

Response to the public
consultation to help inform the

Pensions Commission of the Department of Social Protection

Government of Ireland



Tontine Trust[®]
Live Long & Prosper

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Introduction

Following on from the excellent Report of the Interdepartmental Pensions Reform & Taxation Group published last November 2020 (the 'IDPRTG Report'), we welcome this public consultation by the Pensions Commission on sustainable State Pensions into the future, which is an issue of global concern in particular during these times when government finances are strained by the impact of Covid-19.

It should not of course go unnoticed that since the IDPRTG Report we have also seen the publication last December of the Organisation for Economic Co-operation and Development's (the 'OECD') Pensions Outlook 2020 (the 'OECD Report'), which examines a series of policy options to help governments improve the sustainability and resilience of pension systems.

In fact the OECD has since launched its own public consultation called: OECD Roadmap for the Good Design of Defined Contribution Retirement Savings Plans (the 'OECD Roadmap').

We believe that whilst Ireland has its own unique challenges, not just in public finances but also in the pensions sector, that there are significant benefits to be had by taking into account the findings of the OECD Report and the updated policy guidance provided by the OECD in the updated OECD Roadmap which we highlight below.



What do you expect from State Pensions?

Numerous global studies by financial institutions over the past decade have shown that what the vast majority of people want from their pensions, and in a Milliman study in 2017 involving 100 global financial firms it was comprehensively agreed, is a lifetime income that rises as fast as inflation and which offers value for money vis-a-vis their level of contributions. Irish citizens are no different.

As recently as 2017, such pensions in the modern era of increased life expectancies were considered unaffordable whether for states, employers or financials. However, time and technology have moved on and as the OECD Report confirms, better pensions offering higher incomes with less risk to individuals are now possible and are coming soon.

This new generation of pensions will now enable retirees to benefit from higher rising life-long incomes and which if structured correctly can be expected to rise faster than inflation.

These new pensions utilise many of the features of the original Irish and European tontine pensions to enable modern collective arrangements. We recommend that an entirely new risk-sharing pensions model be introduced that offers fully-funded, 100 percent sustainable pensions without placing any financial undue burden on the State and yet would deliver the lifelong value for money income which everyone is seeking in retirement.

Perhaps this is why the OECD Roadmap is suggesting that such collective risk sharing tontine pensions, or tontine-annuities as the OECD also refers to them, are not only the better option for savers but indeed that they should be mandated as the default option.

We believe that the individual should be incentivised to save for their future with a platform that brings full transparency to future pay-outs.

Below we have summarised some international examples where reforms have been introduced in countries like Finland, the USA, Sweden and the Netherlands.

Finland - universality and uniformity

The Finnish pension system has succeeded in gaining high social, and reasonable financial sustainability. The balance between reaching the ambitious redistribution goals and minimising labour supply distortions is achieved with tax-financed, income tested basic pensions, income-tested basic pensions and a strong link between wage income and accrued pensions for middle- and high-income workers in the earnings-related schemes. These well-governed first-pillar schemes have high coverage and similar benefit rules. Second pillar occupational pensions are rare in Finland.

One of the secrets of its success has been the capacity to make extensive reforms when required. By law, the earnings-related pension scheme follows the defined benefit rule, where contribution rates adjust to shocks that weaken the contribution base or increase expenditures. In practice, however, an outlook of a strongly increasing contribution rate has often triggered a reform process. Both the negotiations and the full implementation of the reforms have taken time, but the outcomes have been largely accepted.



A specific feature in the Finnish pension system is rule-based preparation for mortality change. The earned pension capital is adjusted to life expectancy and the lowest age limit of the flexible retirement age will be adapted so that the ratio of expected years in employment and retirement is fixed after year 2030. Postponed withdrawal of pensions is rewarded in an actuarially fair way. This set of rules generates strong incentives to extend working life when life expectancy increases. Hence, the rules promote adequacy of pensions and fiscal sustainability.

Another non-standard element is the partial pre-funding of the first-pillar earnings-related benefits. The share of contributions that is pre-funded in the dominating private sector pension scheme (TyEL) is small, but the required return on funds is low, and the amount of excess is saved to support the funding.

The observed reluctance to extend voluntarily working lives and a continued rise in projected life expectancy generated the need for a new pension reform. It was understood that the low retirement age endangered both adequacy of pensions and financial sustainability of the general government. The reform, implemented in 2017, introduced a stepwise increase in the lower age limit of the flexible pension age until it reaches age 65 in 2027 and establishes a link between life expectancy and the lowest retirement age in 2030. The link is calibrated so that for each additional year of life expectancy, the lower age limit goes up by eight months. The link is also applied to basic pensions and early retirement pensions except disability pensions. The upper age limit of the flexible retirement age will be raised from 68 to 70 years.

The higher accrual rate earned from work after the lowest retirement age was replaced by a reward for postponing withdrawal of the pension. The reform also included two minor changes in early retirement schemes. The generous part-time pension scheme was replaced by the actuarially fair possibility of drawing part of the old age pension from age 61. The second new element is a years-of-service pension, which can be drawn from age 63 if a stressful working career has continued for at least 38 years and the working capacity of the individual has declined. The years-of-service pension remains unpopular because access to benefits is complicated and uncertain and it is smaller than the disability pension. The goal of higher employment periods near retirement has been supported by shortening the period of earnings-related unemployment benefits paid before reaching the lowest eligibility age for old age pensions.

Private sector pensions are financed by contributions collected from employers and employees. Contributions are deductible in income taxation, pensions are taxable, and there is no tax on the yields of the funds during the savings period (exempt-exempt-taxed principle). Entrepreneurs have similar benefit rules, but they have flexibility in declaring the amount of labour income and thereby can influence the paid contributions and accrued benefits. In addition, the government supports their pensions.

The key features of the current earnings-related pension system are universality and uniformity. Policy changes are effective, because the rules apply to almost everyone, and the first-pillar benefits cover a large share of the incomes of the retired population. For those whose earnings-related pensions are small, the pensions-tested tax-financed national pension tops up the income. Guarantee pensions ensure the minimum level of income. Low-income pensioners are also eligible for a housing allowance.



USA (Wisconsin) – a leader in resilient pension plan design

As many US state pension plans struggle with severe underfunding, the Wisconsin Retirement System (WRS) stands out with a funded ratio above 100 per cent. Wisconsin's fully funded status can be attributed to a combination of plan design and pragmatism that ultimately enabled the system to swiftly regain full funding after past market declines.

Wisconsin outranks all other states when it comes to pension funding. While national public pension plan funding averaged 72.1 percent in 2017, WRS reported a market value-based funded ratio of 102.9 percent and an actuarial value-based funded ratio of 100 percent. This wasn't something that happened by chance, but rather through a series of careful considerations and thoughtful, timely reforms.

Wisconsin's experience with public retirement systems began with the creation of the Milwaukee Police Pension Plan and the Milwaukee Fire Pension Plan in 1891. Over the next 50 years, the state and many local governments followed suit. By the mid-1940s, Wisconsin had myriad pension systems covering a wide variety of state and municipal employees. Recognizing that some of these plans were "defective in structure" and "glaringly unsound," the state legislature created a Joint Legislative Interim Committee on Pensions and Retirement Plans to study its public employee retirement landscape.

Committee members were concerned with problems of coordination and financial sustainability that a large number of systems across the state posed, along with early retirement incentives provided by some plans. And, in 1947, the committee reported back with goals and recommendations for the sustainability of the retirement systems. After saying the state's array of pension plans at the time were as "bewildering as Alice in Wonderland," the committee recommended merging most of the current systems. Most local plans were closed to new participants who were instead placed in the Wisconsin Retirement Fund. The only exemptions were the separate city and county of Milwaukee employee pension funds and the various teacher pension funds.

In order to ensure effective plan management and design, the committee examined previous pension plans to identify where they had fallen short. In these deficient plans, the committee discovered a commonality: objective actuarial information was not available. Instead, actuarial calculations were supplied by lobbyists or department heads. Thus, in addition to recommending the use of trained actuaries, the committee advised using conservative mortality and return assumptions.

The trend toward consolidation continued in 1975, when the Wisconsin Retirement Fund, the State Teachers Retirement System, and the Milwaukee Teachers Retirement Fund merged into the Wisconsin Retirement System. Police and fire pension funds, excluding Milwaukee, also consolidated into the WRS in 1977.

This merger provided a foundation vital for the WRS solvency that is seen today. At retirement, participants will receive an annuity from one of two plans—a formula-based benefit (a defined-benefit pension plan) or a money purchase benefit (a defined-contribution plan)—and the calculation that offers the highest annuity will be the one the participant receives. The formula-based benefit favours long-term employees, while the portability of the money purchase benefit serves the interest of shorter-term employees.

In 2015, about 74 percent of retirees received the formula-based pension benefit. Included in the plan are the Core (formerly known as "Fixed" until 2005) and Variable funds, where pension contributions are invested. Participants are able to place all of their contributions in



the Core Fund or choose to put a portion in the Variable Fund, where the portfolio consists of common stocks and offers a possibility of higher returns but with more uncertainty.

Instead of making potentially unsustainable promises in the form of fixed-rate annual cost-of-living increases untethered to actual changes in consumer prices, the system allows adjustments to annuities based on investment outcomes and the funding needs of the plan. For participants, this means they will usually see higher benefits in bull-market years but when the market declines, any increase to their pension benefit may be reduced or skipped. These modifications to pension benefits based on investment performance allow plan administrators to maintain WRS funding in bear market years without placing overwhelming fiscal pressure on taxpayers. In addition to this risk-sharing method, the plan requires employers to fully pay the actuarially determined contribution, preventing the payment shortfalls that have put the pension systems of other states, like Illinois and New Jersey, at risk.

Although structurally sound today, and widely regarded as a leader in resilient pension plan design, like all pension plans WRS faces political and market risks that require vigilance to maintain solvency. For example, Act 11 of 1999 increased fiscal pressure on the system through benefit enhancements. The measure increased formula benefit multipliers, maximum formula benefit payables, and death benefits for some participants. The market-value based funded ratio dropped during this time period, falling from over 100 percent prior to the 1999 Act to 83.9 percent in 2002 (a stock market decline during this time also contributed to the funding decline).

In 2011, the Wisconsin legislature passed and then-Gov. Scott Walker signed a reform package that included measures designed to improve pension sustainability. As an attempt to balance the state budget after a large deficit, Act 10 introduced pension cost and risk-sharing measures that remain in effect today:

- General-status and elected-status WRS participants are required to contribute half of all actuarially required contributions. Protective-status (public safety) employees are responsible for the same contribution rate as general-status participants, with employers covering the remainder of the required contribution
- WRS employers are prohibited from taking over portions of required contributions for participating employees (so-called “pick-ups”), with exemptions for public safety employees utilising collective bargaining agreements with those conditions
- The pension benefit formula for executive-status employees—including the governor, members of the state legislature and unclassified executives—was reduced to 1.6 percent from 2 percent to match the existing rate for general-status employees
- Those hired into public employment on or after July 1, 2011, are subject to a five-year vesting requirement, requiring a minimum of five years of creditable service to be eligible to receive a WRS benefit

Combining these cost-sharing methods with full annual actuarially determined contributions into the system has reduced financial risk while helping restore system solvency. That same year, Act 32 modified Act 10 by prohibiting municipal employers of police and fire employees and state employers of troopers and vehicle inspectors from utilising pick-ups, reinforcing shared responsibility of employers and employees.

These policies relieve pressure on taxpayers and promote a shared sense of responsibility to maintain solvency. Failing to immediately address the losses caused by the Great Recession of the late 2000s and early 2010s could have prompted growing pension debt. Instead, the reforms Wisconsin enacted ensured healthy pension funding and prudent risk-sharing policies going forward.



With the exception of Milwaukee, public employee participation in WRS is mandatory—generating a system with 632,802 participants with a median annual pension benefit of \$20,758. While this benefit may seem low, the average WRS participant retires with only 21 years of service. In addition, living costs in Wisconsin are low, especially for retirees. These modest pensions allow for the sustainability of the system and retirees in the state to continue at their current standard of living.

Overall, the Wisconsin Retirement System is in good shape. Consolidating the previous systems, embracing prudent reforms, and utilising sound actuarial assumptions is working in its favour. The cost- and risk-sharing aspects of the system have been instrumental in securing Wisconsin retirees their pension cheques. Most other state and municipal pension systems, including the pension systems in Milwaukee, could learn from Wisconsin's blueprint and success.

Sweden – vulnerable to hidden costs

The Swedish pension system was among the first to shift to a system of notional accounts. The aim was to render it fair, transparent, and sustainable and the reform enjoyed a broad consensus across the political spectrum. The reform was radical and complemented the public pension with an occupational pension.

While the public pension remained pay-as-you-go, it became a defined-contribution scheme: contributions are fixed and benefits are later computed as a function of these contributions and life expectancy.

Reform has rendered the system fiscally sustainable and politically stable but raises concerns about benefits' adequacy because the cost of ageing is shifted onto pensioners. Substandard pensions may lead to ad hoc interventions that go against the aim of automatism/transparency. These adjustments may be seen as hidden costs that could ultimately put pressure on the very sustainability the new scheme is supposed to guarantee.

Transparency was a key goal of the reform of the system, whose legitimacy relies critically on the public understanding of the automatic adjustments built into the system. It also calls for measures promoting life-long learning and a healthy workplace, to ensure that the labour force will actually be fit to contribute effectively until retirement.

Further avenues to be explored could be to give the individual job holder the possibility of making full pension contributions while working part-time, to increase the flexibility of the labour market and promote pension income equality between men and women (reduce the so-called pension gap).

The Netherlands - breaking down 'the world's best pension system'?

If approved by parliament, new legislation will take effect on January 1, 2022, with all pension arrangements required to switch to a new contract form between that date and January 1, 2026.

In all supplemental pension plans, the value of (tax-favoured) annual future pension accruals — as a percentage of pensionable earnings (i.e., salary capped at €110,111 less an offset)

— would not be allowed to vary according to the participant's age, a major difference from the current framework. Currently, the value of the annual accrual (i.e., the contribution rate) increases with age in almost all defined contribution (DC) plans. For defined benefit (DB) plans, currently the pension accrual rate typically is independent of age, which means that the value of the pension accrual actually increases with age; again, this would no longer be possible.

Moving future DC accrual values to this new basis would result in flat contribution rates (i.e., independent of age); however, existing DC plans would be allowed to continue with their current design for current workers.

Tax-favoured DB accruals would cease; all future accruals would have to be in individual-account DC plans or in collective DC plans (accounting treatment to be determined, in particular under US GAAP), and new DB plans would not be permitted.

Members' accrued pensions would be transferred to the new contract by default, though the social partners and boards of trustees could choose to deviate if the transfer would be detrimental to certain member groups.

Employees whose future pension accrual values are negatively affected by these changes would receive compensation from their employer(s), starting no later than 2026 and through 2036. There would be a central approach defined for calculating the negative impact, but individual employers would have to agree with workers' representatives on the details of how and to what extent they compensate affected employees, subject to the conditions that the compensation be adequate to the employee and cost-neutral to contributors (employee and/or employer). For an affected employee, this compensation would end on termination of employment but then resume on joining a plan with a new employer during this period. The compensation from the new employer would be determined on the same basis as paid by that employer to its existing employees and could be more or less favourable for the employee than that received from his or her former employer. Further details on how this might work in practice are yet to come.

Under the new fiscal rules, tax-favoured total annual contributions to a member's pension account, excluding risk premiums and administrative charges, would be capped at a government-specified percentage of the member's pensionable earnings, which would initially be set somewhere between 30% and 33%. The rate would be derived based on the targeting of a retirement income replacement ratio of 75% after 40 years (reflecting various assumptions); it would generally be subject to change every five years, though for stability purposes the memorandum calls for holding the initial rate fixed through 2035 (unless the derived rate moves by at least five percentage points). The new rules would apply from the time of the plan's transition to the new accrual system.

It remains unclear whether risk premiums, especially in the case of industry-wide pension funds, would be determined and levied according to age. The first seems inevitable, since the price of risk cover is highly age-dependent.

For a period of 10 years after moving to the new pension accrual basis, a tax-favored additional contribution of 3% of pensionable pay would be allowed as part of the compensation to the employee described above.

From January 1, 2022, a new type of collective DC contract would be an option available to pension funds, in which: There would be a collective investment pool with no actual individual member accounts.



An investment “solidarity reserve” to help smooth inter-generational fluctuations in investment experience would be required. The reserve could be built up through contributions (up to 10% of total contributions) or a portion of “excess” investment return (up to 10% of return above a defined threshold). The maximum size of the solidarity reserve would be 15% of total fund assets. The rules of how and when the reserves could be distributed among the participants would have to be transparent and determined in advance.

On an annual basis the collective fund’s investment results (after any transfer to or from the solidarity reserve) would be allocated to individual members’ notional accounts according to the members’ age-dependent risk profiles.

Contribution rates would be fixed (although they could be re-evaluated in the future) and would not be determined based on an explicit targeted level of benefits. There would be no funding buffer.

The level of benefits paid to a member would not be guaranteed and would be adjusted up or down annually based on investment and demographic experience.

In terms of the determination of any compensation payable to members as described above, in addition to the negative effect of moving to the new accrual basis, there would be a potentially offsetting effect for a pension fund moving to this collective DC contract to reflect that members would participate more directly from expected future fund returns in excess of (or below) a threshold risk-free rate. The net impact could be that no compensation is payable to members, though it will only be possible to determine whether this is the case once calculations for the individual fund are completed

Criticism

Léon de Jong of the populist Freedom Party (PVV), the largest opposition party, said: “It’s a huge scandal this reform is not improving the world’s best pension system, but is instead doing away with it.”

De Jong also pointed out a lot of uncertainty around the implementation of the new contract remains. It is still unclear what method will be used to convert existing defined benefit (DB) pensions to the new contract, and whether further pension cuts can be averted until 2026 when the new system is expected to be in force.

Most large pension funds currently have funding ratios far below the required 100%. Social Affairs Minister Koolmees refused to rule out pension cuts during the transition phase to the new contract, which will last until 2026.

In principle, pensions must be cut if funding ratios are below 100% for more than five consecutive years. For this year, this limit was temporarily reduced to 90%. The real purpose of the so-called solidarity reserve, a rainy-day buffer that was introduced in the new contract to please trade unions, is also still shrouded in mystery. It is supposed to be filled using excess returns and a maximum of 10% of annual pension premiums.

Some pension experts suspect the solidarity buffer will “most likely” be used to provide indexation to pensioners, potentially flaring up the conflict between generations the pension reform was supposed to end.

According to the reform outline, pension funds have discretionary powers on the rules on how to fill and use the solidarity reserve.



While Koolmees was not able to shed any more light on the issues that remain, he promised to investigate the potential consequences on the labour market of one of the most contentious elements of the pension reform: the decision to allow current DC schemes to continue operating plans with progressive pension premiums for existing employees, while introducing equal contribution plans for new hires.

MP Pieter Omtzigt of coalition partner CDA noted this could possibly have “enormous effects on the labour market”, as it discourages older employees who currently enjoy high pension contributions from their employers from switching jobs.

What’s working with current State Pension arrangements?

The Government’s commitment to benchmark the State pension at 34% of average earnings will help to prevent people from falling into poverty. This coupled with the intention to develop a process whereby future rates of payment are linked to changes in the Consumer Price Index and average wages means that the State pension will keep up with inflation.

We wholeheartedly support the move towards pensions which can keep up with inflation.

In addition, we support the move towards a system where social insurance contribution rates and classes are actuarially reviewed annually to determine what changes would be required to fund benchmarked increases in payment rates.

What concerns you with respect to current State Pension arrangements?

The current Irish state pension is considered by many to be unsustainably generous given the rapid ageing of the country’s population. It is a globally accepted fact that over-reliance on state pensions needs to be urgently addressed via a broadening of pension coverage.

From an Irish respect, we agree with recent commentary from Mercer that Ireland “should take a number of steps to improve its pension sustainability, including increasing the number of employees in occupational pension schemes; introducing a minimum level of mandatory savings into retirement accounts; improving the protection of members’ benefits in defined benefit schemes; and reducing government debt.”

What specific policy, provision or other changes are needed to make State Pension arrangements sustainable into the future?

A major problem of the current State Pension arrangements, as the Pension Commission admits is that:

Current workers and employers therefore support current pensioners (and that) Trust is an essential part of the ‘social contract’ that makes the State Pension Contributory financing arrangements work.

However, the Pension Commission further emphasis that:



If current arrangements are maintained in the future these will place an unreasonable burden on a proportionally smaller group of current workers to pay for a proportionally larger group of current pensioners.

This may undermine trust in the social contract that underpins the financing of the SPC. This may also impact on the scope for taking in additional Government revenue from taxpayers to help meet increasing fiscal costs.

This dilemma has similarly not gone unnoticed by the OECD which notes that:

Continuity risk is a particular concern when risks are transferred primarily from the older generations to the younger ones. If the funding mismatch is too negative, the younger generations may come in knowing that they will lose from the retirement income arrangement and prefer to default on their obligations to the older generations and not participate in the arrangement. Even if participation is mandatory, they may exert political pressure to change the arrangement or alternatively adjust their labour supply by changing their employer, their industry or even their country in order to avoid participating

(and that)

even large positive transfers can put the continuity of the arrangement at risk. Older generations will be tempted to consume large positive buffers rather than leaving them to reduce the risks for the younger generations, and can exert pressure to release those buffers. This increases the probability that future generations will not see an advantage to participate in the plan and that the arrangement will not be sustainable (Bovenberg and Mehlkopf, 2014).

The OECD concludes on this point by saying that: *In order to avoid the breakdown of the social contract and disincentives for future generations to participate in the retirement income arrangement, constraints need to be put in place to limit the risk of a significant funding mismatch.*

Again, we wholeheartedly agree with these findings however what needs to be taken into account is that no matter how actuarially sophisticated the solution to this problem, unless such a mechanism can be communicated in a simple immediately comprehensible manner to these younger generations of increasingly mobile workers, then the risk of skilled workers leaving Ireland could be substantial.

In this respect, the Irish tontines of 1773, 1775, and 1777 provide a simple proven solution. In these tontines pension, the Irish government offered separate classes to each generation of savers creating a simple arrangement that could more accurately and fairly attribute benefits based upon expected longevity as well as contributions.

Indeed these Irish tontine pensions were so accurate that they attracted contributions from a pan-European audience. Such a simple arrangement, even if contributions of each generation are only partially ringfenced, would go a long way to ensuring that each generation can know with absolute certainty that funds have been set aside for, and invested optimally for, the benefit of their pensions in old age.



About TontineTrust®

TontineTrust® is an Irish based, majority Irish owned group of companies which is commonly referred to within the international retirement and savings industry as the world's 1st 'RetireTech'.

Since 2017 we have been developing a world first globally patent-pending system for enabling governments, corporates and institutions to offer the collective risk sharing tontine pensions that the OECD Roadmap now suggests are the best option for savers and retirees and which should become the *default* pensions available in the 37 OECD member states.

Our system eliminates the complexity involved in the design, operation and management of fair collective risk sharing tontine pensions and thanks to the support of Enterprise Ireland, we expect to launch Europe's first pan-European lifetime income tontine pensions in 27 countries within two years.

For savers and retirees, tontine pensions offer a simple and sustainable lifetime income based upon a proven, age-old concept which ensures higher income in retirement and which can be expected to rise over time.

We welcome this opportunity to make a submission and to help support the development & operation of sustainable pension arrangements for Ireland into the future.





Further Research

LIMRA (Life Insurance Marketing and Research Association) estimates that Baby Boomers retiring in the US between now and 2026 have an estimated €29 trillion saved for retirement. Across the EU, EEA, Switzerland and Canada, the equivalent number is unlikely to be less than €20 trillion.

Numerous studies by institutions such as Allianz and TIAA (The US\$2 trillion Teachers Retirement Provider) show that between 47% and 60% of consumers aged over 50 are obsessed with the fear of outliving their savings in retirement (i.e. they worry about their idiosyncratic longevity risk).

According to Wells Fargo, 82% of middle-income Americans want their defined contribution retirement accounts to offer a lifetime income solution which is not surprising when the same study indicates that as far back as 2010, already one in four men and one in three women aged 65 expected to live to least age 90.

In recognition of the massive pent-up demand for lifetime income pensions, the asset management industry now offers target date funds and lifecycle funds. However, none of these products actually address or eliminate the consumers' idiosyncratic longevity risk, rather they simply hope to alleviate the fear of it.

In the post defined benefit pension era, the only 'pension product' currently available (and many providers are withdrawing these) for consumers to mitigate their idiosyncratic longevity risk is the 2000 year old "fixed annuity" offered by insurance companies including the majority of the 100 insurers cited in the above 2017 study. For a number of several systemic reasons, annuities are necessarily priced at levels which are deeply unattractive to retirees and have rarely achieved greater than 14% market penetration at any point in the past 150+ years.

On the contrary, where private longevity risk sharing pensions have existed in the past, some of these have seen market penetration of over 50% of households outselling annuities by over 4 to 1. Accordingly, the total available market in Europe alone for a product that can solve idiosyncratic longevity risk without the cost of insurance, is likely to be in the range of €8 trillion to €12 trillion in Europe alone by 2026.

EY recently carried out a study noting that demand for Pan-European Pension Product (PEPP) could grow to €2 trillion per annum by 2030. Given that approximately 50% of this demand could come from European Baby Boomers seeking a lifetime income decumulation (un-saving) solution, this again places the demand for lifetime income PEPPs at €1 trillion per year.

Accordingly, the EU member states that facilitate the creation of the most adopted PEPP products can expect to foster a new multi-trillion euro financial services industry. The new pan-European personal pension industry will not look like the pension industry of old.

Just as Uber is now the world's largest taxi company, AirBNB is the world's largest hotel operator and Amazon is now the world's largest retailer, the PEPP providers that are likely to resonate loudest with consumers are those which obsessively focus on addressing the needs of consumers in the simplest and most cost efficient manner.

In the financial services world this is already happening in the banking industry with the advent of digital banking apps such as Revolut (10 million customers), N26 Bank (5 million)



and Monzo (4 million). These “neo-banks” do not acquire customers through heavy advertising campaigns, shirt sponsorship campaigns or through bank-account-brokers. They acquire customers through delivering product excellence, which generates word of mouth and through understanding how behavioural science affects the decisions of their target demographic.

In the European market covered by the PEPP rules, there are approximately 75 million consumers aged between 50 and 65 years old, which is a demographic that is old enough to be obsessing about idiosyncratic longevity risk but young enough to trust digital financial products. This demographic almost certainly likely controls over 50% of the accumulated savings in Europe which in aggregate is likely in the region of €50 trillion based upon the above LIMRA figures.

Sustainable Reform Proposals

Policymakers are now endorsing tontine-style risk-sharing pension strategies, as outlined in the Organisation for Economic Co-operation and Development’s (OECD) Pensions Outlook 2020, the benefits of which are summarised below:

The ability for a collective retirement income arrangement to pool risks and smooth funding shocks over time can significantly mitigate the risks that individuals would otherwise bear on their own. This increases the certainty that they will be able to receive a reasonable level of retirement income for life. The mitigation of the risk at the individual level allows higher retirement incomes to be paid, and ultimately increases the collective capacity of the arrangement to invest in higher risk assets that will provide an even higher expected retirement income overall.

Collective risk sharing can be limited to within a specific cohort or shared across cohorts or generations. Risk sharing within cohorts functions as a regular insurance contract through the pooling of a large number of individuals. Idiosyncratic longevity risk, or the risk that any individual will live longer than the average life expectancy, is easily mitigated by pooling risks within a given cohort. With this type of risk sharing, people who die earlier subsidise those dying later. This means that all participants can increase their retirement income because they do not need to plan to have additional savings to cover the risk of living beyond the average life expectancy. Arrangements that spread risks across several cohorts or even generations can share both investment and systemic longevity risks – and in some arrangements even wage and inflation risks – among participating members.

Sharing risks across cohorts and generations allows for intertemporal smoothing of shocks that cannot be mitigated periodically through risk pooling. Investment shocks in particular can only be smoothed over time and cannot be diversified through pooling a larger number of participants. Systemic longevity risk (i.e. the risk that all members of a cohort may live longer than expected) can also be smoothed over time and shared across cohorts rather than be borne by individual cohorts.

The main objective for risk sharing across cohorts is to provide retirement income stability. This stability is achieved through smoothing features incorporated into the design of the retirement income arrangement that aim to avoid frequent and/or large retirement income benefit adjustments due to changes in funding levels. Examples of such mechanisms include corridors and amortization periods. With these mechanisms, younger generations effectively provide a subsidy to retirees, which can be more or less temporary.



The main objective of risk sharing across generations is to improve welfare and maximise the expected utility of all participants. Given their long duration and long-term outlook, retirement income arrangements are one of the few types of arrangements that can allow for sharing risks across generations, and even across non-overlapping generations. In an ideal setting, this can allow for ex-ante welfare gains, as it allows for participants to trade risks that they would normally not be able to share due to incomplete markets, as well as to share funding mismatches due to investment and longevity shocks over a long time horizon. These arrangements theoretically allow young participants to borrow against their future human capital and thus take advantage of the equity premium earlier in life as compensation for securing the retirement income of current retirees. Such risk sharing relies upon intergenerational solidarity and the participation of future generations who will inherit any funding mismatch, whether positive or negative, and therefore can be viewed as a social contract.

Intergenerational risk sharing increases the risk bearing capacity of the retirement income arrangement and the demand for higher risk investments. Welfare gains from arrangements that allow for intergenerational risk sharing largely come from the ability for the arrangement to take on more investment risk without increasing the risk borne individually. Even though total investment risk exposure for the arrangement is higher, this is partially offset by better intertemporal diversification, so individuals can have the same level of risk exposure while benefiting from higher expected returns. Nevertheless, the conditions required to achieve optimal outcomes from intergenerational risk sharing do not always materialise, and the design of the arrangement also needs to take a realistic view of the context in which it operates.

The ability for a collective retirement income arrangement to pool risks and smooth funding shocks over time can significantly mitigate the risks that individuals would otherwise bear on their own. This allows for higher retirement incomes to be paid, and ultimately increases the collective capacity of the arrangement to invest in higher risk assets that can provide a higher expected retirement income overall.

Risk sharing in the design of retirement income arrangements offers benefits in terms of risk mitigation and the level of expected income in retirement compared to individual retirement arrangements. The ability for a collective retirement income arrangement to pool risks and smooth funding shocks over time can significantly mitigate the risks that individuals would otherwise bear on their own. This allows for higher retirement incomes to be paid, and ultimately increases the collective capacity of the arrangement to invest in higher risk assets that can provide a higher expected retirement income overall. However, providing retirement income guarantees in such arrangements can offset some of these expected benefits, as the security mechanisms needed to enforce these guarantees involve both implicit and explicit costs. Designing the arrangements to share risks either between the provider and the participants or solely among the participants themselves allows for a more efficient and sustainable distribution of risks by allowing the risks to be shared among more stakeholders.



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