Occupational closed pension funds (also referred to as contractual or negotiable pension funds) can be managed by investment firms, banks, insurance companies or asset management companies. "Closed" means that only a specific group of employees is permitted. Therefore, the funds are established at company level, on a territorial basis or in connection with a labour organisation. The occupational closed pension funds for employees are defined-contribution systems.

Open pension funds

Besides closed funds, there exist open pension funds operating on a collective, occupational level. They can be managed by the same companies that manage closed funds. Open pension funds are considered as private pension schemes, but other than the individual pension plans (PIP) they may offer collective or individual membership or both. The difference to the above mentioned closed funds is that the membership is not limited to a certain group or category of workers. Instead, other groups or even individuals can join the fund.

Trattamento di fine rapporto (TRF)

In Italy, employees are entitled to a severance package upon termination of employment called Trattamento di fine Rapporto (TFR). The TFR intends to support the person in the event of unemployment or retirement if he/she has worked at the same employer for at least eight years. An amount of 6.91 % of the employee's gross salary is booked to the employee's individual account.[191] The TRF accrues at 1.5 % per year plus 75 % of the inflation rate. Since 2007 the annual amount of the severance payments is transferred to a supplementary occupational pension fund unless the employee refuses a transfer (silent consent principle).[192] The aim of the silent-consent principal concerning transfers of the TRF is to promote supplementary pension schemes in Italy.

[191] INPS, *Il Trattamento di Fine Rapporto*, https://www.inps.it/nuovoportaleinps/default.aspx?itemdir=50229, (Accessed 15 July 2019).
[192] European Commission, *Joint Report on Pensions – Country Profile: Italy*, page 67, (Available at: ec.europa.eu/economy_finance/publications/.../ocp71_country_profiles_en.pdf).

3 Private Pension Schemes

Private pension schemes can be established as open funds or as individual pension plans using life insurance policies. Individual pension plans *(Piano Individuale Pensionistico – PIPs)* are based on insurance contracts that comply with the rules on complementary pensions. In addition to old-age they can cover death, long-term care and/or disability. In case of a with-profit insurance contract the company usually guarantees a minimum annual interest rate and a quota according to the profit situation which is determined at the end of the year. The *Trattamento di fine Rapporto* (TRF) can be voluntary transferred to a PIP.

4 Position of researchers

4.1 Work Conditions and Details of researchers' pension provision

Compared to other EU Member States the employment of researchers on a fixed-term basis is fairly low.[193] Researchers with a fixed-term or permanent employment contract, including dotoral candidates not receiving fellowships or grants, are eligible for social security coverage with the statutory INPS pension scheme.[194] Beneficiaries of PhD scholarships or fellowships within an EU mobility programme often work on so called "parasubordinate" contracts which lead to a registration with the special INPS account *"gestione separata"*.[195] The same applies to grant recipients for research training, e.g. the Assegno di ricerca research grant. The total contribution to the *"gestione separate"* amounts to 27.72 % but was increased to 33.72 % by 2018.[196] Two-thirds of the contribution is paid by the employer and one third is paid by the worker.

Professors at state universities used to be covered under a special scheme for civil servants. In 2012 the managing institution merged with INPS.

5 Cross-border Portability/Mobility

Italy requires a qualifying period of 20 years. According to EU Regulation 883/2004 insurance periods completed in other Member States can be taken into account if necessary. In general, the same applies to citizens of a country with which Italy has concluded a social security agreement.

A transfer of the capital accumulated in an overseas individual account of an occupational or private pension scheme is possible in theory.

[193] European Commission & Deloitte, Researchers' Report 2014, *Country Profile: Italy*, page 4.
[194] European Commission & Deloitte, Researchers' Report 2014, *Country Profile: Italy*, page 8.
[195] INPS, *Gestione Separata*, https://www.inps.it/nuovoportaleinps/default.aspx?itemdir=45795, (Accessed 16 July 2019)
[196] INPS, *SSE MOVE: Social Security on the MOVE, Promoting Coordination on the Transferability of Welfare Benefits within a Cluster of EU Social security Institutes", Country Report: Italy*, page 2, (Available at: https://www.inps.it/docallegati/Informazioni/SSM/eng/Documents/Country_Repor_IT_EN.pdf).

LUXEMBOURG

Summary

In Luxembourg the statutory pension system of the first pillar is the prevailing kind of provision. Compared to other European Countries, it provides a fairly high level of benefits. However, the public pension expenditure is expected to increase in the future due to the demographic change. Therefore, the necessity of further pension reforms is being discussed.

The 2nd and 3rd pillar do have a marginal share of the overall pension coverage, although the government implemented specific legal instruments for occupational pension provision and favourable fiscal treatments.

1 Statutory Pension Scheme

Luxembourg has two pension schemes: the general scheme compulsory for all private sector employees and self-employed persons, and the special scheme for public sector employees. The general scheme is managed by the National Pension Insurance Fund *(Caisse Nationale d'Assurance Pension – CNAP)* whereas the public sector scheme is managed by the Administration of State personnel *(Administration du Personnel de l'Etat – APE)*. For those who entered one of the schemes after 1 January 1999, the conditions of entitlement and calculation of benefits are almost identical.

Financing

The financing of the statutory pension is based on a pay-as-you-go system. Contributions for wage earners are split equally in three parts: the employee, the employer and the authorities each pay a contribution equivalent to 8 % of the employee's salary. Contributions are only levied on earnings equal to the minimum social wage (in 2019 EUR 25 077 per year). The annual earnings ceiling for contribution is five times the minimum social wage.[197]

Benefits

In order to qualify for a retirement pension, the beneficiary must have been insured for at least ten years. This qualifying period can be accumulated by compulsory, credited or voluntary insurance or by means of a buy-in.

Calculation Method

The old-age pension consists of two elements: a flat-rate basic pension depending solely on years of insurance and an earnings-related pension related to the level of contributory income.

A full **flat-rate pension** is paid after 40 years of insurance. The flat-rate increase amounts to 24.288 % of the reference amount of EUR 2 085 per month (2019). The percentage will increase gradually to 28 % in 2052. A proportionally reduced flat-rate pension is paid to people with less than 40 years of insurance. The pension is calculated by applying the index level 100 of the cost of living on the basis of the year 198 (8.1440 in 2019) as well as a revaluation factor (1.446 in 2019).[198]

Full pension for one month = 2 085 x 24,288 % x 40/40 x 8.1440 x 1.446 / 12

The **earnings-related part** of the pension is calculated by multiplying the sum of the earnings liable for contribution with an accrual rate. In 2019 the accrual rate was 1.807 % but it will decline gradually to 1.6 % by 2052.[199] For the calculation the revaluation factor is applied as well. An additional accrual rate of 0.013 % is credited for each year beyond the fixed threshold value of 93 (= age at retirement + contribution years).[200]

[197] CNAP, *Financement*, https://www.cnap.lu/a-propos-de-la-cnap/financement/, (Accessed 18 July 2019).
[198] CNAP, January 2019, *Alterspension in Luxemburg*, page 7 and 20, (Avaiablabe at: https://www.cnap.lu/fileadmin/file/cnap/publications/Publications_CNAP/Brochures/D_Broschuere_Alterspension.pdf).
[199] CNAP, January 2019, *Alterspension in Luxemburg, page 7 and 20*, (Avaiablabe at: https://www.cnap.lu/fileadmin/file/cnap/publications/Publications_CNAP/Brochures/D_Broschuere_Alterspension.pdf).
[200] In case of retirement at age 60 and 40 years of contributions: 60 + 40 = 100. Therefore 7 years above the threshold results in an increase reate of 7 x 0.13 % = 0.091 %.

There is also a **minimum pension** of 90 % of the reference amount (EUR 2 085 in 2019) provided that 40 insurance years have been fulfilled. A reduced minimum pension is paid to those with at least 20 years of insurance.[201]

Every person who receives a pension on the 1st of December is entitled to a bonus, the "end-of-year allowance".

Pensionable Age/Early and Late Retirement

The standard retirement age is 65. The qualifying period is 10 years. It is possible to combine work and pension without any reductions in the pension benefits.

Early retirement is possible at age 60 with 40 years of insurance with compulsory, voluntary or credited contributions or at age 57 with 40 years of compulsory insurance. Pensioners on an early pension may continue working but only up to certain earnings limits.

2 Occupational Pension Schemes

Luxembourg used to have only two occupational pension vehicles, the provision on the balance sheet and the group insurance. With the Complementary Pensions Act of 8 June 1999 Luxembourg introduced several European directives into its legislation, pension funds became the third occupational pension vehicle.[202] The law intended to promote the activity of pension funds on a national and European level. It states, for example, minimum requirements for the vesting of pension rights or determines the tax treatment of contributions, capital gains and benefits. Nevertheless, provisions on the balance sheet remain the prevailing form of occupational pensions.

The employer is not obliged to set up an occupational pension scheme for its employees. But the insurance with an existing occupational pension plan is compulsory if the employee meets the eligibility conditions. For wage earners there is usually a waiting period of six month of employment before they can become a member of the scheme and in most plans the employee must be at least 25 years old. The supplementary pension is usually financed by the employer at a rate between 3 % to 7 %, but the employee can pay additional voluntary contributions to group insurances or pension funds. The contributions are tax-deductible up to an annual limit of EUR 1,200)[203] Entitlements from employee contributions become vested immediately, whereas rights from employer contributions may have a maximum vesting period of ten years. The retirement age of the schemes is usually between 60 and 65.

[201] CNAP, January 2019, *Alterspension in Luxemburg*, page 10, (Avaiablabe at: https://www.cnap.lu/fileadmin/file/cnap/publications/Publications_CNAP/Brochures/D_Broschuere_Alterspension.pdf).
[202] European Actuarial & Consultancy Services (EURACS), *Luxembourg Pension Summary*, https://euracs.eu/summaries/luxembourg-pension-summary-6/, (Accessed 26 July 2019).
[203] European Actuarial & Consultancy Services (EURACS), *Luxembourg Pension Summary*, http://euracs.eu/summaries/luxembourg-pension-summary-6/, (Accessed 26 July 2019).

Pension funds in Luxembourg are either supervised by the Control Authority of the Insurance Sector (CAA) or the Control Authority of the Financial Sector (CSSF). Pension funds controlled by the CAA can have the form of retirement institutions comparable to the legal form of insurance companies or non-for-profit organisations *(Association Sans but Lucrative – ASBL)*. Pension Funds depending on the CSSSF can have the legal form of a pension saving companies with variable capital *(Sociétés d'èpargne-Pension à Capital Variable – SEPCAV)* or a pension savings associations *(Associations d'Épargne-Pensions – ASSEP)*. A SEPCAV is a cooperative society organised as a public limited company with its members being shareholders. It may only provide defined-contribution plans. The benefits calculation takes into account the number of holding shares and the value of shares on the date of payment. Benefits are paid as a lump sum. The ASSEP instead may offer defined-contribution, defined-benefit or hybrid schemes. Benefits can be paid either as lump sums or annuities.

3 Private Pension Schemes

Personal private pension contracts can be concluded with banks or insurance companies offering defined-contribution plans. Retirement savings plans or life insurances exist as well. The terms and conditions are set out in the plan rules. In general, a retirement savings plan is a life insurance policy with a minimum term of 10 years that pays out a partial lump sum at age 60 and life-long annuities until death. Both retirement savings plans and conventional life insurances benefit from tax breaks.

4 Position of researchers

4.1 Work conditions

Research in Luxembourg takes place at these main public research institutions: the Luxembourg Institute of Science and Technology (LIST), the Luxembourg Institute of Health (LiH) with the Integrated BioBank of Luxembourg (IBBL), The Luxembourg Institute of Socio-Economic Research and the University of Luxembourg which hosts many Higher Education Institutes.[204] Private companies contribute to research in Luxembourg to a great extend as well.

Researchers employed at the University of Luxembourg or the public research centres (CRP) as well as Ph.D or post doctoral grant holders from an AFR Grant Scheme *(Aides à la Formation-Recherche)* are treated as "private employees" similar to those of the private sector. They work on employment contracts with their host institution and enjoy full social security rights.[205]

4.2 Details of Researchers' Pension Provision

All researchers with employment contracts are automatically enrolled in the state-run, compulsory social security insurance which includes coverage for old-age, invalidity and survivor's pensions. The conditions of the statutory pension scheme have been already presented above in section 1.1.

[204] Euraxess Luxembourg, *Public research in Luxembourg*, http://www.euraxess.lu/luxembourg/informationresearchers/research-landscape/policy-and-strategy, (Accessed 26 July 2019).
[205] European Commission & Deloitte, Researchers' Report 2014, *Country Profile: Luxembourg*, page 10.

5 Cross-Border Portability/Mobility

For EU citizens and those of Iceland, Liechtenstein, Norway and Switzerland the insurance periods of the social security systems are aggregated according to the EU Regulation No. 883/2004. In Luxembourg only insurance periods of at least one year in another EU/EEA Country are taken into account to fulfil the qualifying period of the statutory pension system.

Luxembourg has also concluded bilateral agreements on social security with y countries outside the EU that may include rules on the coordination of insurance periods. In case of an employment of less than 12 months, Luxembourg does, in general, not grant benefits but the insurance periods of non-EU/EEA citizens spent in Luxembourg may be taken into account by the pension scheme of their home country.

At retirement age of 65 insured persons under the statutory pension scheme who do not meet the conditions for an old-age pension, namely the ten years' qualifying period, may claim a refund of their contributions.[206]

[206] CNAP, January 2019, *Alterspension in Luxemburg*, page 3 (footnote 3), (Avaiablabe at: https://www.cnap.lu/fileadmin/file/cnap/publications/Publications_CNAP/Brochures/D_Broschuere_Alterspension.pdf.

NETHERLANDS

Summary

The **Netherlands** is a true example of a genuine three pillar concept in terms of pension provision. The system consists of a residence-based, basic flat-rate state pension related to minimum wages, occupational pension schemes and individual saving schemes. The flat-rate state pension together with the occupational pension comprises the main income of the elderly.

More than 90 % of employees are covered by a supplementary occupational pension scheme.[207] These schemes are quasi-mandatory due to a broad coverage of employees based on collective bargaining agreements. Although the Netherlands have a strong funded second pillar, an ageing population has put intergenerational solidarity into question and reforms in the occupational pensions have been discussed for several years now.

[207] EPC, *Country fiche on pensions for the Netherlands-the 2017 round of projections for the Ageing Working Group*, page 9, (Available at: https://europa.eu/epc/sites/epc/files/docs/pages/netherland_-_country_fiche_on_pensions.pdf).

1 Statutory Pension Scheme

The Social Insurance Bank *(Sociale Verzekeringsbank – SVB)* is responsible for the basic flat-rate pension *"Algemene Ouderdoms Wet"*(AOW) that provides benefits for everyone who has been living in the Netherlands. All residents from the age of 15 are insured and accrue pension rights.

Former residents who moved abroad may buy in missing AOW years or take out voluntary insurance for a maximum of ten years.

Financing

AOW is a pay-as-you-go system financed through contributions and, in case of a deficit, through government public funds. Contributions to the old-age pension AOW have to be paid solely by the employee. The contribution rate is 17.9% of pensionable income, up to an annual assessment ceiling of EUR 34 300 (2019).[208]

Benefits

The flat-rate pension amount depends mainly on years of insurance and residency. There is no earnings-related part of the pension calculation. Thus, former income or the contributions paid are not relevant for the pension calculation. The pension amount corresponds to marital status and years of residence.

Calculation Method

For each year of insurance, the pension accrues at 2 % of the full AOW pension. Therefore, a full old-age pension is reached only after 50 years of residence between the age of 15 and the standard retirement age. Individuals not eligible for a full pension receive a proportionate pension.

The old-age pension is linked to statutory net minimum wages. The full old-age pension amount for a single is 70 % of the net minimum wage. As of 1 July 2019, the gross pension payment for a single equaled EUR 1 228.22. For a couple living together in one household, the pension is 50 % of the net minimum wage per partner which equals EUR 843.78 gross per month since 1 July 2019.[209] If the partner of the beneficiary has not yet reached pensionable age and the partner's income is limited, the beneficiary may receive a pension bonus.

Pensionable Age/Early and Late Retirement

The pensionable age used to be 65, but increased to 66 by 2018 and is supposed to increase further to 67 by 2021. As from 2022 the retirement age will be linked to life expectancy. Therefore, in 2022 and 2023 the pensionable age will be 67 years and 3 months. However, in June 2019 the parliament, employers and trade unions presented plans on a Dutch pension reform that intends to limit the increases of the retirement age.[210]

Early retirement within the AOW pension system is not possible. It is possible to work while receiving the basic flat-rate pension.

[208] Belastingdienst, *Hoeveel moet u betalen?*, https://www.belastingdienst.nl/wps/wcm/connect/bldcontentnl/belastingdienst/prive/werk_en_inkomen/sociale_verzekeringen/premies_volks_en_werknemersverzekeringen/volksverzekeringen/hoeveel_moet_u_betalen, (Accessed 1 August 2019).
[209] SVB, *AOW-Leistungsbeträge*, http://www.svb.nl/int/de/aow/hoogte_aow/bedragen/, (Accessed 1 August 2019).
[210] LCP, 12 June 2019, *Summary agreement in principle on dutch pension system*, http://www.lcpnl.com/en/news-events/news/2019/20190612-summary-agreement-in-principle-on-dutchpension-system/, (Accessed 1 August 2019).

2 Occupational Pension Schemes

More than 90 % of employees working in the Netherlands are covered by a supplementary occupational pension scheme.[211] Occupational pensions are quasi-mandatory due to a broad coverage based on collective bargaining agreements. They cover private and public sector employees as well as civil servants and are often established industry-wide or profession-wide. In addition to old-age, the collective agreement may include coverage for disability and death. Occupational pension schemes have to be fully funded and are managed by pension funds or insurance companies.

The Dutch pension industry is very dynamic and competitive due to it being one of the largest in Europe. An ageing population and low long-term interest rates challenge the financial stability of the pension funds. According to law, most pension schemes must hold a minimum required coverage ratio of 104.2 %.[212] As a result, some pension funds face benefit cuts or need to revise their investment strategy. Despite several measures that were already undertaken to meet the shortfall in assets, further changes are still under discussion. Consequently, an ongoing tendency remains to switch from final pay (defined-benefit) pension schemes to pension schemes based on average salary (defined-contribution) and put more risk sharing on employees.

Financing and Benefits

Contributions are only levied on earnings above the fiscally accepted pensionable salary of up to EUR 105 075. A so called net pension can be offered for employees earning more than the pensionable salary.[213]

Most occupational pension schemes are still defined-benefit in nature but defined-contibution schemes are becoming more and more popular. Nearly all defined-benefit schemes have switched from final salary plans to a benefit calculation based on average salary. The maximum legal accrual rate in an average salary scheme has been lowered from 2.25 % to 1.875 % for each year of service.[214] The limits are determined inclusive of the state old-age pension benefit (AOW) that may be taken into account by an occupational pension scheme (so called state pension offset).

The target retirement age in occupational pension schemes is 68.[215]

Reform plans 2019

On 5 June 2019 the parliament, employers and trade unions presented an agreement in principle on the main elements of a major reform of the Dutch pension system. The shift to a pension system based on more flexible defined-contribution plans is one key element of the reform.[216] It also aims to spread the burden of paying for

[211] EPC, *Country fiche on pensions for the Netherlands-the 2017 round of projections for the Ageing Working Group*, page 9, (Available at: https://europa.eu/epc/sites/epc/files/docs/pages/netherland_-_country_fiche_on_pensions.pdf).
[212] DeNederlandscheBank, *Dutch pension funds' policy funding ratio at 104.5% as at end of September 2017*, https://www.dnb.nl/en/news/news-and-archive/statistisch-nieuws-2017/dnb364880.jsp, (Accessed 1 August 2019).
[213] Figure of 2019. Belastingdienst, *Pension schemes*, https://www.belastingdienst.nl/wps/wcm/connect/bldcontenten/belastingdienst/business/payroll_taxes/you_are_not_established_in_the_netherlands_are_you_required_to_withhold_payroll_taxes/when_you_are_going_to_withhold_payroll_taxes/pension_schemes/, (Accessed 1 August 2019).
[214] As from 1 January 2018.
[215] OECD, *Pensions at a Glance 2017: Country Profiles - Netherlands*, page 1.
[216] Jan-Daan Recourt, Stephanie Rosseau, Fiona Webster, Mercer, 11 June 2019, *Penion Reform Plans Move Forward in the Netherlands*, https://www.mercer.com/our-thinking/law-and-policy-group/pension-reformplans-move-forward-in-the-netherlands.html, (Accessed 1 August 2019).

pensions more fairly across generations. Today‘s occupational pensions are based on average wage related contributions[217] but older employees typically accrue more pension rights than younger ones due to a higher salary. With the reform, the accrual based on average contributions will be replaced by a pension accrual method more closely linked to contributions.[218] Other changes affect, inter alia, the retirement age for the state pension and the minimum funding ratio of pension funds. The details of the reform shall be complete at the end of 2020 but the legal framework is likely to be completed no earlier than by the start of 2022.[219]

3 Private Pension Provisions

Banks and insurance companies offer additional individual retirement cover within the voluntary private pension pillar. This sector is relatively small in the Netherlands, as it was simply not necessary for most people – up till lately – to accrue additional pension rights. Mainly self-employed and employees without an occupational pension participate in private pension schemes. But because of significant tax breaks, the private pension sector may grow in the future.

4 Position of Researchers

4.1 Work conditions

All residents in the Netherlands are covered under the state social security system, including the AOW state pension. Therefore, researchers residing in the Netherlands accrue AOW pension entitlements.

Researchers in the private sector are usually also participants of an industry-wide or company occupational pension scheme. Public sector researchers are insured with the pension fund *Stichting Pensionsfonds ABP*, administered by APG. It covers employees in the government and education sectors[220] and is one of the largest pension funds in the world. Researchers working at a Dutch university have their rights to an occupational pension defined in the Collective Labour Agreement of the Dutch Universities.

4.2 Details of Researchers' Pension Provision

Stichting Pensioenfonds ABP is the pension fund for employees in the government and education sectors.

In ABP pension there is no minimum age for membership and also no vesting period for pension entitlements. Contributions are paid by both the employer and the employee. The contribution rate for retirement and surviving dependents pension including supplements is 24.9 % in total (2019).[221] Thereof, the employee pays 7.5 % and the employer 17.4 %. Employees earning more than the fiscally accepted pensionable salary-level (EUR 105 075 in 2018) may accrue pension entitlements for the salary above that limit through the so called "net pension". Voluntary extra contributions to save up for pension benefits can be made under conditions.

[217] All employees pay the same contribution rate, regardless of salary.
[218] Karen Anderson, European Social Policy Network, ESPN Flash Report 2019/41, July 2019, *New dutch afreement in principle on a major reform of the pension system*, (Available at: https://ec.europa.eu/social/BlobServlet?docId=21520&langId=it).
[219] DutchNews, 10 June 2019, *What does the new pension agreement really mean?*, https://www.dutchnews.nl/news/2019/06/what-does-the-new-pension-agreement-really-mean/, (Accessed 1 August 2019)
[220] ABP, *About us*, https://www.abp.nl/english/about-us.aspx, (Accessed 1 August 2019).
[221] ABP, *Annual report 2018*, page 23, (Available at: https://www.abp.nl/english/financial-situation/annualreport.aspx).

ABP is an average salary scheme[222]. For the accrual of the pension the gross annual salary is taken into account. Thereof, the state pension (AOW) offset is deducted. An accrual does not take place over this amount. For example, in 2018 a pension was not accrued over the "threshold" amount of EUR 13 350 which means that the annual pension accrual rate is 1.875 % of gross earnings minus the threshold amount.[223]

The pensionable age for the so-called ABP Multi-Option Pension is flexible. The pension can be requested between the ages 60 and 72, with the pension being higher the longer someone continues to work.

5 Cross-border Portability/Mobility

State pension (AOW)

According to EU legislation, the insurance periods of the statutory pension scheme are recognized abroad and vice versa. Social Security Agreements between The Netherlands and other countries may also define the coordination of insurance periods.

Pension funds

There is considerable scope for transfers of occupational pension benefits in the Netherlands, but there are also strict legal requirements set out in the Dutch Pension Act that have to be fulfilled. A transfer is only possible to a "recognized" foreign pension institution, meaning the pension fund has to be formally registered with the Dutch Tax Authorities, beforehand. Upon request, the Dutch pension fund will check whether a transfer is possible under the current guidelines. But due to the strict pension and fiscal conditions on outbound pension transfers, portability towards foreign pension schemes is almost non-existing. A transfer is, inter alia, only allowed if "the options for a commutation or a buy off of the transferred Dutch pension value are not more liberal than the Dutch Pension Act allows".[224]

[222] The pension of members oft he armed forces is still accrued according to a final salary scheme.
[223] ABP, *Annual report 2018*, page 23, (Available at: https://www.abp.nl/english/financial-situation/annualreport.aspx); ABP, *The dutch pension system consists of 3 pillars*, (Available at: https://www.abp.nl/images/24.0103.19-ABP-Dutch-Pension-system.pdf); Example for an annual pension accrual: Full time salary of 54 000 € minus state pension offset of 13 350 € multiplied by the accrual percentage of 1.875 = 762 €.
[224] EAPSPI, *The Netherlands, Report: Mobility and Pensions Part 1*, page 47 (Available at: http://portal.versorgungskammer.de/portal/page/portal/eapspi/en/download/report_mobility_part1.pdf).

NORWAY

Summary

The pension landscape in **Norway** is composed of three pillars: a statutory public pension scheme (NIS), occupational pension schemes and private pension provisions. It is one of the few EU countries that enforces obligatory occupational pension provision by law, thus making its 2nd pillar coverage rate one of the highest in Europe.

In 2011, a reform of the statutory pension system came into force, replacing the former flat-rate basic pension ("Grunnpensjon") and the former special supplement by means of an Income Pension and a Guarantee Pension with flexible retirement age. The Income Pension is the earnings-related part of the pension system, whereas the residence based Guarantee Pension aims to ensure a minimum pension level. The abovementioned reform also linked pensions to the increase in life expectancy which was necessary to meet the demographic changes and the increasing costs of the old pension system.

1 Statutory Pension Scheme

The National Insurance Retirement Pension is managed by the Norwegian Labour and Welfare Administration (NAV). Membership in the Norwegian Insurance Scheme (NIS) is compulsory for residents and for employees and self-employed persons working in Norway, even if they do not live in Norway. In order to be considered a resident, one has to reside or intend to reside in Norway for at least 12 months. Voluntary membership is possible but only if certain conditions are met. Coverage under the pension section includes old-age pensions, disability pensions, benefits for the surviving spouse and orphan's pensions.

The reform of 2011 replaced the former flat-rate basic pension and the special supplement by an earnings-related Income Pension and a Guarantee Pension. The Income Pension is earnings-related whereas the Guarantee Pension is paid out to all residents. Its aim is to secure a minimum level of income for pensioners.

Financing

The statutory pension scheme is financed on a pay-as-you-go basis. The National insurance contributions, including health care and pension insurance, are calculated on personal income and pension. For employees, the total contribution to the National Insurance is 8.2 % of the gross personal income (2019).[225] The contribution rate for employers differs according to the economic development of the region. Thus, employers have to pay contribution rates between 0-14.1 % depending on the zone.[226] Contributions on pensionable income are not paid on income less than NOK 54 650 (Approx. EUR 5 470, figure of 2018). There is no contribution assessment ceiling.

Benefits

The earnings-related pension is designed as an old-age income strictly linked to lifetime earnings.
The guarantee pension, on the other hand, is also paid to residents with no or only small pension income but is income tested against the income pension.

Income Pension

The pension amount depends mainly on annual income, years of contribution and the life expectancy factor. Pension accrual can take place from age 16 (for those born in or after 1997 from age 13) until age 75 based on annual, pensionable earnings. Several other situations, e.g. child care, are treated as contribution periods as well.

Calculation Method

For each year of employment 18.1 % of the pensionable annual earnings is credited to a notional pension account.[227] However, the credited amount may not exceed 18.1 % of 7.1 times the so called National Insurance Basic Amount *(Grunnbeløpet or simply 'G')*. As of May 2019 this fixed basic amount is NOK 99 858 per year.[228]

[225] NAV, N*ational Insurance Contributions*, https://www.nav.no/en/Home/Rules+and+regulations/National+insurance+contributions, (accessed 30 August 2019).
[226] Norwegian Ministry of Labour and Social Affairs, January 2019, *The Norwegian social insurance scheme*, page 6, (Available at: https://www.regjeringen.no/contentassets/03b0e088c8f44a8793ed0c0781556b11/a-0008-e_the-norwegian-social-insurance-scheme-2019.pdf).
[227] Norwegian Ministry of Labour and Social Affairs, January 2019, *The Norwegian social insurance scheme*, page 11, (Available at: https://www.regjeringen.no/contentassets/03b0e088c8f44a8793ed0c0781556b11/a-0008-e_the-norwegian-social-insurance-scheme-2019.pdf).
[228] NAV, *Grunnbeløpet i folketrygden*, https://www.nav.no/no/NAV+og+samfunn/Kontakt+NAV/Utbetalinger/Grunnbelopet+i+folketrygden, (Accessed 30 August 2019).

The pension calculation consists of two parts. Firstly, the overall pension stock *(Pensjonsbeholdning)* for people born in or after 1963 is determined as follows:

Pension stock = sum of annual income (between age 13-75) x years of contribution x 8.1 %.[229]

Secondly, the pension stock is adjusted in line with longevity in order to secure the sustainability of the pension system. The pension stock *(Pensjonsbeholdning)* is divided by a life expectancy divisor. The divisor is determined separately for each birth cohort based mainly on remaining life expectancy. If life expectancy rises, younger people have to work longer to receive the same pension amount.

The pension reform of 2011 has made retirement more flexible. The insured person may choose to draw only a part of the full monthly pension amount (20, 40, 50, 60 or 80 percent). This is called the pension level. It can be changed once a year. Furthermore, a full or part time pension can be combined with remaining in a job.

The following example shows how a partial pension is calculated on the basis of 80 %:

$$\frac{\text{NOK 3 040 800 (Pensjonsbeholdning) x 80 \%}}{\text{6.02 (life expectancy divisor)}} = \text{NOK 151 850 (≈EUR 18 062) per year}$$

Pension payments are subject to annual adjustments, in line with wage, and then subtracted with a fixed factor of 0.75 % per year.[230]

Pensionable Age/Early and Late Retirement

Norway has a flexible retirement age. The pension can be drawn between the age of 62 and 75. But in order to retire before the age of 67, sufficient pension rights of at least the minimum guarantee pension must have been accumulated. A later retirement increases the pension amount because the life expectancy factor is more advantageous. Furthermore, people receiving a full or part time pension are allowed to continue working without any reduction of their pension amount.

Guarantee Pension

A guarantee pension can be drawn from the age of 67, once the insured person has resided in Norway for at least three years after the age of 16 and is still a member of the National insurance scheme on retirement. The requirement of insurance affiliation upon retirement does not apply for individuals who have been insured for at least 20 years, thus if moving abroad, 20 years of insurance have to be fulfilled. An entitlement to a full guarantee pension requires 40 years of insurance. It is proportionately reduced for shorter periods of residency. The amount also depends on the marital status. The (full) guarantee pension shall ensure a minimum pension level of NOK 176 099.[231] The Guarantee Pension is furthermore tested against the Income Pension by 80 %.[232]

[229] NAV, *Beregning av alderspensjon, født 1963 eller senere,* https://www.nav.no/no/Person/Pensjon/Alderspensjon/Relatert+informasjon/beregning-avalderspensjon?kap=5 , (accessed 30 August 2019).
[230] OECD, *Pensions at a Glance 2017: Country Profiles – Norway*, page 1.
[231] www.smartepenger.no, „Garantipensjon", http://www.smartepenger.no/pensjon/1020-garantipensjon, (accessed 30 August 2019).
[232] OECD, *Pensions at a Glance 2017: Country Profiles – Norway*, page 1.

This way, people with an Income Pension enjoy some advantage in comparison to those without any Income Pension.

2 Occupational Pension Schemes

Since 2006, nearly all private sector employers in Norway are legally obliged to set up an occupational pension provision for their employees. These mandatory occupational pension schemes *(Obligatorisk tjenestepensjion – OTP)* are the minimum requirement that each employer has to provide. They were introduced especially for those employees who were not already covered by an occupational pension plan. The schemes can be either defined-contribution or benefit-based. It is up to the employer to decide which type of scheme should be set up. However, defined-contribution plans become more and more important. Since 2014, the Act on Occupational Pensions provides more flexibility for employees in the design of their pension plans.

Financing

In general, the contributions to a defined-contribution plan are paid in full by the employer. The employer is obliged to contribute a minimum of 2 % of the employee's earnings between the National Insurance Basic Amount known as "G" (in 2019 NOK 99 858) and 12 times this basic amount.[233] There is an upper limit on employer contributions percentages. Until 2014, the contributions were capped at 5 % for earnings between the National Insurance Basic Amount ("G") and 6 times this basic amount. For earnings above that level the limit was 8 % up to the maximum pensionable salary of 12 times the basic amount.[234] However, with the Act on Occupational Pensions of 2014, higher limits (7 % of earnings from 1 „G" to 7.1 „G" and 25,1 % of earnings from 7.1 „G" to 12 „G") were defined.[235]

Employees may contribute to their own pensions, but such contributions will not reduce the minimum requirement for employers' contributions.

Benefits

Defined-contribution plans have a flexible retirement between the ages 62 and 75.

Employers offering a defined-benefit scheme must provide at least the same level of benefits as expected under the mandatory defined-contribution schemes. Defined-benefit plans are most common in the public sector and in larger companies. Typically, they provide a replacement rate of 66-70 % after 30 years of service at the age of 67. Gaps in the qualifying period of 30 years can be filled by continuing to work after the age of 67. With the 2018 agreement on public sector occupational pension, pension accrual will take place over the entire career up to the age of 75 within a notional defined-contribution system.

[233] § 4 sec. 1 Lov om obligatorisk tjenestepensjon, https://lovdata.no/dokument/NL/lov/2013-12-13-106?q=lov+om+tjenestepensjon
[234] § 3-2 sec. 2, Forsrift til low av 24.november 2000 nr. 81 om innskuddspensjon i arbeitsforhold, http://lovdata.no/dokument/SF/forskrift/2000-12-22-1413?q=forskrift+til+lov+av+24.
[235] § 4-7 sec. 1 Lov om tjenestepension.

Public sector occupational pension

In the public sector, the occupational pension provision for state employees is subject to law, whereas the provision for the local authority sector is based on collective bargaining agreements. In March 2019 the government and labour organisations concluded a new agreement on public sector occupational pensions in line with the pension reform. The agreement covers age-related pensions and early retirement pension schemes (Avtaefested pensjon -AFP) for those born in 1963 or later. It acknowledges, inter alia, an occupational pension for all public sector employees, facilitates job changes between the public and the private sector and provides incentives to work longer.[236] The occupational pension schemes will be transformed into a notional defined-contribution system with all working years up to age 75 being included in the pension calculation. Pension accrual in these schemes started from 2020. The early retirement pension AFP used to be paid out between the ages of 62 and 67 if the conditions were met.[237] From 2019 on, the eligibility under the ATP scheme will be similar to the retirement conditions in the private sector, but only for those born in 1963 or later. The new lifelong ATP pension can be drawn flexible between the ages 62 and 70 and can be combined with income. Furthermore, a conditional pension for those not qualifying for an ATP pension was introduced by the new agreement.[238]

Further elements of occupational pensions for state employees are described in the section "Position of Researchers" below.

3 Private Pension Provision

The Act on Individual Pension Plans[239] sets out the legal framework for private pension provisions such as pension savings plans and pension insurance plans. It states, for example, which institutions may offer an individual pension, how contributions have to be used, and at what age benefits can be paid out. Contributions to the plan can be made until the age of 75.[240] Voluntary private pension plans managed by life insurance companies, banks or securities funds enjoy tax relief if they comply with certain requirements. A pension can be drawn at the earliest age of 62.[241]

4 Position of Researchers

4.1 Work conditions

According to the European Commission's Researcher Report from 2014, nearly 68 % of researchers within Norway's higher education sector were estimated to have been employed under permanent employment contracts during 2013. PhD candidates also become employed, in general, with the exception of about 5 - 7 % who were receiving development grants.[242]

236 SPK, „Agreement on new pension arrangement for the public sector"
https://www.spk.no/en/pension/agreement-on-new-pension-arrangement-for-the-public-sector/, 28.03.2019
237 Fort he conditions see. SPK, *Contractual Pension*, https://www.spk.no/en/pension/contractual-pension/, (accessed 30 August 2019).
238 Qualifying conditions to an ATP pensions: SPK, Contractual Pension,
https://www.spk.no/en/pension/contractual-pension/, (accessed 30 August 2019).
239 Lov om individuell pensjonsordning, http://lovdata.no/dokument/NL/lov/2008-06-27-62?q=individuell+pensjonsordning.
240 § 2-2 and § 3-1 sec. 3 Lov om individuell pensjonsordning,.
241 § 2-4 sec. 1 and § 3-2 sec. 1 Lov om individuell pensjonsordning.
242 European Commission, *Researchers' Report 2014 – Country Profile: Norway*, page 11,
(Available at: https://cdn4.euraxess.org/sites/default/files/policy_library/norway_country_profile_rr2014_final.pdf).

Researchers who plan to reside in Norway for less than 12 months are usually not insured with the Norwegian National Insurance (NIS).[243] PhD students on development grants are only partially insured with the statutory social security system and accrue no entitlement to an old-age pension.[244] Researchers on employment contracts for more than 12 months receive full social security coverage and accrue occupational pension rights with the Norwegian Public Service Pension Fund. In order to be entitled to a supplementary pension, they have to work more than 14 hours per week for more than 60 days and earn an income above the National Social Security Basic Amount 'G' of NOK 99 858 per annum.[245]

4.2 Details of Researchers' Pension Provision

Norwegian Public Service Pension Fund (Statens Pensjonskasse – SPK)

The Norwegian Public Service Fund (SPK) is responsible for the occupational pension of the central government administration, the school system and for many employees of the research and administrative sector in particular. KLP is the main provider in the local authority sector. All schemes in the public sector used to be defined-benefit in nature. For those born in 1963 or later the new occupational pension agreement for the public sector of March 2019 introduced a notional defined-contribution system with pension accrual starting in 2020. The following section focuses on the defined-benefit scheme that is still in place.

The membership in the Norwegian Public Service Pension Fund *("Statens Pensjonskasse" – SPK)* is obligatory for all state employees. This includes researchers employed at all universities, university colleges and some independent research institutes. Other public sector organizations may choose to join the SPK and insure their employees. The main rules for the occupational pension of the SPK are laid down in the Act on 'Statens Pensionskasse'.

The defined-benefit, top-up scheme managed by SPK is 'coordinated' with the statutory pension of the National Insurance Scheme (NIS). This means that the statutory pension is topped up by the SPK to a maximum target level. The maximum overall old-age pension of 66 % of final salary is reached after 30 years on a full-time employment at age 67. However, this amount will be further adjusted to life expectancy.[246]

Employees have to pay a contribution of 2 % of their salary.[247] For every Norwegian Krone paid by the employee, the employer is obliged to pay between five to six Kroner.[248] In order to be entitled to a pension from SPK, the employee must have been a member of the scheme for at least of 3 years. This qualifying period can consist of any number of periods of employment in the public service of more than 60 days.

[243] NAV, "Membership of the National Insurance scheme", https://www.nav.no/en/Home/Rules+and+regulations/Membership+of+the+National+Insurance+Scheme (30 August 2019).
[244] European Commission, *Researchers' Report 2014 – Country Profile: Norway*, page 11, (Available at: https://cdn4.euraxess.org/sites/default/files/policy_library/norway_country_profile_rr2014_final.pdf).
[245] University of Oslo, "Pensions", https://www.uio.no/english/for-employees/employment/payments/pension/(29.04.2019).
[246] SPK, *Retirement Pension*, https://www.spk.no/en/pension/retirement-pension (accessed 30 August 2019).
[247] § 16 Lov om Statens pensjonskasse.
[248] https://www.spk.no/en/About-SPK retrieved on 08.08.2019.

The benefits provided by SPK are linked to final salary. For the pension calculation the salary is limited to 12 times the National Insurance Basic Amount 'G' (NOK 99 858 in 2019).[249] For a person who has worked full time (100 %) the pension formula for one year is as follows:

Pensionable final salary x 66 % x years of contributions/30[250]

This pension amount is subject to a further adjustment to life expectancy, meaning that the pension amount is divided by an age factor. For instance, for someone born in 1953 the factor at age 67 is 1,050.[251]

5 Cross–border Portability/Mobility

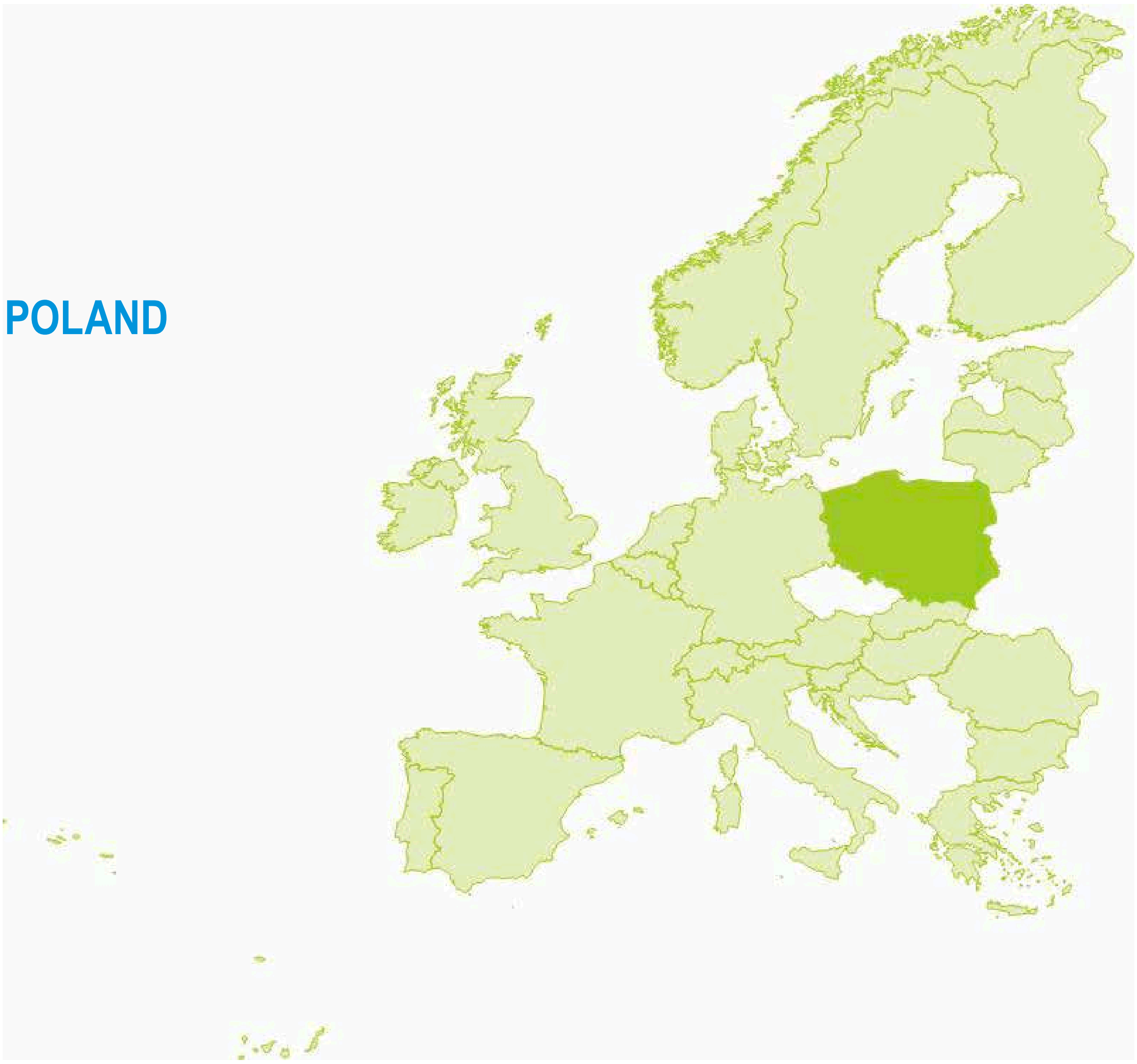
Norway is a member of the European Economic Area (EEA). Therefore statutory social security periods are coordinated with all other EU and EEA Member States. Periods covered in other EU/EEA countries or Switzerland are acknowledged in order to fulfill necessary qualifying periods. A bilateral agreement with other states, apart from the EU/EEA Member States, may also provide limited coordination.

In the public sector, accrued pension rights can neither be transferred to another pension fund abroad nor is it possible to claim a refund on the contributions paid when moving abroad. Contributions will only be refunded as soon as the contributor reaches the requisite retirement age according to Norwegian law.

Under the abovementioned Act on Occupational Pensions of 2014, foreign nationals who have been living in Norway for less than three years are allowed to transfer their pension rights accumulated within the private sector to a pension provider abroad, if they have terminated their employment in Norway and have moved abroad.[252]

[249] Lov-1949-08-28-26 om Statens pensjonskasse, § 14.
[250] SPK, *Beregning for deg fodt 1959-1962*, https://www.spk.no/Pensjon/Alderspensjon/alderspensjon-fordeg-fodt-1959-1962/for-deg-fodt-1959---1962/, (accessed 30 August 2019).
[251] SPK, *Levealdersjustering*, https://www.spk.no/Ord-og-uttrykk-om-pensjon/levealdersjustering/, (accessed 30 August 2019).
[252] § 6-6 Utenlandske statsborgere, Lov vom tjenestepenskon.

POLAND



Summary

In 1999, the state pension system in Poland had been substantially reformed. Benefits of the pay-as-you-go financed state pension system were strictly linked to the contributions paid in order to secure the sustainability of pensions (NDC). Following the World Bank Modell of 1994, a mandatory, capital-funded component of old-age provision had been introduced as well as a third pillar consisting of voluntary private pension plans. Employees born in or after 1968 were obliged to join the new so called Open Pension Funds (OPFs).

In 2014, the state took over all the government bonds held by the Open Pension Funds and re-reformed the system of a mandatory second-pillar system. As a new development an occupational pension scheme is being introduced gradually since July 2019. These Employee Pension Plans are based on auto-enrolment and mandatory for all employers. Accumulated assets are private as opposed to assets in Open Pension Funds, which are considered as public money. The government’s new proposal is to transform the Open Pension Funds into investment funds and to transfer the majority of assets into individual pension accounts.

1 Statutory Pension System

The statutory pension provision is obligatory for employees and self-employed persons. Special systems exist for farmers, military servants, public prosecutors and judges, as well as for police and fire personnel.

Reform of 1999

After Poland's pension reform of 1999 the former defined-benefit statutory pension system was closed and a new three pillar pension system with two mandatory schemes and voluntary private pensions in the third pillar was implemented. The mandatory public pension scheme of the first pillar is provided by the state-owned Social Insurance Institution *(Zkład Ubezpieczeń Spotecznych – ZUS)*. The fully funded, privately managed Open Pension Funds *(Otwarte Fundusze Emerytalne – OFE)* are known as the "second pillar". Persons born after 1968 were obliged to join the Open Pension Funds whereas those born before could choose whether to remain in ZUS or to become a member of an Open Pension Fund.

The old-age pension insurance at ZUS is a pay-as-you-go scheme based on notional defined-contribution accounts that mimic the principles of funded pensions. The individual accounts of the Open Pension Funds are defined-contribution. The benefits are strictly linked to the indexed contributions that have been registered on the individual pension accounts at ZUS and the Open Pension Funds.

Reform of 2013

With the 2013 reform, membership in an Open Pension Fund is no longer mandatory by law but voluntary. Initially a share of 7.3 % of the contributions to the state pension provision had to be transferred to the Open Pension Funds. As a result the ZUS had to pay the current pensions with fewer contributions received and thus, due to the pay-as-you-go character of the system, payments of the state became necessary in order to compensate for the gap which increased the Polish debt deficit.[253] Thus contributions to the Open Pension Funds were radically reduced. Between 1 April 2014 and 31 July 2014 existing members had to declare whether they wanted to stay in an Open Pension Fund or to transfer the contributions to ZUS. Without a private market for annuities, the assets will be gradually transferred to ZUS, beginning ten years before the person reaches standard retirement age. Only 18.3 % of the 14 million eligible for the second pillar remained in Open Pension Funds.[254]

Reform of 2018

From July 2019 new occupational pension savings schemes known as Employee Capital Plans *(Pracownicze Programy Kapitałowe – PPK)* are gradually being introduced. The introduction of the plans is supposed to fill part of the gap that emerged after the "second pillar" Open Pension Funds were done away with in 2014.[255]

[253] IPE, Acticle by Krystina Kryzak, January 2019, *Poland: A policy gear change*, https://www.ipe.com/countries/cee/poland-a-policy-gear-change/www.ipe.com/countries/cee/poland-apolicy-gear-change/10028792.fullarticle, (Accessed 30 September 2019).
[254] European Trade Union Institute, *Pension Reform in Poland – Background Summary*, https://www.etui.org/ReformsWatch/Poland/Pension-reforms-in-Poland-background-summary, (Accessed 30 September 2019).
[255] European Social Policy Network, Article by Agnieszka Chłoń Domińczak, January 2019, *Flash Report 2019/01: "New occupational pension savings scheme in Poland*, (Availiable at https://ec.europa.eu/social/BlobServlet?docId=20611&langId=en).

Financing

Contributions to the statutory pension insurance are paid by both the employer and the employee in equal halves. The total contribution rate is 19.52 % of earnings. Thereof 12.22 % go to Social Insurance Fund and 7.30 % to the sub-account in ZUS. If an insured person is a member of an Open Pension Fund, ZUS transfers 2.92 % of the total contribution to the Open Pension Fund selected by the insured person.[256]

Benefits

The statutory pension scheme provides mainly old-age pensions, survivors' pensions, funeral grants and some supplements (i.e. nursing supplement, veteran supplement). There is no qualifying period for an old-age pension, so that the very first contribution leads to an entitlement. The amount of pension depends on the accrued (notional) capital, in both the ZUS provision, and the so-called life funded pension of the Open Pension Fund.

ZUS

The ZUS benefits (main account and sub-account) are calculated on the basis of contributions after 31 December 1998, the initial capital and life expectancy at retirement. Old-age pension contributions to the Social Insurance Fund are subject to indexation. The amount of the old-age pension contributions credited to the individual account is multiplied by an indexation rate. Indexation of the ZUS sub-account is different.

In order to determine the pension amount, the total value on the account is divided by the average life expectancy at retirement age expressed in months. The formula is as follows:

$$\text{Old-age pension amount} = \frac{\text{indexed contributions + initial capital}}{\text{average life expectancy at retirement age expressed in months}}$$

There is a minimum pension of about 47.0 % of the average old-age pension with the minimum amounting to PLN 1 000 (approx. EUR 234).

Open Pension Funds and sub-account in ZUS

The Open Pension Funds (OFE) and the sub-account in ZUS are considered the "second pillar" of the Polish pension landscape. Although the Open Pension Funds are managed by private institutions, the accumulated assets are considered to be public money. Until 31 January 2014 participation in Open Pension Funds was mandatory for persons born after 31 December 1968. Governmental reforms have weakened the role of the Open Pension Funds.

Ten years before statutory retirement age, the Open Pension Fund will start transferring the accumulated assets to ZUS on a monthly basis. Thus, at retirement age all of the assets will be registered with the sub-account in ZUS. Pension based on the defined-contribution accounts are calculated and paid out by ZUS as a combined benefit with the notional defined-contribution part.

The Government's new proposal provides for the conversion of open-ended pension funds into investment funds and the transfer to the assets to individual pension accounts with a 15 % one-off transfer tax.[257]

[256] Zaklad Ubezpieczen Spolecznych – ZUS, *Contributions*, https://lang.zus.pl/en/finances/contributions, (Accessed 11 October 2019).
[257] Emerging Europe, Article by Aleksander Łaszek, 29 April 2019, Poland's latest pension reform is good fort he government, bad for savers, https://emerging-europe.com/voices/polands-latest-pension-reform-is-goodfor-the-government-bad-for-savers/; IPE, Article by Krystina Kryzak, January 2019, Poland: A policy gear change, https://www.ipe.com/countries/cee/poland-a-policy-gearchange/www.ipe.com/countries/cee/poland-a-policy-gear-change/10028792.fullarticle, (Accessed 30 September 2019).

Pensionable Age/Early and Late Retirement

From 1 October 2017 the statutory retirement age is 65 for men and 60 for women. Between January 2013 and October 2017 the statutory retirement age was gradually increased but the reform was revoked and transitional rules apply.
Under the new rules, early retirement is not possible in the general pension system. Those born between 1 January 1949 and 31 December 1968 who declared that their pension should be dealt with according to the old rules that were applicable until 1999 can retire early if the conditions were met on 31 December 2008.

It is possible to defer both the pension of the notional defined-contribution account at ZUS and the funded, defined-contribution pension of the Open Pension Funds without any age limits. In this case the pension increases due to the obligation to pay contributions.

Work and pension can be combined. However, in order to receive a full pension, the employment contract needs to be terminated beforehand. Subsequently, the pensioner can conclude a new employment contract. If the pension is claimed before the standard retirement age, income limits apply.

2 Occupational Pension Schemes

From July 2019 new occupational pension savings schemes known as private Employee Capital Plans *(Pracownicze Programy Kapitałowe – PPK)* are being introduced. Employers are obliged to set up a PPK unless they already have an Occupational Pension Programme *(Pracownicze Programy Emerytalne – PPE)* in place. In order to set up a PPK, the employers can chose from a range of providers such as fund management companies, pension fund societies and insurance companies. The PPK cover all employees between 19 and 55 on the basis of auto-enrolment with only the self-employed excluded. Older employees can participate voluntarily. An opt-out is possible but the process must be repeated every four years.

Contributions will be financed by employers, employees and the State budget. The basis contribution is at least 3.5 % (2 % employee, 1.5 % employer). Additional voluntary contributions of 2 % (employee) and 2.5 % (employer) are possible. Lower contribution rates apply for low-waged earners with earnings below 120 % of the minimum wage. For those who contribute more than the minimum an annual state subsidy will be paid. Additionally, an introductory lump-sum payment will be provided by the state.

The normal retirement age will be 60 years. The savings accumulated on the PPK account can be paid out as a tax-free 25 % lump-sum withdrawal with the rest paid out in at least 120 instalments on a 10-year schedule or as a taxed lump-sum. The savings can also be used to purchase an annuity. Furthermore, the funds of the PKK will be inheritable. A withdrawal of the funds before the age of 60 reduces the payment amount but it will be possible to access the uncut funds before retirement age for housing purposes or in case of sever illness.

Besides the new Employee Capital Plans Occupational Pension Programmes *(Pracownicze Programy Emerytalne – PPE)*, also exist. This is a voluntary group saving organised by employer in cooperation with employees. They are financed by a basic employer contribution with the option for the employees to pay additional contributions. The normal retirement age in these programmes is 60 years of age.

3 Private Pension Provisions

The third pillar voluntary pension plans are managed by private institutions. It consists of Individual Old-age Pension Accounts *(Indywidualne Konto Emerytalne – IKE)* and Individual Old-age Pension Protection Accounts *(Indywidualne Konto Zabezpieczenia Emerytalnego – IKZE)*. Both are fully funded. The IKEs are mainly managed by insurance companies, fund management companies or banks. Persons from the age of 16 may contribute. The payments for an IKE is taxed whereas the savings are exempt from capital gains tax. The contribution limit is three times the projected average monthly salary (in 2017 it was PLN 12 789, approx. EUR 3 015). THE IKZEs are also maintained by insurance companies, investment fund companies and other private financial institutions. It has a contribution limit of 1.2 times the projected average monthly salary (in 2017 it was PLN 5115.60, approx. EUR 1 200). Payments to an IKZE are tax-privileged. The funds can be withdrawn from age 65 with a 10 % flat-rate tax of income.

4 Specific Aspects of Researchers' Old-age Provision

4.1 Work Conditions

There are about 400 higher education institutions in Poland. Research also takes place in research institutes and in the development units of business entities.[258] Poland has taken several measures to improve the employment conditions in public research institutions. In October 2010, the Polish Government started the program "Building upon knowledge: Science reform for Poland's development". With its six legislative acts it modified rules on financing research institutions and on research quality assessment. Furthermore, it defined a clear distribution of powers and tasks in the research sector. In 2011, Poland also initiated the National Reform Programme. The programme aims to improve higher education and the quality of research, and to promote the cross-sectoral mobility of scientists.[259] On 1 October 2018 the so-called "Constitution for Science" came into effect which gives universities more autonomy to follow their own research agendas and intends to improve the internationalisation of the science and higher education sector.[260]

4.2 Details of Researcher's Pension Provisions

In Poland there is no specific legislation dealing with the pensions of researchers.[261] Scientists are entitled to a pension under the same conditions as all other employees. They are insured with the statutory pension scheme managed by the Social Insurance Institution (ZUS) and, if born in January 1949 or after, could opt for an insurance with an Open Pension Fund. Researchers that were already part of an Open Pension Fund and wanted to continue their membership in the fund had to file a declaration until the end of July 2014. The social security contributions are deducted from the researcher's salary, regardless of nationality.

[258] Euraxess Poland, *Research Institutions*, https://www.euraxess.pl/poland/research-poland-0, (Accessed 30 Septmeber 2019).
[259] European Commission & Deloitte, Researchers' Report 2014, *Country Profile: Poland*, pages 4 and 5.
[260] Science/Business, *Poland's ‚constitution for Science' gives universities more power and accountability*, https://sciencebusiness.net/news/polands-constitution-science-gives-universities-more-power-andaccountability, (Accessed 30 September 2019).
[261] European Commission, *Researchers' Report 2013 – Country Profile: Poland*, page 10.

5 Cross-border Portability/Mobility

In the new statutory pension regime no qualifying period is required for an old-age pension entitlement. However, insurance periods spent in Poland can be taken into account in another EU/EFTA Member State according to the European rules on the coordination of social security systems.[262]

Poland has also signed several social security agreements with countries outside the EU/EFTA Member States (e.g. the United States, the Republic of Korea and Canada).

[262] Regulation (EC) No. 883/2004 of the European Parliament and of the Council of 19 April 2004; Regulation (EC) No. 987/2009 of the European Parliament and the Council of 16 September 2009.

PORTUGAL

Summary

The statutory pension scheme is the dominating pension scheme in Portugal and compulsory for the entire workforce. In the past decades Portugal pension system has undergone certain changes. The special scheme for civil servants and public sector agents managed by the Caixa Geral de Aposentações (CGA) was closed for new entrances. From 2006 onwards, new civil servants and public employees are enrolled in the general social security scheme. In 2014, the retirement age was raised and linked to life expectancy from 2016 onwards.

Supplementary schemes do not cover a wide range of people in Portugal. Only 2.5 % of the working-age population are covered by a voluntary occupational plan.[263]

[263] OECD (2019), *OECD Reviews of Pension Systems: Portugal, OECD Reviews of Pension Systems*, page 103, (Available at: https://doi.org/10.1787/9789264313736-en).

1 Statutory Pension Scheme

The statutory pension scheme is an earnings-related scheme with a means-tested safety net. It is managed by the *Centro Nacional de Pensões (CNP)*. The scheme is compulsory for the entire working population as well as for the self-employed with a gross income of more than 6 times the IAS (Indexante dos Apoios Sociais – Social Support Index). A voluntary insurance is possible for residents not registered with the statutory scheme.

Financing

The public pension scheme is financed on a pay-as-you-go basis. The overall social security contribution for all branches is 34.75 % of which 20.21 % go to the pension budget. Out of the total contribution the employee pays a share of 11 % of gross earnings whereas the employer pays 23.75 % of gross earnings.[264] There is no contribution assessment ceiling.

Benefits

The pension system provides old-age, disability and survivors pensions. In order to be entitled to a pension, insured persons need to have completed a qualifying period of 15 years of insurance. A full contribution year is credited after at least 120 working days with registered earnings.[265] For a full pension a contributory period of 40 years is required. There are 14 pension payment per year.

Calculation Method

The formula for the pension amount used to be:

Reference earnings x Global accrual rate x Sustainability factor.[266]

Currently, with the changes in the retirement age and the link to life expectancy, the sustainability factor is only applied to early retirement pensions.[267] It was abolished in 2014 for pensions at standard retirement age.

The reference earnings reflect the adjusted average earnings during the pensioner’s insurance career. The basis for the reference earnings calculation are the registered annual earnings adjusted according to the consumer price index (without considering the housing prices).[268] The formula is:

$$\frac{\text{Total annual revalued earnings}}{(\text{number of years of contributions x 14})}$$ [269]

[264] Office for Economic Policy abd Ubterbatuibak Affairs, Ministry of Finance, January 2018, *Portugal Country Fiche, 2018 Ageing Working Group pension projection exercise*, page 2 ,(Available at: https://ec.europa.eu/info/sites/info/files/economy-finance/final_country_fiche_de.pdf).
[265] OECD, *Pensions at a Glance 2017: Country Profiles - Portugal*, page 6.
[266] Office for Economic Policy abd Ubterbatuibak Affairs, Ministry of Finance, January 2018, *Portugal Country Fiche, 2018 Ageing Working Group pension projection exercise*, page 9 ,(Available at: https://ec.europa.eu/info/sites/info/files/economy-finance/final_country_fiche_pt.pdf).
[267] European Trade Union Institute, *Pension Reform in Portugal – Background Summary* https://www.etui.org/ReformsWatch/Portugal/Pension-reforms-in-Portugal-background-summary, (Accessed 3 June 2019).
[268] Between 1 January 2002 and 31 December 2011 the earnings were adjusted by applying 75 % of the consumer price index and 25 % of the average wage growth.
[269] Segurança Social, Pensão de velhice, *Como calcular a valor pensão*, http://www4.seg-social.pt/pensao-develhice, (Accessed 3 June 2019).

In case the pensioner has more than 40 years of insurance, only the best 40 years are taken into account for the reference earnings calculation. Thus, 40 years of insurance are needed to receive a full pension. Maternity leave and periods of unemployment benefits count as qualifying years. For up to three years a part-time job can be treated as a full-time job if caring for children under 12 years of age.[270]

The **accrual rate** depends on the years of contributions and the earnings level. For 20 or less years of contributions the accrual rate is 2 % of the earnings base. For pensioners with 21 or more years of contributions an accrual rate between 2 – 2.3 % of pensionable earnings is applied for each year of contributions. Which percentage is relevant for the calculation depends on individual earnings relative to the value of the IAS.[271] The global accrual rate is the product of the accrual rate and the number of contribution years.[272]

Since January 2008 the pension formula used to include a **sustainability factor** adjusting the benefits to the demographic evolution. Due to a new mechanism to increase the retirement age in line with life expectancy, the sustainability factor is only applied for early retirement pensions. In 2019 this factor was 0.8533.[273]

There is a minimum monthly pension amount that depends on years of contributions.

Means-tested Supplement and Social Pension

Since 2008, beneficiaries who receive an old-age or survivors pension and have lived in Portugal for the past 6 months are entitled to a Solidarity Supplement for the Elderly if their annual income is equal to or less than EUR 5 175.82 (for a single) or EUR 9 075.69 (for a couple; income of the requesting person is equal to/less than the amount for a single).[274]

There is an income-tested old-age social pension for people at standard retirement age or older who do not qualify for an earnings-related pension. The social pension is only paid if their income does not exceed 40 % (couples no more than 60 %) of the IAS.[275] It can be requested by pensioners residing in Portugal who are either national citizens or citizens covered by the EU regulations on social security or by bilateral social security agreements. Pensioners receiving a social pension are also entitled to a small Solidarity Extra Supplement.

Pensionable Age/Early and Late Retirement

In 2019 the statutory retirement age was 66 and 5 months for both men and women. In the years to come, the retirement age is expected to increase due to its link to life expectancy.

[270] OECD, *Pensions at a Glance 2017: Country Profiles – Portugal*, page 5.
[271] OECD, *Pensions at a Glance 2017: Country Profiles – Portugal*, page 2.
[272] Office for Economic Policy abd Ubterbatuibak Affairs, Ministry of Finance, January 2018, *Portugal Country Fiche, 2018 Ageing Working Group pension projection exercise*, page 10, (Available at: https://ec.europa.eu/info/sites/info/files/economy-finance/final_country_fiche_de.pdf).
[273] Segurança Social, *Pensão de velhice, Como calcular a valor pensão*, http://www4.seg-social.pt/pensao-develhice, (Accessed 3 June 2019).
[274] Agência para a Modernização Administrativa, I.P, ePortugal, *Request the solidarity supplement for the elderly*, https://eportugal.gov.pt/en/servicos/pedir-o-complemento-solidario-para-idosos, (Accessed 2 October 2019).
[275] Agência para a Modernização Administrativa, I.P, ePortugal, *Request the old-age social pension*, https://eportugal.gov.pt/en/servicos/requerer-a-pensao-social-de-velhice, (Accessed 2 October 2019).

If an insured person has completed 40 years of contribution, early retirement at age 60 is possible. As from 2014 the pension reduction will be 0.5 % for each month until standard retirement age. However, the normal retirement age can be reduced by 4 months for each year that exceeds the 40 years of contributory career at the age of 65 years with a 65-year threshold.[276] Pensioners also have the possibility to pay contributions voluntarily after their early retirement which leads to an increase in the pension amount.

Long-term unemployed workers are eligible for early retirement without any deductions at age 62 if unemployment has occurred after the age of 57. People with 22 years of contribution who become unemployed at age 52 can retire early at age 57 with a reduction to their pension payments over a period of five years.

A late retirement after the standard retirement age increases the pension amount if the person has completed at least 15 years with earnings registration relevant to the pension calculation. In case of a late retirement after 2014 the monthly increase rate ranges between 0.35 % and 1.00 % depending on contributory years.[277] This monthly bonus will be provided until reaching 70 years of age.

2 Occupational Pension Schemes

Starting in the year 2000 Portugal has taken measures by passing laws and provisions to improve the legal basis for supplementary pension schemes. However, the OECD assumes that no more than approximately 2.5 % of Portugal's active workforce benefit from an occupational pension scheme.[278] Most of the occupational pension providers are pension funds. Insurance schemes exist mainly in small or medium companies.[279]

The majority of pension funds are closed pension funds (Fundos de Pensões Fechados) provided by one single employer or groups of companies. Some closed pension funds are also set up by collective bargaining agreements between employers and trade unions. The plans are mostly of the defined-benefit type but can also be defined contribution or hybrid in nature. Open pension funds (Fundos de Pensões Abertos) instead are not limited to certain employers. The membership depends solely on the acceptance by the pension fund manager.

The pay-out requirements for occupational pension plans stipulate that at least two-thirds of accumulated pension assets from employer contributions must be converted into a regular income stream product while the remainder can be paid as a lump sum.[280]

[276] OECD, *Pensions at a Glance 2017: Country Profiles – Portugal,* page 1.
[277] OECD, *Pensions at a Glance 2017: Country Profiles – Portugal*, page 4.
[278] The figures for Portugal should be treated as indicative. OECD, *OECD (2019), OECD Reviews of Pension Systems: Portugal, OECD Reviews of Pension Systems*, page 103, (Available at: https://doi.org/10.1787/9789264313736-en).
[279] Wilmington plc, *Pension Funds Online – Pension System In Portugal*, https://www.pensionfundsonline.co.uk/content/country-profiles/portugal/111, (Accessed 2 October 2019).
[280] OECD, OECD (2019), *OECD Reviews of Pension Systems: Portugal, OECD Reviews of Pension Systems*, page 125, (Available at: https://doi.org/10.1787/9789264313736-en).

3 Private Pension Provisions

In Portugal private pension provisions are not widespread although the coverage is higher than for occupational pension plans. The arrangements range from pension insurance retirement contracts *(Fundos Poupança Reforma)*, open pension funds *(Fundos de Pensões Abertos)* to personal retirement saving funds *(Fundos Poupança Acções)*. Around 96 % of private pension plans come in the form of pension insurance retirement contracts.[281] In general, the individual contributes to the private plans, but employer may contribute as well.

4 Specific Aspects of Researchers' Old-age Provision

For researchers in the public sector the Scientific Research Career Remuneration Statue of 1999 regulates, among others, rights and obligations, social security coverage.[282]

In general, researchers are only insured with the statutory pension scheme if they have an employment contract. However, fellowship beneficiaries and grant recipients without an employment contract have the possibility to sign up for voluntary social security insurance.

All employed researchers appointed after 2006 are registered with the general statutory pension scheme *Centro Nacional de Pensões (CNP)*. Researchers who were appointed as civil servants before 2006 were registered in the specific pension scheme *Caixa Geral de Aposentações (CGA)*.

5 Cross-Border Portability/Mobility

An entitlement for an old-age pension requires a qualifying period of 15 years. However, EU rules coordinate national social security systems of the 1st pillar to make sure that moving to another EU/EFTA Member State does not result in a loss of social security rights.[283] Hence, insurance periods that are covered by the statutory pension schemes in another Member State of the European Union, Iceland, Liechtenstein, Norway or Switzerland are taken into account when applying for a pension in Portugal.

The International Social Security Agreements concluded between Portugal and other States outside the European Union also establish the conditions for coordination between them.

[282] European Commission & Deloitte, Researchers' Report 2014, *Country Profile: Portugal*, page 5.
[283] Regulation (EC) No. 883/2004 of the European Parliament and of the Council of 19 April 2004; Regulation (EC) No. 987/2009 of the European Parliament and the Council of 16 September 2009.

SLOVENIA

Summary

The statutory pension system is the most important pillar in the Slovenian three pillar pension system. Already in the year 2000 a significant reform was concluded in order to render the statutory pension system more sustainable. As of 2013, a second reform came into effect which, among other measures, gradually equalized the pensionable age of men and women, and encouraged people to continue working beyond the legal retirement age.

Unlike other Central and Eastern European states, Slovenia has developed an occupational pension provision such as collective company sponsored pension plans and the public sector's supplementary pension schemes. At the end of December 2016, 96.4 percent of all supplementary insurance policies were collective supplementary pension plans, compared with only a 3.6 % share for personal insurance policies.[284]

[284] European Commission, *Pension Adequacy Report 2018: Current and future income adequacy in old age in the EU, Volume 2 – Country Profiles*, page 229.

1 Statutory Pension Scheme

The statutory pension scheme, provided by the pension and invalidity insurance institution ZPIZ, is mandatory for employees, self-employed persons, recipients of unemployment benefits or childraising allowance, farmers and apprentices. It is an earnings-related, defined-benefit system. A voluntary insurance is possible if the conditions are met.

Financing

The scheme is financed on a pay-as-you-go basis. The contribution rates for old-age, death and disability amount to 15.5 % of gross salary for the employee and to 8.85 % for the employer.[285] There is no assessment ceiling on contributions. All contributions are registered on the central record at the Health Insurance Institute of Slovenia.

Benefits

The scheme provides for old-age, disability and survivors' pensions as well as for a yearly flatrate bonus. The old-age pension benefit equals a certain percentage of the pension rating base which is determined from the valorised average individual (net) earnings out of 24 consecutive years with the highest earnings. The minimum qualifying period (for men) was 20 years of insurance from 2013 until 2019. Thereafter 15 years of insurance will be sufficient.

Calculation Method

The pension is determined according to accrual rates that are slightly higher for women than for men. Following the 2013-reform the use of net-accrual rate was introduced in order to calculate the percentage of the pension rating base. In 2016, men received 26 % of the pension rating base and women 29 % once the minimum qualifying period of 15 insurance years has been met. Thereafter, the annual accrual rate is 1.25 % for men. The accrual rate for women will rise gradually until it reaches 1.25 % as well in 2023. After a career of 40 insurance years, men are entitled to a pension accrual (net) of 57.25 % of the pension rating base and women to 60.25 %.[286] On 3 October 2019 the government adopted changes to the pension insurance act equalising the base for pensions for men and women to 63.5 % of the pension rating base as of 2025.[287]

The pension rating base is calculated on the basis of the best 24 consecutive individual average net earnings from 1970 onwards, valorised by a coefficient. The minimum pension rating base that applies to all pensionable earnings is however equal to 76.5 % of the average monthly salary minus tax and contributions. In 2019 the minimum pension rating base is EUR 858.46 net per month.[288] There is also a maximum amount of pensionable earnings to be taken into account when calculating the pension rating base. This ceiling is set at four times the minimum pension rating base.

[285] Mladipodjetnik.si , *Obligatory contributions for social security in Slovenia*, https://mladipodjetnik.si/en/obligatory-contributions-social-security-slovenia, (Accessed 25 September 2019).
[286] OECD, *Pensions at a Glance 2017: Country Profiles – Slovenia*, page 1.
[287] Totalslovenainews, Article by JL Flanner, *Slovenia Adopts Changes to Pension Law*, https://www.totalslovenia-news.com/lifestyle/4671-slovenia-adopts-changes-to-pension-law, (Accessd 4 Octiober 2019).
[288] ZPIZ, *Uskladitev pokojnin in nadomestil* https://www.zpiz.si/cms/content2019/uskladitev-pokojnin, (Accessed 25 September 2019).

Flat rate bonus

In addition to their earnings-related pension, retirees are entitled to an annual flat-rate bonus in relation to their pension amount.

Pensionable Age/Early and Late Retiremernt

In 2019, a pension can be drawn once the following requirements are met:

Contribution years	Retirement age (men)	Retirement age (women)
15	65	65
20		64 years and 6 months
40 (without additional payment)	60	60

An early retirement before the age of 65 results in a reduction of the pension payment. As an incentive to continue working after having met the necessary retirement criteria, a bonus of 1 % for each three months worked can be earned by those who stay in their job for up to three years after qualifying for retirement on a full pension.[289] A deferred pension at age 60 with 40 years of contributions is possible and increases the pension.

Individuals fulfilling the conditions for receiving a pension and remaining in employment for a minimum of 2 hours a day or 10 hours a week are entitled to a partial pension.

2 Occupational Pension Schemes

Slovenia's occupational pension schemes are fully funded and based on defined contributions with a minimum guarantee of return. Only licensed life insurance companies, mutual pension funds, pension companies and the state owned public pension fund provider *Kapitalska Družba* offer occupational pension plans. Responsible for the licensing is the Ministry of Labour, Family and Social Affairs. There are single and multi-employer pension funds.

In the public service as well as for workers performing hazardous work, the setting up of an occupational pension plan is mandatory and is based on collective bargaining agreements in general. The largest mandatory occupational pension plan for state employees, the Life-Cycle Pension Fund for Civil Servants (KPSJU), is managed by *Modra Zavarovalnica* and owned by *Kapitalska Družba*.

Companies of the private sector may provide supplementary pension on a voluntary basis by signing a contract with the relevant trade union. In case of a collective insurance, either the employer or both parties may contribute to the scheme. For these voluntary occupational pension schemes tax relief is granted on contributions from both, the employee and the employer, up to 5.844 % of gross earnings.[290] The maximum

[289] Republic of Slovenia, Ministry of Finance, *Country fiche on pensions for the Republic of Slovenia- the 2018 round of projections for the Ageing working group*, November 2017, page 7, (Available at: https://ec.europa.eu/info/sites/info/files/economy-finance/final_country_fiche_si.pdf)
[290] Pokojninska družba, *Company supplementary pension insurance*, Available at: https://www.pokojninskada.si/datoteke/razno/Occupational_pension_plan_INFO_and_PDA_company_presentation.pdf).

ceiling for these tax reliefs is EUR 2 819.09 (2019) of contributions a year. The investment policy of occupational pension schemes is influenced by a minimum guaranteed rate of return which is determined twice a year by the Ministry of Finance. Benefits are usually paid out as lifelong annuities and subject to limited taxation (only ½ of an annuity). However, there are possibilities to receive a lump-sum payment instead which is subject to certain conditions.

3 Private Pension Schemes

Individual private pension schemes are not very widespread in Slovenia. The private pension savings and insurances are offered by authorised pension providers, mutual pension funds or insurance companies. They are fully funded and the contributions are subject to tax relief.

4 Position of researchers

4.1 Work Conditions

In the past, Slovenia has undertaken certain measures to support researchers and to improve the employment conditions in public research institutions. The National Research and Innovation Strategy of Slovenia 2011-2020 (RISS) aims to increase the number of researcher and doctors of science by improving researchers' career opportunities, the inter-institutional and interstate mobility of researchers.[291]

For young doctoral candidates the Young Researchers Programme of the Slovenian Research Agency is the main funding instrument. The objective is to increase the number of PhD students and to make research science, technology, engineering and mathematics more attractive. The young researchers sign regular, fixed-term employment contracts and receive salaries, social contributions, the material and non-material costs for research and postgraduate study. Most young researchers sign regular, fixed-term employment contracts.[292]

4.2 Details of researchers' pension provision

Slovenia has public and private universities and research institutions that offer job opportunities for researchers. Those with employment contracts are covered by social security. Researchers of the 'Young Researcher Programme' receive full social security coverage and therefore also accrue pension rights. If the young researcher is part of another programme or project, the conditions of this relevant programme state if the researchers will be covered by social security or not. Therefore, other young researchers on i.e. stipends may be exempt from compulsory social security coverage, with the exception of health insurance.[293]

Researchers employed at private research institutions are insured with the statutory pension scheme and may be covered by an occupational pension scheme set up by their employer.

[291] European Commission & Deloitte, Researchers' Report 2014, *Country Profile: Slovenia*, page 4.
[292] European Commission & Deloitte, Researchers' Report 2014, *Country Profile: Slovenia*, page 9.
[293] European Commission & Deloitte, Researchers' Report 2014, *Country Profile: Slovenia*, page 13.

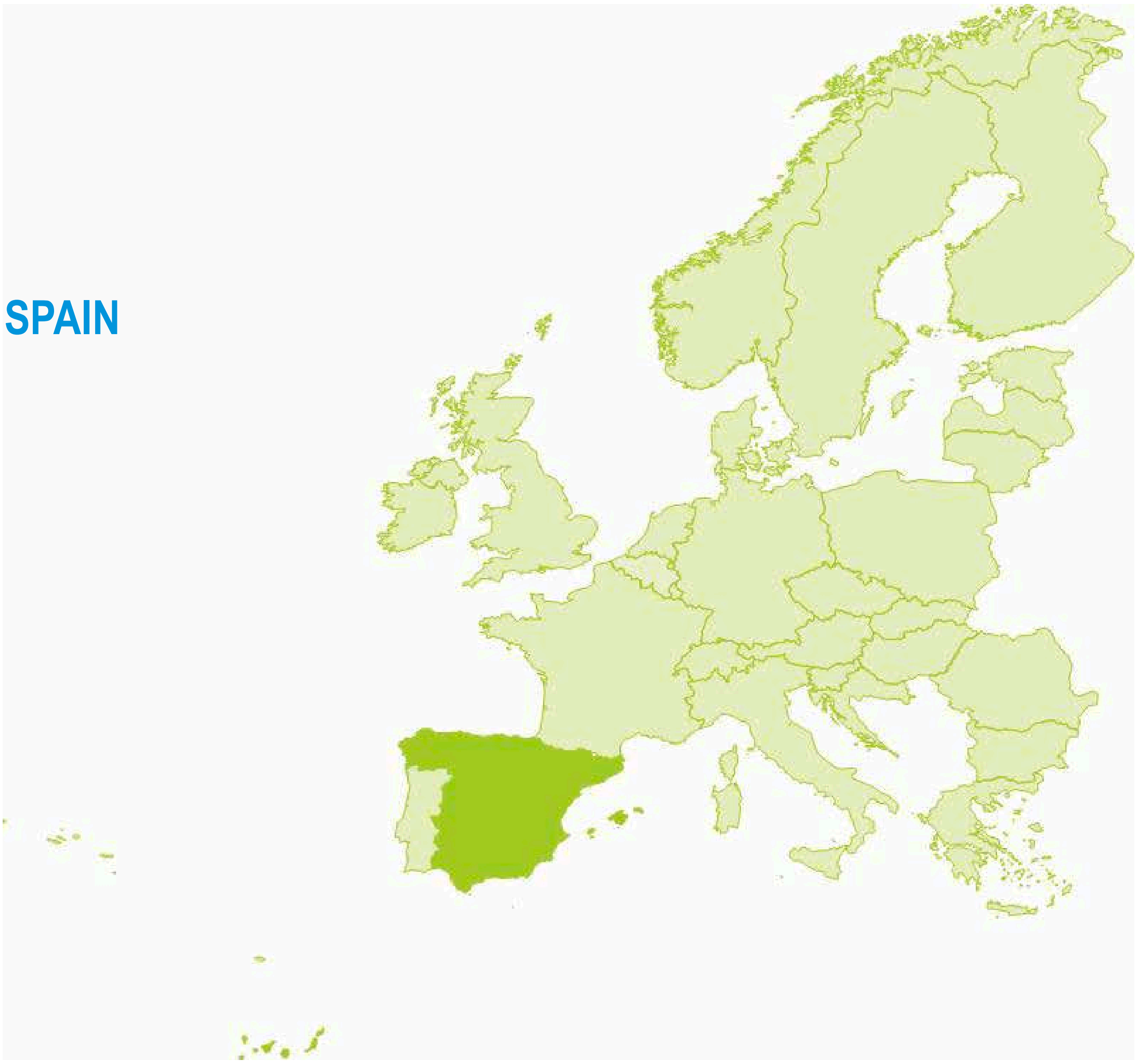
Researchers at public universities may have civil servant status. They are insured with the statutory pension scheme as well as with the occupational Life-Cycle Pension Fund for Civil Servants (KPSJU) managed by *Modra Zavarovalnica*. The occupational scheme is based on defined-contributions. KPSJU is a Life-Cycle Pension Fund that comprises three sub-funds (Dynamic, Prudent and Guaranteed Sub-Fund) with different investment policies. The funds are designed for different age groups. Members are allowed to decide in which sub-funds they want to invest in within a particular period. In general, they can change their decision once per year and switch to one of the other two sub-funds. The employers pay monthly contributions for their employees that consist of a minimum contribution and an additional contribution based on the years of employment. The total contributions ranged from EUR 29.27 to EUR 58.71 in 2019 depending on the contribution class which is determined with regard to years of employment on 1 August 2003. Members may also pay additional individual contributions to secure a larger supplementary pension.

5 Cross-border Portability/Mobility

Slovenia's statutory pension scheme requires a qualifying period of at least 15 years of contributions. But according to EU law insurance periods completed in another EU/EFTA Member state can be taken into account in order to meet the required qualifying periods on national level. Slovenia has also concluded several bilateral social security agreements that deal with the coordination of insurance periods. A refund of contributions paid to the statutory pension scheme is not possible.

Researchers insured with the KPSJU Fund may transfer their assets collected in this fund to the new employer's occupational pension provider. However the insured person loses the special savings benefits provided by KPSJU, such as relatively low costs of management.

SPAIN



Summary

The pension landscape in **Spain** is a 3-pillar system consisting of a mandatory statutory pension, a voluntary occupational pension and a voluntary individual pension. However, the first pillar pension is the main source of income for pensioners. The Spanish pension system used to have one of the highest gross average replacement rates in Europe. This has changed due to the economic crisis and the problem of high unemployment rates, especially amongst the younger generation. Spain has taken several measures to assure the sustainability of its pension system. For example, the inflation indexation for pensions was reduced to its legal minimum and new pension payments are expected to be linked to life expectancy by 2023.

Third pillar private pension plans are the most common form of pension arrangement on the relatively small Spanish pension market. Occupational pension schemes hardly play a role in the Spanish pension system.

1 Statutory Pension Scheme

All Spanish people who reside in Spain and foreigners who reside in Spain are included in the social Security system. It is made up of the General Regime and Special Regimes. The general statutory pension scheme is mandatory for all employees. Special schemes cover self-employed persons, coal miners or sea workers. In addition, there are special pension schemes for civil servants working for the central government or the justice system, and for people working within the armed forces.

Within the general scheme there are two categories of pensions in Spain:
★ contributory, earnings-related pensions and
★ non-contributory pensions

The National Social Security Institute (INSS) is the competent body for managing economic benefits of the Spanish social security system, as well as the basic part of the non-contributory pensions; their complement is managed by the services of the autonomous regions and other responsible bodies.

1.1 Earnings-related Contributory Pension

The earnings-related contributory retirement pension *(Pension por Jubilacion Ordinaria)* covers old-age and disability, maternity, survivors' risks and temporary incapacity. It represents the main source of retirement income in Spain.

Financing

The contributory part of the statutory pension scheme is a pay-as-you-go system. It is financed by contributions of both the employer and the employee. Within the general pension scheme, some professional groups have a special collective system concerning affiliation and contributions. In general, the employee contribution amounts to 4.7 % of gross salary, whereas the employer has to pay 23.6 % into the scheme. The monthly contribution is capped at the level of EUR 4 070.10 per month salary, therefore the monthly contribution is capped at EUR 1 151.83 (14 monthly payments per year as there is a double payment in June and December). As of 2019, the minimum salary amount on which contributions are levied is EUR 1 050.[294]

Benefits

An entitlement to a contributory pension requires a qualifying period of at least 15 years of contributions, including at least two years of contributions within the last 15 years.

Calculation Method

The earnings-related pension depends mainly on annual earnings during the reference period and the years of contributions. The pension amount is a percentage of the so called pension base. This is a value resulting from the individual earnings over the last 22 years on which contributions were paid. In order to determine the calculation base, the earnings of the past 264 months immediately prior to retirement are divided by 308. The

[294] Seguridad Social, *Bases y tipos de cotización 2019*, http://www.segsocial.es/wps/portal/wss/internet/Trabajadores/CotizacionRecaudacionTrabajadores/36537/36538#36538, (Accessed 26 September 2019).

earnings of the last 24 months immediately before retirement are counted at face value, whereas the rest is adjusted to the consumer price index. The reference period for the pension base will be extended gradually to 25 years in 2022. The divisor will also be different, up to 350 in 2023.

The percentage varies depending on the number of years of social security contributions paid. After 15 years of insurance, the pension amounts to 50 % of the pension base. For each additional month that exceeds these 15 years the percentage is 0.21 for month 1 to 163, and 0.19 for the months thereafter (applicable to the years 2013-2019. The maximum percentage that can be reached is 100 % after 35.5 years of contributions. However, until 2027, a gradual, transitional period has been established. From 2027 onwards, 37 years on contributions will be needed for a full pension.[295]

New pension benefits were supposed to be affected by a sustainability factor from 2019. The application of this factor, that takes into account the growth in life expectancy of the new pensioners, has been postponed. It will become effective by 1 January 2023 instead.

The pension is limited to a minimum and maximum with 14 payments per year. As of 2019 the minimum amount of a contributory pension is EUR 677.40 per payment for a single pensioner at age 65, for a married person with a dependant spouse it is EUR 835.80. The maximum pension is EUR 2 659.41.[296]

1.2 Non-contributory Pension

Citizens with low income are entitled to a non-contributory, means-tested retirement pension *(Pensiones no Contributivas)* if,

- they live in Spain
- have resided there for at least 10 years between the age of 16 and retirement age of 65, and
- have spent the last two years immediately prior to retirement in Spain.

The non-contributory pensions are fully financed by the state.

Pensionable Age/Early and Late Retirement

The standard retirement age will gradually increase to 67 by 2027. However, individuals with an exceptionally long period of contributions of 38.5 years can retire with a full pension benefit at age 65.[297]

A person who is involuntary unemployed is entitled to an early retirement four years before the standard retirement age with 33 years of contributions. In case of voluntary unemployment early retirement is possible two years before the statutory retirement age and after having fulfilled 35 years of contributions. Early

[295] Seguridad Social, *Amount*, http://www.segsocial.es/wps/portal/wss/internet/Trabajadores/PrestacionesPensionesTrabajadores/10963/28393/28396/28475#40827, (Accessed 26 September 2019).
[296] Seguridad Social, *Revalorización*, http://www.segsocial.es/wps/portal/wss/internet/Pensionistas/Revalorizacion, (Accessed 26 September 2019).
[297] Seguridad Social, *Requirements*, http://www.segsocial.es/wps/portal/wss/internet/Trabajadores/PrestacionesPensionesTrabajadores/10963/28393/28396/28472/6156#6156, (Accessed 25 september 2019).

retirement reduces the pension depending from the length of contributions. A partial early retirement is possible under conditions depending on whether the pensioner is being replaced by a new employee or not. For example a partial retirement with a replacement will be possible at age 63 with 36 years and six months of contributions once the reform is completed in 2027.[298]

From standard retirement age, a partial pension can be combined with work on a part-time basis without any obligation to replace the pensioner by a new employee. There is the opportunity to defer the pension after normal retirement age. This will increase the pension benefit.

2 Occupational Pension Scheme

Occupational pension provisions are not widespread in Spain. Apart from the autonomous regions mainly larger corporations and companies operating on an international level.[299] Only some 7 % of companies offer some kind of pension plan, around a quarter of these occupational pension plans are only available to executives.[300]

Occupational pensions in Spain must be funded externally through pension funds or collective insurance contracts.[301] According to Spanish legislation the plans can take the form of defined-contribution pension plans, defined-benefit pension plans or hybrids but are mainly defined-contribution in nature. The pension schemes can be set up from a single employer or a group of employers. Contributions can be made by the employer, the employee or both. Benefits can be paid out as lump-sums, pensions or a combination of both. Retirement age is usually the same as in the statutory pension scheme.

3 Private Pension Provisions

Although the coverage of private pension funds is quite high in Spain (around 54 % of the working population[302]), the contributions into the funds are low. The Pension funds are separate legal entities. Since November 2007, it is possible to offer two investment strategies under one pension plan. Previously, only one investment strategy was allowed.[303] Private pension plans can be tax-qualifying although the tax-qualifying amount is limited. Some plans do not profit from favourable tax treatment.

Voluntary social welface entities, *Entidades de Prevision Social Voluntaria (EPSV)*, are quite common in the Basque Country. They offer social welfare tools similar to pension plans but with more insurance options (such as health or unemployment).[304]

[298] OECD, *Pensions at a Glance 2017: Country Profiles – Spain*, page 1.

[299] Aitor Emaldi in: Euro Pension Bulletin (EPB 38) 2/2011, *Spain – 2010/2011 Pension Reform Plans*, page 12, (Available at: http://portal.versorgungskammer.de/portal/page/portal/eapspi/en/epb); Wilmington plc, *Pension Funds Online – Pension System In Spain*, https://www.pensionfundsonline.co.uk/content/countryprofiles/spain, (Accessed 26 September 2019).

[300] Wilmington plc, *Pension Funds Online – Pension System In Spain*, https://www.pensionfundsonline.co.uk/content/country-profiles/spain, (Accessed 26 September 2019).

[301] OECD, Private Pension Outlook 2008, *Pension Country Profile - Spain*, page 5 and 8, (Availaible at: http://www.oecd.org/finance/private-pensions/42565857.pdf).

[302] Expatica, *Spanish pension guide: How to claim a pension in Spain as an expat*, https://www.expatica.com/es/finance/retirement/pensions-846584/, (Accessed 27 September 2019).

[303] Wilmington plc, *Pension Funds Online – Pension System In Spain*, https://www.pensionfundsonline.co.uk/content/country-profiles/spain, (Accessed 26 September 2019).

[304] ANDBANK, *¿Qué son las EPSV o Entidades de Previsión Social Voluntaria?*, https://www.andbank.es/observatoriodelinversor/que-son-las-epsv-o-entidades-de-prevision-socialvoluntaria/, (Accessed 26 September 2019).

4 Specific Aspects of Researchers' Old-age Provision

Researchers mainly work as public researchers with civil servant status, as tenured professors or as industry employees.[305] Researchers with civil servant status, under employment contracts or receiving funding are covered by social security including old-age benefits.[306]

There is no exclusive occupational pension scheme for researchers in the public sector. Public or private research institutions might offer occupational pension plans to their employees.

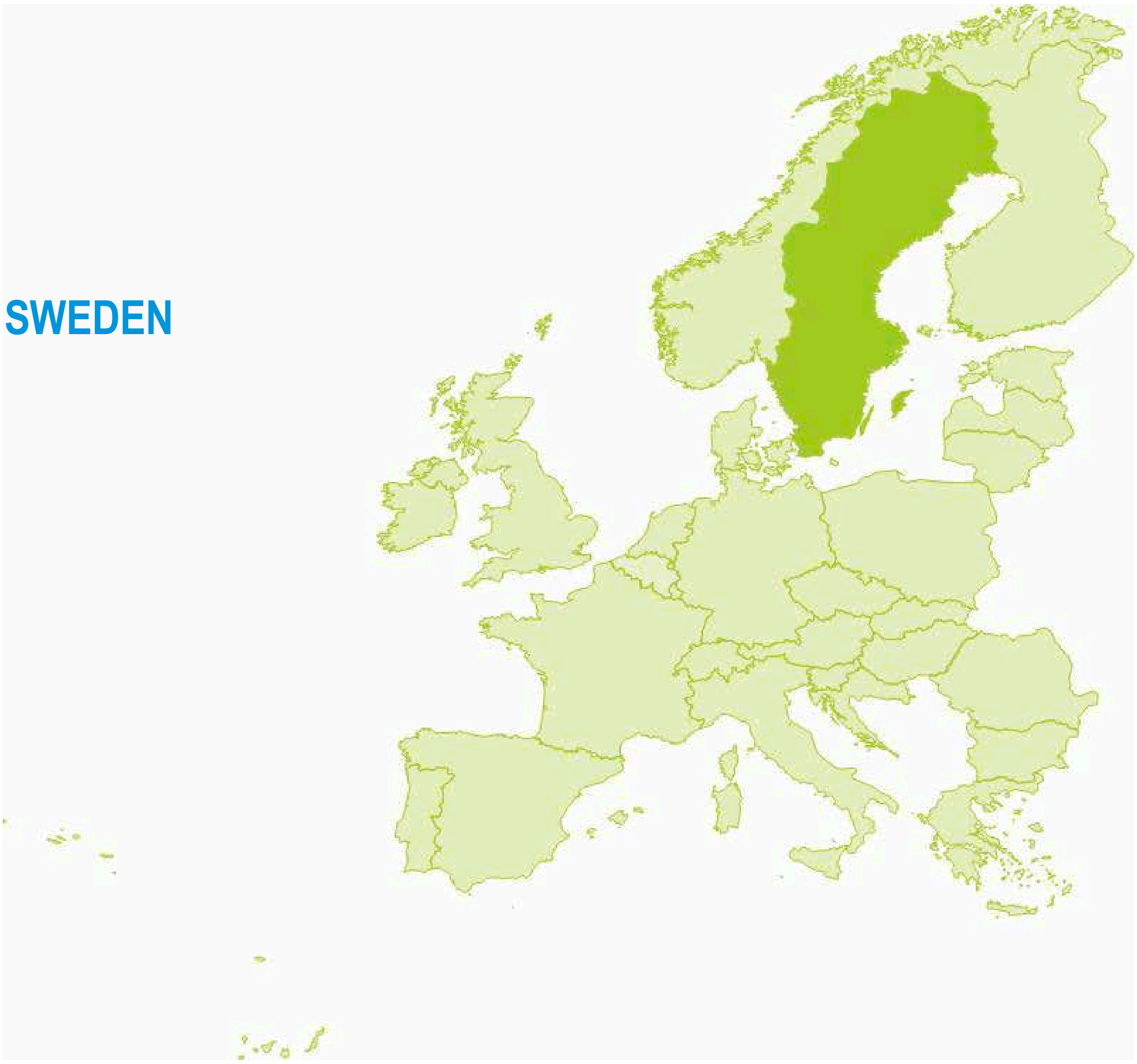
In public sector supplementary pensions are i.e. provided by the *Plan de Pensiones de la Administración General del Estado* and the *Itzarri, E.P.S.V* of the Basque country.

5 Cross-Border Portability/Mobility

The pension system in Spain is dominated by the first pillar statutory pension scheme. However, Spain's contributory pension not only requires a fairly long qualifying period of 15 years, but also that 2 years must have been covered within the last 15 years prior to retirement. This obstacle can be reduced by the EU principle of coordination of insurance periods according to EU Reglulation No. 883/2004. Consequently, the qualifying period can be completed by taking into account insurance periods spent in another EU/EFTA Member State.

305 Euracess Spain, *Researcher career path in Spain at a glance!*, https://www.euraxess.es/node/184559/, (Accessed 27 September 2019).
306 European Commission, European Commission, *Researchers' Report 2014 – Country Profile: Spain*, page` 12, http://ec.europa.eu/euraxess/pdf/research_policies/country_files/Spain_Country_Profile_RR2013_FINAL.pdf.

SWEDEN



Summary

In Sweden the mandatory public earnings-related pension includes both a notional defined contribution (NDC) scheme (Income Pension) which is financed on a pay-as-you-go basis and a defined contribution scheme (Premium Pension) which is funded. In terms of the Premium pension, there are a lot of changes foreseen around the pension fund platform and these are planned to happen in the next couple of years. The benefits are calculated on the basis of the paid contributions while also reflecting the life expectancy and a certain projected income growth or growth of the financial markets. Furthermore, there is an income-tested Guarantee Pension securing basic needs. In addition there are lots of changes happening around pension age (increasing in line with increased life expectancy) and entitlement to guaranteed pension.

Over 90 % of Sweden's workforce are covered by quasi-mandatory occupational pension schemes that is negotiated by the social partners in collective agreements with a highly standardized framework. Employers who are not part of collective agreements may, on a voluntary basis, also offer similar pension plans.

1 Statutory Pension System

The accumulation of pension rights in the statutory pension insurance is obligatory for all employees, self-employed and certain categories of Swedish residents. Every employed and self-employed person, with earnings of more than 42.3 % of the price basic amount (SEK 46,500 in 2019), falls under the earnings-related part of the statutory pension system that provides the Income and Premium Pension.[307] Furthermore, there are other benefits securing the basic needs of pensioners such as income-tested Guarantee Pension, income support and housing supplement. The Swedish Pensions Agency (Pensionsmyndigheten) is responsible for administering and paying benefits from the statutory pension system.

Sweden's pension reform of 1999 introduced notional, defined-contribution accounts for its Income Pension and the Premium Pension with a fund platform. The Income Pension is pay-as-you-go in nature and only mimics a defined-contribution plan, without setting assets aside. Notional capital is built up on these accounts in order to calculate the future pension.

Assets in the fully funded Premium Pension are managed by licensed fund managers. Pension savers are entitled to choose from a range of funds on the fund platform. As of 21 November 2019 there were 484 funds to choose from.[308] If the saver does not wish to make a decision on where to invest, the contributions are automatically invested in Såfa, the default fund, which is managed by the government agency Seventh National Pension Fund (AP7 Såfa).[309] Funds can be switched at any time.

Financing of the Earnings-related Pensions

The Income Pension is a pay-as-you-go system, whereas the Premium Pension is fully funded. Contributions of 18.5 % of pensionable earnings up to a ceiling of 483 000 a year (= 7.5 times the income base amount[310]) are credited to the pension accounts.[311] Thereof, 16 % is set aside for the Income Pension, where the value of the pension follows earnings trends in Sweden. 2.5 % is allocated to the individual's account of the Premium Pension in form of pension credits. The contributions are paid by both the employer and the employee.

Benefits of the Earnings-related Pensions

Income and Premium Pension provide for old-age, but not for disability, and generally not for survivors' pension but there are certain exceptions. Upon request of the insured person, when applying for pension, the Premium Pension offers survivors' benefits which in return lowers the old-age pension of the insured person. Additional financial entitlements referred to collectively as the survivor's pension are also available to specific categories of individuals which include a Child pension, Adjustment pension and Widow's pension[312]. Disability allowances are not part of the pension system, but are provided via other social security means.

[307] Finfa, August 2019, *Statutory and Collective Insurance Schemes for the Swedish Labour Market 2019*, page 25, (Available at: https://www.finfa.se/globalassets/forsakringsboken/statutory-and-collectiveinsurance-schemes-swedish-labour-market-august-2019.pdf).
[308] Swedish Pensions Agency, fund platform. (https://www.pensionsmyndigheten.se/minatjanster/fondtorg/sok)
[309] Swedish Pensions Agency, *Orange Report 2018 – Annual Report of the Swedish Pension System*, page 21, (Available at: https://www.pensionsmyndigheten.se/other-languages/english-engelska/englishengelska/publications0
[310] Income base amount in 2019: SEK 64 400 (approx. EUR 6 005).
[311] Since the pensionable earnings are defined as earnings less the employee contribution of 7 % of gross earnings, the effective contribution rate on gross earnings is 17.21 %.
[312] Pensionsmyndigheten, Survivor's pension if a family member dies (https://www.pensionsmyndigheten.se/other-languages/english-engelska/english-engelska/survivorspension)

There is no qualifying period for the earnings-related old-age pension. The Guarantee Pension, however, requires at least three years of residency in Sweden, and is proportionally reduced if you have lived in Sweden (or another EU/EEA country) for less than 40 years[313].

The earnings-related pension is based on lifetime earnings reported to the system. The ceiling on which pension benefits are accrued annually is SEK 483 000 (figure of 2019, approx. EUR 45 035) of pensionable earnings.[314]

Income Pension

Each year the Income Pension accounts earn a notional interest rate that is normally determined by the growth in average income. The income pension system is financed though the pay-as-you-go system with pension savers contributions, and if necessary assets from the buffer funds (AP1, AP2, AP3 and AP4). If the debt in the system is greater than the assets, the system has a balancing mechanism to regulate the future pension pay-outs.

Upon retirement the notional pension credit is converted into an annuity. The notional pension credit is divided by an annuity divisor that partly reflects the remaining life expectancy and partly an advance interest of 1.6 %. The pension annuity is recalculated every year, on the basis of a so-called adjustment indexation.[315]

Premium Pension

The value of the premium pension account reflects the lifetime of premiums paid in and the performance of the financial markets, which is dependent on the fund(s) where the assets are invested.[316] The pension is calculated by dividing the accumulated capital by an annuity divisor. In contrast to the Income Pension, the annuity divisor is based on forecasts of future life expectancy instead of actual life expectancy at retirement, and the advance interest may be different depending on the way the benefits are drawn.[317]

While receiving pension during retirement the accumulated premium pension assets continue to be invested. The individual chooses whether the assets are invested in a traditional insurance managed by the Swedish Pension Agency resulting in a guaranteed life-long annuity at a fixed rate, or invested in fund insurance with the assets being left in the existing market fund resulting in a variable annuity payment that is recalculated each year. In the latter case, only a sufficient number of fund shares are sold each year in order to finance the pension payments.[318]

The Premium Pension offers the opportunity to transfer the pension entitlements to a lawful spouse or a registered partner. In this case the pension capital that is transferred is reduced by 6 %.[319]

313 Pensionsmyndigheten, Guaranteed pension for those with low income, (https://www.pensionsmyndigheten.se/other-languages/english-engelska/english-engelska/guaranteedpension-for-those-with-low-income)
314 7.5 times the income base amount.
315 Swedish Pensions Agency, *Orange Report 2018 – Annual Report of the Swedish Pension System*, page 23 and 24, (Available at: https://www.pensionsmyndigheten.se/other-languages/english-engelska/englishengelska/publications0
316 Swedish Pensions Agency, *Orange Report 2018– Annual Report of the Swedish Pension System*, page 21.
317 Swedish Pensions Agency, *Orange Report 2018 – Annual Report of the Swedish Pension System*, page 24.
318 Swedish Pensions Agency, *Orange Report 2018 – Annual Report of the Swedish Pension System*, loc. cit.
319 Finfa, August 2019, *Statutory and Collective Insurance Schemes for the Swedish Labour Market 2019*, page 26, (Available at: https://www.finfa.se/globalassets/forsakringsboken/statutory-and-collectiveinsurance-schemes-swedish-labour-market-august-2019.pdf).

Pensionable Age/Early and Late Retirement of the Earnings-related Pensions

Sweden has no standard retirement age. Due to the fact that the pension amount of the Income and Premium Pension depends significantly on the (notional) capital accumulated in the individual accounts and the life expectancy at retirement age, retirement is flexible. However, the age at which you can claim your statutory benefits is currently being adjusted to take into account increasing life expectancies.

From 1 January 2020 income pension and premium pension can be drawn no earlier than from the age of 62 for individuals born in 1959 or later, and a withdrawal can be made up to any age. However, the earliest retirement age is gradually increasing in line with increasing life expectancy. How quickly this will change has not been decided by the Swedish government, but it is anticipated that by 2026 the earliest retirement age will be 64 years of age.

The employee has a legal right to work until the age of 67. However, in line with increasing life expectancies this is also changing. From 2020 this is increasing to the age of 68 and will increase to 69 from 2023.

The individual can choose between partial (25, 50 or 75 percent) or full retirement. In case of a partial or full retirement, while continuing to work, additional pension accrual will be accumulated. The Income Pension and the Premium Pension can be taken together or separately. In addition, the individual can choose to completely stop receiving statutory pension benefits and start working again.

Guarantee Pension

The tax-financed Guarantee Pension is a top-up for people with no or low income from the earnings-related pensions. The pension is based entirely on residency, the individual must have at least three years of residency in Sweden, and is a means of giving everyone a minimum standard of living during old-age. It can be claimed at age 65, however, this is also gradually increasing in line with increasing life expectancy. How quickly this will change has not been decided by the Swedish government, but it is anticipated that by 2026 the age for guaranteed pension will be 67 years of age.

A full guaranteed pension is reached after 40 years of residence in Sweden or another EU/EEA country between the ages 16 and 64. In case of a shorter residency the pension will be reduced by 1/40 for each year less than 40. The guaranteed pension will also be reduced if an earnings-related pension is received.

2 Occupational pension Schemes

In Sweden, occupational pension schemes are of particular importance. Over 90 % of the workforce is covered.[320] Employees on a permanent work contract at an employer that has a collective agreement are automatically enrolled in an occupational pension scheme.[321] The pension schemes are not mandatory by law, but are usually based on nationwide collective bargaining agreements and thus highly standardized. There are four large sectoral collective agreements:

Private sector:
- Private sector blue collar – SAF-LO
- Private sector white collar – ITP1 or ITP 2)

Public sector:
- Government employee – PA16
- Employed within the municipality and region – KAP-KL or AKAP-KL (or PA-KFS for a municipal company)

The occupational pension plans can be defined benefit and/or defined-contribution systems with individual investment choices. The type of occupational pension plan an individual is entitled to is dependent on a number of different factors such as their year of birth and their salary level. Pension benefits can be funded through either pension insurances, pension funds or book reserves. The contributions to an occupational pension scheme are fully financed by the employer. In general, for the defined contribution plans, 4.5 % of earnings is paid up to the statutory assessment ceiling (7.5 times the income base amount[322]) and 30 % above that limit.

The occupational pension schemes have a minimum eligibility age. The normal retirement age is either 65 or 67.

Section 4.2 "Details for researchers' pension provisions" deals with details of the PA03 occupational pension plan.

3 Private pension provisions

There are no tax incentives in saving private pension provisions. Individuals can therefore only save for retirement through salary sacrifice in their occupational pension, if it is offered. Alternatively, using individual savings in a bank, for example, through an investment savings account (ISK) or in a capital insurance (kapitalförsäkring). It should be noted that salary sacrifice is not always beneficial for all, as it can impact future social security or unemployment benefits.

320 Karen M. Anderson, Friedrich Ebert Stiftung, December 2015, *Occupational pensions in Sweden*, page 1, (Available at: https://library.fes.de/pdf-files/id/12113.pdf).
321 Wilmington plc, *Pension Funds Online – Pension System In Sweden*, https://www.pensionfundsonline.co.uk/content/country-profiles/sweden, (Accessed 6 August 2019).
322 Income base amount in 2019: SEK 64 400.

4 Position of researchers

4.1 Work conditions

All researchers working in the state universities and other state funded research institutes are state employees. Public sector employees are insured according to the Occupational Pensions Agreement, a collective agreement between trade unions and the Swedish Agency for Government Employers. The occupational pension is administered by SPV *(Statens Tjänstepensionsverk)*, the details of which are described below.

4.2 Details of researchers' pension provision

SPV **(Statens tjänstepensionsverk)** administers the occupational pensions of state employees in Sweden. State employees become members of the occupational pension agreement PA 16 Section I (born in 1988 or later) or Section II (born before 1988).

The occupational pension provides old-age and survivors' pensions. Employees can decide whether they want to be coverd by the so called repayment cover for the survivors' pension. If no repayment cover exists, the old-age pension will be slightly higher. The pension at retirement depends on salary, age at retirement, and insurance period.

Born in or after 1988

For individuals born after 1988 the occupational pension has three elements: the selectable part, the mandatory retirement pension Kåpan Tjänste and the flexible retirement pension Kåpan Flex. The employer pays 6 % of the employee's salary into the occupational pension. For salary greater than SEK 40 250 a month[323] (figure of 2019, approx. EUR 3 753), the employer pays a 31.5 % contribution on the salary above this ceiling.[324] The contributions are split between the three pension elements. Pension rights are accrued from the first day of employment.

Selectable part

The employer contribution to the selected part is 2.5% of the employee's salary up to the ceiling of SEK 40 250 (figure of 2019). For salaries of SEK 40 251 and up, the additional contribution is 20 %.[325] The employee can choose between traditional or unit-linked insurance. When choosing the traditional insurance, the insurance company selects where to invest. The capital has to be invested according to low-risk strategies, and the insurance includes a guaranteed minimum return. Alternatively, with unit-linked insurance the individual has the choice on where to invest.[326] The value of the investment can rise or fall, depending on the market. It is therefore less secure than the traditional insurance, but potentially more lucrative. Furthermore, the insured

[323] 7.5 times in the income base amount (SEK 64 400 in 209) a year.
[324] SPV, *Occupational pension – born in 1988 or later*, https://www.spv.se/en/about-your-pensions/curiousabout-pensions/occupational-pension--born-in-1988-or-later/, (Accessed 6 August 2019).
[325] SPV, *Occupational pension – born in 1988 or later*, https://www.spv.se/en/about-your-pensions/curiousabout-pensions/occupational-pension--born-in-1988-or-later/, (Accessed 6 August 2019).
[326] Statens Tjänstepensionsverk (SPV), *The selectable part*, https://www.spv.se/en/about-yourpensions/curious-about-pensions/occupational-pension--born-in-1988-or-later/the-selectable-part--born-in-1988-or-later/, (Accessed 6 August 2019).

person has the choice between an insurance with or without the so-called "repayment cover". By choosing the repayment cover, the surviving dependants of the pensioner will continue to receive the pension payments in the event of death. However, this lowers the level of the pension amount.

If no choice is made, *Kåpan Pensioner Försäkringsförening* will invest the pension in traditional insurance called *Kåpan* Valbar withour repayment cover. The money will initially be placed in an 'entrance solution' until a fund is chosen to invest in. There is the option to choose either way once a year.

Pension accrual takes place from the first day of employment until age 67. The pension can be withdrawn from the age of 61 either as a life-long annuity or as a temporary payment of at least ten years.[327]

Kåpan Tjänste

A monthly employer contribution of 2 % of the employee's salary up to the ceiling of SEK 40 250 (figure of 2019) is paid into the complementary retirement pension insurance *Kåpan Tjänste*. For salaries of SEK 40 251 and up, the additional contribution is 10 %.[328] The *Kåpan Tjänste* is a traditional insurance with a guaranteed interest rate. The pension can be drawn from age 61. The retiree can choose between a life-long annuity and a temporary pension payment of at least five years. If no pension application is submitted, the pension will be paid out from age 70.[329]

Kåpan Flex

A contribution of 1.5 % of the employee's salary is paid into the flexible retirement pension *Kåpan Flex*.[330] The *Kåpan Tjänste* is a traditional pension insurance with a guaranteed interest rate. Pensions are accrued from the first day of employment until age 67. The pension *Kåpan Flex* can be used to cut down on work time before you retire but no earlier than from age 61. It is possible to choose between a life-long annuity and a temporary pension payment of at least one year. If no pension application is submitted earlier, the pension will be paid out automatically from age 70.

Born before 1988

For individuals born before 1988, the occupational pension has two elements that apply to all employees: the selectable part, the mandatory retirement pension *Kåpan Tjänste*. A defined-benefit pension is offered for individuals born before 1973 or for those born after 1973 with a monthly salary over SEK 37 063.

[327] Statens Tjänstepensionsverk (SPV), *The selectable part*, https://www.spv.se/en/about-yourpensions/curious-about-pensions/occupational-pension--born-in-1988-or-later/the-selectable-part--born-in-1988-or-later/, (Accessed 6 August 2019).
[328] SPV, *Occupational pension – born in 1988 or later*, https://www.spv.se/en/about-your-pensions/curiousabout-pensions/occupational-pension--born-in-1988-or-later/, (Accessed 6 August 2019).
[329] Kåpan Pensioner, *Kåpan Tjänste*, https://www.kapan.se/vara-forsakringar/kapan-tjanste/, (Accessed 6 August 2019).
[330] SPV, *Occupational pension – born in 1988 or later*, https://www.spv.se/en/about-your-pensions/curiousabout-pensions/occupational-pension--born-in-1988-or-later/, (Accessed 6 August 2019).

Selectable part

The employer contribution to the selectable part is 2.5 % of the employee's salary. The employee can choose which insurance provider could manage the money (see above for people born in 1988 or later). Pension credits are earned from the age of 23 until 65. The pension can be withdrawn from the age of 61, usually as a life-long annuity.[331]

Kåpan Tjänste

A monthly employer contribution of 2 % of the employee's salary is paid into the complementary retirement pension insurance *Kåpan Tjänste*.[332] It is managed by Kåpan Pensioner in a traditional insurance. At present, the guaranteed pension amount consists of 80 % of premiums paid plus a guaranteed interest rate of 1 %.[333] All employees from the age of 23 are eligible for pension accrual. The pension is paid out automatically at age 65 and over five years unless. It can be drawn earlier starting at the age of 61 once the employment is terminated.[334]

Defined-benefit

The pension benefits of the defined benefit retirement pension depend on salary, length of service and the date of birth. It can be drawn no earlier than from age 61.

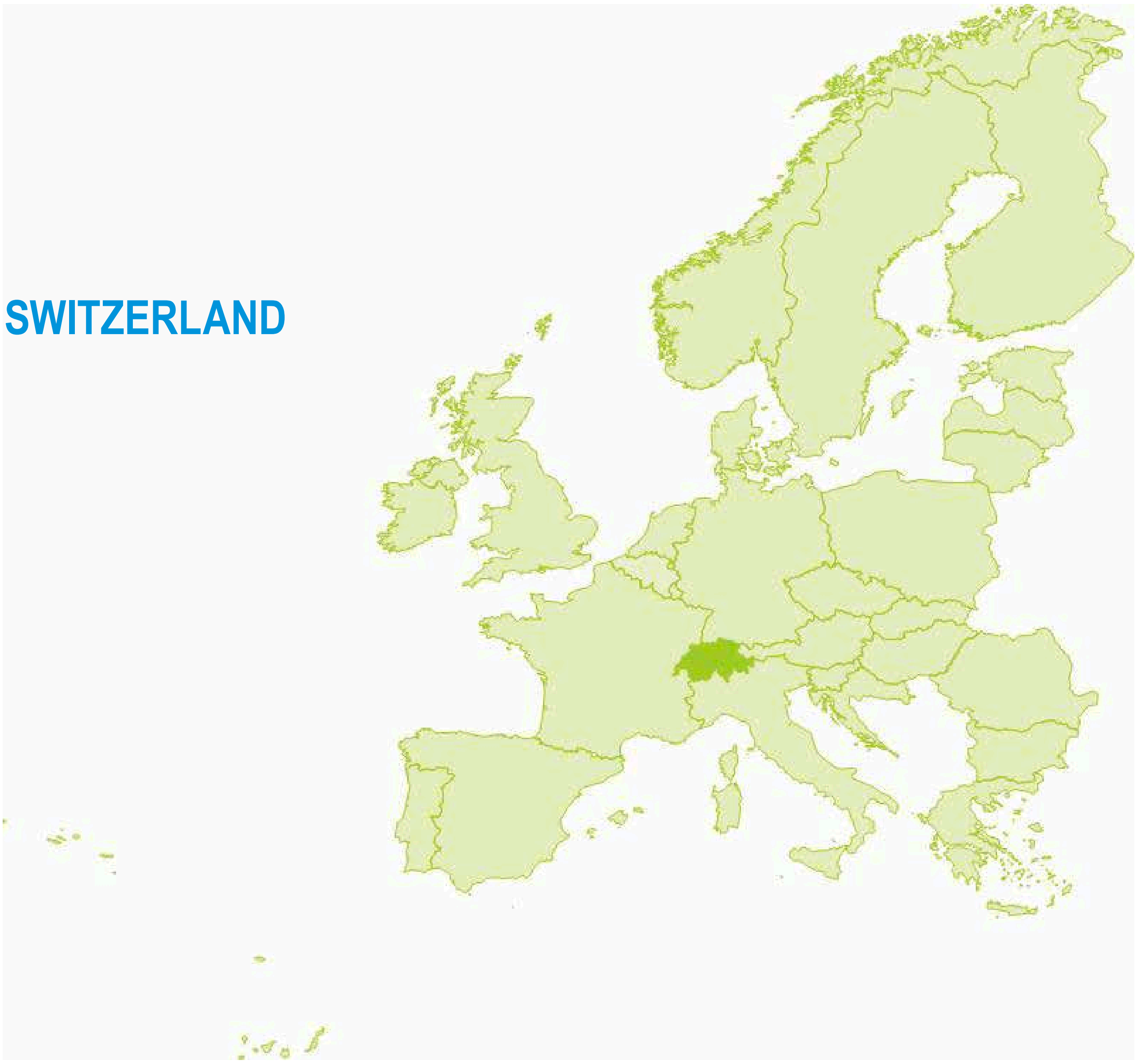
5 Cross-border Portability/Mobility

The earnings related pension entitlements as well as occupational pension rights do not require any vesting or waiting period. The possibility to transfer occupational pension rights to other countries has been discussed lately. Concerning public sector employees, the collective bargaining agreement does not stipulate rules for cross-border transfers.

On the Swedish website www.minpension.se every insured person can track down its pension entitlements accrued in the 1st, 2nd and 3rd pillar. This service is a collaborative project between the government and participating pension funds.

331 Kåpan Pensioner, *Information about your pension insurance*, page 3, (Available at: https://www.kapan.se/globalassets/om-kapan/broschyr/kapan-bro-eng-24jan.pdf).
332 Kåpan Pensioner, *Information about your pension insurance*, page 3, (Available at: https://www.kapan.se/globalassets/om-kapan/broschyr/kapan-bro-eng-24jan.pdf).
333 Kåpan Pensioner, *Garanterad avkastning*, https://www.kapan.se/vara-forsakringar/att-spara-hoskapan/garanterad-avkastning/, (Accessed 6 August 2019).
334 SPV, *Before you apply*, https://www.spv.se/en/about-your-pensions/time-to-retire/before-you-apply/, (Accessed 6 August 2019).

SWITZERLAND



Summary

The pension system in **Switzerland** is based on three pillars. The first pillar including the public old-age, survivors' and disability insurance secures the basic needs. Due to the fact that there is no ceiling on contributions but a maximum pension amount, there is a significant redistributive effect.

Switzerland is one of the few countries where occupational pension provision is mandatory by law. The occupational pension system is an important part of the Swiss pension system with the aim to maintain the previous standard of living by providing – together with the statutory pension system – a replacement rate of about 60 % of the final salary. In addition there are so called super-obligatory and voluntary provisions.

1 Statutory Pension Scheme

All persons who live or work in Switzerland, as well as persons posted abroad for the Swiss Confederation or for institutions named by the Federal Council, are insured with the statutory pension scheme AHV/IV. Swiss and EU/EFTA citizens who relocate to a country outside the EU/EFTA, may join the voluntary pension scheme if they have been insured with the compulsory insurance for five consecutive years and have applied to the Swiss representation responsible for their place of residence within a year of having been insured.[335]

The statutory pension scheme's objective is to guarantee a minimum standard of living. It provides benefits for old-age and death (AHV), for invalidity (IV), supplementary benefits (EL) and income compensation (EO). Responsible for the execution of the public pension provisions are the cantonal, professional and confederate compensation funds.

Financing

The public old-age, survivors' and disability insurance is based on a pay-as-you-go system (except for the additional services) and financed through contributions and state subsidies of 19.55 % of the annual expenses of the public insurance[336]. Gainfully employed persons (including self-employed) have to pay contributions starting with the first of January that follows their 17th birthday. Non-employed residents are liable to pay contributions with the first of January following their 20th birthday. Married persons without income are liable for contributions as well.

Employers and employees pay a total contribution of 10.25 % of the gross income in equal halves divided further into 8.4 % to AHV, 1.4 % to IV and 0.45 % to the income replacement scheme (EO).[337] Employees who earn less than CHF 2300 (approx. EUR 2140 a year) are not obliged to pay contributions unless the person wishes so or works in a specific profession that is not excluded.[338] The contribution rate for self-employed and for residents without an employment depends on their economic situation.

Benefits

The qualifying period for pension entitlements is one year of relevant contributions. The pension amount is calculated in reliance to years of contributions, the valorised average earnings[339] and credits for child-raising periods or periods of care for a relative in need.[340]

Calculation Method

Men receive a full state pension once they have contributed for 44 years, women if they contributed for 43 years. In order to calculate the pension amount, the average income for the entire contribution period is valorised to average wage and price development. Years of childcare can be credited for the contribution period to close gaps. Another possibility to cover missing insurance years is to pay extra contributions, but only contributions for the last five years can be recognized.

[335] Schweizerische Eingenossenschaft, *Shortfall in OASI (AHV) contributions*, https://www.ch.ch/en/gapscontribution/, (Accessed 29 July 2019).
[336] Art. 103 AHV-Law (AHVG) as of 1. June 2019.
[337] Figures of 2019. AHV/IV, 1 January 2019, *Lohnbeiträge an die AHV, IV und EO*, page 2, (Available at: https://www.ahv-iv.ch/p/2.01.d).
[338] Figures of 2019. AHV/IV, 1 January 2019, *Lohnbeiträge an die AHV, IV und EO*, page 13, (Available at: https://www.ahv-iv.ch/p/2.01.d).
[339] Usually only the earnings that were achieved in the calendar year following the 20th birthday. To cover gaps so called "teenage years" can be taken into account.
[340] To determine whether a full contribution year has been achieved, see the brochure on the AHV website *Altersrenten und Hilflosenentschädigung der AHV*.

The formula to calculate the pension is quite complex but the so called pension scales (Rentenskalen) may help to determine the pension amount. If the insured person has a complete contribution period he/she is entitled to a so called full pension according to the pension scale 44 (Rentenskala 44).[341] According to the pension scale 44 of 2019 the annual minimum old-age pension benefit for a single is CHF 14 220 (approx. EUR 12 834) and the maximum old-age pension – which is reached with an average annual income of CHF 85 320 (approx. EUR 77 007) or more – is CHF 28 440 (approx. EUR 25 669). For married couples the pension amount has a limit of 150 % of these amounts.[342] In case of discontinuous contribution periods the pension amount is reduced by at least 1/44[343] per each missing year and the pension scale 1-43 *(Rentenskala 1-43)* applies.

Pensionable Age/Early and Late Retirement

The standard legal retirement age for men is 65 years of age, for women 64 years of age.

It is possible to retire earlier, namely 1 or 2 years before the standard retirement age with the consequence of the pension being reduced by 6.8 % for one year and 13.6 % for two years until the legal retirement age. In the event of an early retirement the pensioner is obliged to pay contributions to the AHV.[344] These contributions, however, do not increase the pension and are a bare solidarity payment. Upon reaching legal retirement age the reduction rate will be recalculated.

A late retirement of at least 1 year and up to 5 years is also possible and increases the pension amount according to fixed percentages. Persons having reached pensionable age and continue to work only pay contributions if they earn more than CHF 16 800 per year (approx. EUR 13721).[345]

2 Occupational Pension Schemes

The occupational pension system has three elements: an obligatory, a super-obligatory and a voluntary provision. Together with the statutory pension of the first pillar it aims to maintain the accustomed standard of living.

341 Bundesamt für Sozialversicherung, *Monatliche Vollrenten*, Skala 44, http://www.bsv.admin.ch/vollzug/documents/view/673/lang:deu/category:23, (Accessed 26 July 2019).
342 European Actuarial & Consultancy Services (EURACS), "Switzerland Pension Summary", http://euracs.eu/summaries/pension-summary-switzerland/, (19.7.2013).
343 Informationsstelle AHV/IV, January 2019, *Altersrenten und Hilflosenentschädigung der AHV*, page 5, (Available at: https://www.ahv-iv.ch/p/3.01.d).
344 Informationsstelle AHV/IV, January 2019, Flexibles Rentenalter, page 4 and 5, (Available at: https://www.ahv-iv.ch/p/3.04.d).
345 Bundesamt für Sozialversicherungen, *Freibetrag*, https://www.bsv.admin.ch/bsv/de/home/glossar/freibetrag.html, (Accessed 26 July 2019).

2.1 Obligatory insurance scheme

In Switzerland there are more than 2000 pension funds offering the obligatory occupational insurance.

The schemes are applicable for persons insured with the public state pension scheme AHV/IV and have to cover old-age, disability and death risks. The pension funds may be defined-contributions, defined-benefits or hybrid in nature with a trend to DC schemes. All employees with an annual salary of more than CHF 21 330 (approx. EUR 19 246; figure of 2019[346]) have to be insured but there are exceptions e.g. for people with temporary employment contracts of up to 3 months. The insurance ends with the standard legal retirement age, the termination of employment or if the annual salary falls below the required threshold mentioned above. Each pension fund has its own conditions and benefit promises but the Federal Law on Occupational Old-age, Survivor's and Disability Insurance (BVG) sets minimum standards for the obligatory insurance which every occupational pension fund has to comply with.

Disability and death are covered by the obligatory insurance from the 1st of January after the 17th birthday onwards. Entitlement to an old-age pension can be accrued at the earliest as from the 1st of January after the 24th birthday.[347]

Financing

The obligatory insurance is fully capital funded, with the exception of some pension institutions of public authorities.

The basis for the contribution calculation is the insured salary. This is the salary minus a coordination deduction. According to law, a pension fund has to insure annual gross salaries of up to CHF 85 320 (approx. EUR 79 987) minus CHF 24 885 (approx. EUR 22 454). This is called the "coordinated salary". Therefore, the annual maximum coordinated salary is CHF 60 435 (approx. EUR 57 533). The minimum coordinated salary fixed by law is CHF 3 555 per year (approx. EUR 3027.00).[348]

The contributions are paid by both the employer and the employee on the basis of the coordinated salary. Each pension institution defines its own contribution rates in accordance with the minimum requirements set by law. The employer must at least contribute an amount that is equal to the contribution of the employee.

Benefits

The old-age benefit depends on the retirement assets, the total contributions at the beginning of retirement plus the transferred capital and the interest earnings ("Altersguthaben"), multiplied by the so called conversion rate (6.8 %). The minimum interest rate on assets (currently 1 %)[349] is set by the Federal Council. Due to the fact that the contibutions are based on the so called "coordinated salary" the benefits are "coordinated" with the benefits of the 1st pillar statutory pension system (AHV/IV) as well.

[346] Federal Social Insurance Office, *Legal bases & legislation*, https://www.bsv.admin.ch/bsv/en/home/socialinsurance/bv/grundlagen-und-gesetze.html, (Accessed 26 July 2019).
[347] Art. 7 Bundesgesetz über die berufliche Alters-, Hinterlassenen- und Invalidenvorsorge (BVG) as of 1. January 2019.
[348] Art. 8 Bundesgesetz über die berufliche Alters-, Hinterlassenen- und Invalidenvorsorge (BVG) as of 1 January 2019. Figures of 2019.
[349] Bundesamt für Sozialversicherung, Mindestzinssatz, https://www.bsv.admin.ch/bsv/de/home/glossar/mindestzinssatz.html, (Accessed 26 July 2019).

In most obligatory pension insurance schemes the retirement age is 65 for men and 64 for women. According to law an early retirement is only possible from the age of 58 with a reduced conversion rate. This rate is usually 0.2 percent for each year the insured person retires before the standard legal retirement age. In case of a late retirement, the Federal Social Insurance Office recommends that the conversion rate should increase by 0.2 percent for each additional year. Since the law only defines minimum standards, the pension scheme may set further requirement for an early or late retirement.

Instead of a pension, the insured person has the option to an early capital withdrawal every five years or to finance real estate property.

2.2 Super-obligatory insurance scheme

Salary components above the maximum coordinated salary of CHF 85 320 (2019) are not insured in the obligatory insurance but can be recognised by pension funds within a super-obligatory occupational pension scheme.

The benefits are in general based on an individual contract between the employer and the pension institution with the consent of the employee.

2.3 Voluntary insurance

Self-employed persons and employees who are not subject to the obligatory insurance scheme but receive an annual income of CHF 21 150 (approx. EUR 19 113) from various employers can pay contributions into the voluntary insurance.

3 Private Pension Schemes

The 3rd pillar encompasses capital funded private pension provisions defined as the so called "pillar 3a" and "pillar 3b". The first one is a tied pension provision and subject to precise legal rules. It is only open to employees or self-employed persons. Contributions are tax deductible. The maximum annual contribution for insured persons with an occupational pension scheme is CHF 6 826 (approx. EUR 6 189).[350] The "pillar 3b" is a flexible pension provision and is open to all Swiss residents. The most common products are life insurances.

[350] For persons without an occpuational pension scheme it is CHF 34 128.

4 Position of Researchers

Researchers working in Switzerland are automatically enrolled in the statutory public pension scheme AHV/IV of the first pillar. This includes fellows who are employed under employment contracts by the Swiss Universities as well as doctoral and post-doctoral research fellows funded by SNFS or the Scientific Exchange NMSch Sciex Programme.[351]

Researchers who are in gainful employment and have an annual salary above CHF 21 330 also accrue occupational pension rights in the relevant cantonal or federal obligatory occupational pension schemes.

4.1 Details of Researcher's Pension Provisions

Employees of the public sector are registered with the responsible cantonal pension fund. Each canton has its own pension funds with different benefit plans settled by cantonal law after negotiation with the collective bargaining parties. For example in the canton of Basel it depends inter alia on the type of contract (permanent or temporary) in which cantonal fund the researcher will be enrolled. The cantonal pension funds are mostly independent legal entities, only some are part of the cantonal administration.

According to law there is the principle of full capitalization of pension funds. Public pension funds are obliged to have a coverage ratio of 100 % until 2023 unless they have received a state guarantee until the end of 2013 (so called partial capitalisation). In this case the coverage ratio has to be only 80 % by 2052. In order to achieve full capitalization some public pension funds have changed from a defined-benefit to a defined-contribution system.

For researchers at the Swiss Federal Institute of Technology (ETH Zurich or EPFL Lausanne) the pension fund PUBLICA is responsible for the occupational pension and insures the researchers with the ETH pension plan "VR-ETH1". An insurance requires an employment contract for more than three months and annual earnings of more than CHF 21 330 (approx. EUR 19 246).[352] Only earnings out of an employment contract are recognised but no grants. Contributions are normally shared between employer and employee. Voluntary contributions are possible.

The CERN, the supranational European Organization for Nuclear Research, has its own pension fund. Another specific pension fund, the VSAO, exists for assistant physicians and senior physicians e.g. those working at university hospitals.

[351] European Commission & Deloitte, Researchers' Report 2014, *Country Profile: Switzerland*, page 13.
[352] Figures of 2019.

5 Cross-border Portability/Mobility

5.1 Statutory Pension scheme (AHV/IV)

Switzerland and the EU Member States have concluded an agreement of free movement of persons. Since the agreement came into effect on 1 June 2002, the EU regulations on the coordination of national social security systems also apply for Switzerland. The same coordination rules are included in the EEA Convention covering the nationals of Iceland, Liechtenstein, Norway and Switzerland. The insurance periods spent in another EU/EEA country are recognized in Switzerland and vice versa. Switzerland has also concluded several social security agreements that define the conditions for pension payments abroad. Thus, a refund of contributions may be possible if the insured person moves to a third country where the pension benefits are not subject to coordination.

However, it is important to mention that the EU coordination of insurance periods does also apply to the obligatory part of the occupational pension insurance.

5.2 Occupational Pension Schemes

In the event of job changes within Switzerland, an automatic transfer of the capital from the former employer's pension fund to the new employer's pension fund is mandatory by law *(Freizügigkeitsgesetz)*.

Upon leaving Switzerland permanently, there are different options depending on the new country of residence.

In case of an emigration to a non-EU/non-EFTA state there is the choice between applying for payment of your accumulated capital (termination benefit) or maintaining the retirement fund cover. Within six months after the employment contract has ended the the last employer's retirement fund is responsible for the cash payment. Thereafter, the capital is transferred to a so called auxiliary fund (Auffangeinrichtung) which becomes responsible for any cash payment applications.

In case of emigration to an EU/EFTA state where the individual is not subject to any coverage in a statutory social insurance system the same conditions for a cash payment apply.

A different treatment of the accumulated pension capital applies in case of emigration to an EU/EFTA state where the individual is subject to social security coverage in that country. Only vested benefits exceeding the legal minimum (super-obligatory insurance) can be withdrawn as a cash payment. The obligatory part has to remain in Switzerland until retirement in accordance with the following options:

The termination benefit can be transferred into

- a special blocked bank account (so called Freizügigkeitskonto),
- a blocked insurance policy (so called Freizügigkeitspolice) or
- the so called auxiliary fund.

In the event that no decision is communicated to the last pension fund, the pension fund must transfer the termination benefit to the auxiliary fund after six months at the earliest but no later that two years after the employment contract ended.[353]

An exception applies for Liechtenstein where a transfer of the termination benefits to the institution of a new employer is obligatory.

Transfers from abroad to a Swiss pension fund may be possible if the relevant pension fund gives its approval. A buy-in for persons moving to Switzerland and becoming a new member of a Swiss pension fund is possible in order to fill gaps in the contribution history.[354]

353 Art. 4 and Art. 25f Bundesgesetz über die Freizügigkeit in der beruflichen Alters-, Hinterbliebenen- und Invaliditätsvorsorge (freizügigkeitsgesetz) as of 1 October 2017.
354 Art. 60b of the Verordnung über die berufliche Alters-, Hinterlassenen- und Invalidenvorsorge as of 1 January 2019.

UNITED KINGDOM

Summary

Traditionally, the pension system of the **United Kingdom** has three pillars: the public pension system, occupational pension provisions and private pension schemes. However, the increasing risk of poverty in old-age challenged this three pillar pension system and was a key-factor for reforms. In 2014 the first pillar statutory pension system was remodelled. With effect of April 2016 the former two-tier State Pension system, the basic flat-rate pension and the Second State Pension, was replaced by a single-tier flat-rate pension. Its aim is to simplify the pension system.

Despite the rather large market for voluntary occupational and private pensions, the coverage rate of occupational and private pensions has been declining. With regard to occupational pension schemes in 2012, the government introduced auto-enrolment in order to increase additional pension provision through participation in occupational pension schemes.

1 Statutory Pension System

The statutory UK pension system used to have two tiers: the flat-rate Basic State Pension, functioning as a general safety-net, and the earnings-related Additional State Second Pension. Until April 2012 contracting out of the Additional State Second Pension was possible, thereafter it remained possible only by joining a defined-benefit workplace pension scheme. Members of other schemes were contracted back in, paid National Insurance Contributions at a full rate and accumulated a State second Pension.

The statutory pension scheme has been changed as of 6 April 2016. The new State Pension scheme is a so called single-tier scheme and provides a flat-rate pension. The new scheme is applicable for men born on or after 6 April 1951 and women born on or after 6 April 1953. Accumulated pension entitlements before 6 April 2016 were converted into the new pension scheme as a so called 'starting amount'. A means-tested pension, the Pension Credit, provided supplementary benefits for pensioners with low or no income.

The statutory pension system in UK is part of the National Insurance (NI). Individuals become affiliated to the National Insurance in case of being at least 16 years old and paying National Insurance contributions, are being treated as having paid contributions or receive National Insurance credits due to caring responsibilities or claiming working age benefits.

Financing

The new State Pension is based on a National Insurance record. For the tax year 2019/2020 employee contributions are only levied on weekly earnings above GBP 166 ('primary threshold') from one employer. For earnings below that threshold no contributions have to be paid. However, for earnings of more than GBP 118 a week from one employer ('lower earnings limit') the employee is treated as having paid contributions and receives pension credits. Self-employed persons may contribute as well. Voluntary National Insurance contributions to close gaps in the insurance history are possible.

National Insurance contribution rates depend on various factors and are categorized. The National Insurance Contributions are divided into Classes and Categories. The contribution rate stated here is a Class 1 National Insurance Contribution of Category letter A which applies to most employees.[355] The contributions are paid by both the employee and the employer. The employee's contribution rate is 12 % on weekly earnings between GBP 166.01 to 963. Beyond that level the contribution is 2 %. The employer contribution is 13.8 %.[356]

Benefits

The new State pension offers a flat rate pension above the level of means-tested support based on the National Insurance record when reaching State Pension age. There is a qualifying period of at least 10 years. Qualifying years are defined as tax years during which the individual paid contributions, was treated as having paid or paid voluntary National Insurance contributions.

[355] Categories and Classes: https://www.gov.uk/national-insurance-rates-letters/category-letters.
[356] Gov.uk, *National Insurance Contribution Rates*, https://www.gov.uk/national-insurance-ratesletters/category-letters, (accessed 3 September 2019).

The pension amount depends solely on the years of contributions or periods treated as such. The full rate of the new State Pension is a weekly amount of GBP 168.80 (2019, approx. EUR 188.00) that is paid after 35 qualifying years. If the pensioner has fewer years a proportionately reduced pension is paid which is calculated as follows:

$$\text{pro rata pension amount} = \frac{1}{35} \times \text{number of qualifying years}$$

Based on this calculation you will accrue about GBP 4.77 a week to your new State Pension for every year up to a maximum of GBP 166.80 in 2019.

People who accrued pension rights under the former State Pension system before 6 April 2016 received a 'starting amount' on their National Insurance record. The new rules make sure that the State pension amount is no less than the one accrued under the old pension system. Thus, the 'starting amount' could be less than, more than or equal the full new State Pension.[357]

Means-tested Pensions Credit

The residence-based Pension Credit is a means-tested benefit that has two elements: the guarantee credit which gives persons with low income a top-up to their pension and the savings credit which rewards people for having made at least some retirement saving. The savings credit was abolished for the pensioners with the pension reform in 2016.

Pensionable Age/early and Late Retirement

As of November 2018 the State Pension age is 65 for both men and women but it will rise further over the years. Early retirement before that age is not allowed. A deferral of the pension is possible and increases the pension by a fixed percentage (approximately 5.8 % for each year of deferral). The State Pension needs to be deferred for at least nine weeks. People who decide to continue working after State Pension age do not have to pay National Insurance contributions.

2 Occupational Pension

With the Pensions Act 2008, which came into effect on 30 June 2012, the government introduced automatic enrolment into so called workplace pension schemes. Since February 2018, all employers have a legal duty to enroll all qualifying workers.[358] Auto-enrolment is – with some exceptions – applicable for employees between the age of 22 and State Pension Age with earnings of at least GBP 10,000 a year.[359] However, it is possible for employees to opt out of membership as if they had never joined the pension scheme. Every 3 years the employee has to renew his decision, otherwise he/she will be re-enrolled. The pension plan needs to meet

[357] Department for Work & Pensions, *Your State Pension explained*, Updated 8 April 2019, https://www.gov.uk/government/publications/your-new-state-pension-explained/your-state-pensionexplained, (accessed 3 September 2019).
[358] OECD, *Pensions at a Glance 2017: Country Profiles – United Kingdom*, page 1.
[359] Gov.uk, Joining a Workplace pension, https://www.gov.uk/workplace-pensions/joining-a-workplacepension, (accessed 5 September 2019).

minimum requirements depending on the pension type, e.g. a minimum contribution rate. In order to insure that all employers are able to offer a workplace pension scheme, the government established the National Employment Savings Trust (NEST), a trust – based occupational pension scheme.[360] NEST has to accept all employers on request and also provides voluntary membership for people with earnings below the qualifying earnings.

Traditionally most of the workplace pension plans were defined benefit but this type of pension is increasingly being replaced by defined-contribution (known as "money purchase") or hybrid schemes. Some employers have introduced employer sponsored group stakeholder pensions or a group personal pensions that are in fact a series of individual personal pensions that benefit from employer contributions and lower charges.

In most automatic enrolment schemes, contributions are based on total annual earnings between GBP 6 136 and GBP 50 000 before tax. From April 2019, the legal minimum employer contribution is 3 %, the employee contribution 5 %.[361] Contributions into workplace pensions are subject to tax reliefs.

3 Private Pension Provisions

Voluntary individual pension provisions are available as personal pension plans or as stakeholder pensions that have to meet a number of Government standards. Stakeholder pensions are more flexible and permit variable payments rather than fixed amounts. Those plans are provided by life insurances or banks and enjoy several tax reliefs.

4 Position of Researchers

Researchers on employment contracts are in general eligible for State Pension coverage. A gap in the contribution record – e.g. while on a grant – can be supplemented with voluntary contributions. Sponsored researchers on grants or fellowship do not pay National Insurance Contributions and are therefore not entitled to a State Pension.

The Universities Superannuation Scheme (USS) is an occupational pension scheme that insures a large number of researchers employed in the UK and represents the vast majority of researchers employed in the public sector.

[360] OECD, *Pensions at a Glance 2017: Country Profiles – United Kingdom*, page 1.
[361] Gov.uk, *What you, your employer and the government pay*, https://www.gov.uk/workplacepensions/what-you-your-employer-and-the-government-pay, (accessed 5 September 2019).

4.1 Details of Researchers' Pension Provision

Universities Superannuation Scheme (USS)

The Universities Superannuation Scheme is the occupational pension service for more than 340 employers of Universities and Higher Education institutes in the UK.[362] However, not all UK universities and higher education institutes are affiliated to USS and other types of employers are also members of USS.

When working in the UK for an employer who is a member of USS employees will be enrolled automatically according to the auto-enrolment rules. Researchers on a variable time contract might not be insured with the USS pension scheme automatically due to unpredictable working hours and earnings. Furthermore, an opt-out of the Universities Superannuation scheme is possible.

For many years USS was solely a defined-benefit, final salary scheme but this type of scheme was deemed to be too generous. There have been two major revisions in the USS pension scheme in order to replace the so-called Final Salary Section. As of October 2011 all new members were enrolled in the so-called Career Revalued Benefits Scheme. From April 2016 the USS scheme became a hybrid pension scheme, the so called Revised Career Revalued Benefits scheme. It has two sections, the Retirement Income Builder as the defined-benefit section and the Investment Builder as the defined-contribution section. All members will be entered into the new hybrid scheme, even if they have previous membership. Members who have accrued pension rights before April 2016 when retiring receive two kinds of benefits: the pension benefits built up under the new scheme from 1 April 2016 onwards, and as an addition those pension benefits which were accrued until 31 March 2016 as a service credit.

Benefits

The Universities Superannuation Scheme provides benefits in case of old-age or incapacity and for dependants.
The Retirement Income Builder provides retirement benefits on the basis of time period spent as a member of the scheme and the salary used as a calculation basis for the contributions. Every year a pension of 1/75 is built up, limited to a salary threshold. Until 30 September 2016 the Retirement Income Builder was irrespective of income. As of 1 October 2016 an upper income threshold was set which is currently at GBP 58 589.70 (2019/2020, approx. EUR 72 070).[363] The value of each year's pension is revalued until retirement. From the USS Retirement Income Builder pensioners will receive a pension of 1/75 of annual pensionable salary plus a 'one-off tax-free cash lump sum of three times the gross pension (with the option to take more or less cash and receive a lower or higher pension).

Salaries above the threshold of GBP 58 589.70 are pensionable to the so-called Investment Builder section. It is also possible to decide to increase the later pension by joining the Investment Builder section when earning below the threshold. This will be in the form of additional voluntary pension savings. The pension amount from the Investment Builder corresponds to the contributions paid, how they were invested and how those investments have performed. Concerning the investment strategy, it is possible to choose among a range of

[362] USS, May 2019, *Options on Leaving*, page 1, (Available at: https://www.uss.co.uk/~/media/documentlibraries/uss/member/factsheets/options-on-leaving.pdf).
[363] USS, April 2019, *Your guide to the Universities Superannuation Scheme*, page 9, (Available at: https://www.uss.co.uk/~/media/document-libraries/uss/member/member-guides/post-april-2016/yourguide-to-universities-superannuation-scheme.pdf).

options. Pension rights accrued in the USS Investment Builder can be used in various ways. For example, as a tax free lump-sum, as a series of cash payments or to buy an annuity.

The minimum period before Retirement Income Builder benefits from employer's contributions can be accrued is two years of service times. Therefore, there are different option for those leaving the USS pension scheme before the Normal Pension Age. Individuals having fulfilled the qualifying service time of two years are entitled to either a so called 'deferred pension' based on the benefits earned at retirement age or may transfer their benefits to another pension scheme. Individuals with less than two years of membership have three options: they may be eligible for a refund of their own contributions, will receive a deferred pension based only on their own contributions or may transfer the full benefits to another scheme. However, a refund of the employee's contribution is not possible in the case of participation in salary sacrifice arrangement because the employee contributions are treated as paid by the employer. In respect of the USS Investment Builder, the refund will be based on the amount of employee contributions in case of less than three months' contributions and on the accumulated value of benefits in case of more than three months' contributions.

Financing

Contributions are paid by both the employee and the employer. The employee will contribute 8.8 % and the employer 19.5 % until October 2020 into the USS Retirement Income Builder.[364] In respect of salaries above the threshold of GBP 58 589.70 (2019/2020) employee contributions of 8 % and employer contributions of 12 % go into the USS Investment Builder.[365] Additional contributions into the USS Investment Builder, regardless of the salary threshold, are possible. The section used to provide an automatic matching mechanism, meaning that an additional employee contribution of 1 % was matched by the employer. From 1 April 2019 employers will stop paying towards the match.

Retirement age

The USS Normal Pension Age (NPA) is currently 65 but will increase in line with State Pension age. When retiring at the Normal Pension Age the USS Retirement Income Builder benefits can be taken in full. The earliest age for retirement is 55 years unless you are made redundant. In this case retirement is possible already from age 50 provided that continuous membership since 5 April 2006 exists. If you retire before the scheme's Normal Pension Age – excluding retirement due to ill health – any pension from the USS Retirement Income Builder will be reduced. In general, the current early retirement reduction is approximately 4 % for each year the benefits are taken before the Normal Pension Age.[366] Active members of USS can retire later than the Normal Pension Age and continue to pay into USS beyond Normal Pension Age. This will increase the pension.

Flexible retirement is possible as well. With the employer's agreement up to 80 % of the benefits in the USS Retirement Income Builder can be taken, provided the employee agrees to reduce its working hours by at least 20 %. The pension can be taken in two stages. The USS Investment Builder provides an increased flexibility for how to draw the accrued benefits. The savings from the Investment Builder can be taken in various ways anytime from the age of 55.

[364] USS, A rise in your contributions, https://www.uss.co.uk/members/members-home/retirementarticles/2019/a-rise-in-your-contributions, (Accessed 5 September 2019).
[365] USS, April 2019, *Your guide to the Universities Superannuation Scheme*, page 11, (Available at: https://www.uss.co.uk/~/media/document-libraries/uss/member/member-guides/post-april-2016/yourguide-to-universities-superannuation-scheme.pdf).
[366] USS, April 2019, *Your guide to the Universities Superannuation Scheme*, page 16.

5 Cross-border Portability/Mobility

Between EU/EEA Member States the insurance periods of the 1st pension pillar are coordinated in order to ensure that required qualifying periods in the Member States can be fulfilled to a greater extend.

Universities Superannuation Scheme (USS)

The Universities Superannuation Scheme which applies for many researchers offers three options upon leaving the USS Retirement Income Builder section of the scheme within two years of joining:
members may be eligible for a refund of their own contributions, will receive a deferred pension based only on their own contributions or may transfer the full benefits to another scheme. However, a refund of the employee's contribution is not possible in the case of participation in salary sacrifice arrangement because the employee contributions are treated as paid by the employer. In respect of the USS Investment Builder, the refund will be based on the amount of employee contributions in case of less than three months' contributions and on the accumulated value of benefits in case of more than three months' contributions.

Transfer of pension funds

In the UK transfers between UK pension schemes as well as cross-border transfers may be possible with the schemes consent. However, they might be subject to rather large UK tax charges for an unauthorized payment unless the receiving overseas pension scheme is registered with HM Revenue & Customs (HMRC) as a Qualifying Recognised Overseas Pension Scheme (ROPS). In order to qualify for a QROPS, the scheme must, inter alia, be regulated as a pension scheme, be verified for tax purposes in its home country and accept the information obligations. It depends on the overseas pension scheme whether transfers from or to the UK will be accepted and whether the tax authorities in that country will allow a transfer. A transfer overseas may be subject to an Overseas Transfer Charge of 25 % from HMRC which is levied if certain conditions are not met.[367]

Foreign employees who continue their existing overseas pension scheme may profit from UK tax reliefs, known as the UK migrant member relief, if the pension scheme has been registered as a Qualifying Overseas Pension scheme (QOPS) and further conditions are met.

[367] USS, April 2019, *FAQs on transferring out*,
(Available at: https://www.uss.co.uk/~/media/documentlibraries/uss/member/factsheets/transfers-out-faqs-factsheet.pdf).

Chapter 3

How professional mobility can be encouraged within the framework of existing schemes – Obstacles and solutions

Chapter 3

How professional mobility can be encouraged within the framework of existing schemes – Obstacles and solutions

Free movement is one of the fundamental principles of the European Union. Mobility is also a significant requirement in certain professions, in particular in sciences, research and health. Researchers should not suffer any disadvantages to their pension because they are mobile. Often the first question is: can I be exempted from the pension scheme when I do not intend to stay on in the country? The background of this question is that some think they'll be losing whatever entitlement they have acquired when leaving the host country. Consequences of mobility that are perceived by mobile workers in science, research and health as obstacles. Most researchers in public service participate in occupational pension schemes.

Cases where occupational pension provision can be an obstacle to professional mobility

The issue is to promote the mobility of scientists. To recognize the fields of action, it is certainly worthwhile to take a close look at emerging problems. In what situations may a job change have negative effects on researchers' occupational pension claims?

In principle, frequent job changes can result in loss of pension rights in the following cases:

- a scientist often works with short-term employment contracts, meaning that he/she will later have to claim the benefit of many small pension rights in many different institutions;
- the employment contracts are often so short that the required vesting or pre-qualifying periods set forth in the regulations are not reached (resulting in pension gaps);
- A lack of information or lack of awareness of accrued pension rights leads the scientist not to claim rights which in fact exist.

It is difficult to assess the frequency of these cases. It is nevertheless a fact that these consequences on your career are perceived as obstacles for mobile workers. It is a genuine risk of forgetting membership dating back several decades. The increasing number of enquiries from young researchers shows that their professional careers are increasingly marked by a series of fixed-period contracts in different institutions and countries. In how far these features are an obstacle for mobile workers, depends from case to-case a most important from the waiting period/vesting period.
Other main differences in the second pillar provision- if any-can be: financing methods, the qualifying period, the retirement plans (DC/DB or hybrid) and the possibility of cross-border portability. We made an overall comparison of the differences in the second pillar provision in a summary table at the end of this chapter.

Possible solutions for professional mobility

There are different ways in which the goal of mobility can be realised. The possible solutions mooted since 2001 have different approaches which range from the establishment of Pan-European pension funds (particularly suitable to large corporations), encouraging transferability of existing pension entitlements or their cash equivalent values, shortening waiting and vesting periods, coordination or the establishment of a tracking service system. We made a summary of the most important ones. In addition, we concluded with the lessons learned in the course of our Findyourpension project that we will integrate in the upcoming ETS project in order to encourage transparency and clarity in terms of pension systems for mobile worker as well as other citizens. The evolution in cooperation opportunities with other European pension institutions has shifted more and more towards providing pension information and information exchange in the scope of the IORP II Directive. Concrete transfer agreements or portability were less and less considered as possible fields of cooperation during the course of the Findyourpension project.

1 Mutual transfer of the cash equivalent transfer value or portability

As mentioned above, increased mobility is required in the course of scientific careers nowadays. Therefore, researchers have to change their jobs frequently. It is possible for a researcher to accrue pension rights within more than 10 institutions. By transferring the cash equivalent transfer value (CETV) from the previous occupational scheme to the new scheme, it would be possible to reduce the number of pension institutions involved.

Although capital funded DC systems have increased, such transfers may only be possible in the case of vested and funded rights and in compliance with applicable national law. They are not suitable for pay-as-you-go schemes, because there is no capital to be transferred. Transfers cannot be used in countries and schemes, which have a final account system (meaning that the last scheme pays the entire pension to the beneficiary and receives a pro-rata amount from each of the other participating schemes). Even if transfers are not possible in all schemes and all countries, they can be part of the solution to improve professional mobility.

This approach would allow scientists to pool their capital from pensions. However, not many pension institutions would participate or offer capital transfers to their customers due to an inconsistent legal framework, especially in the context of the tax treatment.[368] As each EU-Member state has full fiscal autonomy, portability of (fiscal facilitated) pension capital within the EU is a cumbersome process. This is related to national fiscal facilitation of pension premiums in coherence with the future tax-claims whenever accrued pension capital is paid. All the EU-States with a second-pillar pension provision, have a taxation-system in which there is a fiscal coherence regarding the fiscal treatment of pension premiums (savings), investment returns (investment income) of these premiums and the pensions (payments). Due to this obstacle, many experts give consideration to the fact that portability might involve a great deal of administrative work and might be costly.[369]

Since its version of 2008, the former called portability Directive did no longer contain any provisions regarding transferability. Instead, major changes have been introduced in 2014[370] such as vesting periods and/or waiting periods (combined) in occupational pension schemes have to be limited to a maximum of three years. Where a worker has not yet acquired vested pension rights when the employment relationship ends, the supplementary pension scheme has to reimburse the contributions paid by the outgoing worker, or paid on behalf of the outgoing worker. In addition, the Directive stipulates that Member States must ensure that outgoing workers' dormant pension rights or their values are treated in line with the value of the rights of active scheme members, or the development of pension benefits currently in payment. By other means the directive

[368] EAPSPI, Pensions for the Public sector: Report: mobility and pensions: „Main obstacles of practicing portability", p.74, 2008, http://portal.versorgungskammer.de/portal/page/portal/eapspi/en/download/report_mobility_part1.pdf

[370] European insurance and occupational pension authority (EIOPA), Fourth Consumer trends report:"Transferability of Pension rights", p.49, 18.11.2015, https://eiopa.europa.eu/Publications/Reports/EIOPA-BoS-15-233%20-%20EIOPA_Fourth_Consumer_Trends_Report.pdf

[370] Directive 2014/50/EU of the European Parliament and of the Council of 16 April 2014 on minimum requirements for enhancing worker mobility between Member States by improving the acquisition and preservation of supplementary pension rights https://eur-lex.europa.eu/eli/dir/2014/50/oj

safeguards the nominal value of the rights or adjusting the value of the dormant rights. Occupational institutions also have to provide clear information on how a termination of employment would affect supplementary pension rights at request from the active scheme member.[371]

Furthermore, already in the White Paper on Pensions (2012) cross-border portability had been mentioned in the context of possible tax obstacles. Here, the promotion of other approaches to foster mobility like a pan-European pension fund (for researchers) or the development of pension tracking services was announced.[372] This conclusion seems to be confirmed by the results of different stakeholder's surveys[373] launched by EIOPA, validating that institutions are more or less sceptic with regard to the implementation of a right to cross-border portability.

2 Pan European Products

Other initiatives to support mobile researchers is a Pan-European Pension fund called RESAVER. RESAVER is supporting a consortium of employers, through Horizon 2020, in creating a single European pension plan (RESAVER) that will offer a defined contribution plan, tailor-made for research organisations and their employees.[374] It should enabled employees to stay with the same pension plan when moving between different countries or employers. The problem is that the researcher could only join the RESAVER pension plan regarding the second pension provision, if their organisation joined RESAVER. For now, not a lot of organisations or employees joined the RESAVER pension plan and therefore it is not really wide-spread.

In the meantime, the IORP II further promoted cross-border pension funds and the European Commission adopted a regulation on a pan-European Personal Pension Product (PEPP) thus creating a new, portable vehicle for pension provision in the area of the third pillar at European level.[375] The PEPP legislation's aim is not to harmonise every existing type of personal pension across Europe. Instead, the idea is to create an EU-wide personal pension product that can be offered to EU citizens in addition to the products that are already available at the national level. The PEPP regulation suggests a shift, within pensions, towards more personal savings. From a larger view, it also suggests that the time to retire the pension may be fast approaching, as it's clear that the shift from a state pension to increased personal (and workplace) savings schemes is inevitable.[376]

[371] Article 6 of Directive 2014/50/EU of the European Parliament and of the Council of 16 April 2014 on minimum requirements for enhancing worker mobility between Member States by improving the acquisition and preservation of supplementary pension rights https://eur-lex.europa.eu/legalcontent/EN/TXT/?uri=CELEX%3A32016L2341

[372] White paper on Pensions „An Agenda for adequate, safe and sustainable pensions", Annex I citation 15, citation 17, https://ec.europa.eu/social/BlobServlet?docId=11067&langId=en

[373] „Consultation Paper on a Report on Good practices on individual transfers of supplementary occupational pension rights, Eiopa, European Insurabce abd occupational pensions authority, https://eiopa.europa.eu/Publications/Consultations/EIOPA-CP-15-001_Pensions_Transferability_Final.pdf

[374] The Commission will pursue the on-going work on a pan-European pension fund for researchers. European Commission, White paper on Pensions „An Agenda for adequate, safe and sustainable pensions", Annex I citation 15, https://ec.europa.eu/social/BlobServlet?docId=11067&langId=en

[375] Pan-European personal pension product (PEPP) – Regulation 2019/1238, Regulation (EU) 2019/1238 of the European Parliament and of the Council of 20 June 2019 on a pan-European Personal Pension Product (PEPP), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32019R1238

[376] Pensions Euope, „Position paper on the pan-European Personal Pension Product Proposal", 26 January 2018, https://www.pensionseurope.eu/pensionseurope-publishes-position-paper-pan-european-personalpension-product-pepp

3 Recognition of membership periods

Membership periods within an occupational pension scheme in the European research area could be added together, so that employees with short-term employment contracts could meet the conditions for pre-qualifying periods and other conditions of the same type governing final accrual of rights. Such regulations would have an impact only for schemes which apply pre-qualifying periods. Times could be added together by mutual recognition of periods worked so as to meet the required time frames. An example of this type of approach: mutual recognition of membership periods by supplementary pension institutions of the local and church sector and by VBL in Germany. It should be taken into consideration that this solution requires modifications of legal provisions or statutes and that in many countries only the legislator or the social partners will be able to implement such changes, following the approach of coordination of state pension systems set forth in Regulation EC 883/2004.

4 Improvement and measures regarding information and awareness

Access to information will remain a key aspect of pension provision. This problem exists especially for mobile employees. This can be due to language barriers, but even more so to the different schemes which the people concerned need to be familiar with. The greater the number of pension providers in the career of a researcher, the higher the risk certain accrued rights will not be claimed because of lack in knowledge.

The IORP II Directive has been substantially amended and included since 2017 also general information obligations for the pension institutions to ensure an understandable presentation of the necessary information to their members. The information must be (1) clear, understandable, concise and conclusive and, as far as possible, formulated in general language, (2) presented in a reader-friendly form and (3) regularly updated towards the clients.[377]

In course of the Findyourpension project, it became apparent that, particularly among international institutions, little effort was made to provide or improve information for foreign workers and to offer it in English. In addition to improving the information offered to mobile researchers on the FYP website, the Findyourpension team offered over the years more than 40 pension consultation days at various universities and research institutions during the project period. In total, more than 1600 mobile scientists took part in the events across Germany. The subject of the „Consultation Day" forum was the presentation of basic knowledge on the topic of pensions in Europe and the explanation of the most important features of researchers' pension provision in Germany (statutory pensions and supplementary pensions). In the course of many presentations and discussions, it was possible to achieve a better understanding of the problems and situation of the mobile researchers. During the events, feedback forms on the project were distributed continuously concerning the website and the pension information given as such. The feedback of mobile workers concerning the FYP consultation days and the website as such were moreover positive.[378]

[377] Article 36 from the IORP Directive II DIRECTIVE (EU) 2016/2341 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 14 December 2016 on the activities and supervision of institutions for occupational retirement provision (IORPs) https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32016L2341

[378] The answers received from the assessment of the FYP initiative and consultation days are the subject of the scientific evaluation, which will be included in the annex of this project publication.

Overview of the benefits a citizen has accrued in one single state, can be delivered from National pension tracking services. National tracking Services were installed in European countries and the first services were launched around 2010. At European level, the aim of promoting crossborder portability of pension rights for the purpose of professional mobility has been promoted.

The development of national tracking systems, was first propagated in the European Commission's white paper on pensions.[379]
National Tracking systems should allow people to keep track of their pension entitlements acquired in different jobs and give information of the different pension pillars. National Tracking Services however, are often not accessible for mobile citizens who don't longer work in the foreign countries. Therefore, a European platform where all European citizens-regardless of their nationality – could have access to the different pension information would be a suitable and attractive solution.

5 Phases of the Findyourpension Pension project

The FindyourPension project was provided by the VBL and sponsored by the Federal Ministry of Education and Research from 2011 to 2019 in the context of the EU- Initiative called European Partnership for Researchers. The aim was to develop and operate a pension portal for mobile researchers in order to support the target group in dealing with and building up their personal pension biographies, as well as to explore and promote opportunities for cooperation among employers and pension institutions or providers in the EU/EFTA region. In the framework of the so called FYP Initiative, a network of editors was set up in order to deliver and maintain comprehensive as well as up-to-date information on pension systems.

Already within the first two funding periods, the focus shifted to informing mobile workers about their pension systems. The website created was continuously evaluated and, in accordance with the feedback from users, employers and pension institutions, was revised several times and provided with new functions. At the same time, a support network was set up to ensure that the content was correct and maintained.

The second phase was dedicated to further information gathering and exploring the country conditions with regard to the precautionary status of mobile researchers. At the talks and events held for this purpose, it was also possible to successfully promote the acquisition of further partners. The first version of the data collection and legal comparison was completed and already During the third phase the discussion about a European Pension Tracking Service (ETS) was intensified, whose feasibility was discussed and finally recommended in the so-called Track and Trace your Pensions in Europe (TTYPE) project at many events. Since TTYPE and FindyourPension share the mission to strive for establishing a European pension tracking service, TTYPE acknowledged in the common cooperation declaration, that FYP is a European Pension Tracking Service for mobile researchers al-ready in place and could therefore be used a pioneer for a cross border tracking service for mobile workers within the EU.

[379] „The Commission will promote the development of pension tracking services", taken from the EC, White paper on Pensions „An Agenda for adequate, safe and sustainable pensions", Annex I, citation 17, https://ec.europa.eu/social/BlobServlet?docId=11067&langId=en

The first submission of a project proposal was planned for the end of May 2017, so that by the end of the third phase in March 2017 the future financing had not yet been clarified. The number of users and the interest of the target group, which was evident on the numerous consultation days, remained succesfull. However, the evaluation showed that the search function had to be improved. Due to the difficult subject matter, the length of stay and user satisfaction could still be optimised and potential for improvement could be identified.

The Findyourpension project applied for the funding of a fourth phase, where we prepared the proposal of the ETS and did at the same time a relaunch on the Findyourpension website. The Findyourpension relaunch included a significant improvement of the search functions and the first introduction of a content presentation in layers for basic and advanced users. In terms of content, we have already worked on a concept for extending and transferring the content to an ETS, a second application was successful in May 2018, so that the transition to an ETS under the Findyourpension brand began with the project launched on 1 January 2019.

Conclusion: User-centric development of an European Tracking Service on Pensions (ETS)

The FYP network, in particular the close involvement of the members of the two associations ESIP for the state pension schemes and EAPSPI for the supplementary pension scheme for the public service, has supported the project at all times and will now also be integrated into the new structure. The project ends with a cooperation of eight partners within the ETS project. A consortium of experienced European pension stakeholders has taken up the challenge to carry out a European Commission action to develop the Pilot stage of a European Tracking Service on Pensions (ETS). The different partners where FYP cooperate with are National Tracking Services like Sigedis (Belgium) and Minpension (Sweden), Pension providers and institutions like APG (the Netherlands), Federal Pensions Service (Belgium), Pensionsmyndigheten (Sweden), PGGM (the Netherlands) and AEIP (European Association of Paritarian Institutions.

In the first phase the ETS (Pilot) will offer general information on pension landscapes in a wide range of European countries and help mobile workers in finding their pension providers in at least five Member States. Main goal of the service is to provide cross border and other professionally mobile workers an insight in their personal pension situation. We learned from the Findyourpension project that merely providing information helps mobile workers, but is not accepted and implemented by everyone, as pension provision is obviously a difficult and rather frustrating matter for scientists as well. For this reason, information should always be tailored to the individual and, as far as possible, presented in an individualised way, indicating the amount of pension entitlements acquired in every situation.

The aim for the ETS project is to have a website based on the Findyourpension website with a more customer centred design. This customer-centred approach is still barely practiced in the field of Pension communication. The reason why this is barely practiced is the complexity of the pension topic as such, as the often detailed legal requirements as well. Pension information design on platforms like FYP should apply a holistic approach (in terms of pillars). In order to be able to obtain an overview of pension entitlements, or to have a successful pension planning tool, the user needs a certain amount of information or at least have some previous basic pension knowledge. If this basic knowledge is not available, the risk exists that the first use of the website may lead to frustrations and that the user will click away. Examples of this would be a lack of knowledge of the different sources/columns and the fact that pension entitlements possess no different disbursement modalities. If a user lands on the homepage of the ETS and only sees a table of entitlements from different pension sources, this could lead to an overwhelming feeling. In the worst case scenario, further engagement with the pension topic will be avoided.

In order to shape a successful website, national particularities and different user horizons (according to the age, background, life situation, etc.) should be taken into account. Tailor-made solutions should be shaped to individual needs in order to have more transparency. Therefore, the goal on the ETS website is to offer information in the form of a „Guided Tour". It comes here to on a good structure and preparation of the content, so that information will only be used and showed where it seems relevant. Main features to adapt to the customers need would be the use of Layering, "a basic layer" with basic pension key information and an "Advanced layer" with more detailed information. After the relaunch of the FYP website, we also tested the use of icons for pension key information. In order to avoid „pension information overload", layering and icons are perceived as very positive by the users. Nevertheless, some particular icons are not clear and not meaningful for users (like for example: indexation). Therefore the continuous process of user testing is key.

For this reason, platforms like FYP should less focus on comparability of different entitlements and more focus on the strengthening of users 'competences (pension literacy). Especially in the search function, information should be offered in small pieces and not just as a parallel glossary or separate menu items with longer explanatory texts. Layering and glossary with the different technical terms in multi-languages would be even more helpful. In order to build-up a European Tracking website successfully findings of the behavioural science and recent studies on the design of pension communication should as much as possible be included. In the next chapter you will find the results of our user surveys we did in order to track the usability of the existing Findyourpension website and these results of the FYP project should be taken into account when designing the ETS.

Summary of Researchers' Occupational Pension Schemes' Features:

The following table summarizes important differences in occupational pension scheme features for researchers.

Country	System	Financing	Qualifying Period	Retirement benefit plans/ promises	Crossborder portability
Austria	Valida VBV APK and other pension funds	Funded	Waiting period: 2 years	DC	Yes
Denmark	MP Pension	Funded	None	DC	No
Germany	VBL ★ Mandatory insurance – VBLklassik	Financing pool West Germany: Pay-as-you-go Financing pool East Germany: Hybrid	5 or 3 years depending on employment For the full insurance 5 or 3 years depending on employment	DB	No
	★ Mandatory and/or voluntary insurance – VBLextra	Funded	None	DC with minimum guaranteed rate of return	Yes
Ireland	Single Public Service Pension Scheme	Pay-as-you-go	2 years	DB	Yes
Netherlands	Stichting Pensionesfonds ABP	Funded	None	DB	Yes
Norway	SPK (state employees)	Pay-as-you-go	3 years	DB From 2020: DC (notional)	No
Slovenia	Modra Zavarovalnica – Pension Fund for Civil Servants, KPSJU –	Funded	None	DC	Yes
Sweden	SPV ★ Born in or after 1988: Kåpan Tjänste, Kåpan Flex, selectable part ★ Born before 1988: Kåpan Tjänste, selectable part, definedbenefit part	Hybrid	None	DC/DC	No

Country	System	Financing	Qualifying Period	Retirement benefit plans/ promises	Crossborder portability
Switzerland	Cantonal pension funds or specific pension Funds (e.g. VSAO) ★ Obligatory insurance scheme ★ Superobligatory insurance scheme	Funded or Hybrid	None	DC/DB	No
United Kingdom	USS	Funded	2 years	DC/DB	Yes

Scientifically-based evaluation of the FYP website

Final report 31/08/2019

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Summary

Objective

To carry out a scientifically-based evaluation of the FYP website, taking into account the relevant stakeholders by means of specific evaluation criteria. The aim is to assess the legitimization and optimization as well as derivation of concrete recommendations for action.

Methods

Evaluation by means of quantitative and qualitative methods based on hard copies of surveys carried out at events, the online survey on the FYP website and a follow-up survey of the subject group as part of an eye-tracking study. This was supplemented by an eye-tracking study on responses to questions about the perception of certain elements and the information conveyed by the FYP website as well as the use thereof.

Key findings

All the various surveys showed that the initiative with the aim of a transnational and cross-pillar platform on the subject of retirement provision was actively welcomed. With regard to the knowledge of those surveyed about finance and pension provisions, in general a rather low level of knowledge should be assumed. Interest in an interactive and playful approach to the complex issue of pension provision is high. For many of those questioned, the subject of data protection and data security is of concern.

Recommendations for action

- The approach taken of layering information as well as the use of icons to make the complex issue of pension provision more accessible should certainly be continued. For the use of icons in particular, the recognizably and classification of the icons needs to be improved. To this end, interviews with focus groups of laypeople and a repeated evaluation of the modifications through accompanying eye-tracking studies on a redesigned website are recommended.
- As many respondents wanted an interactive and playful approach to the complex issue of pension provision, this should be taken into account when designing the website. Gamification elements could be used for this, whose purpose is to motivate website users to engage with the topic for longer and to develop a bond through game features. Gamification essentially includes three areas: Entertainment and fun through storytelling, performance measurement and assessment as well as competition and reward. Elements such as interactive stories and solving tasks with progress bars and bonus points are motivating for users, even on such complex issues.
- A concept for transnational and cross-pillar information on pension provisions should focus, first and foremost, on the requirements from the perspective of the consumers, and less on the requirements of the responsible bodies e.g. politics or individual states. In addition, reference should be made to theoretical insights of behavioral economics as well as the more practically-based evaluation of the FYP initiative.
- Those surveyed would like close attention to be paid to the issue of data security and data protection.

1 Introduction

1.1 Client and initial situation

Pension provision for public-sector pensions

The public institution for federal and state pensions (VBL) is Germany's largest provider of supplementary pensions. Its first class pension scheme helps millions of public sector employees to have a better quality of life in old age or when they have a reduced earning capacity or for their surviving dependants. The labor law principles are regulated in the public service collective pension provision agreements. The services offered range from old-age and survivors' pensions and incapacity allowances for public sector workers under the collective agreements for compulsory insurance to an insurance product on a voluntary basis for additional, fully-funded old-age provision. The VBL is an institution funded by federal and state governments with the legal status of a public-law institution. For over 80 years public sector employers have entrusted VBL with the occupational pensions of their non-civil-service employees. Currently VBL manages occupational pensions for more than 5,400 employers. As well as federal and state governments, numerous municipalities and municipal institutions, these also include, for example, hospitals, universities and retirement homes as well as other organizations which perform duties in a broad sense for the general public.

FindyourPension

VBL has been running the project, "FindyourPension" (FYP), since April 2011 with financial support from the Federal Ministry for Education and Research. The purpose is to build and maintain a website which provides mobile researchers with information about their pension systems in Europe. In a personal area, once users have agreed to the terms and conditions and registered, they can save their career stages with the employers listed and with the assigned pension providers. Inputting future pension entitlements and an aggregation are also possible. The entire content of the website is prepared and updated by the Department for International Affairs and Association work at VBL (VS20) through cooperation with employers and more than 50 pension institutions in Europe. Maintenance of the network is therefore also part of the project work. So far, information, which is in part extremely detailed, about pension provision systems in 19 countries is available on the website. FYP is the first supranational pension tracking service in Europe. The list of occupational pension institutions so far only refers to the group of researchers in the public sector.

1.2 Scientifically-based evaluation of the FYP website

Evidence-based evaluation

Scientific evaluation uses social science methods to assess a target of evaluation (e.g. a website) by considering the relevant stakeholders (e.g. the users of the website) on the basis on certain evaluation criteria (e.g. acceptance, effectiveness, efficiency and sustainability) and specifications on their characteristics. The assessment obtained as a result of the process of evaluation should perform different functions in practice (e.g. a legitimization or optimization function as well as identifying recommendations for action). Addressing the evaluation results in practice (e.g. supported by written reports and evaluations) is in turn up to the client. Scientific standards Evaluation research is bound by the usual principles of scientific methods and science and research ethics as well as the compulsory evaluation standards as quality standards for evaluation studies (e.g. the DeGEval standards of utility, feasibility, propriety and accuracy). As regards the questions and targets, but also the time and budget guidelines, they are aligned with the clients who are financing the study.

1.3 Data basis

Preparation of qualitative and quantitative data

Computerized processing of the quantitative data (preparation and commenting, anonymisation, data cleansing, data transformation of the quantitative data set) took place on the basis of

- surveys at events, available in paper form,[1]
- the online survey on the FYP website[2] and
- the follow-up survey of test subjects as part of the eye-tracking[3]

This was followed by a computerized data analysis (description of samples and presentation of data in tables and/or graphs, data inspection and descriptive statistical analyses, inferential statistical analyses, visualization of the results and content-related interpretation of the statistical results) through the use of general statistics program packages such as R or STATA. Processing and analysis of free text was based on qualitative methods.

Surveys at events (Surveys at events)

The sample size amounted to 421 questionnaires and 28 questions (in addition, ID, the event venue and the event date were recorded). For various reasons there was some missing data. Firstly, this is due to the technical reason that identical questionnaires were not used at every event and questions were gradually supplemented over time. Therefore it is physically impossible for there to be complete feedback for all 421 cases. Secondly, on paper questionnaires, respondents can leave out questions, e.g. overlook a question, consciously skip a sensitive question and deliberately or accidentally give an invalid answer. In line with Döring und Bortz (2016), it must be emphasized that missing individual values in a data set are usually unproblematic. It is trickier, however, if there are many missing values and if these occur systematically frequently among certain (groups of) people or variables. By default, statistical programs mostly take the approach of excluding the missing values on a case-by-case or on a variable-by-variable basis from the

[1] Sample questionnaire see Annex 1
[2] Sample questionnaire see Annex 2
[3] Sample questionnaire see Annex 3

analysis. Filtering approaches lead, albeit frequently unnoticed, to distortions in the results, especially if missing values systematically occur in a sub-population. Therefore differentiation was made depending on whether a gap in a person's data set occurred a) because they had not even been given the question, b) they clearly have no opinion on the issue in question, and c) they refuse to give information on a personal question. This corresponding differentiated coding of missing values can be considered in later analyses. In this report, analysis initially referred solely to the number of questions answered; missing data was therefore not taken into account.

Surveys at FYP events (paper questionnaire)
421 questionnaires
28 questions
Survey period 2012-2018

Online survey on the FYP website (Online survey on the FYP website)

When using the FYP website, visitors to the website were asked to complete a voluntary survey. The sample encompasses 91 questionnaires and 22 questions (ID and a section for comments were additionally included), on the one hand for the FYP website and on the other on the topic of finance and pension provision in general. For various reasons there was also some missing data here, particularly when respondents terminated the survey (see above for explanation).

Survey of visitors to the FYP website (online survey)
91 questionnaires
22 questions
Survey period 2017-2018

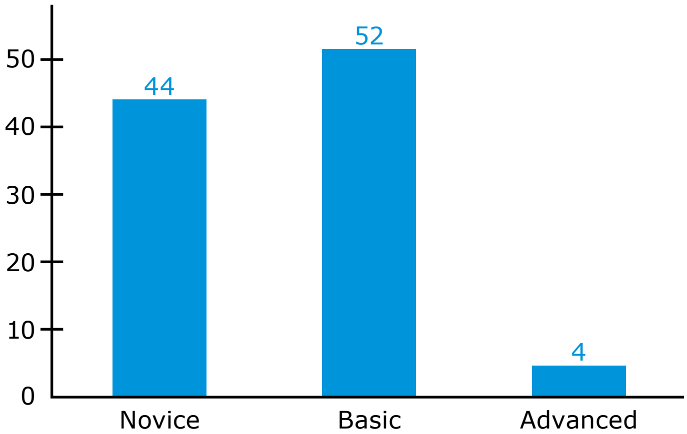
Follow-up survey of test subjects as part of the eye-tracking (Survey of eye-tracking subject group)

A supplementary follow-up survey of the subject group took place as part of the investigation in the eye-tracking laboratory. The sample size encompasses 20 questionnaires and 22 questions (ID and a section for comments were additionally included), on the one hand for the FYP website and on the other on the topic of finance and pension provision in general. For various reasons there was also some missing data here, particularly when respondents failed to give answers (see above for explanation).

Survey of eye-tracking subject group (paper questionnaire)
20 questionnaires
22 questions
Survey period July 2019

2 User group

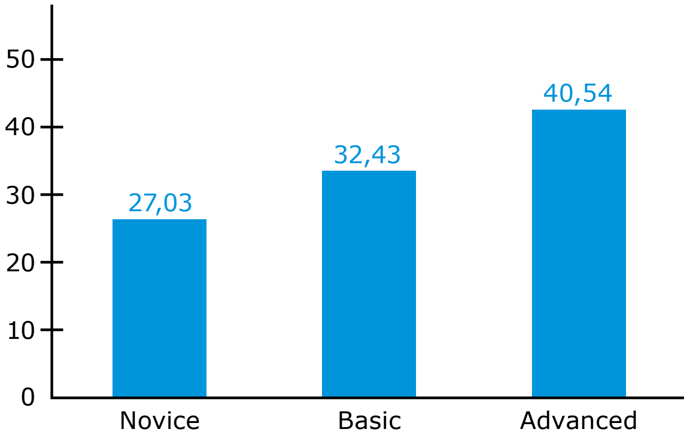
2.1 Pension scheme knowledge



Source: Surveys at events. Own calculations (N=150).

Novice and basic knowledge predominate at events

44 % of respondents considered themselves as novice on the subject of pension provisions, 52 % described themselves as only having basic knowledge. Only a very small proportion of respondents (6 people, or 4 %) felt they had in-depth knowledge of pension provisions.



Source: Online survey on the FYP website. Own calculations (N=74)

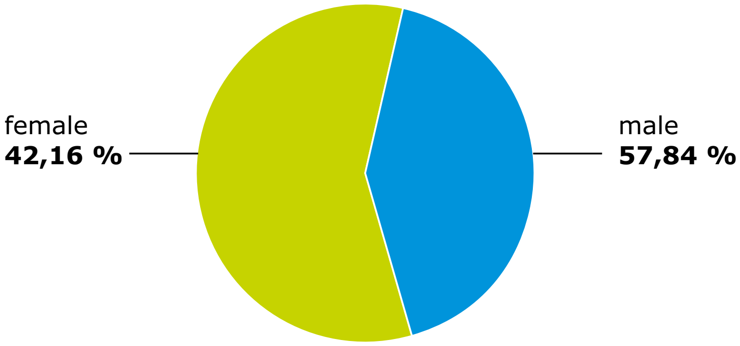
In-depth knowledge amongst visitors to the FYP website

The reverse picture emerges for surveys on the FYP website. Here, only 27.03 % of respondents considered themselves as novice on the subject of pension provisions with 32.43 % describing themselves as having basic knowledge. The largest proportion of respondents (40.54 %) felt they had in-depth knowledge of pension provisions.

Different user groups as a reason?

The self-evaluation of the pension scheme knowledge and the widely differing results for surveys at events compared with surveys on the FYP website seem to indicate that these are very different samples. It is possible that visitors to the website may already be interested in pension provision and that they also took part in the survey on this subject due to their interest.

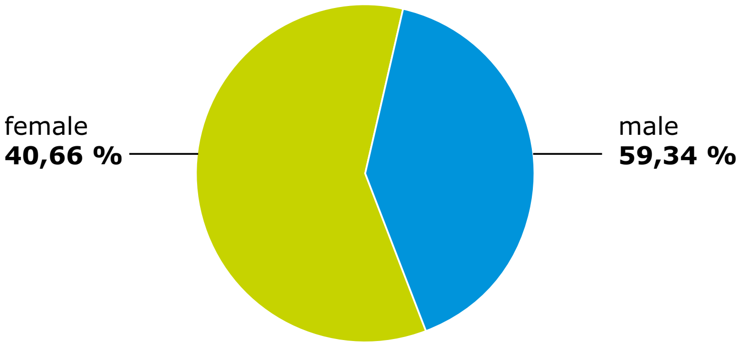
2.2 Sex



Source: Surveys at events. Own calculations (N=102).

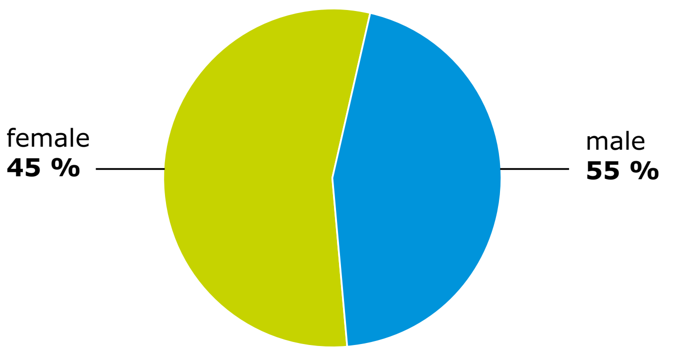
Men predominate – a common picture in science and research

43 respondents stated that they are female (42.16 %), 59 respondents stated that they are male (57.84 %).



Source: Online survey on the FYP website. Own calculations (N=91).

37 respondents stated that they are female (40.66 %), 54 respondents stated that they are male (59.34 %).

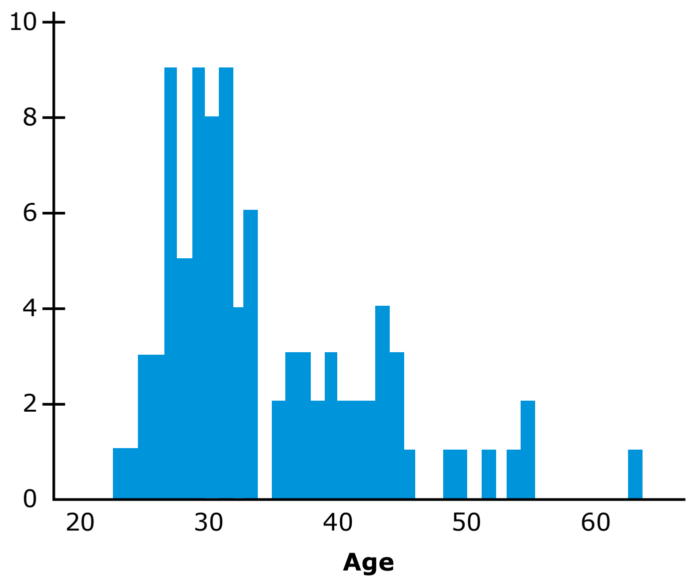


Source: Survey of eye-tracking subject group. Own calculations (N=20).

Nine respondents stated that they are female (45 %), eleven respondents stated that they are male (55 %).

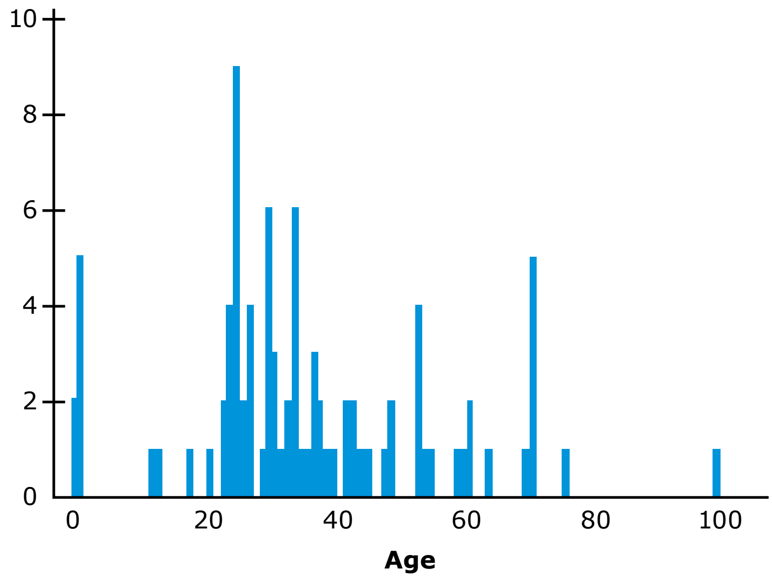
Across all three data sets, a greater proportion (between 55 and almost 60 %) of respondents was male. This is a common picture for gender distribution in science and research.

2.3 Age



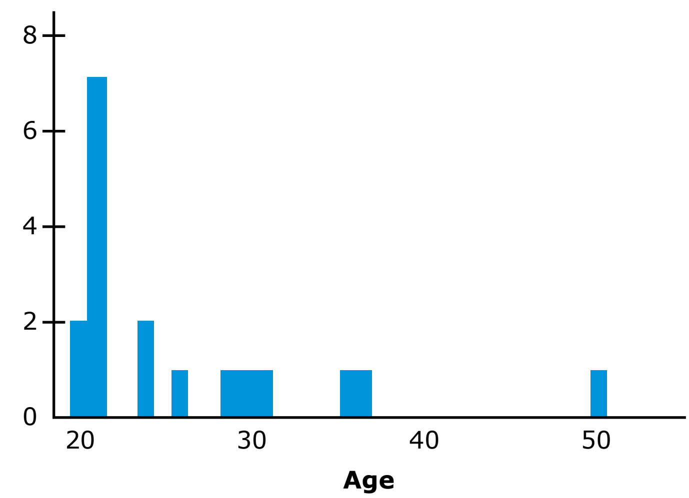
Source: Surveys at events. Own calculations (N=92).

92 respondents gave data about their age. The average age was 35.01 years (with a standard deviation of 7.83 years). The lowest age recorded (minimum) was 24, the highest age (maximum) was 63.



Source: Online survey on the FYP website. Own calculations (N=88).

88 respondents entered information about their age, although at times with implausible data such as ages 0, 1 and 99. If we discount these implausible values, the average age was 38.3 years (with a standard deviation of 15.45 years). The lowest age recorded (minimum) was 12, the highest age (maximum) was 76.



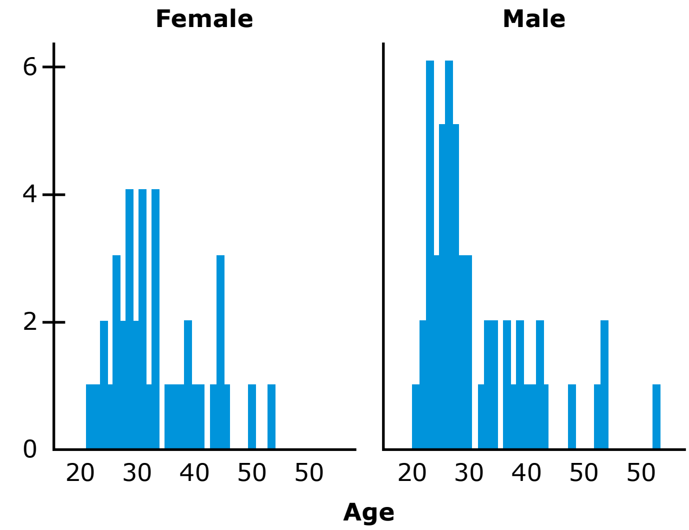
Source: Survey of eye-tracking subject group. Own calculations (N=18).

18 respondents gave data about their age. The average age was 25.39 years (with a standard deviation of 8.22 years). The lowest age recorded (minimum) was 19, the highest age (maximum) was 50.

Large age differences with a broad distribution

The age distribution, including the average age and standard deviation (to measure the dispersion) is very large across the three data sets. However, it appears questionable whether the respondents always gave the correct information, at least for the online survey on the FYP website. The results for this data set should therefore be scrutinized critically in respect of age.

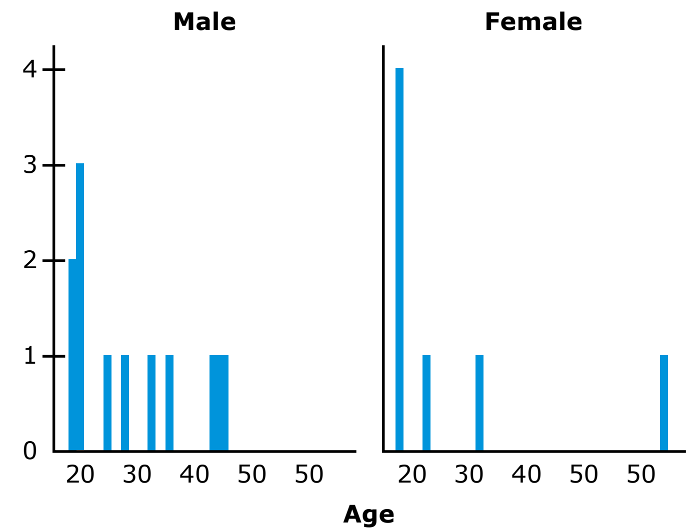
2.4 Age separated for both sexes



Source: Surveys at events. Own calculations (N=92).

The average age for men and women is practically identical (women 34.37 years, men 35.61 years), whereby the age distribution amongst men is somewhat higher (standard deviation 8.38 years) than amongst women (standard deviation 7.02 years).

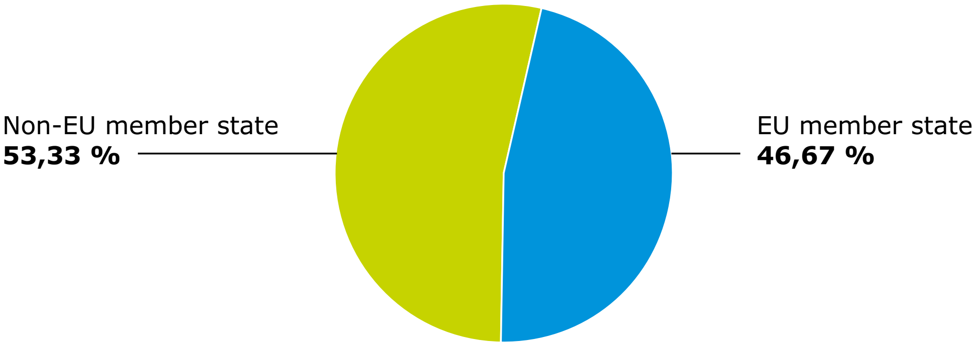
Due to the fact that the information about age needs to be scrutinized critically, it was decided not to include a diagram for age, separate for both sexes, for the online survey on the FYP website.



Source: Survey of eye-tracking subject group. Own calculations (N=18).

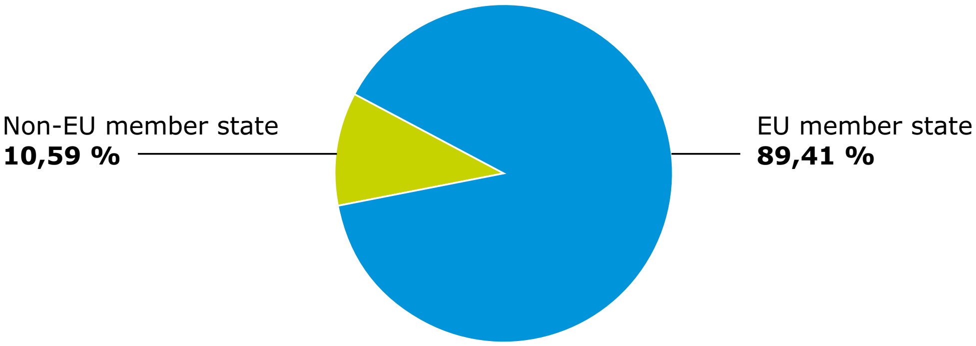
The average age for men and women is practically identical (women 26 years, men 25 years), whereby the age distribution amongst women is somewhat higher (standard deviation 11.09 years) than amongst men (standard deviation 6.37 years).

2.5 Origin



Source: Surveys at events. Own calculations (N=150).

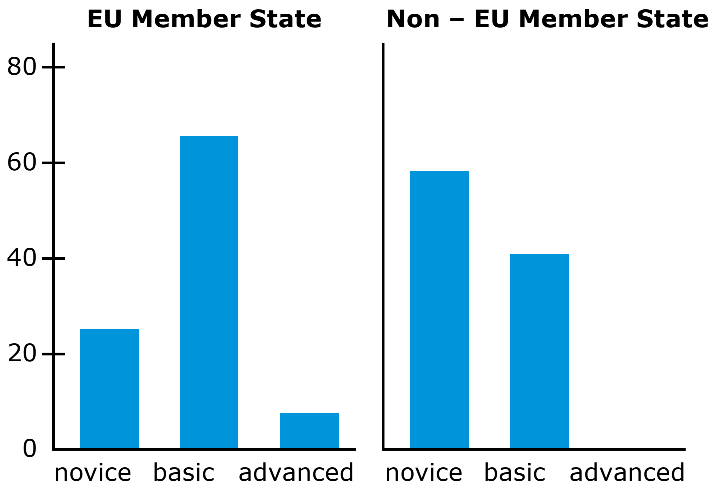
A larger proportion of respondents said they came from a non-EU member state (80 people), with a smaller proportion from an EU member state (70 people).



Source: Online survey on the FYP website. Own calculations (N=85)

The reverse picture emerges for the online survey regarding origin. Here, almost 90 % of respondents said they came from an EU-member state with only a small proportion of respondents who said they came from a Non-EU member state (9 people). Regarding naming the EU member state, the countries mentioned most frequently were Germany (37.65 %), Belgium (18.82 %) as well as Italy and the Netherlands (both 7.06 %).

2.6 Pension scheme knowledge by origin



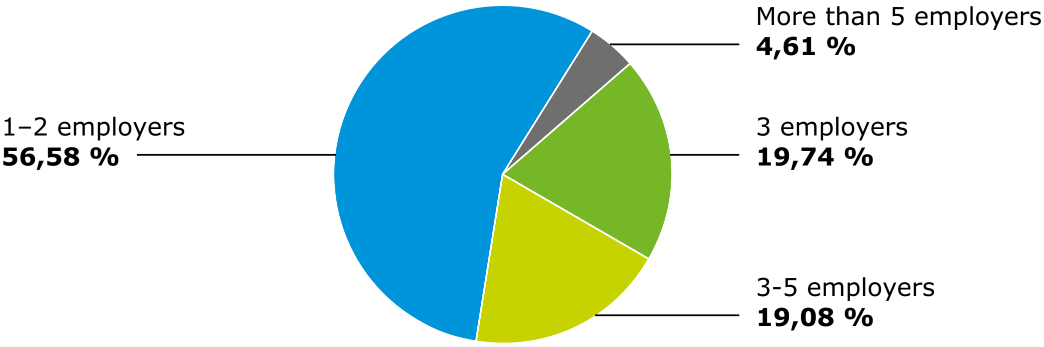
Source: Surveys at events. Own calculations (N=150).

Large differences in pension provision knowledge among respondents from the EU and non-EU countries

There are large differences in the appraisal of pension provision knowledge between respondents from EU and non-EU member states. Respondents from non-EU member states considered their level of knowledge to be significantly lower: 58.23 % described themselves as novice and 41.77 % as someone with basic knowledge. No respondents from non-EU member states said they had indepth knowledge of pension provision. A different picture emerged among respondents from EU countries: 65.22 % had basic knowledge; only 26.09 % described themselves as novice. Respondents who said they had extensive knowledge of pension provision all came from EU member states.

Due to the very low proportion of people from non-EU member states (N=9), it was decided not to include an analysis of pension provision knowledge by origin for the online survey on the FYP website.

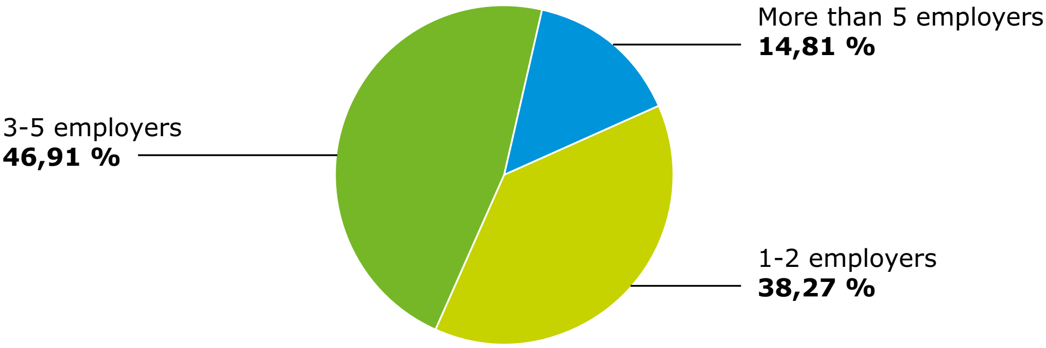
2.7 Number of employers



Source: Surveys at events. Own calculations (N=152).

Different employers are the rule

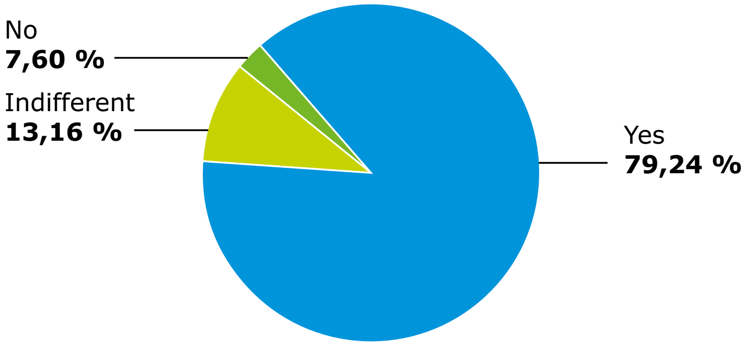
More than half of respondents said they had had one or two employers to date. Only a small proportion of respondents (4.61 %) had to date more than five employers. 38.82 % of respondents had to date between three and five employers.



Source: Online survey on the FYP website. Own calculations (N=81).

Due to the slightly differing response categories, the online survey on the FYP website reveals a different picture. The proportion of respondents with only one or two employers is just 38.27 %, with 46.91 % stating they have had three to five employers (38.82 % for those surveyed at events). The proportion of respondents with more than 5 employers is considerably higher at 15 % than those surveyed at events.

2.8 Better understanding of the pension provision situation in Germany

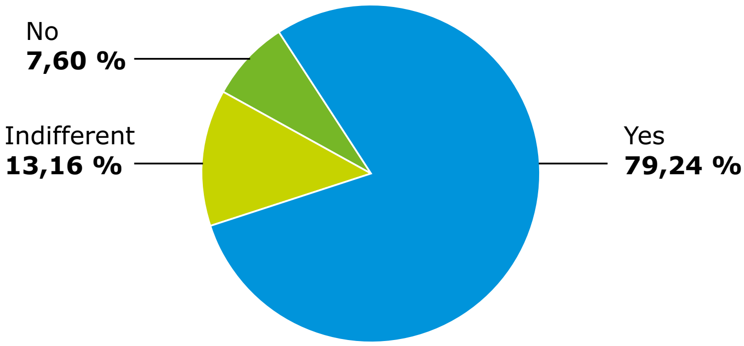


Source: Surveys at events. Own calculations (N=371).

Better informed after event visit

Almost 98 % of respondents said they had better knowledge, or in some instances, better knowledge about pension provision in Germany after an event. Some respondents added a handwritten note saying that the topic is very complex and the presentations were clear, explicit and informative and they would like events like this to be held more frequently. Only ten respondents said that they did not feel better informed after attendance at an event.

2.9 Consideration of individual questions and concerns



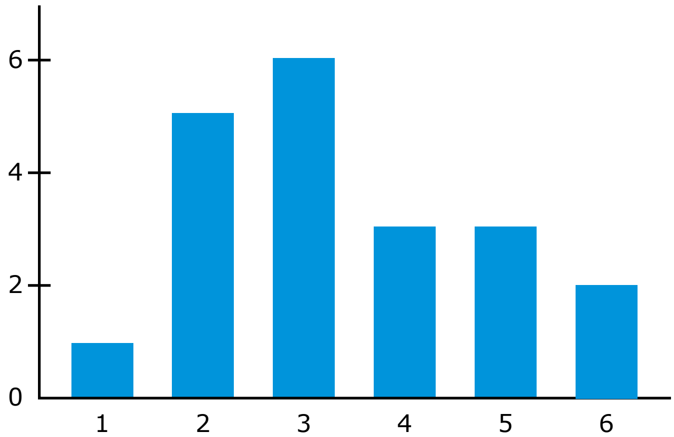
Source: Surveys at events. Own calculations (N=342).

Personal questions and concerns were addressed

Almost 93 % of respondents said that personal questions and concerns were fully or partially addressed during an event. Some respondents added a handwritten note saying that questions were answered in far more detail than they had expected and that they were also able to benefit from the questions asked by others. A few respondents were rather confused by the wealth of detailed information and others would have liked the information before signing their employment contracts. Only 26 respondents said that their individual questions and concerns were not answered as e.g. nothing was said about civil servants or because their personal biography is very complex.

3 Financial Literacy und Pension Literacy[1]

3.1 Subjective assessment of knowledge about the subject of finance



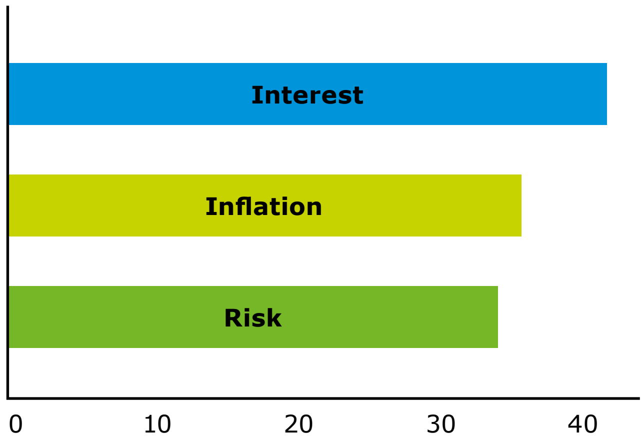
Source: Survey of eye-tracking subject group. Own calculations (N=20).

Low level of subjective financial literacy

The respondents provided information on their personal assessment of their knowledge on the subject of finance (1=very low to 7=very high) (Question 12, Annex 3). 60 % of respondents said they only had a limited level of financial literacy (1-3); no-one indicated a very high understanding of finance (7).

[1] The term "financial literacy" comes from English-speaking countries and is often translated and used interchangeably in German literature with the terms Finanz-Alphabetismus (financial literacy), ökonomische Bildung (economic education), finanzielle Allgemeinbildung (general financial knowledge) and Finanzwissen (knowledge of finance). The term 'pension literacy' is derived from this and targets knowledge and

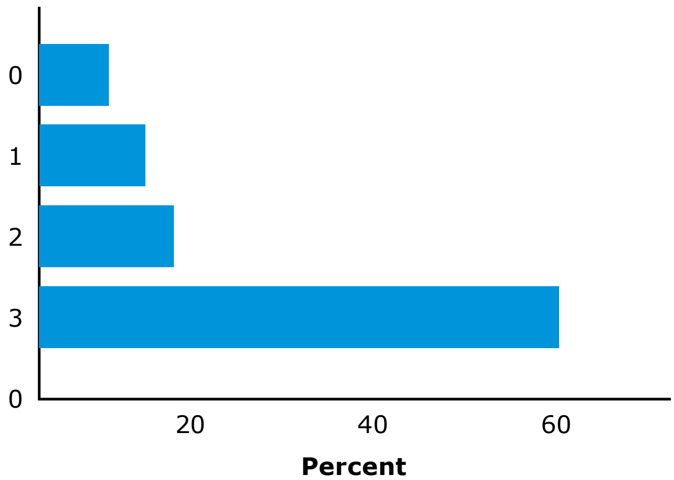
3.2 Objective assessment of financial knowledge (financial literacy



Source: Online survey on the FYP website. Own calculations (N=91).

Large-scale lack of responses for objective financial literacy

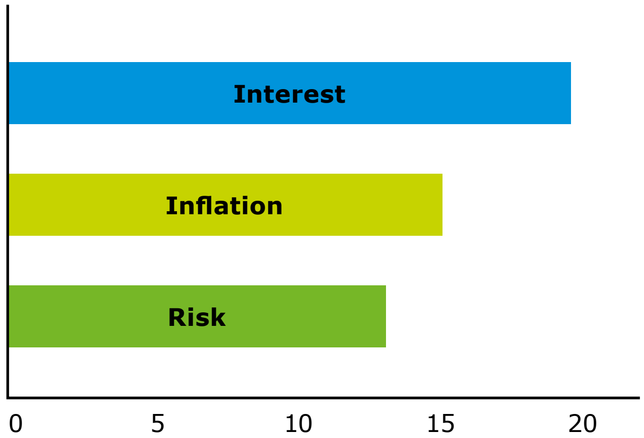
The use of the three well-known questions by Lusardi und Mitchell (2011) for the objective measurement of general financial knowledge or financial literacy (questions 13 to 15, annex 3) showed that 42 people or 46.15 % of respondents were able to correctly answer the question on interest, 37 people or 40.66 % respondents answered the question on inflation correctly and 35 people or 38.46 % of respondents got the question on risk diversification correct. However, it must be remembered that these questions were asked last and many respondents had given up answering questions before this point. If we only consider the respondents who actually answered the question (the 'drop outs' are therefore excluded), the proportion of correct answers was 84 % for interest rates, 77.08 % for inflation and 38.46 % for risk diversification.



Source: Online survey on the FYP website. Own calculations (N=50).

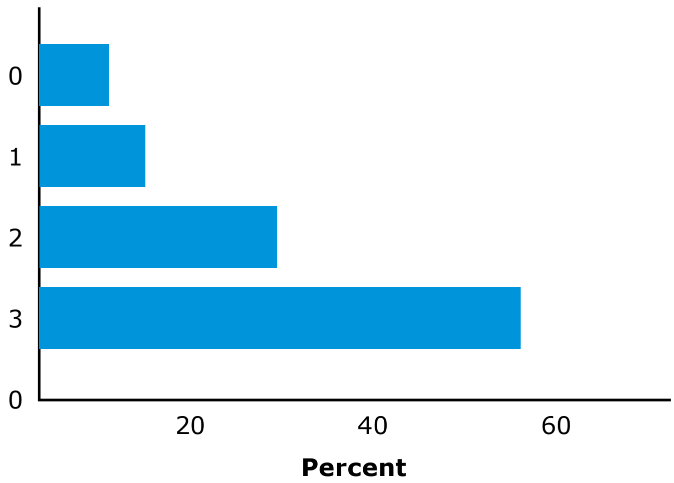
Wide variation in cumulative financial literacy

As the financial literacy index[1] shows, only 60 % of respondents (of those who were actually confronted with the question) were able to answer all three questions correctly, with a further 18 % able to answer two questions correctly. 22 % (eleven people) didn't answer any questions correctly or were only correct on one question.



Source: Survey of eye-tracking subject group. Own calculations (N=20).

The use of the three well-known questions by Lusardi und Mitchell (2011) for the objective measurement of financial literacy (questions 13 to 15, annex 3) showed that 95 % of respondents were able to correctly answer the question on interest, 75 % answered the question on inflation correctly and 65 % got the question on risk diversification correct.

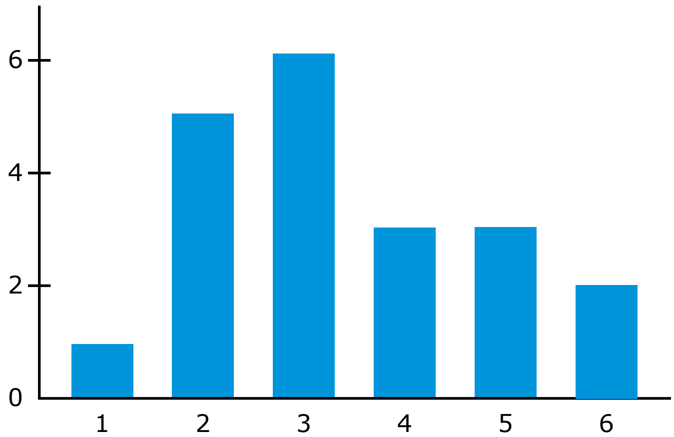


Source: Survey of eye-tracking subject group. Own calculations (N=20).

As the financial literacy index shows, only 55 % of respondents were able to answer all three questions correctly, with a further 30% able to answer two questions correctly. 15 % (three people) didn't answer the questions at all or only answered one question.

[1] In addition to the individual evaluations, the sub dimensions have been amalgamated into a financial literacy index. This index gives every respondent a value between 0 (no questions answered correctly) and 3 (all questions answered correctly)

3.3 Subjective assessment of knowledge about the subject of pension provisions

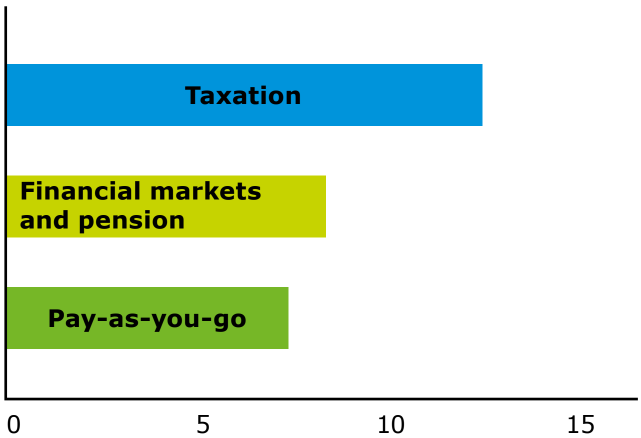


Source: Survey of eye-tracking subject group. Own calculations (N=20).

Lower subjective pension literacy than financial literacy

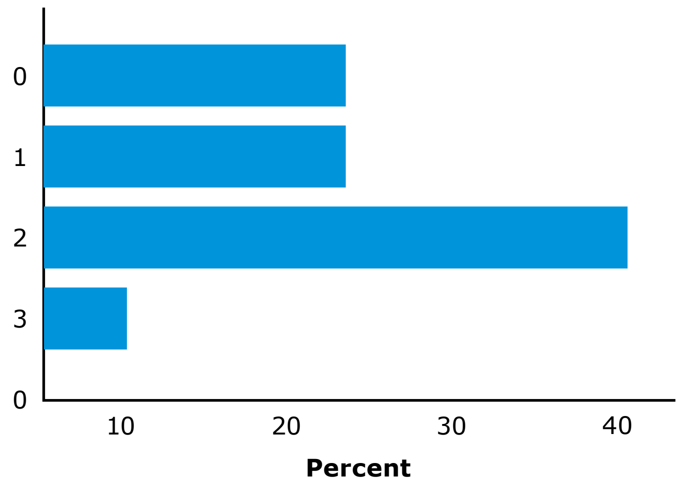
The respondents provided information on their personal assessment of their knowledge on the subject of pension provision (1=very low to 7=very high) (Question 18, Annex 3). This shows that they assessed this level of knowledge lower than their financial literacy: 80 % of respondents said they only had a limited knowledge of pension provision (1-3); no-one indicated a very high knowledge of pension provision (7).

3.4 Objective assessment of pension provisions (pension literacy)



Source: Survey of eye-tracking subject group. Own calculations (N=20).

The use of the three well-known questions by the Consumer Finance Research Center (CFRC) at the University of Rome "Tor Vergata" for the objective measurement of knowledge of pension provision (pension literacy) (questions 19 to 21, annex 3) showed that 60 % of respondents were able to correctly answer the question on taxation, 40 % answered the question on the relationship between financial markets and pension funds correctly and 35 % got the question on the pay-asyou-go system in the statutory pension insurance scheme correct.



Source: Survey of eye-tracking subject group. Own calculations (N=20).

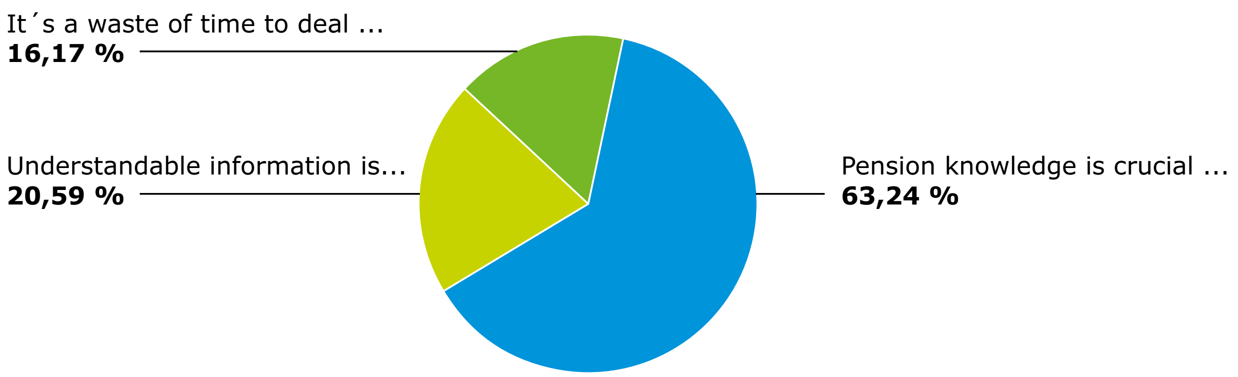
Objective pension literacy levels also low

As the pension provision index[1] shows, only 10 % of respondents were able to answer all three questions correctly, with a further 40 % able to answer two questions correctly. 25 % didn't answer any questions correctly and a further 25 % were only correct on one question.

This shows very clearly that the respondents' knowledge on the subject of pension provision is considerably lower than their knowledge of finance in general, both subjectively assessed as well as objectively measured.

[1] The sub dimensions have been amalgamated into a pension literacy index, in the same way as the financial literacy index was created. This index gives every respondent a value between 0 (no questions answered correctly) and 3 (all questions answered correctly)

3.5 Relevance of knowledge about pension provisions and pension plan information



Source: Online survey on the FYP website. Own calculations (N=68).

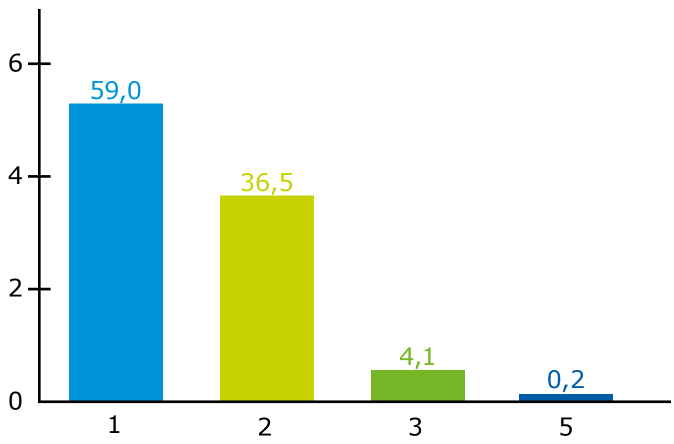
Relevance of knowledge about pension provisions is certified

The respondents gave their view on the question about the extent to which they consider information about the pension provision system relevant and they had a choice of three response options: Knowledge is crucial or very important for financial planning; comprehensible information is worth reading or engaging with the issue of pension provision is a waste of time.

The majority of respondents (63.24 %) said that in their view, knowledge about the pension provision system is very important for individual financial planning in old age. 20.59 % said that comprehensible information is worth reading and only 16.18 % were of the opinion that the topic is not worth bothering about.

4 Evaluation of the FYP initiative and the FYP project

4.1 Opinion on the FYP initiative



Source: Surveys at events. Own calculations (N=383).

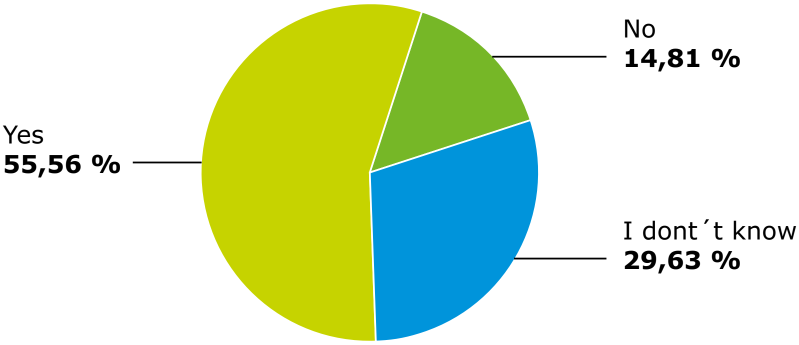
Very positive feedback on the FYP initiative

The open-ended written feedback given by respondents on the FYP initiative was translated into German school grades (1=very good, 2=good, 3=satisfactory, 4=sufficient, 5=unsatisfactory), in order to be able to carry out an analysis. This revealed very positive opinions – almost 96 % of respondents evaluated the FYP initiative as very good or good.

Source: Surveys at events. Word cloud on the basis of the open-ended feedback

At this juncture, a few selected opinions from respondents are quoted as examples which are representative of much of the other feedback.

- „Excellent initiative. Progress and development in this project are obvious, and I think, due to the enthusiasm of the people in charge (most of whom we met at the Event on December 6th). However, the page can be further improved by adding much more information. There should not be missing EU countries, for example ... Difficult task, of course.“ (ID 7)
- „I think it is great to have the overview of all possible funds where someone could have contributed during the working life in one Website and the possibility to save individual data in there.“ (ID 104)
- „I think it is very useful to have a single point of reference for all my pension-related questions. I expect it to help remove the frictions in the EU labor market. Primarily best labor force mobility“ (ID 160)
- „It is a very useful initiative, especially considering the complexity of all country pension schemes and our mobility. So, go on!“ (ID 226)
- „I think it is a great idea to inform researchers who are working abroad and changing locations. Pensions can be confusing, so having basic information available online is very helpful.“ (ID 359)
- „great initiative that should be recommended to international scientists when they start their contracts“ (ID 393)



Source: Online survey on the FYP website. Own calculations (N=54).

FYP website supports the mobility of researchers.

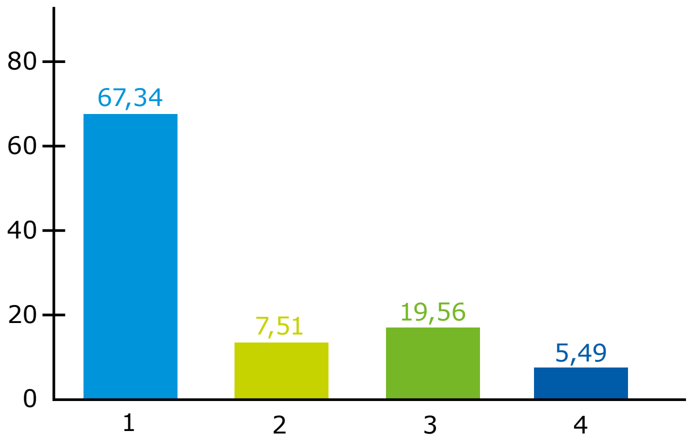
As part of the online survey on the website itself, the question was asked whether the project helps researchers to be mobile. The possible answers were Yes/No/Don't know. A high proportion of 29 % said they did not know, possibly to avoid having to answer or because they really could not answer the question. But around 56 % of respondents answered in the affirmative (30 people) and only approx. 15 % answered no (eight people).

4.2 Usefulness of the FYP website

Source: Surveys at events. Word cloud on the basis of the open-ended feedback

Selected representative comments from respondents:
- „might be, too many missing EU countries!" (ID 91)
- „Yes, especially if the private account function works well to keep track of your memberships" (ID 94)
- „Yes. I will use it to view my pension state and also help to take decisions." (ID 289)
- „I think so. I will definitely look into it in more detail and recommend it to my international colleagues" (ID 291)
- „partly – does not include my employer." (ID 372)

4.3 Registration for MyTrack



Source: Surveys at events. Own calculations (N=346).

Registration is sought

The open-ended written feedback given by respondents about whether they would register for MyTrack (and if not, why not) was translated into German school grades (1=yes, 2=no, 3=maybe/possibly, 4=don't know), in order to be able to carry out an analysis. A very positive picture emerged: 67.34 % of respondents said they would register and 19.56 % said they would consider it. Only a small proportion of respondents (7.51 %) definitely do not want to register, citing almost exclusively insufficient data protection and privacy of sensitive information as the reason. 5.49 % of respondents said they did not know about My-Track.

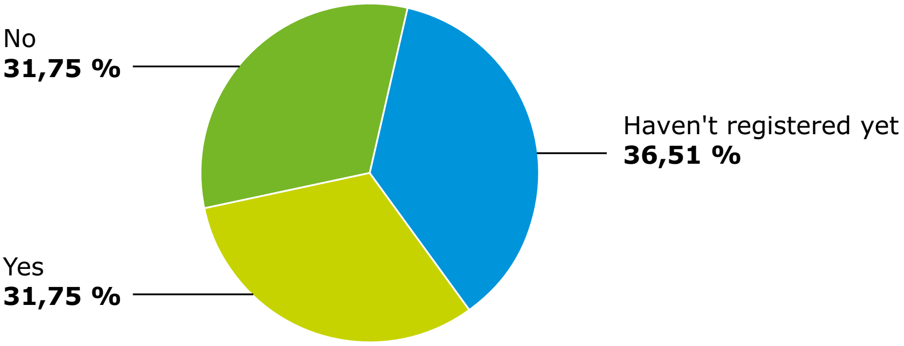
Source: Surveys at events. Word cloud on the basis of the open-ended feedback

Selected representative feedback and comments from respondents:

- „If in the Website the information of all my employers would be available, yes.“ (ID 18)
- „Potentially yes, to keep track of my German pension or other EU accounts in the future.“ (ID 159)
- „Probably – If I´m happy with privacy protection + security. It´s a very good idea! If I can also add non-public sector pensions.“ (ID 251)
- „Yes – although I would worry that it may become outdated by the time I actually want my pension…“ (ID 293)
- „I will, but I hope the system becomes an automatic tracking system in the future.“ (ID 373)
- „It can be useful, but I am not keen on sharing this kind of information in an online database. I prefer to keep it for myself.“ (ID 385)

5 Evaluation of the website

5.1 Awareness of MyTrack

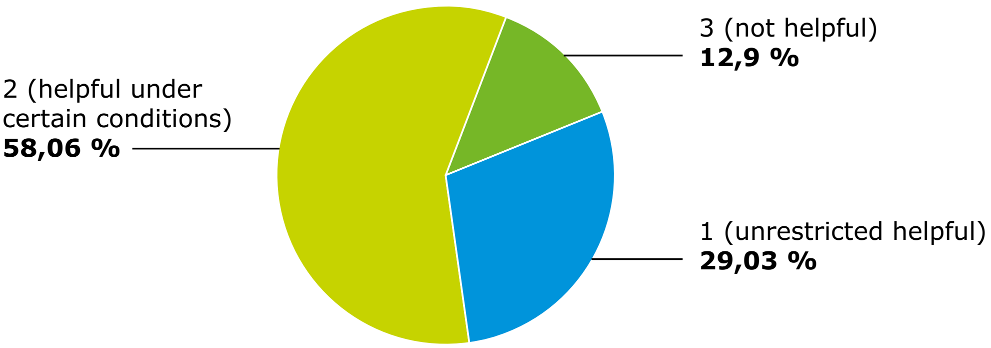


Source: Online survey on the FYP website. Own calculations (N=63).

Only a third had no awareness of MyTrack

For the question about the extent to which respondents were familiar with “My Track” functions or services, the response options were Yes/No/Haven’t registered yet. Out of the 63 respondents, 23 people or 36.51 % chose the third option, and are not yet registered on the website. These people had also potentially not yet visited the website. Of the remaining respondents, exactly the same amount of people (20) and therefore 31.75 %, said they were aware of My Track as those who were not aware of it.

5.2 Data storage

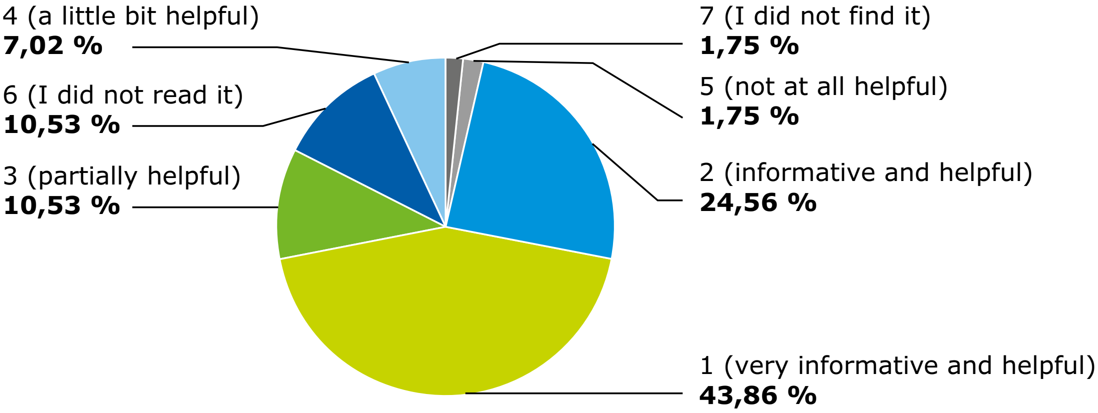


Source: Online survey on the FYP website. Own calculations (N=62).

Usefulness under certain conditions

On the question of the usefulness of storing data about career trajectories and one’s own pension history, more than 58 % of respondents said that they found this function useful under certain conditions. About 29 % of respondents assessed the data storage function as totally helpful. Only 13 % of respondents said that this function was not useful.

5.3 Allocation of employers to pension institutions

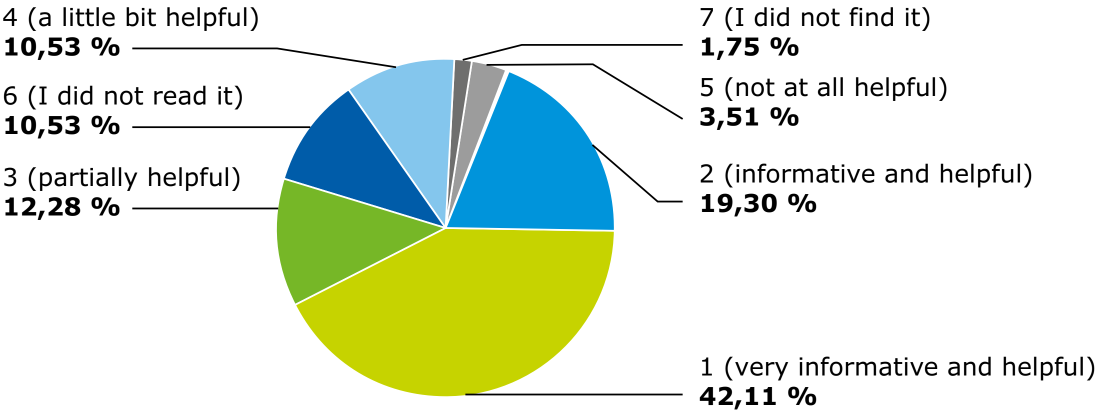


Source: Online survey on the FYP website. Own calculations (N=57).

Two thirds view the function as (very) informative and useful

Almost 44 % of respondents assessed the function of the website which allocates employers to the respective pension institution as very informative and useful. A further 24.56 % of respondents said that they considered this function informative and useful. 10.53 % of respondents assessed the function as partially helpful and the same proportion had not seen this function on the website. Only 1.75 % of respondents judged this function as not at all useful and a further 1.75 % could not find this function on the website.

5.4 Links and addresses/contact information

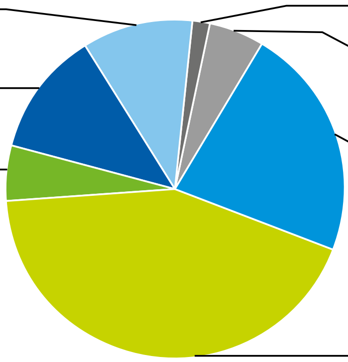


Source: Online survey on the FYP website. Own calculations (N=57).

Addresses, links and contact information are (very) informative and helpful for more than 60 %

Regarding the usefulness of links, addresses and other contact information mentioned on the website, 61.4 % of respondents rated this as very informative and helpful or as informative and helpful. A further 12 % of respondents assessed this information as partially helpful or useful. 10.53 % said this aspect of the website was a little bit helpful and the same proportion said they had not looked at it. 3.51 % of respondents could not find this information and a further 1.75 % of respondents described this information as not helpful.

5.5 Pension ABCs

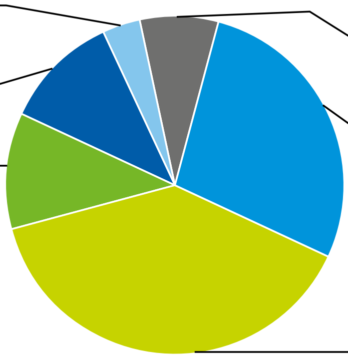


Source: Online survey on the FYP website. Own calculations (N=57).

Two thirds view the Pension ABCs as (very) informative and useful

The Pension ABCs on the website, i.e. the overview of key aspects of pension provision systems in different countries, was described by 66.67 % of respondents as very informative and helpful or as informative and helpful/useful. About 12 % of respondents said that they had not looked at this section. 10.53 % of respondents said that they considered this information to be a little bit helpful. About 5 % of respondents judged this information as partially helpful. Approx. 3.5 % of respondents considered this section to be not useful and 1.75 % of respondents could not find this information.

5.6 Pension Landscapes

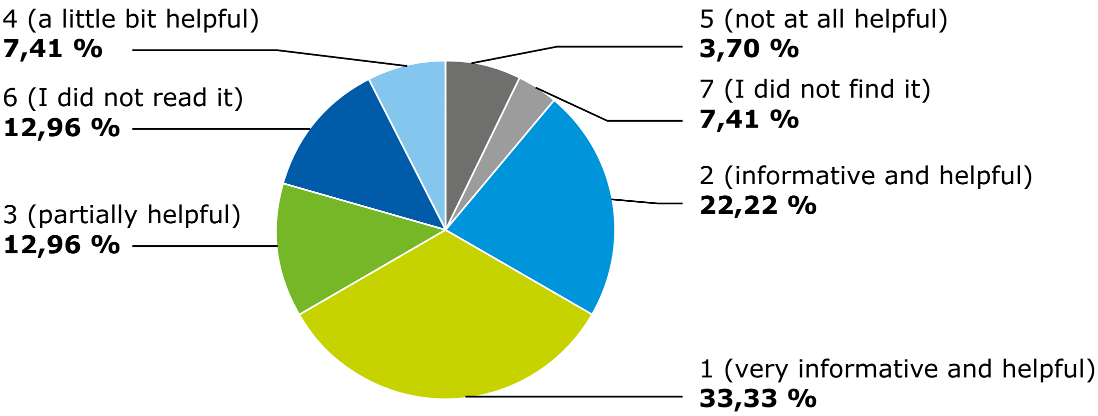


Source: Online survey on the FYP website. Own calculations (N=54).

Two thirds view the pension landscapes as (very) informative and useful

The so-called pension landscapes i.e. information about European countries, their pension provision policies and their pension providers was rated by 66.67 % of respondents as very informative and helpful or informative and helpful. About 11 % of respondents described this section of the website as partially helpful and the same amount said that they had not looked at this section. Approx. 7.4 % of respondents were unable to find this section and 3.7 % of respondents said that they considered this information to be a little bit helpful. None of the respondents gave it grade 5 (not at all helpful).

5.7 News and other information

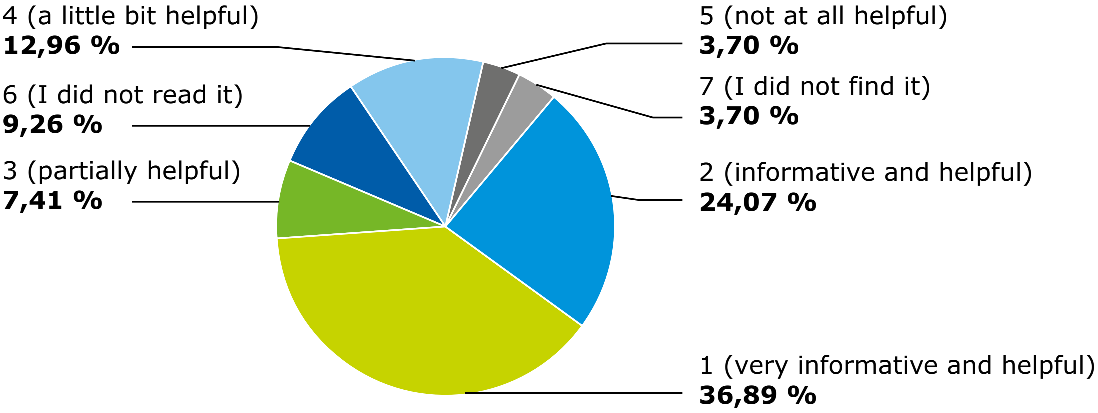


Source: Online survey on the FYP website. Own calculations (N=54).

More than half judged this section to be (very) informative and helpful

The section of the website "news and other information" was rated as very informative and helpful by about a third of respondents. Over 22 % of respondents described this section as informative and helpful. Almost 13 % of respondents assessed this information as partially helpful. A further 13 % of respondents said that they had not looked at this section. About 7.4 % of respondents assessed this information as a little bit helpful and the same percentage was unable to find this section. Only approx. 3.7 % of respondents described this section as not useful.

5.8 General presentation of information and user-friendliness



Source: Online survey on the FYP website. Own calculations (N=54).

More than 60 % assessed the usability and presentation of information as (very) good

Some 38.9 % of respondents assessed the general presentation of information and usability of the website as very informative and useful. About 24 % of respondents described this presentation as informative and helpful. Approx. 7.4 % said that they regarded the site as partially useful. Almost 13 % of respondents described the website as a little bit helpful. Only 3.7 % of respondents described the site as not useful. Approx. 9.3 % of respondents said that they had not read it and 3.7 % of respondents said that they could not find the information.

5.9 Supplementary information and suggestions for improvement

At this juncture, a few selected comments and suggestions for improvement from respondents are quoted as examples which are representative of much of the other feedback.

- Increase the amount of information and enlarge the project to include more countries. (ID 5)
- Provide info about how to increase your pension (ID 45)
- This talk should be given at the beginning of the contract for everybody, because is very important to know the topic. (ID 64)
- More examples/Practical issues (ID 154)
- Cases and examples. (ID 157)
- More info on transfer: Possibility? Advisable? Under which circumstances? (ID 168)
- Try to get „all" data from EU countries. I understand it takes time, but please continue with this effort. (ID 185)
- Individual consultations are very important. Thank you! (ID 213)
- Extend your Website for public as well as for private sectors. (ID 223)
- More information about taxes (ID 231)
- It should be escalated to the EU commission. It is a great initiative. (ID 290)
- More newsletters and more workshops and more personal sessions (ID 353)
- Make your services available in an app (ID 364)
- it would be nice to have the possibility of follow up personal meeting with pension expert to take care of specific needs and situations (ID 379)

6 Supplementary evaluation of the website with the eye-tracking study

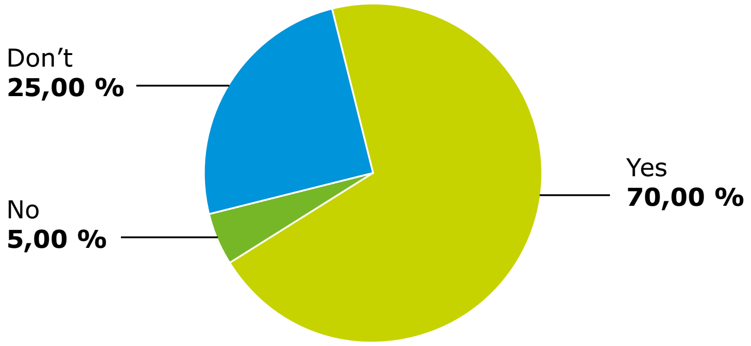
Eye-tracking (measurements of eye activity and eye movement) is a method of measurement to capture eye activity which records eye position and movement using high-resolution cameras. Eye movement cameras are either integrated in glasses or mounted to a monitor or display on which the stimulus material is presented. As a result, the eye movement path on the stimulus material can be visualized statically as a graphic or dynamically as a video. In addition, areas of the stimulus material upon which the gaze focused most frequently can be highlighted in color in a graphic representation, similar to a thermal image. Eye trackers are widespread in applied research, particularly for visualizing eye movement patterns when looking at a website.

The focus of the eye tracking in collaboration with DHBW Karlsruhe and their use of the Tobii X60 tracker was the responses to questions about the perception of certain elements and the information conveyed by the FYP website as well as the use thereof. As requested by the client, the eye tracking study included at least 20 test subjects (according to the study by Lesemann and Wilms (2007), this sample size of randomly selected test subjects has a 91.2 % match with the total sample). According to Sarodnik and Brau (2011), with 20 test subjects at least 95 % of the problems of a usability test will be found, in fact on average as much as 98.4 % of the problems. The test subjects were researchers, as requested, since they are the target audience of the FYP website.

Through this proper execution it was possible to find out about the focus of attention, the perception and the use of the FYP website. For this purpose, the recruited test subjects (N=20, with knowledge of English) were given two different tasks with a series of sub-questions. Task 1 consisted of researching information on the FYP website and understanding the content; Task 2 targeted the use of the FYP website, by having the subjects enter a sample career history. Questions, results and comments have been given as recommendations for action in Annex 4.

Following the eye tracking analysis, there was a follow-up survey of the test subjects. The key findings derived from this are presented below.

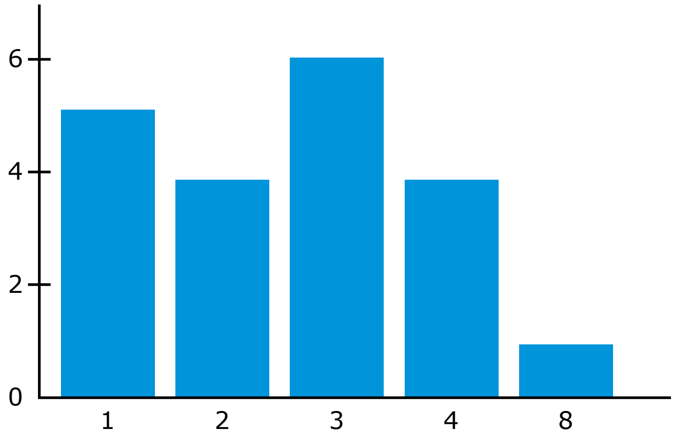
6.1 MyTrack as a prerequisite for extensive engagement with the subject of old-age provisio



Source: Survey of eye-tracking subject group. Own calculations (N=20).

70 % of respondents said that in their view, an individual summary of the different pension schemes and benefits like in MyTrack is an important precondition in order to be able to engage with the subject in more detail. 25 % are undecided and only one person said that this was not the case.

6.2 Icons for relaying basic information

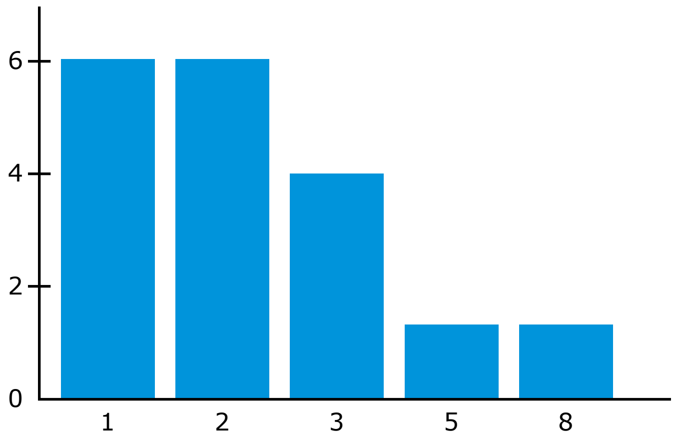


Source: Survey of eye-tracking subject group. Own calculations (N=20).

Icons are (very) interesting for three quarters

On a scale of 1 (very interesting) to 7 (not at all interesting) or 8 (don't know), the respondents provided information to the question about how interesting they find the basic information on pension provisions that is provided by the icons in an easily understood way? 45 % of respondents thought they were very interesting (1-2), a further 30 % said they were interesting (3), 25 % were undecided (4 or 8). No respondents said that icons are not interesting.

6.3 Text form for additional information for advanced users

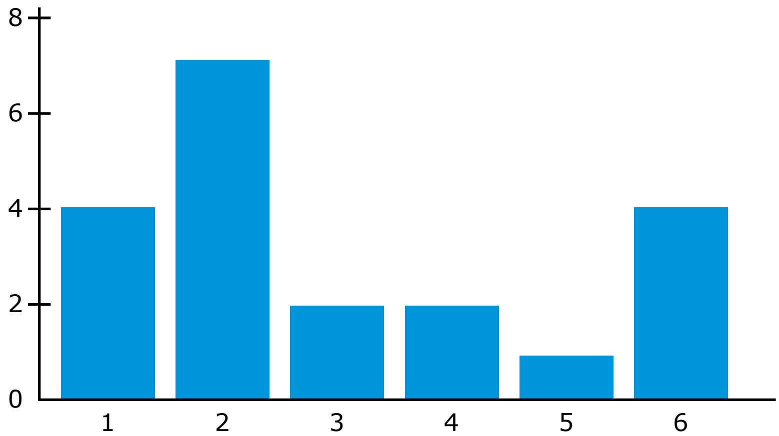


Source: Survey of eye-tracking subject group. Own calculations (N=20).

Additional text information is very interesting for 60 %

On a scale of 1 (very interesting) to 7 (not at all interesting) or 8 (don't know), the respondents provided information to the question about how interesting they find the additional information for advanced users with extra details in text form. A mixed picture emerged here: On the one hand, 60 % of respondents thought it was very interesting (1-2), a further 20 % said it was interesting (3), but on the other hand, 10 % thought it was not interesting (5) and a further 10 % were undecided (8).

6.4 Interactive and playful approach to the subject of pension provisions



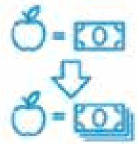
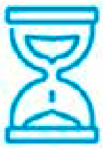
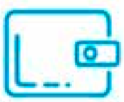
Source: Survey of eye-tracking subject group. Own calculations (N=20).

Divided opinions on playful approach

On a scale of 1 (very important) to 7 (not at all important) or 8 (don't know), the respondents provided information to the question about how important an interactive and playful approach to the subject of pension provisions is to them, e.g. through an app. A mixed picture emerged here: On the one hand, 65 % of respondents thought it was (very) interesting (1-3), but on the other hand, 25 % of respondents thought this was less interesting (5-6). 10 % of respondents were undecided (4).

6.5 Icons and their meaning

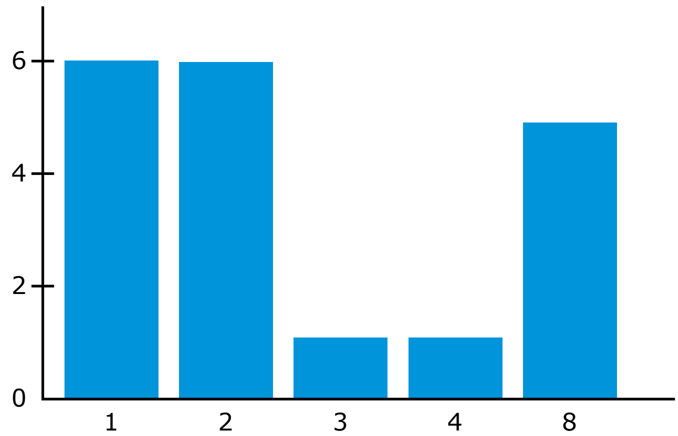
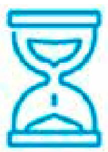
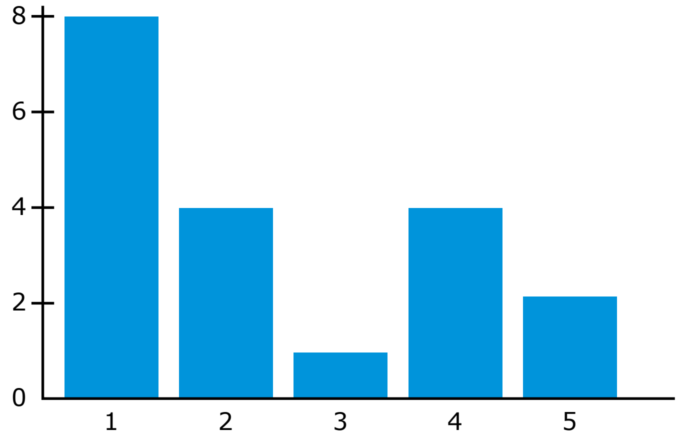
As well as being questioned on icons in the context of the provision and presentation of information, the test subjects were also asked to match the icons on the FYP website with their correct meaning. As can be seen, the proportion of correct matches is between 15 and 85 %. Icons for term (represented by an hourglass) and the scope of performance protection (represented by an umbrella) received the most correct matches. The icon for retirement age (represented by an elderly lady) was corrected matched by many of the respondents. Icons for contributors and payment arrangements were correctly matched by only a few respondents.

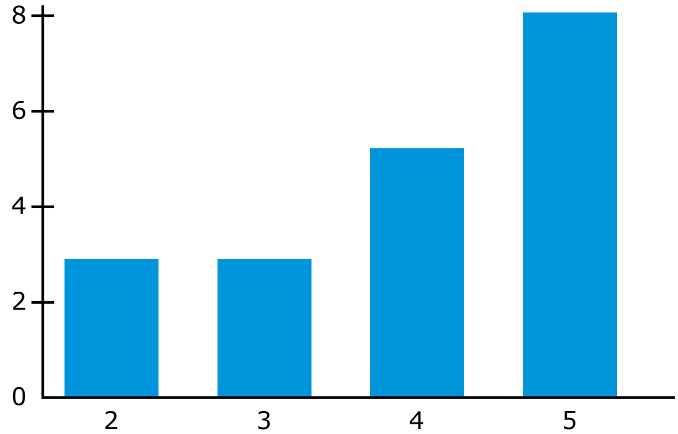
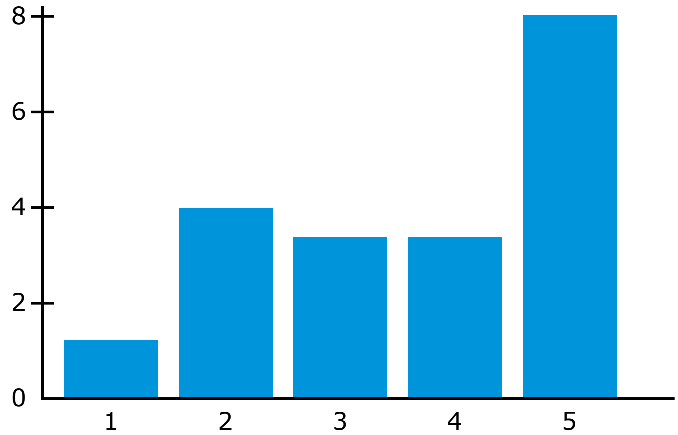
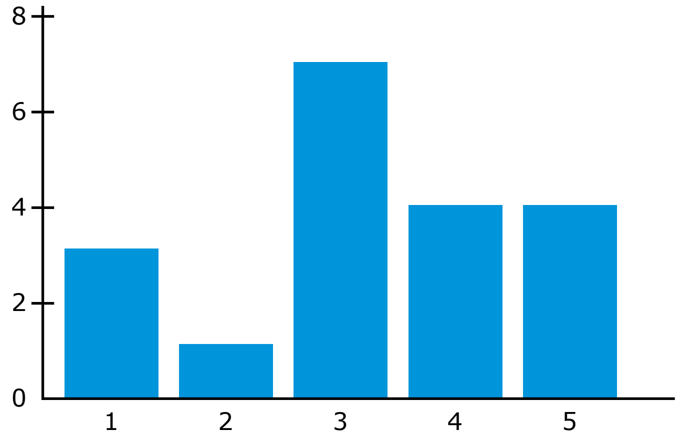
Icon	Meaning	Correct classification by respondents in %	Supplementary information on the icon
	Retirement age	65	
	Adjustments to pension entitlement	45	35 % of respondents classified this icon 
	Minimum term for entitlements	85	
	Adjustments to pension entitlement	30	20 % of respondents were unable to assign the term to any icon; a further 20 % of respondents classified this icon 
	Performance protection	85	
	Payment arrangements	25	45 % of respondents classified this icon 
	Contributors	15	30 % of respondents were unable to assign the term to any icon; a further 35 % of respondents classified this icon

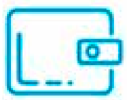
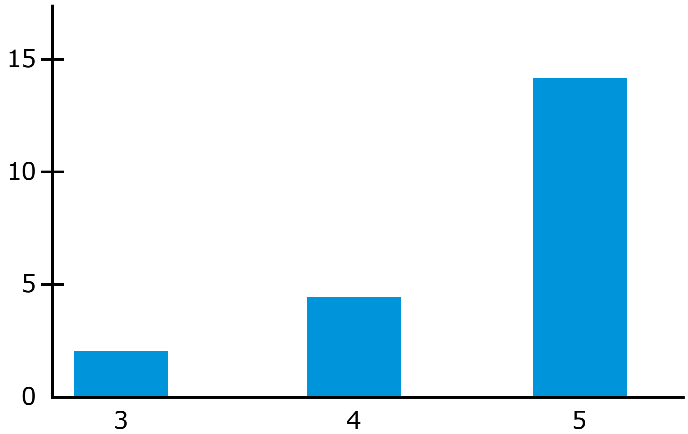
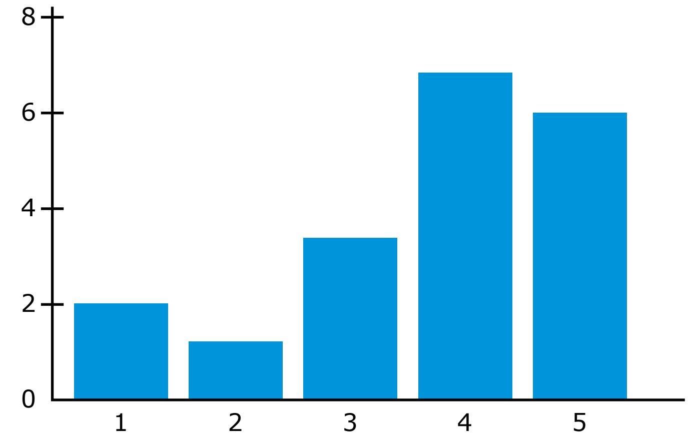
Source: Survey of eye-tracking subject group. Own calculations (N=20).

6.6 Assessment of the classification of icons

The feedback about the ease or difficulty of classifying the icons using a scale of 1=very easy to 5=very difficult, confirms the previously displayed picture that the icons for contributors, adjustments to pension entitlement and payment arrangements in particular, were considereddifficult. As these are essentially complex details of a retirement provision system, they are generally harder to understand (and to classify) than clearer information such as e.g. the retirement age. For another thing, creators of a website are faced with the major challenge of representing these complex details as icons which are self-explanatory.

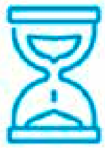
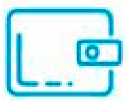
Icon	Assessment on a scale of 1=very easy to 5=very difficult	Average score 2,63	Proportion of missing values in %
		2,63	5
		2,37	5

Icon	Assessment on a scale of 1=very easy to 5=very difficult	Average score 2,63	Proportion of missing values in %
		3,95	5
		3,68	5
		3,26	5

Icon	Assessment on a scale of 1=very easy to 5=very difficult	Average score 2,63	Proportion of missing values in %
		4,63	5
		3,74	5

Source: Survey of eye-tracking subject group. Own calculations (N=20).

6.7 Most important icons for one's own pension provision

Icon	Absolute frequency of mentions	in % of all possible mentions
	15	25
	12	20
	10	16.67
	3	5
	2	3.33
	1	1.67
	7	11.67

Source: Survey of eye-tracking subject group. Own calculations (N=20). The proportion of missing values was 16.67 %

Information about performance protection and the minimum term for entitlements was the most relevant for respondents.

6.8 Suggestions, requests, comments and criticism to follow-up as part of the eye-tracking

Seven test subjects communicated the following:
(1) What is important for me? How secure is the website? (ID 25)
(2) Urgently needs a glossary, ideally also with tooltips in the relevant places (ID 24)
(3) The icons are not always clear (ID 14)
(4) Use colors to show which menu item you are currently under. (ID 12)
(5) Added value is unclear with a view to the overall pension balance → you need to have the knowledge first in order to access the information; consistency of the layout changes from page to page (ID 7)
(6) Website generally well designed, however it needs a key which explains the icons. (ID 11)
(7) The website should be made available in several other languages – not just English. Older people often don't speak English. (ID 18)

7 Summary and recommendations for action

7.1 General

Evaluation of the three available data sets permits different interpretations of the FYP initiative, the website and the respondents' level of knowledge about the topics of finance and pension provision.

Fundamentally positive feedback and suggestions for further development

First of all it is generally clear that the majority of respondents (across the different surveys) explicitly welcome the FYP initiative. The respondents are well aware that setting up a transnational and cross-pillar information platform is a very complex undertaking, both on behalf of the different countries and pensions schemes as well as on the part of their own biographies.

Many respondents would like the inclusion of other countries (e.g. Iceland and Asian countries) and country-specific information as part of the initiative, which should also be supplemented by individual advice (both before starting a job as well as during the contractual period). Strictly speaking, one could also conclude from a lot of the feedback that they would also like an all-singing, all-dancing Jack-of-all-trades on the topic of pension provision for mobile researchers.

Challenge of complexity and lack of individualization

One the one hand, respondents complained of information overload, but at the same time they said that questions on their individual situations were not given sufficient weight. This dilemma is practically impossible to solve to the full satisfaction of all users.

Use of layering and icons

VBL is taking a practical approach here with the established concept of "layering", i.e. layers of information for different user groups and this approach should absolutely be pursued. The first step is awakening interest in the subject and thus overcoming the difficulty of tackling a complex topic. Subsequently basic information is provided, which can be visualized and clearly structured with the aid of icons. This level of information already requires a considerable amount of concentration from the user. For the use of icons, the recognizably and classification of the icons needs to be improved since many respondents rated them fundamentally very positively but had problems in actually classifying them. It may perhaps be an idea to work on the icons in focus group interviews with laypeople, for example. As well as developing the icons, these should then be evaluated again in practical use, e.g. as part of an accompanying eye tracking study on a redesigned website.

Knowledge of finance and pension provision

With regard to the knowledge of those surveyed about finance and pension provisions, in general a rather low level of knowledge should be assumed. The average user of such websites and consultation days overestimates their actual knowledge of these topics and then is very quickly overstretched when it comes to application. Here too, we would refer to the concept of layering information, which users of the website can access when they need it. To a large extent respondents confirmed an interest in an interactive and playful approach to the complex and difficult issue of pension provision.

Design of the platform

On the whole, platforms for cross-pillar information about pension provision which are aimed at mobile employees, which therefore also have to provide information for different countries, should focus less strongly on the actuarial comparability and the legally incontrovertible reliability of pension plan requirements, but turn their attention far more to the necessary support of consumer competence in a multi-pillar security system. After all, a concept for transnational and cross-pillar information on pension provisions, in the interests of a combination of social policy and consumer protection, should focus, first and foremost, on the requirements from the perspective of the consumers (for it is for them, in fact, that such systems are actually implemented), and less on the requirements of the responsible bodies e.g. politics or individual states.

Use theoretical findings from behavioral economics and the evaluation results of the FYP initiative

In addition, previous research work on behavioral economic perspectives on pension provision, research on behavioral anomalies, the complex and multifaceted process of pension provision, changing conditions and requirements, as well as the in-depth research into general financial education and pension expertise derived from these should be used. As well as these rather theoretical considerations, the practical results and experiences from the FYP initiative and the evaluation thereof should also be taken into account.

For in general, previous research and the practical experiences from the FYP evaluation show that the information which should be oriented towards the needs, prior knowledge and interests of users, should neither overwhelm, patronize or demand too little from them. To meet these challenges of transnational and cross-pillar information on pension provisions, including in connection with previous considerations, there have been discussions for some time in theory and practice about concepts of target-group-specific, gender-specific and user-specific information, including with regard to the presentation, as well as structuring information using information layers and these concepts have also been established (i.e. practical implementation as part of the FYP initiative). This also encompasses aspects of accessibility.

Use the opportunities presented by digitalization

The internet in particular, in contrast to physical information formats, offers extensive opportunities to provide information by target group or user horizons and in layers with varying levels of detail. Differentiation is frequently made according to stage of life, needs or age. This offers the advantage of reaching users better and doing justice to their individual situation so that there is greater willingness to take on board information. When layering information in varying levels of detail and by interest, dividing information into three layers is usual. The first layer contains a brief overview with the most important information on the pension systems, e.g. information on what types of entitlements are obtained, how high the previously obtained entitlements are, which components are guaranteed or not guaranteed, what costs will arise and what decisions the policyholder can or must make. More detailed information, in case the policyholder wants to know 'more' about the individual elements is given in the second layer. Important documents such as legal texts, annual reports, messages etc. can be found in the third layer. The design of a website with elements such as layering and icons as part of the FYP initiative is thereby an ideal blueprint and should be used for further concepts and templates.

Data security and data protection

Those surveyed would like close attention to be paid to the issue of data security and data protection. So particularly in the context of personal data on salary and pension provision, which is regarded as very sensitive information, the storage of the data necessary for information about the respective pension products on a central platform is considered worrying. The so-called data retention therefore seems inappropriate and is not advisable (both for general data protection reasons as well as from the perspective of the respondent). Alternatively the detailed information should only be collected at the behest of a user by request from a pension scheme with whom the user holds relevant pension products (or else even from all pension schemes).

Information platforms do not solve all problems

Finally, there should be no illusion that pension provision information, no matter whether crosspillar and transnational or not, can reach all consumers. This applies particularly if they are not even perceived as such. Also, an improvement in financial and pension literacy through consumer education cannot completely prevent the postponement of decisions about retirement provisions. Finally, with all the positive aspects of providing pension provision information, it must also not be forgotten that this can primarily only reduce the discrepancies which result from a lack of knowledge and information. However, discrepancies can occur not only due to a lack of knowledge and information, but also due to fundamental acceptance and/or confidence issues regarding reforms to the welfare state. If there is a limited acceptance of welfare state reforms or if these lead to more uncertainty and waning confidence regarding individual protection in case of need, it is possible there is also a lack of individual awareness to makes provisions or this is not sustained i.e. contracts are suspended early or even terminated. Then savings are still not made for individual pensions even if information is easily accessible and there is more transparency.

7.2 Supplementary findings from surveys at events

In general, it is apparent that feedback on the principle behind the website and the aim of providing transnational pension provision information was predominantly very positive. The initiative itself drew much praise. The surveys show that the website addresses one of the needs of mobile researchers; this is also evidenced by the numerous requests to add additional countries and institutions.

The more subdued appraisals were often due to the fact that the respondents were overwhelmed by the flood of information or because retirement age is still too far in the future and because you first had to know about the German pension system and therefore they got lost in all the details (so-called 'information overload').

Some criticized the events because they said the English presentations by individual speakers were not good; other speakers, however, were said to have very extensive knowledge and above all, lots of personal dedication.

Criticism of the respondents' own employers was something which came up again and again, as respondents would have liked to have had the information from these on-site events before they signed their employment contracts.

7.3 Supplementary findings from the eye-tracking study

Against the background of the tasks which respondents had to complete during the eye tracking, the following key findings of the evaluation should be mentioned. The concrete analysis can be found in Annex 4.
In general the tasks were completed quickly, with few exceptions. The usability of the website and the user interface as part of the self-tracking are therefore assessed as functional.
The country selection on the homepage serves as a starting point and is quickly found thanks to its central position and size and enables lots of searches. The login for the secure area was also found quickly in the test. However, a larger box would speed up access.
The test subjects showed some uncertainty in dealing with English terms in their work and in their answers they occasionally mixed German and English. A glossary of specialist terms in German, English and potentially in the national language of the relevant country would possibly be helpful. In the "My Pension Summary" area, the mouse-over-effect to explain symbols and icons was positively received. This could also improve user experience in other places on the website. In general the test subjects were often confused by places where the amount of information was particularly large or where several possible connection paths, e.g. via additional links as well as input masks, were available. Long lists, in particular, which require a long reading time also delayed the user's next action. A lean website design has less potential to overwhelm its users. The path through the menus should be self-explanatory and clear. Here there is optimization potential, for example when recording employment. Further help and quick orientation could be achieved by placing the introductory user videos on the homepage.

7.4 Recommendations for action

(1) The approach taken of layering information as well as the use of icons to make the complex issue of pension provision more accessible should certainly be continued. For the use of icons in particular, the recognizably and classification of the icons needs to be improved. To this end, interviews with focus groups of laypeople and a repeated evaluation of the modifications through accompanying eye-tracking studies on a redesigned website are recommended.
(2) As many respondents wanted an interactive and playful approach to the complex issue of pension provision, this should be taken into account when designing the website. Gamification elements could be used for this, whose purpose is to motivate website users to engage with the topic for longer and to develop a bond through game features. Gamification essentially includes three areas: Entertainment and fun through storytelling, performance measurement and assessment as well as competition and reward. Elements such as interactive stories and solving tasks with progress bars and bonus points are motivating for users, even on such complex issues.
(3) A concept for transnational and cross-pillar information on pension provisions should focus, first and foremost, on the requirements from the perspective of the consumers, and less on the requirements of the responsible bodies e.g. politics or individual states. In addition, reference should be made to theoretical insights of behavioral economics as well as the more practically-based evaluation of the FYP initiative.
(4) Those surveyed would like close attention to be paid to the issue of data security and data protection.

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Annex 1a: Sample questionnaire Surveys at events

FIND YOUR PENSION
www.findyourpension.eu

Formular speichern
Formular senden
Formular zurücksetzen

Pension Event

YOUR PERSONAL BACKGROUND

1. **Your pension background**
   - ☐ Novice (topic completely unknown)
   - ☐ Only very basic knowledge (Do you know who DRV and VBL are?)
   - ☐ Advanced knowledge. Planning of old-age provision
2. **Age and gender**
   - ☐ female ☐ male Age:
3. **Where are you from?**
   - ☐ EU Member State ☐ Non-EU Member State
4. **How many different employers have you had so far?**
   - ☐ 1–2 employers ☐ 3 employers
   - ☐ 3–5 employers ☐ More than 5 employers

PENSION EVENT

5. **Did you leave with a clearer understanding of the German Pension Landscape afterwards?**
   - ☐ Yes ☐ No
6. **Did the consultation day address your individual questions and issues?**
   - ☐ Yes ☐ No
7. **How did you get the invitation to this event?**

FindyourPension (FYP)

8. **What do you think about the FindyourPension initiative?**
9. **Is the information on the FYP website helpful to you? Will you use the website in the future?**
10. **How could we reach more researchers to make the website more public?**
11. **Will you register in MyTrack? If not, why?**
12. **Any comments/suggestions/improvements?**

Thank you for your time!
Our E-mail: info@findyourpension.eu

Annex 1b: Sample questionnaire Online survey on the FYP website

- Please tick your gender.
- Please enter your age.
- Which country are you from?
- How many different employers have you had so far?
- Your personal background regarding pensions and pension topics: Novice (Topic completely unknown), Only very basic pension knowledge, Advanced pension knowledge
- Do you agree on: Pension knowledge is crucial in order to plan old age income, It's a waste of time to deal with the pension topic, Understandable information is worth to have a look at it
- Do you think the FindyourPension Project is supportive for researchers in being mobile?
- Do you know the function/services of MyTrack?
- How helpful/useful do you suppose the storage of career and pension data?
- A: Assign the employers to the Pension institutions in charge
- B: Links and addresses/contact data of institutions
- C: The Pension ABC's
- D: The Pension Landscapes
- E: News/Other information
- F: Presenting the information in general (user-friendliness)
- Imagine you had € 100 in a savings account and the interest rate was 2 % per year. After 5 years, how much do you think you would have in the account if you left the money to grow?
- Imagine that the interest rate on your savings account was 1 % per year and inflation was 2 % per year. After 1 year, would you be able to buy...
- Do you think that the following statement is true or false? Buying a single company stock usually provides a safer return than a stock mutual fund.

Annex 1c: Sample questionnaire Survey of eye-tracking subject group

DHBW Karlsruhe VBL

04.07.2019

ID:

Teil 1: Fragen zur Website findyourpension.eu

1) Ordnen Sie bitte die jeweiligen Icons ihrer Bedeutung zu.

A B C D E F G

	Rentenanspruchsalter		Anpassungen des Rentenanspruchs		Auszahlungsmodalitäten
	Entwicklung des Rentenanspruchs		Leistungsabsicherung		Beitragsleistende
	Mindestlaufzeit für Ansprüche				

2) Wie empfanden Sie die Zuordnung der jeweiligen Icons (1=sehr leicht bis 5=sehr schwer)

3) Welche drei Icons finden Sie für Ihre eigene Altersvorsorge am wichtigsten?

4) Ist aus Ihrer Sicht eine individuelle Zusammenfassung der verschiedenen Alterssicherungssysteme und -leistungen wie in MyTrack eine wichtige Voraussetzung, um sich ausführlicher mit dem Thema beschäftigen zu können?
□ ja □ nein □ weiß ich nicht

5) Wie interessant sind für Sie solche Basisinformationen zur Altersvorsorge, die durch die Icons in leicht verständlicher Form vermittelt werden?
□ 1 (sehr interessant) □ 2 □ 3 □ 4 □ 5 □ 6 □ 7 (gar nicht interessant) □ weiß ich nicht

6) Wie interessant sind für Sie zusätzliche Informationen für fortgeschrittene Nutzer mit weiteren Details in Textform?
□ 1 (sehr interessant) □ 2 □ 3 □ 4 □ 5 □ 6 □ 7 (gar nicht interessant) □ weiß ich nicht

7) Wie wichtig ist Ihnen ein interaktiver und spielerischer Zugang zum Thema Altersvorsorge, z.B. durch eine App?
□ 1 (sehr wichtig) □ 2 □ 3 □ 4 □ 5 □ 6 □ 7 (gar nicht wichtig) □ weiß ich nicht

1

Part 1: Questions about the website findyourpension.eu

	Age of entitlement to a pension		Adjustments to pension entitlement		Payment arrangements
	Development of pension entitlement		Performance protection		Contributors
	Minimum term for entitlements				

1) Please match the icons with their meaning.
2) How did you find the classification of the icons (1= very easy to 5= very difficult)?
3) Which three icons do you find the most important for your own pension provision?
4) In your view, is an individual summary of the different pension schemes and benefits like in MyTrack an important precondition in order to be able to be able to engage with the subject in more detail?
   yes no I don't know
5) How interesting do you find the basic information on pension provisions that is provided by the icons in an easily understood way?
   1 (very interesting) 2 3 4 5 6 7 (not at all interesting) I don't know
6) How interesting do you find the additional information for advanced users with further details in text form?
   1 (very interesting) 2 3 4 5 6 7 (not at all interesting) I don't know
7) How important for you is an interactive and playful approach to the subject of pension provisions e.g. through an app.
   1 (very interesting) 2 3 4 5 6 7 (not at all interesting) I don't know

04.07.2019

Teil 2: Fragen zum Thema Finanzen und Altersvorsorge

8) Sind Sie ◻ männlich ◻ weiblich ◻ divers ◻ keine Angabe

9) Wie alt sind Sie? ____________ Jahre

10) Welche Nationalität(en) haben Sie? ____

11) Welche Sprachen sprechen Sie? ____

12) Auf einer Skala von 1 bis 7, wobei 1 sehr niedrig und 7 sehr hoch bedeutet, wie würden Sie allgemein Ihr Wissen zum Thema Finanzen beurteilen?
◻ 1 (sehr niedrig) ◻ 2 ◻ 3 ◻ 4 ◻ 5 ◻ 6 ◻ 7 (sehr hoch) ◻ weiß ich nicht

13) Angenommen, Sie haben 100 € Guthaben auf Ihrem Sparkonto. Dieses Guthaben wird mit 2% pro Jahr verzinst, und Sie lassen es 5 Jahre auf diesem Konto. Was meinen Sie: Wie viel Guthaben weist Ihr Sparkonto nach 5 Jahren auf?
◻ Mehr als 102 €
◻ Genau 102 €
◻ Weniger als 102 €
◻ Weiß ich nicht

14) Angenommen, die Verzinsung Ihres Sparkontos beträgt 1% pro Jahr und die Inflationsrate beträgt 2% pro Jahr. Was glauben Sie: Werden Sie nach einem Jahr mit dem Guthaben des Sparkontos genauso viel, mehr oder weniger als heute kaufen können?
◻ Mehr als heute
◻ Genauso viel
◻ Weniger als heute
◻ Weiß ich nicht

15) Ist die folgende Aussage richtig oder falsch: Die Anlage in Aktien eines einzelnen Unternehmens ist weniger riskant als die Anlage in einem Aktienfonds.
◻ Richtig
◻ Falsch
◻ Weiß ich nicht

16) Ist die folgende Aussage richtig oder falsch: Eine 15-jährige Hypothek erfordert normalerweise höhere monatliche Zahlungen als eine 30-jährige Hypothek, aber der im Zeitverlauf zu zahlende Zinsbetrag für das Darlehen ist geringer.
◻ Richtig
◻ Falsch
◻ Weiß ich nicht

2

Part 2: Questions on finance and pension provision

8) Are you male female other not specified

9) How old are you? ________________years

10) What is your nationality?

11) What languages do you speak?

12) On a scale of 1 to 7, where 1 is very low and 7 very high, how would you rate your knowledge on the subject of finance?

1 (very interesting) 2 3 4 5 6 7 (not at all interesting) I don't know

13) Imagine you have €100 in a savings account. You receive 2 % interest per year and you leave it in this account for 5 years. What do you think: How much will you have in your savings account after 5 years?

More than €102
Exactly €102
Less than €102
I don't know

14) Let's assume the interest rate on your savings account is 1% per year and inflation is 2 % per year. What do you think: After one year will you be able to use the balance of your savings account to buy exactly the same, more or less than today?

More than today
Exactly the same
Less than today
I don't know

15) Is the following statement true or false? Investment in shares of a single company is less risky than investment in an equity fund.

True
False
I don't know

16) Is the following statement true or false? A 15-year mortgage normally requires higher monthly payments than a 30-year mortgage but the amount of interest on the loan paid over the course of time is lower.

True
False
I don't know

Annex 1d: Eye tracking results

DHBW Karlsruhe

Evaluation of the eye tracking analysis

VBL - 04/07/2019.

Jan Michael Rasimus

www.karlsruhe.dhbw.d

Tasks I

Task 1:

Start your search on the website "findyourpension.eu". Please complete the following tasks:

a) Research the available **pension (PP) providers in Sweden**. Then enter the **provider** and the **location** in the answer field.

b) Is this a **statutory, occupational** or **private pension provision**? Please fill in the **type of pension provision** in the answer field.

Answer Task 1:

1 a)
- Pensionsmyndigheten (SPA), 11728 Stockholm
- Statens tjänstepensionsverk (SPV), 85190 Sundsvall

1 b)
- SPA: statutory pension
- SPV: betrieblich (occupational pension)

Task 2:

We have entered a career history under “**MyTrack**”.
Please log in with your **login details** (provided).

************@vbl.de
Passwort: ***********

Please answer the following questions and enter your answers in the answer field below:

a) With which **providers** has this registered person already **concluded agreements**?

b) In which **countries** has the person **worked**?

c) Is this a **statutory, occupational** or **private pension provision**?

Answer Task 2:

2 a)
- German pension insurance scheme (DRV)
- VARMA

2 b)
- Germany
- Finland

2 c)
- DRV: statutory pension
- VARMA: statutory pension

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Tasks II

Task 2 cont.:

d) In addition, please add the **following places of employment**:

You worked from **03/06/2013 to 11/05/2015** in **Germany** and concluded an employment contract with the **Karlsruhe Institute of Technology (KIT)**. For this period of time, in which you were insured with **VBL**, you have a current pension entitlement (€200) from your **VBLklassik**.

Please add this to your **biography in MyCareer**.

Answer Task 2:

2 d)
- Country: Germany
- Employer: Karlsruhe Institute of Technology KIT
- From: 03/06/2013 until: 11/05/2015
- Provider: Public institution for federal and state pensions (VBL)
- Earnings: € 200

Data collection:

Mode of collection: stationary eye tracking (Tobii, X 60) with survey

Participants: 20 test subjects. students (m/f) with knowledge of English

Analysis:
- Are the tasks completed within a reasonable period of time?
- What search path is taken to find information?
- Are providers and countries correctly named?
- Are the services (statutory, occupational, private pension providers) correctly interpreted?
- Are participants able to enter in their own employment contracts in the biography?

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Task 1:

a) research the available **pension (PP) providers in Sweden**. Then enter the **provider** and the **location** in the answer field.

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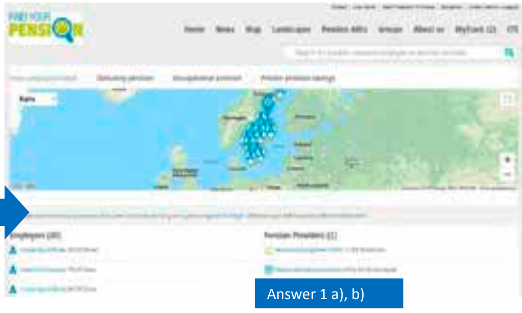
Task 1 Approach & evaluation

Start page: Homepage



Possible landing page: „Select your country“ > „Sweden“

Task 1 a) Approach & evaluation

Search paths for provider research:*

- **65%** (13) use **country selection**
- **20%** (4) use **free text search****
- **15%** (3) use the top **tab**
  - (2) **"Landscape"**
  - (1) **"Map"**

- **5%** (1) **„Search by countries you worked in"**
- **5%** (1) **„Find your… ABCs"**

- **100%** (20) give the **correct answer** (provider & location)
- **00:36 sec. time** taken (Ø)

* Multiple responses, due to repeated searches
** Search terms: "provider", "schweden" (Sweden) (2), "Altersvorsorge" (pension provision)

	Search path	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	Result
1	Country selection	x	x	x					x	x	x	x	x	x	x	x			x		x	65%
2	Free text search					x	x	x	x													20%
3	Tab				x												x			x		15%
4	"Search by countries…"																		x			5%
5	"Find your …ABCs"																	x				5%

	Naming PP	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	Result
A	Pensionsmyndigheten (SPA), Stockholm	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	100%
B	Statens tjänstepensionsverk (SPV), Gundsvall	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	100%
	Answer correct?	ja	ja	ja	ja	ja	ja	ja	ja	ja	ja	ja	ja	ja	ja	ja	ja	ja	ja	ja	ja	100%
	Time taken (sec.)	00:16	00:50	00:14	00:13	01:47	00:54	00:22	00:45	00:05	00:05	01:36	00:36	01:07	00:20	00:29	01:20	00:06	00:13	00:41	00:08	00:36

Task 1 a) conclusion

Conclusion Task 1 a:

- **100%** of test subjects were able to **research** the **pension providers** (name & location) **in Sweden** and **name** them correctly.
- To solve the task, **65%** use "**country selection**", **20%** use "**free text search"** and **15%** the **tab** (landscape & map). **2 participants** (each 5%) additionally tried to find the pension providers using the fields "**Search by countries you worked in**" and "**Find your… ABCs".**
- **On average** they took **36 sec.** to **research** the **providers** they needed (with location). **Individual participants** were able to solve the task **very quickly** (min. 5 sec.), whilst **others** needed **considerably longer than 60 sec.** (max. 1:47 min.).

Notes:

- The "**country selection**" in the middle of the homepage (Example A), received the most attention as the **starting point of the search**, with an average view time of **3.22 sec.** (followed by "**free text search**" with 2.58 sec.). The **country selection** search box is also **viewed considerably quicker** after an average of **1.50 sec.** (the free text search only after 9.36 sec.).
- **Longer search times** occur particularly when the test subjects get distracted by the **list** of all "**employers**" (recorded in Sweden) or when they **search for additional information** (Example B). Test subjects who identify the Swedish **pension providers** after just a **few seconds** as "**providers**" do not display this behavior (Example C).
- One test subject entered "**schweden**" (Sweden) in the **free text search** and started the search using the **Enter key** (without clicking on the suggested result "Schweden (Sweden)" > **Result:** "Your search returned no results".

Example A

Example B

Example C

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Task 1:

b) Is this a **statutory, occupational** or **private pension provision**? Please fill in the **type of pension provision** in the answer field.

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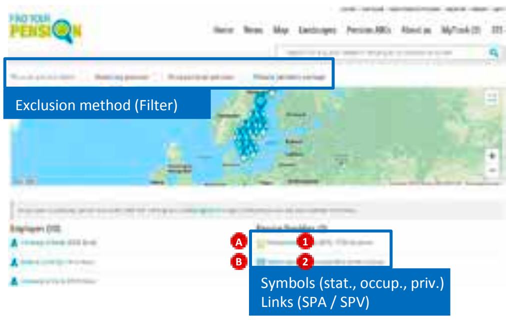
Task 1 b) Approach & evaluation



Matching the type of pension provision:*

- **95%** (19) correctly assigned **SPA** to **statutory pension provision**
- **80%** (16) correctly assigned **SPV** to **occupational pension provision**

- **40%** (8) used **"Show employers listed"**

- **75%** (15) answered **German**
- **15%** (3) antworten **englisch**
- **10%** (2) gave **mixed** answers

- **75%** (15) clicked the **SPA link**
- **35%** (7) clicked the **SPV link**
- **85%** (17) needed **several attempts** for information

- **80%** (16) matched **both providers correctly** (SPA & SPV)
- **02:36 sec. time** taken (Ø)

* statutory, occupational or private

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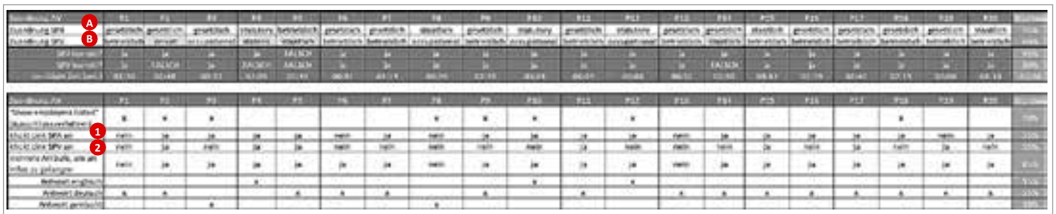

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Allocation PP	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Allocation SPA	statutory	statutory	statutory	statutory	occupational	statutory	statutory	state	statutory	statutory	statutory	statutory	statutory	statutory
Allocation SPV	occupational	private	occupational	statens	state	occupational	occupational	occupational	occupational	occupational	occupational	occupational	occupational	state
SPA correct?	yes	yes	yes	yes	FALSE	yes	yes	yes	yes	yes	yes	yes	yes	yes
SPV correct?	Yes	FALSE	yes	FALSE	FALSE	yes	yes	yes	yes	yes	yes	yes	yes	FALSE
Time taken														

	P15	P16	P17	P18	P19	P20	Result
	statutory	statutory	statutory	statutory	statutory	statutory	
	occupational	occupational	occupational	occupational	occupational	occupational	
	yes	yes	yes	yes	yes	yes	
	yes	yes	yes	yes	yes	yes	

Allocation PP	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
"Show employers listed" (process of filtering)														
Clicked the SPA link	no	yes	yes	yes	yes	no	yes	no	yes	yes	yes	yes	no	yes
clicked the SPV link	no	yes	no	yes	yes	no	no	no	no	no	yes	no	no	no
Several attempts to get the information	no	yes	yes	yes	yes	yes	yes	no	yes	yes	yes	yes	no	yes
Answer English														
Answer German														
Answer mixed														

	P15	P16	P17	P18	P19	P20	Result
	yes	yes	yes	yes	no	yes	
	yes	no	yes	no	yes	no	
	yes	yes	yes	yes	yes	yes	

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Task 1 b) conclusion

Conclusion Task 1 b:

- **95%** of test subjects were able to match the Swedish pension provider **SPA** with **state pension provision**.
  80% identified the state pension department **SPV** as a provider of **occupational pension provision**.
- **40%** used the **filter** "**Show employers listed**" (Example D), to display the **statutory** or **occupational pension providers**.
- **75%** recorded the **type of pension provision** in **German**, **15%** in **English** and **10%** used a **mix of both languages** in their answers**.**
- **75%** of participants **clicked** the **SPA link** to receive extra **information about the type of pension provision. 35%** also did this for the **SPV link**. But this did not give them **any extra information about the type of pension provision** and they **subsequently abandoned** this search path. **85%** needed **several attempts** (different search paths), to make an **assessment of the type of pension provider** (stat. / occup. / priv.).
- **In total**, **80%** of test subjects were able to **correctly match both providers** (SPA & SPV). On **average** this **took them 02:36 minutes**.

Notes:

- Although **80%** of participants could **correctly match** both **types of pension provide**r in the end, they **sometimes** showed **considerable uncertainty** in making a decision. **40%** choose, i.e. in addition, the **filtering process** (Example D), in order to classify the pension providers. A simple "**mouse-over-effect**" (displaying text when users hover the mouse over a symbol > Task 2), for example, would be helpful here to **significantly support** the **interpretation of the symbols**.
- The **transfer** of **English terms** can **potentially** be **an indication** that the test subjects were **unsure** about the **correct translation**. A type of **glossary** with the **most important specialist terms** in the **appropriate national language** could be useful here.

Example D

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Task 2:

> First **login using your login details.**

a) With which **providers** has this registered person already **concluded agreements**?

b) In which **countries** has the person **worked**?

c) Is this a **statutory, occupational** or **private pension provision**?

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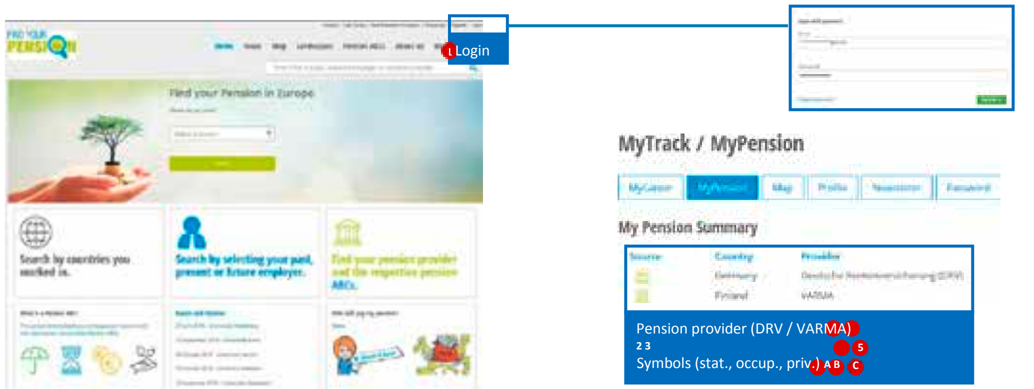
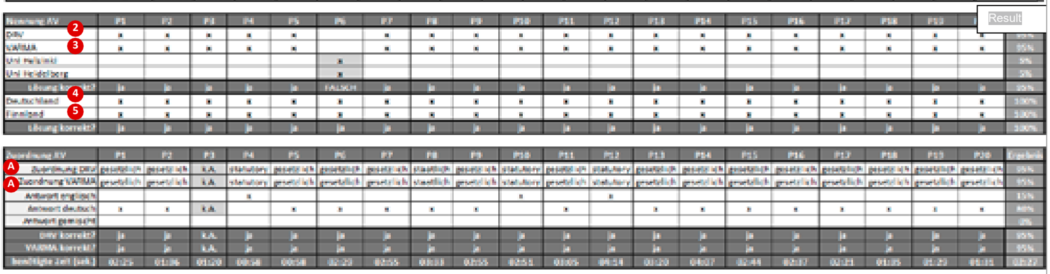
Task 2 a) – c) Approach & evaluation



Login	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	Result
Search for login	00:05	00:10	00:05	00:03	00:06	00:04	00:03	00:04	00:03	00:06	00:24	00:03	00:06	00:04	00:03	00:03	00:05	00:04	00:06	00:03	00:05
Duration procedure "log	00:27	01:01	00:40	00:21	00:24	00:26	00:39	01:04	00:42	00:33	01:17	01:19	00:32	01:52	00:28	00:27	00:38	00:27	00:28	00:41	00:43



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Naming PP	P1	P2	P3	P4	P5	P6	P7
DRV							
VARMA							
Uni Helsinki							
Uni Heidelberg							
Answer correct?	yes	yes	yes	yes	yes	FALSE	…
Germany							
Finland							
Answer correct?	yes	yes	yes	yes	yes	yes	…

Allocation PP	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Allocation DRV	statutory	statutory	no response	statutory	statutory	statutory	statutory	state	statutory	statutory	statutory	statutory	statutory	statutory
Allocation VARMA	statutory	statutory	no response	statutory	statutory	statutory	statutory	state	statutory	statutory	statutory	statutory	statutory	statutory
Answer English														
Answer German			no response											
Answer mixed														
DRV correct?	yes	yes	no response	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
VARMA correct?	yes	yes	no response	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
time taken (sec.)														

	P15	P16	P17	P18	P19	P20	Result
	statutory	statutory	statutory	statutory	statutory	statutory	
	statutory	statutory	statutory	statutory	statutory	statutory	

Task 2 a) – c) Evaluation

Conclusion Task 2 a, b, c:

- **100%** of test subjects **successfully logged in** using the **login details.** This was **identified after** an average of **5 sec.** (min. 3 sec., max. 24 sec.) at the top right of the website. The subsequent **login procedure** lasted **43 sec**. on average.
- **95%** of test subjects were able to **name** the **pension providers** with whom the recorded person had already concluded contracts. **100%** named the **correct countries** in which the person worked.
- **95%** were able to classify **DRV** and **VARMA** as **statutory pension providers**.
- **80%** recorded the **type of pension provision** in **German**, **15%** in **English** and **5% gave no response.**
- On average, the test subjects needed **02:27 minutes** to **complete the tasks** (2 a), b), c)).

Notes:

- The **login access** was not immediately discovered by all the test subjects due to its small size. **Some individual** test subjects needed **a surprisingly long time** (caused in particular by input errors) to **log in**.
- The **evaluation of the type of pension provider** (stat. / occup. / priv.) **was easy for everyone** - apart from one participant - (presumably due to the **now familiar symbol** (> Task 1) and the **pre-installed** "**mouse-over-effect**" under "My Pension Summary" (Example E).

Example E

Task 2:

d) In addition, please add the **following places of employment**:

You worked from **03/06/2013 to 11/05/2015** in **Germany** and concluded an employment contract with the **Karlsruhe Institute of Technology (KIT)**. For this period of time, in which you were insured with **VBL**, you have a current pension entitlement (€200) from your **VBLklassik**.

Please add this to your **biography in MyCareer**.

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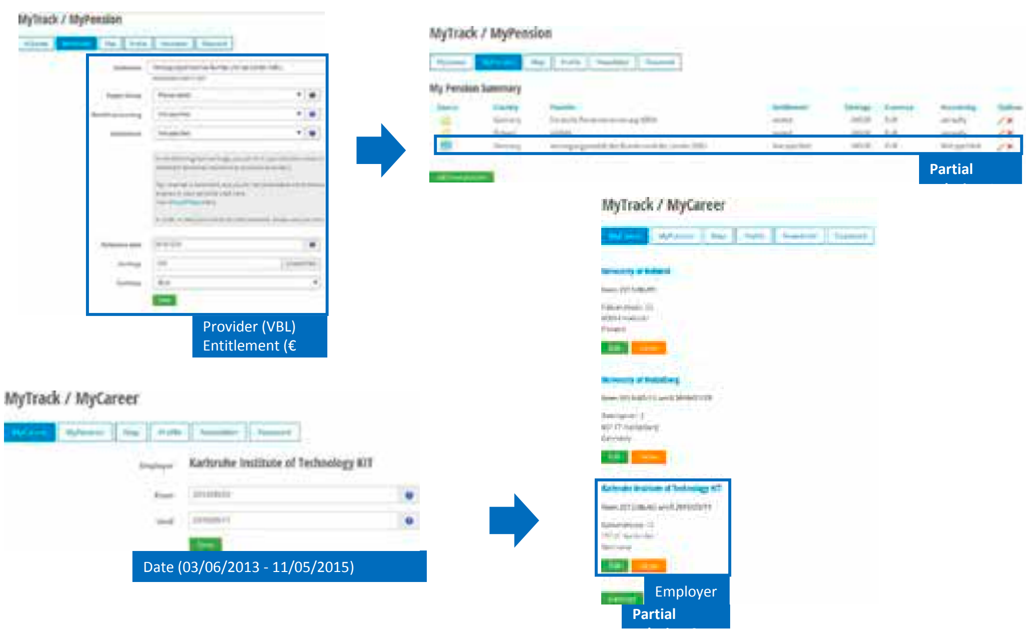
Task 2 d) Approach & evaluation



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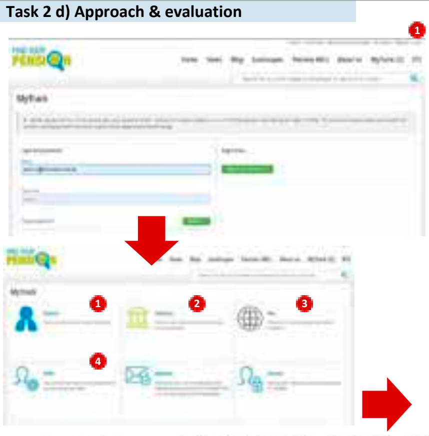
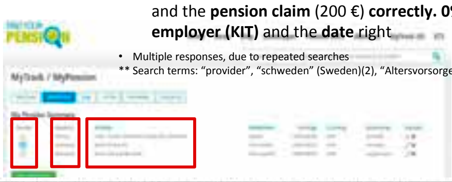
Task 2 d) Approach & evaluation





Search paths for workplace investment:*

- **100%** (20) use **MyPension**
- **80%** (16) use **MyPension**
- **50%** (10) use **Profile**
- **15%** (3) use **Map**

- **10%** (2) „**Pension ABCs**“
- **5%** (1) „**Landscapes**“
- **5%** (1) „**User guide**“

- **100%** (20) completed the **pension provider** (provider: VBL) and the **pension claim** (200 €) **correctly. 0%**, however, got the **employer (KIT)** and the **date** right.

- Multiple responses, due to repeated searches

** Search terms: “provider”, “schweden” (Sweden)(2), “Altersvorsorge” (pension provision)

Input mask	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	Result
Search for input mask	01:11	01:19	03:37	01:13	02:52	00:00	00:00	00:22	00:14	01:32	01:14	00:06	00:52	00:41	00:00	00:01	00:00	01:21	00:47	01:41	00:58
Duration process input (pension provider & salary)	01:44	01:15	01:19	00:33	02:40	02:13	01:12	02:15	02:11	01:39	01:57	01:30	01:28	01:18	01:25	00:57	01:08	02:22	03:54	01:10	01:42

Search	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	Result
2 MyPension	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	100%
1 MyCareer	x	x	x	x	x	x		x	x	x	x	x	x	x				x	x	x	80%
4 Profile	x		x	x	x	x				x	x			x					x	x	50%
3 Map			x																x	x	15%
Pension ABCs			x		x																10%
Landscapes					x																5%
User guide					x																5%
Partial solution 1 correct? (Pension provider & salary)	ja	ja	ja	ja	ja	ja	ja	ja	ja	ja	ja	ja	ja	ja	ja	ja	ja	ja	ja	ja	100%
Partial solution 2 correct? (Employer & Datum)																					0%

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Task 2 d) conclusion

Conclusion Task 2 d:

- **In Task 2 a) – c)** the participants searched for the **previous places of employment** (DRV / VARMA) and found them under “**MyTrack / MyPension**”. **25%** (5) of participants **recognized** straightaway the **button** below **“Add new pension”** to get to the **input mask for new places of employment**. For them, the search length after the input mask was **<= 1 sec.** (Example F). On **average**, however, participants spent **58 sec**. searching for this mask.

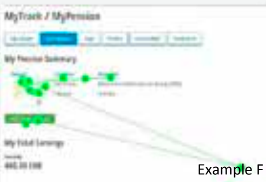
- The process “**Filling in the search mask**” Part 1 (**pension provider & pension claim**) lasted **on average 01:42 sec.** (min. 0:33 sec., max. 03:54 sec.). The **duration of the procedure** was considerably **influenced** by **uncertainties** (Example H) regarding the **correct filling in** and through **clicking on other links** (leaving the input mask to search for further information).

- **100%** clicked on the **link “MyPension”**, **80%** on **“MyCareer”**, **50%** on **“Profile”** and **15%** on **“Map”**, to **enter** the new **places of employment** (multiple clicks possible (see links in Example F & G). Moreover, two test subjects also clicked on the links “Pension ABCs” (10%), “Landscapes” (5%) and “User guide” (5%) in the course of their search.

- **All test subjects (100%)** were able to **apply** the **VBL as the pension provider** and a **pension claim** of €200. However, **none of the participants (0%)** were able to **record the employer (KIT)** and the **date of employment** (03/06/2013 - 11/05/2015). This meant that **none of the test subjects (0%) completely fulfilled the task** (Partial solution 1 & 2).

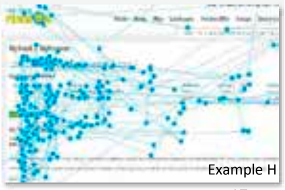
Notes:

- The individual input steps to **fully record previous employment** were **not self-explanatory** for the test subjects. The available **optimization potential** regarding improved **usability** could be considered here when it comes to a re-launch. **Several options** for **searching for / inputting information** do **not necessarily** lead to **easier orientation**.
- It would also be worth considering putting the **introductory videos** on the **first level** (homepage).



Example F

Example G



Example H

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