Financial planning and financial education for old age in times of change

OECD

Please cite as: OECD (2022*), Financial planning and financial education for old age in times of change*. OECD Finance and Business Policy Papers, OECD Publishing, Paris, https://doi.org/10.1787/e1d4878e-en.

This paper considers recent trends in the financial landscape, such as pension reforms, the impact of the COVID-19 crisis and the growing digitalisation of finance, and discusses their implications for old age financial planning and financial education polices, looking at financial decision making both in preparation for retirement and during old age. Building on recent examples of financial education policies and programmes that seek to address these challenges, the paper puts forward policy considerations to help the development of financial education policies and programmes that support financial planning for old age in times of change.

A previous version of this paper was released on 22 July 2022. This version updates the section "Financial education responses to the challenges posed by the COVID-19 pandemic on financial planning for old age".

Foreword

This note highlights recent trends in the financial landscape and their implications for old age financial planning and financial education polices, looking at financial decision making both in preparation for retirement and during old age.

The first section focuses on recent and ongoing trends, namely recent pension reforms, the impact of the COVID-19 crisis and the growing digitalisation of finance, and discusses the implications of these trends for financial planning and financial education before and during old age. It looks at the increasing longevity and individual responsibility for old age planning, and considers the challenges faced by specific population groups such as women, the self-employed and informal workers.

The second section looks at recent examples of financial education policies and programmes that seek to address these challenges. It notably focuses on financial education initiatives to support recent pension reforms and financial planning for old age. It then presents more specific financial education responses to the challenges posed by the COVID-19 pandemic.

The third section concludes with policy considerations to help the development of financial education policies and programmes that support financial planning for old age in times of change.

This note builds on key OECD policy instruments, including the OECD Recommendation on Financial Literacy (OECD, 2020[1]), and OECD publications such as the OECD Pensions Outlook (OECD, 2020[2]; 2018[3]; 2016[4]; 2014[5]), OECD Pensions at a Glance (OECD, 2021[6]; 2019[7]; 2017[8]), and Financial Consumer Protection and Ageing Populations (OECD, 2020[9]). The note incorporates inputs from members of OECD International Network on Financial Education (OECD/INFE), the G20/OECD Task Force on Financial Consumer Protection and the International Financial Consumer Protection Network (FinCoNet).

This note has been prepared by Thomas Montcourrier, Policy Analyst, OECD, and Suzy Morrissey, Policy Director, Te Ara Ahunga Ora Retirement Commission, New Zealand, under the supervision of Chiara Monticone, Senior Policy Analyst, OECD, and with oversight from Flore-Anne Messy, Head of the OECD Consumer Finance, Insurance and Pensions Division and Miles Larbey, Head of OECD Financial Consumer Protection Unit. Editorial support was provided by Jennah Huxley, Project Assistant.

The development of this note has been enabled by the contributions of OECD/INFE members, in particular the members of the OECD/INFE Working Group on Financial Education in the context of ageing populations.

This note was approved at the 17th meeting of the OECD/INFE Technical Committee on 28 April 2022.

Table of contents

Introduction

As set out in the OECD Recommendation on Financial Literacy (OECD, 2020[1]), policy makers should take into account the needs of specific target groups when establishing and implementing their national strategies for financial education. More specifically, the Recommendation recognises that older generations are particularly vulnerable to certain types of fraud, are less likely to be able to lift themselves out of financial difficulty and tend to have a low take up of new and innovative products and services, including digital technologies.

To explore the role of financial education in addressing these challenges, the OECD/INFE created a new Working Group on Financial Education in the Context of Ageing Populations in 2018 to focus specifically on the impact of ageing populations and the needs of seniors, which would also build on work to feed into the G20 Fukuoka Policy Priorities on Ageing and Financial Inclusion in 2019 (GPFI and OECD, 2019[10]). The Working Group had its first meeting in May 2019 to discuss the main issues to be addressed and develop a plan to take their work forward. At their second meeting in Rio de Janeiro in October 2019, the Working Group agreed to develop a series of short notes on:

- Inspiring and engaging seniors to maintain financial well-being into later life
- Financial planning and financial education for old age in times of change
- Designing and delivering financial education for seniors.

The OECD/INFE has conducted extensive work related to financial education for saving and planning in old age and retirement. Existing OECD work on financial education around pensions and retirement income includes the following publications:

- Lessons from National Pensions Communication Campaigns (Atkinson et al., 2012[11])
- OECD Pensions Outlook 2016: The role of financial education in supporting decision-making for retirement (OECD, 2016[4])
- OECD Pensions Outlook 2018: Improving retirement incomes considering behavioural biases and limited financial knowledge (OECD, 2018[3])
- G20 Fukuoka Policy Priorities on Ageing and Financial Inclusion (GPFI and OECD, 2019[10])
- Financial Consumer Protection and Ageing Populations (OECD, 2020[9])
- Strengthening seniors' financial well-being throughout the COVID-19 crisis and its aftermath (OECD, 2020[12])
- Towards Improved Retirement Savings Outcomes for Women (OECD, 2021[13])

Taking stock of previous work, this note focuses on recent trends in the financial landscape and their implications for old age financial planning and financial education polices, looking at financial decision making both in preparation for retirement and during old age. In particular:

- Section 1 focuses on recent and ongoing trends, namely recent pension reforms, the impact of the COVID-19 crisis and the growing digitalisation of finance, and discusses the implications of these trends for financial planning and financial education before and during old age.
- Section 2 looks at recent examples of financial education policies and programmes that seek to address these challenges.

- Section 3 includes policy considerations to develop financial education policies and programmes to support financial planning for old age in times of change.

The note is based on a variety of sources, including the documents mentioned above, as well as:

- Inputs from members of the OECD International Network on Financial Education, the G20/OECD Task Force on Financial Consumer Protection and the International Financial Consumer Protection Network (FinCoNet) through a dedicated member survey undertaken in 2019 to inform the G20 Fukuoka Policy Priorities on Aging and Financial Inclusion (GPFI and OECD, 2019[10]).
- Reponses of OECD/INFE members to a dedicated survey on the implications of the COVID-19 pandemic on financial literacy policy and practice circulated in July 2020.
- Further case studies shared by OECD/INFE members.
- The analysis of existing literature and research.

1 Recent trends affecting financial planning for old age and their implications for financial education

Significant global trends affect people's ability to plan their finances for old age, with population ageing being one of the most important ones. Ageing is a long-term global phenomenon, with almost every country in the world experiencing an increase in the number and proportion of older people as a share of the population. This demographic shift is a consequence of significant increases in life expectancy[1] combined with a falling birth rate in many developed and developing countries and economies. By 2030, 1 in 6 people in the world will be aged 60 years or over. At this time the share of the population aged 60 years and over will increase from 1 billion in 2020 to 1.4 billion. By 2050, the world's population of people aged 60 years and older will double (2.1 billion). The number of persons aged 80 years or older is expected to triple between 2020 and 2050 to reach 426 million (United Nations, 2017[14]). This global trend on population ageing is already creating important sustainability problems on public pay-as-you-go (PAYG) pensions (OECD, 2014[5]), leading many governments to encourage individuals to diversify the sources to finance their retirement.

Pension reforms started in the 1990s have a long legacy and still have an impact on people's retirement planning needs, but the pensions policy landscape is continuously evolving and new reforms are constantly implemented. Recent trends are also reinforcing existing challenges in saving and planning ahead, or creating new ones. In the first place, the COVID-19 crisis has constituted a substantial test to households' financial resilience and ability to plan ahead, highlighting the need for enhanced financial skills. At the same time, the digitalisation of finance and of many other aspects of life created new opportunities and challenges for old age financial planning. This section discusses these challenges.

Existing trends and relevant factors

Population ageing puts continuous pressure on pension systems. Since the 1990s, this led many governments to reform their pension systems in order to cope with demographic challenges and economic imbalances. As discussed further, a number of factors and recent trends underpin various financial education needs connected with old age financial planning.

Increasing longevity and individual responsibility for old age planning

The increase in longevity has many sources such as a better medical care, less physical labour, and different ways of life. While longer lives are generally positive, living longer can also have significant financial implications. Longevity risk can be defined as the risk that people live longer than expected or provisioned for. At the individual level, this risk is generally taken to mean outliving one's retirement savings

[1] This refers to long-term trends, as in several countries life expectancy went down in 2020 (Islam et al., 2021[50]).

(OECD, 2014[15]). Hence, increasing longevity means having to find ways to finance a longer retirement period. Unfortunately, most people tend to underestimate their longevity significantly (O'Connell, 2011[16]). This may increase the risk of making sub-optimal choices with regard to their retirement savings –such as withdrawing larger amounts for short-term consumption. Also, loss aversion coupled with longevity underestimation may further reduce appetite for guaranteed lifetime products or other new financial products and services that are particularly salient for older persons in retirement, such as the decision to purchase an annuity, life insurance policies, reverse mortgages, home-equity lines of credit, etc. In this context, there is an important need for policy makers and relevant stakeholders to adequately empower individuals –notably through financial education initiatives- to adequately plan financially for the long term in order to mitigate longevity risk for individuals.

Moreover, various trends underpin an increase in individual responsibility or old age planning:

- *Decline in public pensions:* In the last decade, many governments have been explicitly or implicitly reducing public pension benefit levels while encouraging private pension savings in order to address sustainability issues (OECD, 2014[5]). Such reforms increase the need for financial education programmes to ensure that individuals understand the impact of such pension system reforms and the responsibilities and risks they are facing.
- *Shift to Defined Contributions (DC) schemes:* A major trend taking place in private pension schemes globally is the shift from defined benefit (DB) to defined contribution (DC) pension schemes (OECD, 2016[4]). This means that more of the risk involved in pension provisioning (investment return risk and longevity risk) is shifted from the employer to the worker – though hybrid schemes, containing both DB and DC elements, may spread the risks between parties. Even though the driving factors behind this shift toward DC schemes may be different across countries, the trend is an increasingly global one. Financial education is necessary to ensure that pension plan members and beneficiaries understand the risks they are exposed to. DC plans typically offer a greater amount of choice than DB schemes, implying a greater amount of responsibility for individuals, and require more financial skills than DB plans. Individuals should have sufficient financial knowledge and skill with regards to benefit calculations (for instance for understanding the performance depending on underlying investments), payout/decumulation options (choice to be made between different payout/decumulation options, such as lump sums, annuities, programmed withdrawals, or any combination) or costs and fees which can have a substantial negative impact on future retirement income. These factors make the need for broad financial education even more pressing (OECD, 2016[4]). Access to resources and tools to facilitate these complex calculations, and that incorporate lessons learned from behavioural sciences, are likely to support individuals in their financial decision making.
- *Shift towards more individualised pension choices:* As well as shifting to DC plans, many pension schemes are also allowing individual plan members to make choices regarding the contribution rate, investment types and payout/decumulation products. Individuals are facing an increasing number of financial risks, including investment risk during the accumulation phase, the risk of asset and interest rate volatility at the point of retirement and longevity and inflation risk during the payout/decumulation phase. More freedom of choice regarding contribution rates and payout/decumulation products also means greater individual risks relating to the ability to cover longevity risk. This trend towards allowing more individual choice implies that individuals should have advanced levels of financial literacy to make informed decisions that are suitable to their personal situation (OECD, 2016[4]).

Recent pension reforms (before COVID-19)

In order to ensure the sustainability of pension systems and cope with the trends previously mentioned, many pension reforms have taken place in recent years. Pre COVID-19 pension changes mainly focused on loosening age requirements to receive a pension, increasing some pension benefits (including first-tier pensions), expanding pension coverage or encouraging private savings. Some of these changes constituted a partial reversal of previous reforms. They reflected improving economic conditions after the global financial crisis, and increasing political pressure in some countries not to implement previously decided measures (OECD, 2019[7]).

Some of the main pension policy measures taken from 2017 to 2019 included (OECD, 2019[7]):

- limiting the increase in the retirement age or expanding early-retirement options (Italy, the Netherlands and the Slovak Republic);
- raising the retirement age (Estonia);
- enhancing work incentives (Belgium, Canada and Denmark);
- increasing the level or expanding the coverage of first-tier pensions, the first layer of old age social protection (Austria, France, Italy, Mexico and Slovenia);
- increasing benefits while reducing public pension contributions for low earners (Germany);
- suspending the adjustment of pension benefits with demographic changes (Spain);
- bringing public-sector pension benefits more in line with private-sector benefits (Norway);
- changing the contribution rates (Canada, Hungary, Iceland and Lithuania) or expanding contribution options (New Zealand);
- expanding the coverage of mandatory pensions (Chile) or developing auto-enrolment schemes (Canada, Lithuania and Poland); and,
- changing tax rules for pensioners (Sweden).

Even so, pension systems remained pressured by their ageing populations, and while the low interest rate economic environment continues to keep the cost of government borrowing low, it offered limited returns to investors, and impacted both defined contribution and defined benefit pensions, although in a different way (OECD, 2019[7]). In this context, policy makers, financial public authorities and service providers need to ensure that individuals remain abreast of policy changes to adapt their individual and family planning for old age, and to continue understanding the implications of changes on the financial landscape (including changes in interest rates) for their personal finances.

Challenges for specific groups of the population

The existing trends and reforms bring challenges and specific financial education needs for financial planning. Most notably, depending on national specificities, some groups are likely to face specific challenges in planning for retirement, meaning that they may need specific (or enhanced) financial literacy skills.

Young people

Given the importance of individual responsibility when it comes to pension choices, young people should develop financial skills and attitudes to recognise the importance of starting to plan and save for retirement from a young age. This may be particularly difficult as many young people may need to prioritise short or medium-term expenses (for example repaying student loans or saving for a house) to the detriment of retirement savings. They also need to understand their options and how to manage their pension savings to provide a suitable level of income in retirement, notably thanks to interest compounding. Since they are likely to have several employers over their lifetimes, they also need to be aware of the issues they may face when trying to move existing pension savings or start new plans, and the cost of holding savings in multiple funds.

Women

The gender pension gap observed today is mainly the result of past work history differences between men and women. Differences in labour market participation, part-time employment, wages, and career length translate into different pension outcomes down the road. Beyond labour market drivers, behavioural and cultural elements, as well as societal interactions, may influence the decisions taken by men and women in a way that contributes to the gender gap in retirement savings arrangements. Compared to men, women are often found to be more risk averse and have lower levels of financial literacy overall, which may influence their attitude towards savings. Marital choices may also affect retirement incomes, as couples may be able to mutualise their pension savings. Gender stereotyping could also encourage women to opt for solutions that are more conservative than what their actual risk preferences imply. Moreover, communication campaigns addressed at the whole population may fail to take into account certain needs specific to women, such as how to compensate for the decrease in salary and contributions during parental leave (OECD, 2021[13]). Additionally, women have a higher average life expectancy than men, and are more likely to be single in old age. This means that they have a higher risk of outliving their retirement savings. In order to overcome these gaps, there is a need for policy makers to integrate a gender-based lens in the development of policies or reforms related to financial planning and financial education in old age.

Informal workers

A significant number of adults around the world are not covered by any formal pension plan, whether public or private. Indeed, low pension coverage and insufficient pension savings are among key policy concerns in many jurisdictions (OECD, 2014[5]; Munnell, 2020[17]). Worldwide, 68% of people above retirement age receive a pension, either contributory or non-contributory. However, regional differences in income protection for older persons are very significant: coverage rates in higher-income countries are close to 100%, while in sub-Saharan Africa they are only 22.7%, and in Southern Asia 23.6% (Grandolini, 2016[18]). In addition, at the global level, roughly a quarter of the working-age population (24.9%) contribute to a private or public pension scheme (6.3% in sub-Saharan Africa to 76.2% in Northern America) and can therefore expect to receive a contributory pension upon retirement (ILO, 2018[19]).

Traditional employment-based pension systems do not cover most informal sector workers in developing economies albeit in some regions, these workers account for two-thirds or more of the working age population. In countries where coverage and contribution levels are low, older people have limited support through formal pensions and rely to a large extent on their family and community for financial support. However, opportunities for informal support from family may become more limited for some people. Indeed, as countries become more urbanised and families have fewer children, traditional family-based care for the elderly is breaking down, without adequate formal mechanisms to replace it. Furthermore, as incomes have been hit hard by the COVID-19 crisis, family support towards older people has been jeopardised. As a result, the risk of financial stress among elderly people in developing countries has been exacerbated.

In light of these aspects, an important objective of many policy makers in countries around the world is to increase pension coverage. While financial education alone cannot address the issue of some people not having access to formal pensions, it still has a role in supporting the financial decision making of informal workers. In this regard, financial education needs to be tailored to the needs of people without formal jobs and formal pensions by helping them to understand basic saving principles that are relevant and applicable in an informal context.

Workers in non-standards forms of work

Non-standard work is an umbrella term referring to a wide range of jobs. Non-standard workers can be independent contractors who work alone, self-employed workers potentially employing other people, dependent employees working part-time, workers on temporary contracts, casual workers, platform workers and other workers who are not in “standard” employment, i.e. working full-time and on open-ended contracts for a single employer (OECD, 2019[20]). Depending on the type of non-standard work, working conditions, job security and social protection rules vary considerably, highlighting that non-standard workers are far from being a homogenous group. With globalisation, automation and demographic changes transforming labour markets at a rapid pace, there has been an expansion of new forms of non-standard work, in particular jobs relying on new technologies. Non-standard employment accounts for more than one-third of employment in the OECD while part-time work is three-times more frequent among women than among men and self-employment is particularly frequent among older workers (OECD, 2019[7]).

The self-employed can be in a challenging situation in terms of pension coverage because they do not have employment contracts that can be used as the basis for pension contributions. (OECD, 2019[7]). In many jurisdictions, the self-employed are required to pay lower payroll contributions than employees to finance their public pensions while in others the self-employed are not required to join earnings-related schemes, contrary to employees (OECD, 2019[7]). Moreover, decisions about private pensions are usually more difficult for the self-employed than for employees, because the self-employed do not have access to occupational plans, they may not be covered by mandatory private pensions, and they are often not covered by auto-enrolment and other default options (OECD, 2019[7]).

These challenges lead to a greater need to accumulate voluntary retirement saving through private pensions or other means and brings increasing responsibility for personal financial planning. It means that the workers in non-standard forms of work need to be particularly skilled in planning and managing their retirement savings and retirement income. Unfortunately, non-standard forms of workers are more common among individuals with lower levels of education (OECD, 2015[21]). They often have lower levels of understanding of pension-related issues and who may not prioritise retirement savings. Hence, many of these workers could highly benefit from improved financial literacy to better manage their long-term finances. (OECD, 2020[1]).

The impact of the COVID-19 pandemic on financial planning for old-age

Among the immediate economic impacts of the COVID-19 crisis were job losses arising from lockdowns, especially in sectors that were more strongly affected. Millions of workers experienced economic disruption, illustrated by widespread income losses which have made it much harder for households to pay even their usual bills (OECD, 2021[22]). Even if still working, workers in many sectors had to accept shorter hours and/or wage cuts (OECD and ILO, 2020[23]). This had an impact not only on the workers themselves but also on their elderly dependants. As many elderly people, especially in developing countries, are not covered by a pension scheme, the support from workers for older family members has often been jeopardised.

In response to the challenges coming from the COVID-19 crisis, a majority of countries around the world introduced a range of emergency measures, or considerably expanded existing ones, aimed at supporting firms, workers and households (OECD, 2020[24]). Such measures included financial support to firms, income support to people losing jobs and/or income, job retention schemes, income and care support to quarantined/sick workers as well as support measures for vulnerable households through for example postponing bills/loans repayments and providing in-kind support (OECD and ILO, 2020[23]). The use of a number of these measures - often targeted to those with the highest levels of economic insecurity - have contributed to protect consumers during the COVID-19 crisis. Thanks to them, consumers in some countries even reported a better financial situation and financial wellbeing during the pandemic than prior to it (CFPB, 2021[25]; Pew Research Center, 2021[26]).

However, despite the important policy responses taken by governments to alleviate the crisis, the people who have been adversely impacted by the crisis face a number of challenges that have both immediate and long-term effect. While some people have been able to set aside larger share of saving during the crisis for precautionary reasons due to the uncertain prospects as well as due to reduced opportunities to consume (OECD, 2021[27]), many others have experienced a reduced capacity to save and have instead needed to withdraw savings or increase their debt in order to cope with the emergency (Munnell, 2020[17]).

Implications of the COVID-19 pandemic on long-term planning

Implications for the working-age population

In addition to the immediate impacts on jobs and incomes, the COVID-19 crisis also has implications on the longer term, including a range of negative potential impacts on retirement savings (OECD, 2020[28]):

- An increase in liabilities from falling interest rates in retirement savings arrangements with retirement income promises (e.g., defined benefits retirement plans, and life annuity arrangements);
- A lower capability to save for the long term or contribute to retirement savings plans by individuals who had their wages reduced or lost their jobs, and by employers suffering financial distress;
- Cyber-attacks, frauds and scams directed at individuals, especially seniors, and also to regulators, supervisors and pension funds;
- A reduction in savings and compound interest earned as a result of short-term relief measures such as contribution holidays, or early access to retirement savings;
- An inclination for individuals to prioritise immediate needs over their long-term interest;
- An increased tendency to use credit/debt to manage day-to-day finances. This increased debt will clearly have negative impacts on individuals' ability to save for retirement or else will impact their financial situation in retirement (Munnell, 2020[17]);
- A lower capability for adult children and other family members to support older people.

Implications on older adults

The incomes of people who were already in retirement when the COVID-19 pandemic started have been less affected then those of people in working age. The income of current pensioners is generally well protected during economic downturns, as already retired persons usually do not depend on the labour market and continue to receive their pensions, unless ad hoc cuts are made for fiscal reasons. This has been the case over 2020-2022, and in many countries older people even benefited from additional targeted support measures. Moreover, the expanded use of job retention schemes and the extension of unemployment protection significantly limited the impact of the COVID-19 crisis on future pensions (OECD, 2021[6]).

Nevertheless, the COVID-19 crisis has important implications on the financial well-being of seniors, including:

- Increased risk of financial exclusion: Even before the crisis, many elderly people preferred cash transactions and were not familiar with digital or online payments. Lockdown measures, social distancing imposed in particular on the older population, and a reduced usage of cash due to sanitary precautions put them at further risk of financial exclusion, as many seniors were unable to access their accounts.
- Increased exposure to security risks, fraud and abuse: Elderly people were already exposed to financial scams and online fraud. The crisis highlighted an increasing number of frauds targeting the elderly.

- Increased financial uncertainty: The crisis increased financial uncertainty and made financial planning more difficult. As many seniors live on limited resources or are at risk of poverty, the current climate of uncertainty has likely put an extra burden on their financial well-being.
- Increased difficulty in accessing financial information, education and advice: Social distancing measures, low digital skills and declining cognitive abilities have made it even more difficult for the elderly to access financial information, education and advice, which have increasingly been offered online and via digital channels.

Policy responses and effects

In addition to a wide range of measures to alleviate the immediate negative impact of the COVID-19 crisis on incomes and financial resilience, governments have taken a number of policy responses related to retirement savings. These included (OECD, 2020[28]):

- Policies to limit the realisation of short-term investment losses, e.g. communicating the importance of a long-term perspective in saving for retirement, diversified asset allocation, and the consequences of frequent trading/transactions or timing the market (switches and withdrawals).
- Policies that provide subsidies to cover pension contributions and support the accrual of assets, e.g. providing wage subsidies covering pension contributions.
- Policies to protect providers and participants from cyber risks and COVID-19 related scams, e.g. warnings and tips to avoid scams.
- Policies to provide short-term relief to individuals or their employers, including facilitating early access to retirement savings.
- Policies to provide temporary flexibility to pension funds to fulfil their reporting and funding requirements.

Most of these measures seek to protect retirement savings balances in different ways. The aim is to help people avoid ‘locking in’ losses incurred in an economic downturn and to direct attention to the importance of having a diversified asset allocation in order to better manage risks, especially for individuals nearing and in retirement. For example, subsidies that cover pension contributions reflect the importance of regular contributions to long-term savings and enable contributions to be made even when cash-flow or revenue is reduced. Also, protecting providers and participants from cyber risks and COVID-19 related scams is a way of ensuring individuals retain the value of investments that they have and do not lose any value from scams.

However, short-term relief measures such as facilitating early access to retirement savings may come at a potential cost in terms of future retirement income, and can be particularly challenging for individuals with limited financial literacy. While this reduces pressure on cash-flow, it is detrimental to the long-term nature of retirement savings, as they will be smaller if contributions are reduced or cease, or if large amounts are withdrawn from pension accounts and not paid back. Such measures were taken for instance in **Australia**, where a provision was made to allow people to withdraw twice up to AUD $10,000 from their superannuation funds (government mandated earnings-related retirement savings schemes). Over the duration of the scheme funds received 4.9 million applications with a value of $37.3 billion. As at 31 January 2021, 98% or 4.8 million of these applications had been paid with a total value of $36.4 billion. 95,000 applications had been closed or revoked without payment (APRA, 2021[29]). Similarly, in the **United States**, even if very few people used this flexibility, the CARES Act of 2020 provided significant relief for businesses and individuals affected by the COVID-19 pandemic. This included allowing retirement investors affected by the coronavirus to gain access to up to $100,000 of their retirement savings without being subject to early withdrawal penalties and with an expanded window for paying the income tax they owe on the amounts they withdraw. Similar types of measures have been adopted in **Chile, Peru** (FIAP, 2020[30]) and **India** - where the Pension Fund Regulatory & Development Authority Act (PFRDA) has taken several steps to permit partial withdrawal towards treatment of specified illness, including COVID-19). In **Canada**, 37% of households accessed savings to cope with the impacts of COVID-19, including savings that had been set aside for retirement (FCAC, 2022[31]). No such change was made to the similar KiwiSaver scheme in **New Zealand** but an emergency hardship withdrawal function was already in place: The Financial Market Regulator (FMA) worked with providers to alleviate issues with difficulties in the application process, also focused on ensuring members were aware of government support packages, and emphasised that hardship withdrawals should be a last resort.

Individuals need to understand how the immediate economic issues (such as a decrease in the value of their funded pensions) impact their old age prospects as well as the consequences of short-term relief measures (such as contribution holidays, or early access to retirement savings) on the long-term adequacy of their pension benefits. Policy makers, public authorities and service providers need to equip individuals with the financial knowledge and skills to understand the implications of the COVID-19 crisis, and of the related policy measures, on their current and future retirement savings. For example in **Peru**, where in 2020, the Congress enacted several laws to allow a partial withdrawal of individual savings from the Private Pension Fund Administrators, the Peruvian Superintendency of Banking, Insurance and Private Pension Funds Administrator (SBS) has reinforced its financial education initiatives, including through a module on long-term savings and pension culture as part of the SBS workplace programme. During the pandemic, the SBS has continued to train citizens through webinars and communicational campaigns on social media. Moreover, it has redesigned its e-learning courses including the module on long-term savings and pensions.

Digitalisation and financial planning for old-age

In parallel with the trends mentioned above, technology and digitalisation are rapidly transforming the way in which society and the financial sector is operating. Not only are digital financial services introducing new opportunities and challenges for consumers, but certain population groups and age cohorts may also be able to use and take advantage of them to a different extent than others. Digital financial services can offer possibilities for integrating unbanked and previously financially excluded populations into the formal financial system by extending reach and access to new types of financial services; offering cheaper, faster, secure and timely transactions; and providing a seamless experience tailored to individual needs (OECD, 2017[32]).

However, reliance on technology can also create new risks. Less educated, or less tech-savvy individuals (such as older ones) might be excluded from technological progress because they do not have access to technology or do not have the skills to engage with new financial products or new forms of communication.

Opportunities for old-age planning offered by digitalisation

Technology is rapidly transforming the way in which the financial sector is operating, and this applies also to products and tools for managing and planning financial resources before and during retirement. Innovative applications of technology for financial services, or FinTech, are already being used to improve communication with consumers and their engagement with their pension plans. Among the numerous digital developments applicable to pension provision, the following are particularly relevant in the context of financial planning and financial education for old age.

Increasing pension coverage and contributions

Considering that emerging FinTech applications attract in particular the attention of younger generations (millennials) and other digital natives, the use of new technologies may contribute to greater adoption of digital solutions to plan and manage financial resources. Digital tools and improved communication techniques can encourage greater engagement and may potentially lead to greater take-up of private pensions, or greater contributions, in particular in voluntary pension systems. This can be the case especially for certain categories of the population such as the young, the self-employed or workers in the informal sector (IOPS, 2018[33]).

Supporting the accumulation phase

Planning for retirement requires individuals to have an expectation about their age-specific needs, vulnerabilities, and preferences at old age, which are often not the same during working life. The likelihood of disruptive life events (such as physical/mental health deterioration, losing a partner, caring for a spouse or other family members, changing housing etc.) should ideally be part of the retirement planning equation. Individuals must fully understand their financial goals, the expected income sources they anticipate in the accumulation and decumulation phases and be aware of the risks they are willing to take and the ones they want to insure, diversify, or hedge.

As individuals are increasingly required to make complex choices about their pension finances, digitalisation can improve the ways in which pension providers interact with them. The development of enhanced digital communication interfaces (mobile apps, web platforms, self-service kiosks, customer portals, online consolidators and simulators) by public authorities, pension providers and/or employers is seen as a possible way to help engage individuals and support decision-making, foster understanding and knowledge about pensions, as well as facilitating saving for retirement (OECD, 2018[34]).

Digital technologies could also encourage greater transparency and allow people to manage, aggregate and analyse their own pension more efficiently. For example, a number of countries have created “pensions dashboards” to give members and beneficiaries an easy-to-use overview of their likely pension finances. These dashboards can be a powerful tool for transmitting information, encouraging people to take action, and in particular for keeping track of and managing pension pot(s) (OECD, 2017[35]). Digital tools such as pension calculators as well as robo-advice can also make financial planning more accessible and efficient (OECD, 2018[34]) by providing key pension information digitally to savers or facilitating access to advice.

However, there is a need for policy makers to increase the awareness of these developments and financially educate end users in order to enable individuals to make the best out of these, mitigate the risks and make sound financial choices according to their specific needs, vulnerabilities, and preferences.

Supporting the pay-out phase

The “decumulation” or “payout phase” of funded pensions is the process of converting the retirement portfolio into a regular flow of income (an annuity for example) or a lump sum. Decumulation requires individuals to decide upon a retirement strategy, comprising elements such as the choice of a longevity insurance strategy, a withdrawal strategy as well as an investment strategy. Therefore, the way individuals chose to decumulate their assets is one of the most important decisions they will make as they approach and enter into retirement.

In this regard, financial digitalisation offers the opportunity to help seniors to make sound financial decisions during the decumulation phase. For example, robo-advice for pensions may enable a better access to appropriate and suitable financial advice and make investing more affordable and accessible by relying on user-friendly digital platforms, algorithms and low-cost passive investment (OECD, 2017[36]). Other digital tools may also incentivise positive financial planning behaviours through personal goal setting, feedback mechanisms and reminders; and address, and possibly overcome, consumers’ personal biases (confirmatory bias, post-purchase rationalisation, short-termism, etc.) through self-applied nudges or just-in-time information.

Challenges brought about by digitalisation

As financial services are increasingly delivered through digital technology, adults' ability to access these services depends on their digital skills and on their access to digital tools, including mobile phones and the internet. Limited digital access and skills have implications not only for day to day money management but also for managing resources before and during retirement.

As highlighted by the OECD Survey of Adult Skills (OECD, 2019[37]), older adults tend to possess lower digital skills as compared to younger cohorts. The survey shows particularly low levels of proficiency in problem solving in technology-rich environments among older adults (55-65 year-olds) and in some countries, the vast majority of older adults did not undertake the problem-solving assessment because they lacked the necessary information and communications technology (ICT) experience or failed a very basic test of ICT skills (OECD, 2019[37]). The fact that many older people currently lag behind younger generations in terms of their digital capability may be due to a range of factors, including a lack of familiarity and confidence, consumer preferences, security concerns as well as age-related physical issues. Studies also show that Internet access and use are lower at older ages (BTCA/World Bank, 2019[38]). While using digital technologies to communicate has become an everyday habit for most people, older adults continue to use digital technologies at a lower rate than younger counterparts.

Furthermore, data from the World Bank's Global Findex suggest that younger adults are more likely than older adults to use digital financial services (BTCA/World Bank, 2019[38]). For example, for relatively straightforward digital financial services such as making or receiving digital payments (such as transfers of pensions, wages and government social benefits, as well as retail purchases using a card or mobile wallet), older adults lag younger and middle-aged adults in the use of payments via mobile phones and the internet. This is particularly the case in low- and middle-income economies, where such payments are made five times more often among younger adults than adults aged 60 years or older.

Therefore, there is a need to strengthen digital literacy and digital financial literacy in order to enable individuals, and especially older adults to make the most of the advantages offered by digital tools.

COVID-19 and the accelerated digitalisation of finance

Internet use was increased by the COVID-19 pandemic and digital technologies emerged as a key element of social resilience (OECD, 2020[39]). Online-platform use increased markedly during the first half of 2020, when most countries imposed lockdowns and physical distancing measures (OECD, 2021[40]).

Similarly, digital finance became even more widespread and allowed many consumers and businesses to tackle the unprecedented situation created by the COVID-19 pandemic. Transactions shifted online as lockdown measures have led many bank branches to close or reduce opening hours or service levels. This heightened the importance of digital financial transactions, including online, mobile and contactless payments (OECD, 2020[41]). A growing proportion of in-store payments are now digital and contactless, and on-line purchases (e-commerce) have significantly increased. FinTech solutions have also helped to broaden and speed up access to loans, including loans supported by governments in response to the COVID-19 crisis.

However, the lower engagement of older people with digital technologies and digital finance, coupled with the accelerated shift towards digitalisation prompted by the crisis, meant that many elderly people have been struggling to effectively use financial services for their day-to-day life. This underscores the importance of digital and financial skills in order to be able to function effectively in a digital environment. Limited digital financial literacy implies that consumers, especially older ones, can be exposed to significant risks including, notably, the risk of digital fraud and abuses, misuse of personal financial data, lack of transparency and inadequate information on products and related redress mechanisms, data privacy and security vulnerabilities, cybercrime, etc. Additional potential consumer risks can derive from the digitally delivered product itself. Excessive exposure to these risks can undermine consumers' confidence and trust in the financial system and technological innovation, thus compromising the potential of digital financial services as drivers of financial inclusion (OECD, 2017[32]).

When combined, all the impacts of the current financial environment on retirement planning and pensions make the need to improve the degree of digital capability/literacy of the elderly even more pressing. The next section lists some of the financial education initiatives taken by public authorities to overcome these challenges.

2 Financial education responses to support financial planning for old age in times of change

This section looks at recent examples of financial education policies and programmes that seek to address the challenges highlighted in the previous section, namely recent pension reforms, the impact of the COVID-19 crisis and the growing digitalisation of finance.

Financial education initiatives aiming to support recent pension reforms and financial planning for old age

Many countries have taken initiatives in order to inform people about changes in the pension landscape and support their financial planning for old age and retirement. Providing financial education around retirement planning is a typical way to support people in building adequate resources for their old age, strengthening their financial resilience and making them feel in control of their finances in the longer term.

Previous OECD/INFE work on the role of financial education in supporting decision making for retirement highlights effective international practice and policy suggestions (OECD, 2016[4]). Similarly, the Policy Handbook on financial education in the workplace looks at challenges and lessons learnt in helping working-age adults develop the knowledge and skills that reduce their financial stress during their active life and beyond (OECD, 2022[42]). Examples of programmes to support decision making for retirement are also included in existing publications such as (OECD, 2020[9]).

In addition to these publications, the case studies presented below focus on recent and new examples of initiatives targeting youth, pre-retirees and older people with the aim of supporting planning and saving for retirement.

Information on retirement and pensions

The majority of countries continue to use websites to provide general guidance, help and education to their population with regard to pension issues. For example, in **Australia** the MoneySmart website[2] provides information on a range of important pension-related issues (benefits, pension age, transition mechanisms etc.) as well as other possibilities to improve retirement income (concessions, volunteering downsizing home etc.). Similar information is provided in **Sweden** on the web portal[3] "*Gilla Din Ekonomi*", in **New**

[2] https://moneysmart.gov.au/retirement-income

[3] https://gilladinekonomi.se/

Zealand through the Sorted website[4], and in **Armenia** through the national strategy website[5]. In **Hong Kong, China**, the Chin Family website[6] provides information, tools (such as pension calculators) and blogs on retirement money management. In **Portugal**, the website of the National Plan for Financial Education has a link that directs users to the Social Security simulator (the institution accountable for managing public pensions in Portugal) which estimates the expected retirement age, as well as the amount to be received, taking into account their lifetime contributions. A similar link is available on the national website[7] for financial education in **Italy**. The link directs users to the social security simulator provided by the institution accountable for managing first pillar pensions for Italian private and public workers (INPS). The simulator also gives users information on their accrued benefits and, taking into account their lifetime contributions, estimates their expected retirement age and the pension to be received. In **Spain,** the Financial Education Plan has specific educational contents for seniors on its website including information about how to plan for retirement and information about the different benefits that seniors can access in case of necessity. In the **Netherlands**, the national strategy website[8] provides information on life events, saving, pensions and is also accessible through various social media channels.

Life-stages approach in delivering financial education on pensions and financial planning

A significant number of countries report taking a life stage approach with regards to financial education, including on long-term financial planning related issues. This means that financial education initiatives seek to target people according to specific life stages such as studying, starting work, getting married, purchasing a house or retiring. This is for example the approach taken in **India** where the National Strategy[9] for Financial Education 2020-2025 aims to achieve its strategic objectives by taking into account different life stages of target audiences: children, young adults, adults in workforce and senior citizens (with special focus on women). Similar life stages of target audiences are taken into account in the National Strategy for Financial Education in **Italy**. A comparable approach targeting school children, youth, adults and pre-retirees/retirees is enshrined in the National Strategy[10] for Financial Literacy 2019-2023 in **Malaysia**. In **Austria**, the recent National Financial Literacy Strategy (OECD, 2021[43]) has identified eight life stages during which to support people with dedicated financial education resources: Attending school, higher education and life-long learning, first job, working life, first major purchase, planning for the future, family life, enjoying senior years. In **Portugal**, the website of the National Plan for Financial Education provides information segmented by life stages, one of which is "planning for retirement". Here, several tips are presented for those who want to start saving for retirement, as well as the main complementary products and services available in the market, highlighting the importance of recognising the risks before investing in them. A similar approach is followed in **Italy** where the national website for financial education provides information segmented by life events including both “planning for retirement” and “approaching retirement”.

For each of these life stages, it is essential to take into account the characteristics and needs of the targeted audience in terms of planning for old-age and to deliver education initiatives accordingly. For example in

---

4 https://sorted.org.nz/

5 https://abcfinance.am/pension1.html

6 https://www.ifec.org.hk/web/en/moneyessentials/qdap-tvc/retirement-calculator.page

7 www.quellocheconta.gov.it

8 www.wijzeringeldzaken.nl

9 https://www.nabard.org/auth/writereaddata/tender/1709204627English%20NSFE%202020-2025-Version%20Printable.pdf

10 https://www.sc.com.my/api/documentms/download.ashx?id=6385977c-bd2c-4612-bda8-9ce6a5961720

India, when getting closer to retirement, the financial education initiatives are more and more targeted on old-age issues. However, this does not mean that those issues should only be covered for target groups which are close or at retirement.

Indeed, it is often easier to maintain a current state, than to try to improve it. In terms of financial well-being, this would suggest that an approach that starts when a person is young has a better chance of success than one started later in life. Programmes designed to build healthy habits and encourage positive attitudes and behaviours from childhood can create a solid foundation for financial well-being that inspires individuals to maintain progress throughout life. Financial education is valuable in this regard. Financial education in schools or through afterschool activities can stress the benefit of financial plans and create a solid foundation of financial literacy, including positive habits and behaviours that will keep younger adults in good financial health as they age. The OECD Policy Handbook on Financial Education for Young People in the Commonwealth of Independent States provides useful examples of effective financial education programmes for young people (OECD, 2019[44]).

Work-related events (starting a new job, changing position etc.) are also key life stages where financial education can provide relevant outcomes, making workplace an important place to convey financial education messages, notably about retirement planning. For example in **Singapore**, the financial education programme *MoneySense*[11] divides work life in four main stages with every phase bringing different goals and priorities that require a different investment approach:

- *Starting the career*: The long-term investment horizon makes it an adequate moment to build up savings and set aside an emergency fund, get basic life and health insurance and invest in suitable products.
- *Mid-career*: This is a life stage where expenses may be high as one can start a family, buy a house or support parents and/or in-laws. It is important to exercise prudence when it comes to investing (for e.g. by buying an affordable house, making informed financial decisions, building enough financial reserves as well as having adequate insurance coverage).
- *Preparing for retirement*: Life moment when children may need studies financing and aged parents financial support. Hence, it is important to choose less risky investments and set aside budget for dependants' needs.
- *Retiring:* Importance to retire debt free, monetise home eventually and spend retirement funds sensibly.

Recent financial education initiatives to enhance retirement and long-term planning

In addition to the provision of general information on pensions and financial planning, many countries have put in place different financial education initiatives aiming to enhance retirement planning and long-term savings. This section includes a non-exhaustive list of recent examples.

Information and training

In many countries, financial education about financial planning is made available through (online and offline) information campaigns, trainings, workshops or seminars.

For example, in **Canada**, the Financial Consumer Agency of Canada (FCAC), in collaboration with the Ontario Securities Commission and l'Autorité des Marchés financiers, developed the Module 10 of the programme "Your Financial Toolkit", which includes information about retirement and pensions, and about financial planning specifically relevant to seniors.

[11] https://www.moneysense.gov.sg/

In **Hong Kong, China,** the Mandatory Provident Fund (MPF) organises since 2014 “Retirement Planning Workshops”. The goal of the workshops is to help MPF scheme members to better manage their MPF and other savings and investments. From 2016, in collaboration with employers and training organisations, the IFEC provided the “RetireWise" programme to assist working adults to better plan their retirement. The three-hour programme includes workshops on topics such as the factors affecting one’s financial needs in retirement, basic steps in retirement planning and features of common financial products in retirement planning. The programme is run in workshop format with group exercises and discussions.

In **India**, the National Centre for Financial Education[12] (NCFE) -a not-for-profit company promoted by financial sector regulators- has developed a comprehensive course on basic financial education[13] covering banking, securities markets, insurance and pension products. The content has 4 sections, further sub-divided into 20 modules (including on retirement planning[14]) of 15-20 minutes each as per the overall architecture of the OECD/INFE Core Competencies Framework on Financial Literacy (OECD, 2015[45]). The content includes, among others, advanced simulations, audio and video. Different modules cater to different target groups such as children, young adults, women, new workers/ entrepreneurs, senior citizens, etc.

In **Ireland**, the third pillar of the Competition and Consumer Protection Commission's (CCPC) Financial Well-being Strategy is planning for retirement and is a focus of work in 2021-2023. It is focused on CCPC workplace programme but also will be through the CCPC's sponsorship of a financial education TV programme and through other digital channels.

In **Italy**, one week of the Financial Education Month is dedicated to educating people about pension related issues, including the importance of retirement planning and saving for retirement: “The retirement education week”. The aim of the initiative is to raise citizens’ awareness of social security, starting from young people, promoting a better understanding of how Italy's compulsory and complementary pension systems works. In 2020, within the Financial Education Month, a competition dedicated to university students was launched to produce digital tools for retirement education among youngsters. Finally, the Committee for financial education, in collaboration with Bocconi University and Assofondipensione, launched and financed a retirement education pilot programme in the workplace for private sector employees with the objective to increase pension literacy among employees, encouraging them to seek more information on private pensions and options related to retirement planning, and becoming more active in retirement planning decisions. The programme is delivered through meetings in the workplace and is free for participants. This project is still ongoing and is a follow up of an Internet-based financial and pension literacy intervention programme designed by the Bocconi University for one of the largest industrial pension funds in Italy.

In **Japan**, the government set forth an objective in the Guidelines of Measures for the Ageing Society to disseminate and promote "Workplace Dollar-Cost Averaging NISA" (workplace individual saving account for periodic investment). Companies that introduced this defined contribution pension scheme are required to comply with best-effort obligations under the pension regulatory scheme in providing workers with appropriate investment education.

Several countries such as the **Netherlands**, **Ireland** or the **United Kingdom**[15] also organise pension awareness days or weeks. In the **Netherlands**, during the National pension days, MoneyWise provides

[12] https://www.ncfe.org.in/

[13] https://www.ncfe.org.in/e-lms

[14] https://www.ncfe.org.in/images/E-LMS_Content/Topic_10_Planning%20_and_Managing_Finance/story_html5.html

[15] https://pensionawarenessday.com/

tools for employees and employers and assists pension funds in organising activities to create more awareness about retirement planning. In **Ireland**, the Pensions Awareness Week[16] is organised annually in order to promote the importance of saving for retirement. Key areas discussed in 2021 included retirement planning, pension consolidation or how to start a pension.

Peru has incorporated the topic of long-term planning and savings as part of the financial education competencies of the national curricula. The SBS has also incorporated long-term savings and pension culture as part of their regular modules[17] of its Teacher Training Program "*Finanzas en el Cole*" and workplace programme "*Finanzas para ti*". Both programmes use as complementary material for the pension culture module, the guide: "*Inform and Plan for your future*". Furthermore, the SBS also prepared financial education materials related to long-term savings and pensions focused on different target audiences such as youths: "Are you saving for your future?", adults: "Are you thinking about your pension plan?" and older adults: "Do you know the modalities and steps for your retirement in the Private pension system (SPP)?".

In **Poland**, the Polish Development Fund (PFR), under the Employee Capital Plans (PPK) Act, launched an education programme to inform, guide and educate employees about the new private, common and voluntary system of long-term savings named PPK. It was designed for 12.3 million employees, based on the co-operation between employers, employees and the state. The programme included a web portal[18] , media campaign, webinars, online courses, and provision of trainings at the workplace by the PFR's experts. During the COVID-19 pandemic, trainings have been organised through online tools and webinars. During the seminars and webinars, employees can learn about the savings programme, and about the rules of early withdrawal of accumulated savings. Participants also obtain information about the basic principles of inheritance of savings, learn how to use the PPK calculator, how to calculate their benefits depending on their current earnings, and the amount of pension benefits they could expect to receive from the employer and the state. In 2020, over 100,000 participants took part in educational events about PPK organised by the PFR.

In the **United Kingdom**, the Pension Wise[19] government service offers free, impartial pensions guidance about defined contribution pension options. It supports people to understand what their overall financial situation will be when they retire and guide them through their options to help them make the right decision.

In the **United States**, the National Council on Aging (NCOA) developed a toolkit[20] in 2019 to help professionals educate older adults about good money skills. This toolkit is a 90min programme (65min instruction/25min Q&A), designed to provide participants with basic money management concepts for a fixed budget, the benefits of banking, and an overview of public benefits and how to access and retain them.

In some countries, the private sector is also active in developing financial education on retirement issues. In **Switzerland,** private companies or banks offer education for older people while the department of finance at the faculty of business and economics of Basel offers a course on personal finance, which is designed to help people to plan for longer-term goals, specifically retirement. In **Canada**, the Canadian Bankers Association developed the programme *"Your Money Seniors*" in collaboration with the FCAC, which is targeted at Canadians 55 and over and includes 3 one-hour seminars covering fraud prevention,

[16] https://pensionsawarenessweek.ie/

[17] https://www.sbs.gob.pe/educacion-financiera/Mira-lee-y-aprende/Cartillas

[18] https://www.mojeppk.pl/

[19] Pension Wise (moneyhelper.org.uk)

[20] https://www.ncoa.org/article/savvy-seniors-financial-education-toolkit

financial abuse, and cash management. It is free and is presented in-person or virtually by banker volunteers. In **Thailand,** the Stock Exchange designed the "Happy money, Happy retirement" financial education programme to promote retirement planning among employees. Educational materials are made available through a web portal[21] which includes saving and retirement planning calculators, and provides guidance on how to effectively plan and save for retirement. In **the Netherlands**, the private sector is also very active in designing financial education tools. For example, *geldvinder* is a new online tool developed by a large pension fund that can be provided by employers (who pay the fee) to their employees. After answering a number of questions, it gives an overview of one's financial wellbeing (income / expenses, savings / debt, pension, risks etc.) and suggests steps to improve these aspects, taking certain life events into account.

Digital tools to support retirement planning and saving

Alongside information and trainings, many OECD/INFE members are also using informative digital tools to support financial planning.

For example, the Government of **Canada** developed the Canadian Retirement Income Calculator, an online tool designed to help users understand how each pillar of the retirement income system contributes to their financial security in retirement. The tool enables users to estimate their retirement incomes from various sources through a series of modules, as well as explore the potential impact of changes to their saving behaviour. Users can then compare the results with their own retirement income goals.

In **Hong Kong, China**, one the objective of the "Retirement Planning Workshops" is also to encourage members to use the MPF's mobile applications and online tools such as "Retirement Planning Calculator" and "Spending Tracker" to plan ahead for their retirement as well as to manage their MPF investment. Moreover, a Facebook Messenger Chatbot was launched in 2018 to provide practical information on MPF investment and retirement planning through a one-on-one simulated conversation.

Many countries in the European Union are providing (or plan to provide) pension tracking systems online including personal information on pension. Most of the time, the information provided includes a projection amount at state pension age statutory pensions. Several countries also provide information on occupational (**Belgium**[22], **Netherlands**[23]) and personal pensions (**Sweden**[24], **Denmark**[25], **Slovakia**[26], **Norway**[27], **Latvia**[28] and **Estonia**[29]) (EIOPA, 2021[46]). Pension simulators and calculators are also offered

---

21 https://www.set.or.th/happymoney/home.html

22 https://www.mypension.be/fr

23 https://www.mijnpensioenoverzicht.nl/

24 https://www.minpension.se/

25 https://pensionsinfo.dk/Welcome

26 https://www.oranzovaobalka.sk/web/sk/

27 https://norskpensjon.no/

28 https://www.manapensija.lv/en/

29 https://www.lhv.ee/en/pension

in other countries such as **Australia**[30], the **United Kingdom**[31], the **United States**[32], **New Zealand**[33] or **Singapore**[34]. Some of these simulators may include (several) scenarios for pension projections or a lifetime income estimate[35].

Mobile apps can also be particularly effective at supporting saving for the long-term when they can be used to access and manage voluntary pension schemes, and when they include customised financial education content. A mobile app was chosen by the **Mexican** Pensions System Regulator, CONSAR, to increase workers' participation and voluntary contributions in the retirement saving system. The app, Afore Movil, includes features to manage the retirement saving account, communicate with or switch providers, and obtain administrative information, and allows the user to set saving goals. The app, together with other digital platforms account for 89% of the voluntary savings transactions and 81% of the amounts saved in 2019. They have been successful in multiplying contributions by a factor of 5.7 between 2013 and 2019.

In **Thailand**, the Government Pension Fund (GPF) has developed an app that exploits two "digital twins" of the policy holder. The GPF aims to overcome inertia behaviours among users and to achieve a better understanding of the nature of investment choices and returns, and therefore higher contribution levels. The two "digital twins" allow the app to show what would be required in terms of contribution levels and investment plan to achieve the desired amount in retirement, and what will be achieved at retirement if the policyholder followed GPF advice with regards to investment plans and contributions above the default level of 3% (OECD, 2021[47]).

Financial education responses to the challenges posed by the COVID-19 pandemic on financial planning for old age

In addition to the immediate impacts on incomes and jobs, the COVID-19 crisis also has implications on current and future retirement savings. Individuals need to understand the implications of the crisis on their old age resources and how to make sure that they take advantage of short-term relief measures (such as contribution holidays, or early access to retirement savings) in ways that do not jeopardise the long-term adequacy of their pension benefits. Moreover, the COVID-19 pandemic is having direct implications on the financial well-being of seniors such as an increased risk of social and financial exclusion, increased exposure to financial security risks, fraud and abuse, or difficulty in accessing education and advice.

In order to address these risks, many countries have used existing or new financial education initiatives to inform, educate, warn and advise younger and older individuals, and especially the vulnerable ones.

In **Canada**, a coordinated Government of Canada approach was taken to warn financial consumers about the potential risks of fraud and scams during the COVID-19 pandemic, which involved updating website content on COVID-19 Fraud and Scams by FCAC, launching a campaign for COVID-19 frauds and scams by Public Safety Canada, creating webpages on how to recognise a scam by the Canada Revenue Agency, on reported scams by the Canada Anti-Fraud Centre, and on cyber hygiene for COVID-19 by the Canadian Centre for Cyber Security. Further, the Canadian Foundation for Economic Education has organised a

---

30 https://moneysmart.gov.au/retirement-income/retirement-planner

31 https://www.pensionsdashboardsprogramme.org.uk/

32 https://www.investor.gov/financial-tools-calculators/financial-tools/retirement-estimator

33 https://sorted.org.nz/tools/retirement-calculator

34 https://www.moneysense.gov.sg/financial-tools?sc_lang=en

35 https://www.barrons.com/articles/401k-retirement-annuity-income-51648740803

series of “Financial Literacy Workshops for Seniors” designed to provide a better understanding of relevant financial issues for seniors such as challenges during the pandemic. Moreover, in **Quebec, Canada** the financial markets regulatory authority (Autorité des marchés financiers) developed a dedicated webpage[36] to prevent financial and digital fraud during the pandemic, with a specific focus on preventing elder financial abuse.

Some countries focused on the implications of early pensions withdrawals in their financial education initiatives. In **New Zealand**, the Te Ara Ahunga Ora Retirement Commission developed a new webinar as part of its workplace financial education programme. The webinar specifically addressed people who were considering to make a hardship withdrawal from their KiwiSaver funds, which could have adverse effects on their retirement income. The webinar focused on presenting other alternatives and getting people to consider the long-term impact of such withdrawals. Also in the **United States**, the Consumer Financial Protection Bureau developed communication[37] specifically targeting people who were considering an early retirement withdrawal. Similarly, in **Zambia**, several public messages have been issued by the Pensions and Insurance Authority (PIA) on the dangers of early withdrawal of pension contributions.

In 2020, the website of the National Plan for Financial Education was one of the privileged channels for the **Portuguese** financial supervisors to disseminate the exceptional measures adopted in the context of the COVID-19 pandemic to safeguard households, ensuring that they take advantage of short-term relief measures. Therefore, a specific area was designed on the website, where measures adopted regarding payments, savings and investment, credit as well as insurance were included. Regular alerts on these contents were also disclosed on the website’ main page.

Financial education to support digitalisation

Although digital tools can facilitate communication and delivery of financial education by improving access to financial information and advice, improving access to training or developing skills and competences (OECD, 2021[48]), it may be hard to fully benefit from them for population subgroups with limited digital financial skills, such as the elderly. Difficulties in using digital tools to access financial services and financial education have become even more acute during the COVID-19 crisis.

To help mitigate some of these challenges and to reduce the risk of financial exclusion, especially among the elderly, a number of countries are supporting efforts to improve the digital financial literacy of older people through education and training programmes, often as part of overall financial literacy efforts. This section includes selected examples; a wider range of examples is included in the forthcoming note on “Designing and Delivering Financial Education for Seniors”.

Many countries are including (digital) financial education of older adults as a component of the national strategy for financial education or other public policies. This is for example the case in **Portugal** where the financial supervisors and the partners of the National Plan for Financial Education Plan hold awareness-raising and financial education initiatives among vulnerable audiences, with several courses specifically directed at the senior population to deepen knowledge and skills in the use of digital financial services. In **Sweden**, the national strategy for financial education offers a course called Secure Your Finances in Old Age, aiming to enhance pensioners' financial knowledge. It covers pensions, the housing supplement, online banking, taxes, consumer law and everyday law. In the **Slovak Republic**, improving digital literacy is one of the topics covered by the National Programme of the Active Ageing 2014-20. In **New Zealand**,

[36] https://lautorite.qc.ca/en/general-public/fraud-prevention/preventing-elder-financial-abuse

[37] https://www.consumerfinance.gov/about-us/blog/cares-act-early-retirement-withdrawal/

the Office for Seniors published a "Better Later Life" Action Plan"[38] as part of its "Better later life" strategy. Enabling older people to embrace technology and ensuring everyone can access essential services is one of the three key priorities for 2021 – 2024.

Many countries are also conducting digital financial education programs specifically targeting seniors. These can take the form of information campaigns. In **Brazil,** the Central Bank conducted a campaign delivered through several channels (WhatsApp, Internet and TV) aimed at protecting elderly citizens from financial fraud. A similar type of campaign[39] "*Senior-Let's meet online*" was launched in **Poland** to increase seniors' knowledge about being safe online. The campaign included messages on to help seniors identify online threats and ways to avoid them, secure their data online, and raise their awareness on specific methods used by online fraudsters. The campaign also engages family members and encourages their support for their parents and grandparents in helping them navigate the digital world. In **Mozambique,** the Bank of Mozambique also developed a media campaign (TV and radio) in order to familiarise older people with the benefits of using digital means of payments. In the **United States**, the Consumer Financial Protection Bureau released a blog[40] with tips for older consumers to engage in mobile banking.

Other initiatives take the form of workshops or trainings. In **Germany,** BaFin collaborates with an organisation that helps older people get familiar with digital technologies and the internet through a series of public webinars. These aim to inform elderly people about new developments in digitalisation in the banking sector, how to use the internet to make financial transactions, the risks of fraudulent activities that consumers need to be aware of and how to recognise dubious offers, how to invest during retirement and the need to overview income and expenses. In **Hong Kong, China**, the IFEC launched a digital financial services workshop specifically designed for retirees to learn about the application of some common FinTech services. The workshop uses simulation games which allow retirees to experience the applications of e-wallet and biometric authentication. In **Israel**, the Bank of Israel launched an education and training programme[41] for older people, known as E-Banking Empowerment, aiming to help senior citizens adjust to e-banking and to give them tools to improve their skills in using e-banking services. In **Malaysia**, the Securities Commission Malaysia has launched an initiative aiming to raise awareness of the population aged 55 years and above to achieve digital financial inclusion through series of webinars on capital market products and services accessible online (e.g. participation in e-Annual General Meeting) as well as 'digital clinics' and tutorials on basic financial literacy, banking and investing.

[38] https://officeforseniors.govt.nz/assets/documents/our-work/better-later-life/Action-Plan/Better-Later-Life-Action-Plan-2021-to-2024.pdf

[39] https://www.gov.pl/web/seniorze-spotkajmy-sie-w-sieci

[40] https://www.consumerfinance.gov/about-us/blog/online-mobile-banking-tips-beginners/

[41] https://www.boi.org.il/en/NewsAndPublications/PressReleases/Pages/7-10-18.aspx

3 Policy considerations

This section puts forward policy considerations to develop financial education policies and programmes to support financial planning for old age in times of change, both before and during retirement. A number of OECD publications provide policy suggestions on developing effective financial education to support individual retirement planning, including:

- OECD Pensions Outlook 2016: The role of financial education in supporting decision-making for retirement (OECD, 2016[4])
- Robo-advice for pensions (OECD, 2017[36]).
- OECD Pensions Outlook 2018: Improving retirement incomes considering behavioural biases and limited financial knowledge (OECD, 2018[3])
- Towards Improved Retirement Savings Outcomes for Women (OECD, 2021[13])
- The Policy Handbook on financial education in the workplace (OECD, 2022[42]).

The section also highlights selected policy considerations that are especially important in light of the challenges posed by recent pension reforms, the COVID-19 pandemic and digitalisation trends.

Providing timely financial information and education in the context of the evolving pensions and financial landscape

Given the growing importance of funded pension arrangements for people's retirement income in many countries, and considering that individuals have increasing responsibility for managing longevity and investment risks, policy makers increasingly recognise the need to help people with their retirement planning. The COVID-19 crisis and its implications on current and future retirement savings have amplified this need further.

In order to empower individuals, it is important to provide them with timely information and education to have a basic understanding of how their pension system is structured, how it affects them and how it is evolving. It is also important to support individuals to understand how the changes in the financial landscape impact their savings, and the potential consequences of reforms or relief measures on the adequacy of their pension benefits.

Providing financial education and information for financial planning

Financial education programmes and information have a great potential to enable individuals to know and understand pension rules (for example regarding private and public pensions and taxation). In this regard, national pension communication campaigns are useful instruments to communicate to the general population on the functioning and reforms of retirement savings arrangements. Individuals should also have an appreciation of the risks related to pension systems (such as longevity, investment, inflation risks etc.) and gain financial knowledge of concepts pertaining to pension and financial planning (compound interest and the need to start young, difference saving/investing etc.). More targeted financial education programmes such as instructions, trainings, workshops or retirement seminars may be useful format to help participants acquire financial knowledge and key financial skills relevant for retirement.

Complementary to knowledge and awareness, they should also be able to take relevant actions when needed such as estimating their retirement income needs (both during the accumulation and payout phase), taking adequate decisions (for example regarding participation, contribution, investment allocation, when to starting to receive benefits, what payout options to choose etc.) as well as being confident enough to shop around to find the financial product/services or provider if relevant that best fit their needs. Personalised communication and/or advice may be useful instruments to engage members and encourage them to take active steps to improve retirement income adequacy.

On top of empowering individuals to understand long lasting changes of the pension landscape, financial education should also enable individuals to take into account some of the possible and/or likely future adjustments of the pension rules, such as potential pension reforms raising pension age or contribution rates, further need to save in a private pension plan, possible changes in taxation rates, etc.

Providing financial education and information on pension-related relief measures

When introducing short-term measures to provide immediate relief (such as early withdrawal from pension schemes, deferment or stop of pension contributions etc.), policy makers could accompany such measures with timely guidance and information in order to enable individuals to consider the potential long-term consequences before having recourse to such measures.

Using communication on pension reforms/measures as a teachable moment for broader financial education on financial planning

The shock caused by the COVID-19 crisis on individuals, and especially on certain groups, induced many people to seek financial information and education from trusted sources. Financial education programmes have been adapted rapidly to digital delivery for the whole population and for vulnerable groups. This allowed governments to provide information and educational resources on support and relief measures. The provision of informative and educative material during the COVID-19 pandemic and future crises could be used as a 'teachable moment' to encourage individuals to acquire greater financial knowledge and skills for their long-term financial planning (e.g. about building savings; understanding, detecting and managing risks such as longevity and inflation; choosing/negotiating pension products; becoming aware of financial fraud and scams, etc.).

Adopting strategic approaches to support individuals to manage their long term savings before and during retirement

An overall strategic and coordinated approach can be particularly relevant in relation to retirement planning. The OECD Recommendation on Financial Literacy emphasises the importance to establish and implement national strategies that take a sustained, co-ordinated approach to financial literacy, and that establish effective coordination mechanisms that take on board all relevant stakeholders. The Recommendation also emphasises the importance to identify relevant financial literacy issues including planning and saving for retirement and pensions (OECD, 2020[1]).

When supporting individuals to manage their long term savings before and during retirement, a strategic approach could identify specific vulnerable target audiences who are in need of tailored guidance, training and advice in order to consolidate skills as well as explaining what to do and how to do it. Depending on national specificities, priority groups with specific needs are likely to include women, young people, workers in the informal sector and those in non-standards forms of work. Some countries may also identify more vulnerable segments of the population, who may have particular retirement planning needs such as indigenous and others from culturally and linguistically diverse backgrounds, migrants, unemployed and job seekers, disabled people, etc.

A strategic approach could allow for a holistic approach to financial consumer issues in relation to long term financial planning. Financial education, together with relevant pension regulation (including rules on auto-enrolment, design of default options, limited choice of options/plans, tax incentives, cap of costs/fees etc.) and an adequate consumer protection framework (quality of the pension information provided, appropriate conduct and governance mechanisms of pension institutions, appropriate redress mechanisms etc.) can address retirement planning challenges and support adequate financial planning. Strategic approaches can also bring together the relevant public, private and not-for-profit stakeholders, including pension regulators, financial education coordinators, pension providers, employers and trade unions, and can include arrangements to avoid and/or mitigate conflict of interests in the provision of financial education by private organisations.

Such a strategic approach could also coordinate messages and initiatives across public authorities and other stakeholders in order to ensure the provision of information that is clear, jargon-free, comparable and standardised, consistent and designed in a way to prompt desired actions.

Choosing the most appropriate delivery methods and tools

Alongside with a timely delivery of financial information and education and the importance to adopt a strategic approach, it is important to choose the most appropriate delivery tools and methods to support individual financial decision making before and during retirement, notably with regard to private pensions.

Designing and adapting financial education initiatives to teachable moments

Communication and education for financial planning have a greater likelihood to be effective when they are delivered in a timely manner and in relation to specific life events and “teachable moments” (OECD, 2019[49]), especially for identified groups.

Women can benefit by receiving tailored information on the long term implications of their greater longevity with respect to men, or about contributions during parental leave. Pension calculators may also be useful to understand the financial impact of their decisions on early retirement of longer parental leave.

In a workplace environment, financial education can address important work-related events such as changing jobs, including the implications for pensions and savings (e.g., taking a refund of contributions, transferring benefits to another pension arrangement, etc.).

Depending on the structure and feature of national pension systems, financial information and education before retirement could focus on issues such as when to retire, how to use any lump sum received, and how to choose an annuity. Pre-retirees could be made aware that the amount of benefits they will receive may also depend on the time when they start receiving benefits, in terms of interest rates and investment returns.

Other important life event may have an important impact on retirement planning and could therefore be taking into account when designing targeted financial education initiatives. Such events can include changes in marital status (marriage, civil partnership, separations and divorce), childbirth, onset of serious illness or disability, unemployment etc.

Using effective delivery tools

Specific financial education tools can support effective decision-making and encourage individuals to take active steps to improve retirement income adequacy both during the accumulation and decumulation phase. Digital financial education tools are becoming more widespread. For instance, pension dashboards and tracking system can provides a ‘one-stop shop’ for individuals to see their pension situation and facilitate access to individualised pension information. Financial planning tools such as calculators can help individuals in estimating minimum contributions or saving amount to save in order to live comfortably in retirement, calculating estimated compound interests or saving goals, or estimating the impact of fees/costs of different retirement plans providers. Robo-advice also can be of great use to provide personalised recommendations regarding investments/saving decisions according to individuals' specific needs.

However, specific challenges may arise when designing and delivering financial education to certain vulnerable population, including seniors. Challenges related to physical and cognitive decline, and limited digital and financial literacy entail specific financial education needs and can have implications on the most effective delivery channels. Financial education initiatives for older adults could be adapted to the specific features of the older population in each country or region, may need to use a mix of traditional and digital delivery methods, and may need to be combined with training on digital skills.

The forthcoming note on 'Designing and delivering financial education for seniors' will look more in-depth at the challenges related to designing and delivering financial education to the older population.

References

APRA (2021), *COVID-19 Early Release Scheme*, https://www.apra.gov.au/covid-19-early-release-scheme-issue-36. [29]

Atkinson, A. et al. (2012), "Lessons from National Pensions Communication Campaigns", *OECD Working Papers on Finance, Insurance and Private Pensions*, No. 18, OECD Publishing, Paris, https://doi.org/10.1787/5k98xwz5z09v-en. [11]

BTCA/World Bank (2019), *The Role of Digital Financial Inclusion in Preparing for Older Age and Retirement*, Better Than Cash Alliance and World Bank, https://www.betterthancash.org/explore-resources/the-role-of-digital-financial-inclusion-in-preparing-for-older-age-and-retirements. [38]

CFPB (2021), *Consumer finances during the pandemic - Insights from the Making Ends Meet Survey*, https://files.consumerfinance.gov/f/documents/cfbp_making-ends-meet-survey-insights_report_2021-12.pdf. [25]

EIOPA (2021), *Technical advice on the development of pension tracking systems*, https://www.eiopa.europa.eu/document-library/advice/technical-advice-development-of-pension-tracking-systems_en. [46]

FCAC (2022), *Summary of findings COVID-19 surveys: Financial impact of the pandemic on Canadians*, https://www.canada.ca/en/financial-consumer-agency/corporate/covid-19/summary-covid-19-surveys.html. [31]

FIAP (2020), *FIAP Statement: The withdrawal of pension funds to mitigate the effects of Covid-19*, https://www.fiapinternacional.org/en/fiap-statement-the-withdrawal-of-pension-funds-to-mitigate-the-effects-of-covid-19/. [30]

GPFI and OECD (2019), *G20 Fukuoka Policy Priorities on Aging and Financial Inclusion*, https://www.gpfi.org/publications/g20-fukuoka-policy-priorities-aging-and-financial-inclusion. [10]

Grandolini, G. (2016), *Can developing countries increase pension coverage to prepare for old age?*, https://blogs.worldbank.org/voices/can-developing-countries-increase-pension-coverage-prepare-old-age. [18]

ILO (2018), *Social protection for older persons: Policy trends and statistics 2017–19*, https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---soc_sec/documents/publication/wcms_645692.pdf. [19]

IOPS (2018), *The Impact of digitalisation of financial services on pension supervisory practices: Case studies*, http://www.iopsweb.org/WP-33-IOPS-Digitalisation-Project.pdf. [33]

Islam, N. et al. (2021), "Effects of covid-19 pandemic on life expectancy and premature mortality [50] in 2020: time series analysis in 37 countries", *BMJ*, p. e066768, https://doi.org/10.1136/bmj-2021-066768.

Munnell, A. (2020), *How Widespread Unemployment Might Affect Retirement Security. Center for Retirement Research at Boston College. July 2020, Number 20-11*, https://crr.bc.edu/wp-content/uploads/2020/06/IB_20-11.pdf. [17]

O'Connell, A. (2011), "How Long Do We Expect to Live? A Review of the Evidence", *Journal of Population Ageing*, Vol. 4/3, pp. 185-201, https://doi.org/10.1007/s12062-011-9049-1. [16]

OECD (2022), "Policy handbook on financial education in the workplace", *OECD Business and Finance Policy Papers*, No. 07, OECD Publishing, Paris, https://doi.org/10.1787/b211112e-en. [42]

OECD (2021), *A national financial literacy strategy for Austria*, https://www.oecd.org/daf/fin/financial-education/austria-financial-literacy-strategy.htm. [43]

OECD (2021), *Digital delivery of financial education: design and practice*, https://www.oecd.org/financial/education/Digital-delivery-of-financial-education-design-and-practice.pdf. [48]

OECD (2021), *G20/OECD-INFE Report on Supporting Financial Resilience and Transformation through Digital Financial Literacy*, https://www.oecd.org/finance/supporting-financial-resilience-and-transformation-through-digital-financial-literacy.htm. [47]

OECD (2021), *OECD Economic Outlook, Interim Report March 2021*, OECD Publishing, Paris, https://doi.org/10.1787/34bfd999-en. [27]

OECD (2021), *Pensions at a Glance 2021: OECD and G20 Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/ca401ebd-en. [6]

OECD (2021), *Risks that matter 2020: The long reach of COVID-19*, https://www.oecd.org/coronavirus/policy-responses/risks-that-matter-2020-the-long-reach-of-covid-19-44932654/. [22]

OECD (2021), "The role of online platforms in weathering the COVID-19 shock", in *OECD Policy Responses to Coronavirus (COVID-19)*, OECD Publishing, Paris, https://doi.org/10.1787/2a3b8434-en. [40]

OECD (2021), *Towards Improved Retirement Savings Outcomes for Women*, OECD Publishing, Paris, https://doi.org/10.1787/f7b48808-en. [13]

OECD (2020), *Covid 19 employment and social policy responses by country*, https://www.oecd.org/social/Covid-19-Employment-and-Social-Policy-Responses-by-Country.xlsx. [24]

OECD (2020), *Financial Consumer Protection and Ageing Populations*, https://www.oecd.org/finance/Financial-consumer-protection-and-ageing-populations.pdf. [9]

OECD (2020), *OECD Pensions Outlook 2020*, OECD Publishing, Paris, https://doi.org/10.1787/67ede41b-en. [2]

OECD (2020), *Recommendation of the Council on Financial Literacy, OECD/LEGAL/0461*, https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0461. [1]

OECD (2020), “Retirement savings in the time of COVID-19”, in *OECD Policy Responses to Coronavirus (COVID-19)*, OECD Publishing, Paris, https://doi.org/10.1787/b9740518-en. [28]

OECD (2020), *Strengthening seniors’ financial well-being*, https://www.oecd.org/financial/education/Senior-financial-well-being-covid-19.pdf. [12]

OECD (2020), “Supporting the financial resilience of citizens throughout the COVID-19 crisis”*, OECD Policy Responses to Coronavirus (COVID-19)*, OECD Publishing, Paris, https://doi.org/10.1787/fa710f2b-en. [39]

OECD (2020), “What have platforms done to protect workers during the coronavirus (COVID-19) crisis?”, in *OECD Policy Responses to Coronavirus (COVID-19)*, OECD Publishing, Paris, https://doi.org/10.1787/9d1c7aa2-en. [41]

OECD (2019), *OECD Employment Outlook 2019: The Future of Work*, OECD Publishing, Paris, https://doi.org/10.1787/9ee00155-en. [20]

OECD (2019), *Pensions at a Glance 2019: OECD and G20 Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/b6d3dcfc-en. [7]

OECD (2019), *Policy Handbook on Financial Education for Young People in the Commonwealth of Independent States*, https://www.oecd.org/financial/education/Youth-Policy-Handbook-on-Financial-Education-CIS-EN.pdf. [44]

OECD (2019), *Skills Matter: Additional Results from the Survey of Adult Skills*, OECD Skills Studies, OECD Publishing, Paris, https://doi.org/10.1787/1f029d8f-en. [37]

OECD (2019), *Smarter financial education: key lessons from behavioural*, https://www.oecd.org/financial/education/smarter-financial-education-behavioural-insights.pdf. [49]

OECD (2018), *Financial Markets, Insurance and Private Pensions: Digitalisation and Finance*, https://www.oecd.org/finance/Financial-markets-insurance-pensions-digitalisation-and-finance.pdf. [34]

OECD (2018), *OECD Pensions Outlook 2018*, OECD Publishing, Paris, https://doi.org/10.1787/pens_outlook-2018-en. [3]

OECD (2017), *Technology and Pensions: The potential for FinTech to transform the way pensions operate and how governments are supporting its development*, https://www.oecd.org/finance/Technology-and-Pensions-2017.pdf. [35]

OECD (2017), *G20/OECD INFE Report on ensuring financial education and consumer protection for all in the digital age*, https://www.oecd.org/daf/fin/financial-education/G20-OECD-INFE-Report-Financial-Education-Consumer-Protection-Digital-Age.pdf. [32]

OECD (2017), *Pensions at a Glance 2017: OECD and G20 Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/pension_glance-2017-en. [8]

OECD (2017), *Robo-Advice for Pensions*, https://www.oecd.org/finance/Robo-Advice-for-Pensions-2017.pdf. [36]

OECD (2016), *OECD Pensions Outlook 2016*, OECD Publishing, Paris, https://doi.org/10.1787/pens_outlook-2016-en. [4]

OECD (2015), “Non-standard work, job polarisation and inequality”, in *In It Together: Why Less* [21]

Inequality Benefits All, OECD Publishing, Paris, https://doi.org/10.1787/9789264235120-7-en.

OECD (2015), *OECD-INFE Core Competencies framework on financial literacy for youth*, https://www.oecd.org/finance/Core-Competencies-Framework-Youth.pdf. [45]

OECD (2014), *Mortality Assumptions and Longevity Risk: Implications for pension funds and annuity providers*, OECD Publishing, Paris, https://doi.org/10.1787/9789264222748-en. [15]

OECD (2014), *OECD Pensions Outlook 2014*, OECD Publishing, Paris, https://doi.org/10.1787/9789264222687-en. [5]

OECD and ILO (2020), *The impact of the COVID-19 pandemic on jobs and incomes in G20 economies*, https://www.ilo.org/wcmsp5/groups/public/---dgreports/---cabinet/documents/publication/wcms_756331.pdf. [23]

Pew Research Center (2021), *A Year Into the Pandemic, Long-Term Financial Impact Weighs Heavily on Many Americans*, https://www.pewresearch.org/social-trends/2021/03/05/a-year-into-the-pandemic-long-term-financial-impact-weighs-heavily-on-many-americans/#:~:text=A%20narrow%20majority%20of%20U.S.,52%25%20earlier%20in%20the%20pandemic. [26]

United Nations (2017), *World Population Ageing*, https://www.un.org/en/development/desa/population/publications/pdf/ageing/WPA2017_Report.pdf. [14]