International trends and reforms in pension policy and delivery: comparative models for accumulation and decumulation

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Table of Contents

Statement of Work

The Public Policy Institute (PPI) was commissioned by the Commission for Financial Capability to deliver with this Background Paper on International Trends and Reforms in Pension Policy and Delivery: Comparative models of Accumulation and Decumulation

The report maps international trends and reforms in pension policy and delivery in Europe with a specific focus on three countries: the Netherlands, Denmark and Germany. The objective is provide the CFFC with insights into international models, to feed into the 2019 Review of Retirement Income Policies, and Terms of Reference 2, 4 and 8.

#2: An update and commentary on the developments and emerging trends in retirement income policy since the 2016 review, both within New Zealand and internationally

#4: Information about, and relevant to, the public's perception and understanding of KiwiSaver fees

#8: An assessment of decumulation of retirement savings and other assets, including how the Government can ensure New Zealanders make the most of their money in the decumulation phase

We provide a literature review and analysis of reports, academic articles, and previous work commissioned for the CFFC. This informs our overarching synthesis of accumulation and decumulation policies in the three countries listed above, with a specific focus on the following:

- the pension system as a whole (by pillar) and recent changes,
- decumulation options, products, and taxation
- fund performance, including annuities,
- consumer perception, behaviour and knowledge,
- complexity and information availability.

The report concludes by identifying opportunities and barriers for policy transfer to the New Zealand context, and the adaptions that might be required.

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Glossary

Accumulation	The process of accruing pension funds.
Annuitant	An individual receives pension benefits through an annuity (OECD, 2005).
Annuity	A decumulation product which guarantees a payment of pension benefits for either a fixed period of time or for the remainder for the life of the retiree (OECD, 2005).
Contribution	Payments made to a pension fund (OECD, 2005).
Decumulation	Refers to the process of withdrawing or spending down pension funds upon retirement (Retirement Income Interest Group of the New Zealand Society of Actuaries, 2016).
Drawdown products	Refers to a decumulation product in which the retirement funds continue to be invested during retirement with the retiree making withdrawals from the funds as retirement income (Retirement Income Interest Group of the New Zealand Society of Actuaries, 2016).
Financial advice	Advice provided by a financial expert to assist retirees to make financial decisions – for example, considering the best decumulation options for the retiree given their personal situation (European Union, 2016).
Guidance	Generic information offered to retirees to help them understand their options for retirement (European Union, 2016).
Indexation	The way in which pension benefits are adjusted to take into account changes in the cost of living (OECD, 2005).

Lump sum	A lump sum is when the entirety of funds accrued is paid to the retiree in a single payment (European Union, 2016).
Pension funds/Retirement funds	A pool of assets forming an independent legal entity, made up of contributions to a pension plan (OECD, 2005).
Pension pot	The amount of money accrued by a retiree across their working life to be used to purchase a decumulation product (European Union, 2016).
Pension scheme/plan	A legally binding contract having an explicit retirement objective i.e., to pay out funds upon retirement (OECD, 2005).
Retiree	Refers to an individual who is retired or will retire (Retirement Income Interest Group of the New Zealand Society of Actuaries, 2016). They do not necessarily need to be of normal retirement age.
Retirement age	The age in which an individual is eligible for pension benefits (OECD, 2005)

Executive Summary

Pension systems globally face a number of challenges, including increasing ageing populations relative to those in the labour market, increased life expectancy and coverage gaps in voluntary contributory schemes. In addition, there remain considerable unknowns associated with the future of paid work. It is no longer likely that an individual will enter the paid workforce and continue as a wage or salary earner continuously through to retirement (OECD 2018).

The introduction of KiwiSaver in 2007 was a response to concerns that New Zealand Superannuation would be insufficient to support the rapidly increasing number of pensioners. Now with more than 2.8 million members and a growing financial base, the next step is to design decumulation models to support secure and sustainable future for an increasing number of retirees.

There are many decumulation models in place across the OECD. Here we explore three: the Netherlands, Denmark and Germany. All incorporate a three pillar or tier system of accumulation with mandatory earnings-based schemes, and structured decumulation options. The primary product for decumulation is annuities. These are compulsory in the Netherlands, and voluntary in Denmark and Germany, and remain the most popular choice in all three countries.

The private sector is involved in the provision of defined benefits and contributions, while in each country, the government provides supplementary payments if the earnings-based schemes do not provide an adequate income during retirement. The embeddedness and strength of occupational contributions schemes is underpinned by collective agreements negotiated by trade unions and employers and these are sometimes industry wide.

New Zealand is one of the few remaining systems where a universal government-funded pension remains the primary source of retirement income. At present there appears to limited appetite for either mandatory systems of accumulation or decumulation through annuities. Strengthening collective agreements (and by association, accumulation options) is a politically charged issue, as is raising the retirement age. However, accumulation through KiwiSaver has proved popular with an increasing number of New Zealanders, and government support for a voluntary system of savings is politically acceptable. Lesson drawing from the three countries

around decumulation options suggests that state involvement is important in building tax incentives, subsidies, and legislative and regulatory frameworks even when decumulation is administered through privately. This does not preclude the possibility of designing a mixed system of decumulation, with policies to encourage products provided by both private funds and public institutions like KiwiBank. While private banks are currently facing some challenges in terms of reputation in Australia, KiwiBank appears to have become an institution of import to New Zealanders.

Building public support for decumulation options through public institutions may be a useful first step to introduce future generations of retirees to the concept of structured decumulation, with a combination of flexible and defined benefit options. This review does not investigate the viability of such options for New Zealand (that is being addressed in a separate report by St John, 2019). However, our international comparisons indicate that whatever models are adopted, these need to be supported with a clear and accessible education and communication plan.

Introduction

Pension systems globally face a number of challenges, including increasing ageing populations relative to those in the labour market, increased life expectancy and coverage gaps in voluntary contributory schemes. These challenges are forcing policy makers to seek out new ways to shore up the financial sustainability of wellbeing in retirement. A number of OECD countries are using legislation to increase incrementally their mandatory retirement age while others are raising contribution rates and/or decreasing replacement rates. All of these options bring with them a number of problems. Although the OECD suggests raising the retirement age is a potential "win-win" financially in the short term because it increases the labour force participation of older workers and helps maintain pension levels, it is a publicly unpopular solution (OECD, 2017: 16).

In addition, there remain considerable unknowns associated with the future of paid work. It is no longer likely that an individual will enter the paid workforce and continue as a wage or salary earner continuously through to retirement (OECD, 2018). While women have historically been the group to experience career breaks, often for extended periods, this is expected to become more common across the working population, in ways that have yet to be predicted. Increased precariousness presents problems for an over-reliance on contributory schemes in that coverage may reduce, exacerbating inequalities in old age.

New Zealand is not immune from these challenges. The advent of KiwiSaver in 2007 was a response to concerns that New Zealand Superannuation would be insufficient to support the rapidly increasing number of pensioners. The early uptake of KiwiSaver exceeded expectations, with 1.97 million people having joined by June 2012 (Lee et al 2016). By 2018, the total number of KiwiSaver scheme members was 2,837,656, total assets in KiwiSaver rose to $48.6 billion and gross investment returns increased by $455 million in the year prior. While the average member's balance is not high ($17,130), this represents an increase of 14.4% on 2017, and is will continue to increase (FMA, 2018).

Thus, an increasing number of those aged 65 and over will have access to increasingly large lump sums they can draw down. This creates vulnerabilities, and needs careful policy thought as to options for secure and sustainable accumulation and decumulation models.

Over the past five years, the OECD has facilitated the international exchange of pension reform experiences, through its annual "Pensions at a Glance" Reports and country specific reviews. These reports provide valuable material for comparative lesson drawing without advocating a preferred pension system or decumulation model. Rather, they provide a catalogue of examples from which composite, tailored reforms can be designed. This makes sense given the variation cross nationally in institutional design, policy legacies and legal and cultural norms. In addition, the role, regulation and size of the financial services sector complicates the provision of annuities and other decumulation options in a small country like New Zealand.

Discussions of decumulation in the New Zealand context are not new. In 2016, the Commission for Financial Capability (CFFC)'s review of retirement income policies explored how decumulation could be added to the policy landscape, given that a growing number of New Zealanders recognised the significance of KiwiSaver as a supplement to government provision, and that more options for investment post-retirement were desirable (CFFC 2016a). Although, 43 per cent of New Zealanders expected that New Zealand Superannuation would be their main source of income, compared to 11 per cent of respondents selecting KiwiSaver as their primary source, 55 per cent acknowledged that KiwiSaver would be a necessary source of *additional* income. The 2016 survey also revealed that majority thought that the government should be more involved in the provision of superannuation, provide more incentives for saving for retirement (through tax measures and higher employer contributions), as well as assisting financial markets to provide more pension investment options.

Thus, while there is research to suggest New Zealanders take a 'Do-It-Yourself' self-management approach to decumulation of their KiwiSaver funds, often through lump sum or drawdown withdrawals (Dale, 2015), they may well do this out of necessity rather than desire. A self-management approach grants individuals greater control and flexibility over their funds, but the possibility of physical and cognitive decline from ageing may not only put additional strain one's ability to manage finances, and may put individuals at increased risk of fraud (Dale 2015).

With these points in mind, our report explores a range of international approaches to decumulation. Cross-national comparison and drawing policy learnings from other jurisdictions is commonplace. However, there is sometimes a tendency for New Zealand to look for lessons

from those countries deemed “most similar” – translated as the English-speaking world where political culture and institutional arrangements are taken to be sufficiently alike. Moreover, because New Zealand and Australia are geographically contiguous, with the latter owning a large stake of our financial service providers, such a comparison is intuitive. However, comparability can relate to a number of factors: the size of country, the nature of the problem, the aims of the agency seeking lessons for innovation, and the anticipated measures of success. In this report, the goal is to explore a range of decumulation options that could be considered by New Zealand over the medium term, to potentially learn from places outside our usual comparative universe. For this reason, we chose three countries where decumulation options have a longer history, where a variety of products are in place, and which have variously sized populations: the Netherlands, Denmark, and Germany.

This report proceeds with an initial introduction to key terms and rationales for decumulation, a discussion of options, and the benefits and risks of each, and the opportunities and barriers for take-up by individuals and by those agencies charged with provision of products. We then offer a broad overview of the policy reforms and context in Europe, followed by a synthesised assessment of the three selected systems and the insights these provide for New Zealand’s KiwiSaver scheme.

1 What is decumulation and why are decumulation options important?

Decumulation is the process by which funds from a pension scheme or product are converted into income during retirement. The decumulation phase is the period in which these funds are paid to the beneficiary. Decumulation products or options are available in many countries, implemented by both the state sector and private sector funds.

Currently, there is no suite of decumulation options for KiwiSaver (St John, 2016; Oxera, 2014b). Contributors withdraw a single tax-free lump sum from their KiwiSaver account, however, this system of a one-off withdrawal does little to protect pensioners from financial risks of various kinds. The risks identified by the European Union (2016) include:

Longevity risk: risk associated with decreased or cessation of income as a result of having a longer than expected lifetime.

Inflation risk: risk associated with an income that does not account for inflation, or changes in prices over time.

Unstable or unsuccessful investment risks: individuals may need capital protection against pension pot losses or in the event of an earlier than expected death.

Projected population changes: there are ongoing global risks associated with increased life expectancy.

Protection against these risks to individual retirees is important, but consideration also needs to be given to systemic policy changes that will ensure retirement systems account for population-based changes. One key population-based change occurring globally and in New Zealand is (expected) increases in life expectancy for future retirees (Kontis et al., 2017; Statistics New Zealand, 2016).

In New Zealand, the median cohort life expectancy for a man born in 1956 is 78.9 years, increasing to 90.7 years for those born in 2016. For women, the median expected life expectancy is 83.5 years before increasing to 92.9 years for those born in 2016. Despite the inevitable increase in lifespan, New Zealanders also tend to underestimate their life

expectancies (O'Connell, 2012). As mentioned previously, it appears that around half of New Zealanders are unconcerned about living longer than their savings (CFFC, 2016b).

With these changes in lifespan, pension systems need to change to ensure that they account for potentially longer retirement periods as well as for increases in long-term care expenses and the potential for retirees to be financially exploited (Dale, 2015; St John, 2016a).

However, they are a number of barriers to introducing a more structured decumulation system. These barriers include:

- the need for greater financial literacy, especially in the face of a more complex retirement system (European Union, 2016);
- the 'Do-It-Yourself', individual responsibility approach to managing pension funds in New Zealand (Oxera, 2014b);
- the status of, and perception that, New Zealand Superannuation as the main source of retirement income;
- the immaturity of the KiwiSaver scheme which favours lump sum withdrawals over more structured decumulation products.

However, these barriers should not preclude an investigation of suitable options that fit with New Zealand's mixed system of state-funded universal superannuation and a voluntary contributory pension system.

Decisions taken around decumulation are influenced by the nature of the pension system as a whole. Pension systems are categorised by "pillars" or "tiers" of which there are three (OECD, 2018).

Pillar One refers to basic or minimum pensions and social assistance provided by the state to an adequate level. These can be universal or means-tested schemes.

Pillar Two refers to social insurance or earnings related public schemes that are mandatory savings schemes provided for through public or private organisations.

Pillar Three includes additional voluntary savings schemes. New Zealand's mixed system does not include a mandatory component.

2 What are the different approaches to decumulate pension funds?

A variety of decumulation systems exist in European member states where there is a long history of contributory schemes attached to labour market participation (EIOPA, 2014; European Union, 2016). The four common decumulation design options are as follows:

Lifetime annuities: A lifetime annuity is when funds are decumulated as a continuous stream of income, paid at regular intervals, for the entire duration of the retiree's remaining lifespan. This option protects the individual from longevity risk (given that the annuity is for the entirety of the lifespan and not limited to a fixed period of time).

Other types of annuity products include:

- Time-limited or fixed-term annuity: an annuity that provides an income for a fixed period of time, regardless of the lifespan of the retiree. This does not necessarily protect against longevity risk.
- Guaranteed annuity: an annuity that expires upon the death of retiree or upon the expiration of a fixed period of time – whichever one occurs last.
- Deferred annuity: an annuity that begins only after a specified period of time, after the annuity purchase premium has been paid. (European Union, 2016; Oxera, 2014a):

Additional features are sometimes included alongside these systems of decumulation. For example, *escalating annuities* are annuities that vary in payment, depending on indexation based on inflation or a fixed rate. Another example is *reversion* or *joint life annuities*, where annuities are paid for the duration of the annuitant's life, as well as, the lifetime remainder of a named survivor. These types of annuities allow the retiree to account for inflation risk (e.g., rising costs over time) and provide capital protection (e.g., protection of funds after the death of the beneficiary by transferring the funds to a spouse or other designed inheritor).

Programmed withdrawal: A programmed withdrawal is a scheme where a series of fixed or variable payments are made as a form of income. Payment amounts are calculated based on a fixed number or by the expected life expectancy for each period. Although this allows for a structured decumulation phase relative to a lump sum, it is not protected from longevity risk.

Drawdown products: A drawdown product or an income drawdown is when retirement funds continue to be invested during retirement. The individual receives a yearly income instead of purchasing an annuity. The retiree chooses their income as there is no standard rate. However, in highly regulated contexts, there may be restrictions on withdrawals, such as setting minimum and maximum withdrawal amounts. In less restrictive contexts, individuals may choose to follow 'rules of thumb' to generate a 'safe withdrawal rate' (Hyams et al., 2017; Retirement Income Interest Group of the New Zealand Society of Actuaries, 2016).

As this approach is a combination of programmed withdrawal and aspects of the lifetime annuity options, it has the benefit of both flexibility and providing some protection from longevity risk. However, it is typically only available during a certain age bracket (e.g. from age 50 to 75). Afterwards, an annuity may be required. Drawdown products are thought to have capital protection as well as protection against inflation risk (as the funds continue to be invested during the retirement period; European Union, 2016; Oxera, 2014a).

Lump sums: Although a lump sum payment is not officially a decumulation product, it is nonetheless a way in which people can withdraw money from funds for their retirement. A lump sum is when the entirety of funds accrued is paid to the retiree in a single payment. Alternatively, the retiree may choose to leave all of the funds in the account and withdraw amounts as required (this is sometimes considered a drawdown method). The funds withdrawn can be used at the will of the individual (for example, to repay debt, to invest, to buy an annuity, to fund long-term care at retirement or to deposit into a bank account). This is a flexible option but requires individual financial management. It may also involve retirees choosing to re-invest their lump sum pension pot, putting them at risk of investment fraud (European Union, 2016; Oxera, 2014a).

Hybrid products: Hybrid products are schemes where a drawdown option is combined with an annuity option (European Union, 2016).

When deciding which decumulation options to pursue, consider should be given to the importance of flexibility to retirees (for example, having sufficient to address sudden unforeseen circumstances, paying off debt, having an inheritance) as well as the need to protect individuals from longevity risk (i.e., ensuring that their funds are sufficient for the duration of their lifespan).

3 What factors may affect a retiree's decisions with regard to decumulation?

There are variety of factors to consider when thinking about consumer preferences, many of which are attributable to difficulties obtaining easy to understand information, and a lack of financial literacy amongst retirees (European Union, 2016; Oxera, 2014a).

Consumer preferences and choice

In some systems, the pension market may be complex to navigate (Oxera, 2014a). For example, there may be many products to compare and the long term nature of these products means it may be difficult to understand which is the best option. As a result, individuals may prefer instead to avoid making a decision, and deferring to the default option, whenever one is available. Indeed some systems enrol all workers in a default accumulation or decumulation system, providing the option to opt out instead.

Retirees may favour products that provide greater flexibility over those that provide greater security. In a report on aspirational changes to decumulation systems in the European Union (Actuarial Association of Europe, 2014), individuals said they would be more likely to opt for greater choice and flexibility in retirement markets to fit with their individual preferences and circumstances.

For example, life annuities are viewed as a decumulation product that provide security in that they ensure a life-long income regardless of the length of one's life (Oxera, 2014a). However, these products do not allow for other uses of funds. Thus, some retirees may prefer to withdraw a lump sum from their funds to repay debt or pay for sudden medical costs, or they may wish to ring fence some of their pension pot to provide for an inheritance to beneficiaries. These options are seldom available with security-based retirement products.

Consumer perceptions of risk

An individual's perception of risk in any investment can affect their purchase of retirement products (Oxera, 2014a). The factors that may affect these perceptions include:

- **Personal experiences:** an individual may have had bad experiences with a product in the past and thus are less attracted to it.

- **Availability bias:** an individual may be reliant on a few experiences to make financial decisions. Although these experiences may not be reflective of the value of a product, due to the availability of these limited observations, they may perceive a product as more or less attractive, depending on previous experiences.

In the case of New Zealand, there exist perceptions of risk with the purchase of annuities. Annuities were historically seen as poor value for money (St John, 2009), were unpopular, and the market for annuities has largely disappeared (Oxera, 2014a). Although annuities can protect against longevity risk, perceptions about the cost-effectiveness of the product contributed to the end of the market.[1]

Framing

Some products may be unpopular due to a tendency for individuals to consider them as investment products rather than insurance products (Brown, Kling, Mullainathan, & Wrobel, 2008). This reveals how the framing of a product matters' to how it is perceived; annuities may be framed as a low return investment product or an insurance product that has the potential to provide for a long retirement period. If an annuity is presented as an insurance strategy for ensured income during retirement (as opposed to a low (but long-term) investment product), individuals may be open to considering them.

Loss aversion

Individuals are likely to want to minimise loss of funds when choosing a decumulation product. For example, individuals may be averse to lifetime annuity products as they may perceive an early death (thus, being unable to spend the funds) as a financial loss. In other words, because

[1] Although it is also notable that the high levels of taxation on annuities also contributed to the perception that they were poor value for money. Alongside this, anecdotal evidence suggest there is limited appetite amongst market providers for annuities.

the money remains with the fund provider after an early death, this is a negative incentive for annuity uptake. Alternative forms of annuities do exist, and may be more attractive in these cases. For example, guaranteed annuities or fixed term annuities may appear less risky than lifetime annuities, and thus choice of annuity type may be more attractive given diverse views of personal life expectancy.

Taxation

Another way in which an individual may attempt to avoid loss of funds is through avoiding products that may be subject to higher levels of taxation (European Union, 2016). This concerns the economic value of the decumulation product during both the accumulation (either contributions or from investment returns) and decumulation stages.

Pension funds and contributions can be taxed or tax-exempt on contributions, on investment returns, and on withdrawals (OECD, 2015a). Eighteen out of 35 OECD countries apply a three-stage model of 'exempt-exempt-taxed' (EET) taxation regime on each of these stages.

New Zealand currently follows a 'TTE' (taxed-taxed-exempt) tax regime (OECD, 2015a). KiwiSaver contributions are not directly taxed but tax is paid based on the full amount of income (Inland Revenue, 2019). In terms of investment returns for KiwiSaver, if the fund is a portfolio investment entity (PIE), then investment earnings are taxed at 10.5 per cent for taxable incomes below NZD$14,000 and 28 per cent for incomes greater than NZD$48,000. Withdrawals from KiwiSaver are tax-exempt.

Financial literacy

Another barrier to engagement with retirement products is a lack of financial literacy (Oxera, 2014a). Although New Zealanders tend to have fairly high levels of financial literacy (CFFC, 2013) as well as access to easy to understand online tools (i.e., sorted.org.nz), a lack of financial literacy may nonetheless be a barrier to decision making when it comes to managing pension funds over the course of retirement. As KiwiSaver funds can only be decumulated through lump sum payments, there may be an over-reliance on individual's own financial responsibility and decisions, issues that are contingent on their existing financial knowledge.

Availability of financial guidance and advice

Individuals may choose to seek financial guidance or advice when making retirement decisions. Guidance often refers to generic information available to all individuals regarding their retirement options, at no cost. Financial advice refers to information provided by financial advisers regarding different retirement options to assist clients to make the best decision. Sources of financial guidance and advice can include:

- **Pension fund administrators and providers of decumulation products** (e.g., life insurers, banks, brokers and agents): These entities are primarily responsible for selling pension decumulation products. They do not necessarily have a responsibility to honour a client's best interests.[2]

- **Independent financial advisors:** These individuals provide financial advice to retirees, with their clients' best interests in mind.

- **Government:** The government may provide resources such as online platforms, allowing individuals to compare their retirement products or provide general financial guidance.

- **Consumer associations:** Associations representing the interests of retirement product consumers may also provide advice, but often only to individuals nearing retirement.

According to a 2013 survey (CFFC, 2013), 47 per cent of New Zealanders accessed financial advice from their bank, 22 per cent accessed financial information from websites, with 21 per cent noting that they had used the government provided Sorted.org.nz website. Only 15 per cent of respondents reported utilising a financial advisor.

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[2] This was made evident in the Report of the Australian Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry (2019) https://financialservices.royalcommission.gov.au/Pages/reports.aspx#final. For a New Zealand summary see https://www.stuff.co.nz/business/world/110372532/australias-banking-royal-commission-final-report-at-a-glance

4 Pension policy and reform in Europe and decumulation options

Many pension systems in Europe underwent considerable change after the Global Financial Crisis and the resulting austerity measures implemented by some governments. While pension reform has since slowed, the OECD Pensions at a Glance report (2017) notes that between 2015 and 2017, six countries increased their retirement age, one third changed the way contributions work, and another third modified some benefit levels. Over the coming years, it is expected that the normal retirement age will increase it at least half of the OECD countries, with some (including Denmark, Italy and Netherlands) looking to increase the future retirement age to over 68.

Adjustments to pension schemes are deemed necessary to deal with falling replacement rates and rising pension expenditure, driven primarily by the increases in life expectancy, larger cohorts entering retirement and low fertility rates (OECD, 2017). However, raising the retirement age is not the only reform being implemented. Changes are being made to the benefits, contribution rates, and although these shifts differ widely across countries. For example, in Finland, accrual rates are being standardised across the entire working life, at 1.5%; in Belgium, the guaranteed interest rate within the voluntary scheme was reduced from 3.25-3.75% to 1.75%, while an increase in life expectancy now automatically lowers the newly granted pensions in Italy, Latvia, Norway, Poland and Sweden.

The OECD report reminds governments that there is no single solution to future-proofing a pension scheme. It highlights instead a number of connected points of focus:

- providing a balanced combination of old-age safety nets, mandatory pensions, annuities in private schemes and pension credits,
- increasing pension coverage, especially for the self-employed and those with non-standard employment, including through improved financial literacy;
- addressing redistributive components given inequalities in life expectancy;
- designing survivors pensions carefully to protect widow(er)s while limiting inefficient forms of redistribution and work disincentives and moving towards a unified pension framework (OECD, 2017).

For New Zealand to meet the OECD's recommendations, some consideration of decumulation options beyond lump sum withdrawals, needs consideration. We look at international examples now with a view to exploring what might be possible for New Zealand.

The majority of EU member states provide annuity options (EIOPA, 2014). Annuities are mandatory in six of the member states of the EU (including the Netherlands), and voluntary in fifteen states (including Denmark and Germany). Three nations did not have annuity as a possible option (Croatia, Latvia, and Poland).

Programmed withdrawal is available in twelve nations (including Denmark and Germany), not permitted in nine nations (including the Netherlands), and not available in seven member states.

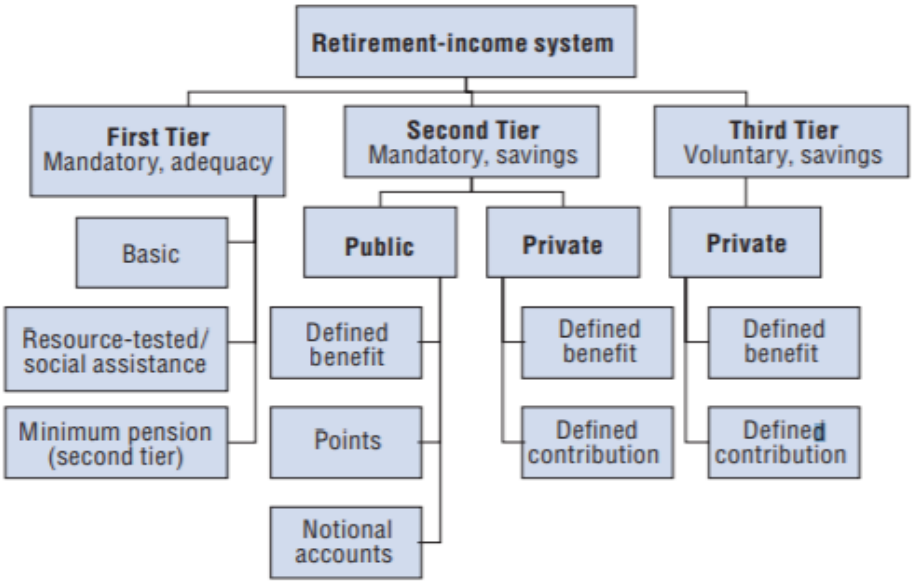
Income drawdown or drawdown products are available in three member states (including Germany), unavailable in fourteen nations (including Denmark) and not permitted in twelve states (including the Netherlands).

Lump sum decumulation is an option for twenty-five nations in the EU (including Denmark and Germany). Three nations do not provide the option for a lump sum, including the Netherlands. Only one nation provides lump sum withdrawal as the only decumulation option (Romania).

The prevalence of annuity and programmed options in Europe, and the range of regulatory frameworks attached to these options, offers a rich source of potential policy lessons for New Zealand's KiwiSaver system.

What follows is a review of three countries' arrangements for decumulation: the Netherlands, Denmark, and Germany. Each of these three countries have a three pillar scheme (see Figure 1) and each provide structured annuities for decumulation. Lumpsum withdrawal is permitted in Denmark and Germany, while drawdown options are rare and, in the case of the Netherlands, prohibited.

Figure 1. Types of retirement income provision



Source: OECD Pensions at a Glance, 2017: 87

Table 1. Retirement income provision in Netherlands, Denmark, Germany and New Zealand.

	Basic Payment (Mandatory)	Savings (Mandatory)	Savings (Voluntary)
Netherlands	Yes	Yes (Private DB, DC[1])	Yes (TP)
Denmark	Yes	Yes (Private DC)	Yes (TP)
Germany	No[2]	Points (Public)	Yes (TP and GS)
New Zealand	Yes	No	Yes (DC; TP and GS)

1. Most Dutch people are in Defined Benefit Schemes (90+% but Defined Contribution are starting to become popular (https://www.oecd.org/els/public-pensions/PAG2017-country-profile-Netherlands.pdf).
2. A basic supplementary income is provided if the defined benefits not adequate.

DB = Defined Benefit; DC = Defined Contribution; TP = Tax promoted; GS = Government subsidised

Table 2. Decumulation products in the Netherlands, Denmark, Germany, and New Zealand.

	Population	Annuity	Drawdown	Lump sum
Netherlands	17.1 million	Yes (M, Taxed)	No (P)	See note[1]
Denmark	5.8 million	Yes (V, Taxed)	No N/A	Yes (V)
Germany	82.4 million	Yes[2] (Taxed)	See note[3]	Yes (V)
New Zealand	4.8 million	No (NA)	Yes (V)[4]	Yes (V)

M= Mandatory; P=Prohibited; V=Voluntary; NA= Not available

[1] Lump sums are only permitted in cases in which the pension pot is below a certain threshold (Oxera, 2014b).

[2] Annuities may be the only option permitted, depending on the pension scheme (European Union, 2016; Fodor, 2018).

[3] Drawdowns are only permitted for some pension schemes (European Union, 2016).

[4] Drawdowns are permitted but are uncommon (Oxera, 2014a, 2014b).

The remainder of this report canvases decumulation options in more detail with a view to exploring possible policy lessons for New Zealand.

5 Decumulation in the Netherlands

The Dutch retirement system

The Netherlands has a three pillar retirement system. **Pillar One** is a non-means-tested state funded pension, providing a flat income for all who have lived and/or worked in the Netherlands. From 2018, the pension age has been incrementally increasing. It was raised from 65 to 66 that year, and will shift to 67 in 2021 and to 67 years and 3 months in 2022. From 2022, the state pension age will be linked to life expectancy and is calculated by date of birth. Dutch citizens can check their pension age by visiting an official online calculator. If people continue to live longer on average, the pension age will be raised in 3-month phases. For example for those born in 1965, the pension age will be 67 and 6 months.

Pillar Two is made up of collective occupational pension funds. The majority of retirement funds accumulated in the Netherlands are through these occupation-based schemes, most of which are negotiated through industry-wide collective agreements. The purpose of these schemes is to maintain a similar standard of living at retirement as one would experience during working life. These are popular with 90 per cent of workers belonging to one of these occupation-based retirement schemes (Oxera, 2014b). Employers typically pay two-thirds of the contribution to the pension fund while employees pay one third of the contribution.

Pillar Three is made up of voluntary pension products, often utilised by self-employed individuals or individuals belonging to industries without collective occupational pension funds.

Taxation

Contributions to occupational pension pots during one's working life are tax exempt (Oxera, 2014b). Further contributions to the pension are tax free up to 70 per cent of the individual's average lifetime income. However, decumulation is taxed. In other words, retirement income is taxed at the same rate as income taxes (although, retirement income that is below a certain threshold is taxed at a lower rate).

Decumulation options

There is only one decumulation option in the Netherlands and that is via annuities. Workers are required to purchase an annuity product upon retirement. However, for individuals with small pension pots (i.e., less than €417 a year, according to values from 2014; European Union, 2016; Oxera, 2014b), lump sums are permitted.

Given this limited choice, lifetime annuity products are the most common on the market (European Union, 2016). There are also few decisions for the retiree when it comes to making a decision to purchase a decumulation product. Retirees may choose to purchase a joint-life insurance product with a spouse or to structure their annuity payments so that the payments in earlier years are higher than later years (Oxera, 2014b).

Although annuities protect against longevity risk, they limit individuals' ability to maintain some funds for inheritance purposes. In addition, inheritances are taxed at between 10–40 per cent depending on the size of the estate and the degree of relationship with the individual (Deloitte, 2019; Oxera, 2014a). Despite this drawback, annuities nonetheless appeal to the overall cultural financial preferences of the Netherlands (although given the compulsion, this may be a product of socialised acceptance). This is similar to other countries with high levels of annuitisation (e.g., Switzerland), individuals in the Netherlands may have higher levels of risk aversion, suggesting that although there are limited freedoms in terms of fund usage, financial security is also considered to be highly important (Visser & Marten, 2013; Oxera, 2014a).

Although the annuity system seeks to ameliorate longevity risk, the compulsion element and restricted flexibility has resulted in some consumer dissatisfaction (Oxera, 2014b). However, recent changes in the design of annuities has allowed for slightly more flexibility. For example, legislation has recently allowed for the purchase of variable annuities (*Pensioenknip*) where individuals are permitted to purchase a temporary annuity with the expectation that they buy a lifetime annuity later on. This option allows individuals more slightly more freedom with making decisions about decumulation.

Decumulation system performance

Consumers appear attracted to annuity products, and there exists strong competition in the annuity market resulting from this being the state mandated decumulation option (European

Union, 2016). This has allowed for greater Money Worth Ratios (MWR) for lifetime annuity products, resulting in both a stable MWR as well as providing higher annuity rates overall.

According to figures from 2004 to 2012, annuity products in the Netherlands maintained MWRs of around 100 during this time-period. In addition, the pension system in the Netherlands achieves a replacement rate of 96.6 per cent (OECD, 2017a). This is made up of mandatory public pensions (28.7 per cent) and 68.2 per cent from the mandatory private (occupational) pensions.

Financial information resources

There is a range of online resources that workers can access with regard to retirement planning as well as decumulation, in Europe generally, and in the Netherlands specifically. These provide guidance on pensions, pension products, and decumulation. Collectively, these are provided through initiatives advance by national insurance schemes, the National Institute for Family Finance Information, the Dutch Ministry of Finance, and the consumer organisation *Consumentenbond* (European Union, 2016; Oxera, 2014a, 2014b)

In combination these different services provide the following information to retirees:

- general information regarding projections based on accrued pension benefits (for public and occupational pensions),
- information regarding different decumulation options (e.g., widowers pension, the impact of different retirement ages),
- information regarding retirement planning, information on the purchase of annuities (including how to compare between pension benefits of different providers).

In addition, a unique tool developed by the pension federation, the Dutch pension funds, and the Social Security Bank, provides an online 'dashboard' tool which enables individuals to view their accumulated pension pots, across all pension funds over their working lifetime (Oxera, 2014b; Van Duuren, 2012). In other words, individuals are able to view their pension funds across all three pillars, providing a total view of retirement income. The service is independent of intermediaries or pension insurers. Individuals can access their information through their

government interaction account (DigiD). The use of this identification account is easy to use and is integrated with other aspects of online government services.

Individuals in the Netherlands also have access to financial advisors, the most common of which are pension administrators as well as general governmental or consumer associations (European Union, 2016). Financial information from pension funds is tightly regulated (Oxera, 2014b), whereby the funds must disclose information on indexation as well as provide an annual review of all pensions paid (European Union, 2016). In addition, providers are required by law to notify retirees about overall costs of pension products. Some consumers may continue to perceive advisors as biased, in that their interests may lie primarily with selling their products rather than helping retirees to make the best decision. Alternatively, independent financial advisors (i.e., those with fiduciary responsibility) are sometimes seen as too costly.

Finally, individuals are contacted and provided information about retirement and pension funds approximately six months prior to their retirement date (EIOPA, 2014). They are given information about the Pillar I state pension as well as information about indexation, pension product purchase options, and a reminder that they may purchase their annuity product from a company other than the company with whom their pension funds have been managed up until retirement.

Barriers to decumulation and retirement

Although the market is almost entirely made up of annuity products, recent changes to annuity products have resulted in a more complex market meaning some retirees have greater difficulty navigating the available products.

In addition, some individuals may still perceive the system to be inflexible especially given the tax-based disincentives for leaving inheritances (Oxera, 2014a). The inheritance tax rate, as of 2019, starts at 10 per cent for funds up to €124,726 for partners and children, rising to 18 per cent for grandchildren, and 30 per cent for all other beneficiaries (Koninklijke Notariële Beroepsorganisatie, 2019). For values over €124,726, the tax increases to 20 per cent for partners and children, 36 per cent for grandchildren, and 40 per cent for all remaining beneficiaries.

6 Decumulation in Denmark

The Danish retirement system

Denmark has a three pillar retirement system. The retirement age is normally 65 years, the same age in which an individual qualifies for the first pillar (EIOPA, 2014; World Economic Forum, 2017). While it is no longer allowable to include mandatory retirement ages in employment contracts, the retirement age will gradually increase to 68 between 2022 and 2030 (OECD, 2017). No other changes have been made to the system in the past three years.

Pillar One comprises two types of state pension, the first of which is called the *Folkepension* which provides a retirement income, which itself is made up of three parts (World Economic Forum, 2017). The *Folkepension* provides a basic income, a supplemental income that is means-tested, and *ældrecheck* which is an additional financial supplement for those who are most financially disadvantaged (Ældre Sagen, 2019). The second is *Arbejdsmarkedets Tillaegspension* (ATP), a supplementary pension based on mandatory occupational contributions that covers 90 per cent of workers in Denmark (Oxera, 2014b; World Economic Forum, 2017). The intention of the ATP is to supplement the *Folkepension* to provide a basic income during retirement. Employees typically pay a third of the contribution and the remaining two thirds are paid by employers.

Pillar Two is made up of privately funded occupational retirement schemes (Oxera, 2014b; World Economic Forum, 2017). These schemes are established through collective agreements agreed to by social partners (i.e., representatives of employers and employees). There are two categories under Pillar Two. One includes those arranged between trade unions and employers for specific industries. The second includes pensions arranged by individual companies or firms and agreed upon by workers and employers, with the pension delivered by a pension or insurance company.

Pillar Three consists of a voluntary, tax-deductible pension scheme outside of occupational pension schemes. These schemes provide savings products for those who are not covered by occupational pension schemes or for those wanting greater flexibility that is not provided in Pillar Two.

Taxation

Retirement income can be taxed during both the accumulation and decumulation phases in Denmark (EIOPA, 2014; Oxera, 2014b). Levels of taxation differ depending on the decumulation product chosen (this is discussed further below).

Decumulation options

The Danish retirement system provides several, but limited, decumulation options for occupation-based schemes (including ATP). These include annuitisation, lump sum withdrawal, and programmed withdrawal or fixed-term annuities (drawdown is only possible with the *Livsforsikringsselskab*, a personal pension scheme; EIOPA, 2014; Oxera, 2014b).

Lifetime annuities are the most popular and operate as the 'social default' due to cultural preferences and the mandatory element attached to ATP pensions (Groves, 2014; Oxera, 2014a; Rocha, Vittas, & Rudolph, 2010). Other reasons for their popularity include a mixture of tax incentives as well as the specific requirements set by the collectively bargained pension schemes. Workers choose the products to which they wish to contribute during the accumulation phases, with the majority selecting annuity products (Rocha et al., 2010). Overall, the Danish system tends to prioritise protection against longevity risk over allowing greater flexibility to retirees (Hyams et al., 2017).

The most popular pension products are deferred life annuities, followed by term annuities, and then lump sum payments (Oxera, 2014b). Although there are high rates of uptake for lifetime annuities, term annuities are still popular despite their lack of protection against longevity risk.

Contributions to annuities are tax deductible (Danish Customs and Tax Administration, 2019). Additionally, contributions to ATP are eligible for tax relief when it comes to employer contributions. For employees, tax deductibility is activated after ten years of contributions.

Additional regulation introduced in 2013 led to increased disincentives for contributions to lump sum products. Prior to 2013, contributions to lump sum products were tax-deductible and withdrawals were taxed at 40 per cent. Subsequent to the new laws, contributions to lump sum

products were no longer tax-deductible, leading to an increasing preference for annuity products (Oxera, 2014b). Lump sum withdrawals are tax free except in situations where the contributions made to the funds were prior to the 2013 change, in which case they are taxed at 40 per cent upon withdrawal (EIOPA, 2014). Contributions to annuities have risen considerably since 2013 and contributions to lump sum products have dropped (Better Finance, 2018).

Decumulation system performance

The combination of Pillar One[3] and Pillar Two pension funds result in an average income replacement rate of 86.4 per cent (OECD, 2017a). Of these, 14.8 per cent is attributable to public pensions and 71.6 per cent is attributable to mandatory private pensions.

Financial information resources

Similarly to the case of the Netherlands, a variety of online resources are available to Danish workers which canvas retirement information and plan comparisons provided by both public and private groups such as industry insurance associations (EIOPA, 2014; Oxera, 2014a, 2014b). These online resources provide overviews and comparisons of pension products across all pension providers, calculations of projected income upon retirement (depending on current levels of income and the impact of different retirement decisions), information about the Danish pension system, and the types of products, providers, and associated costs.

One aspect of the Danish retirement system worthy of note is that employees are often encouraged to think about decumulation early in their working lives (Oxera, 2014b). When an individual approaches retirement, pension funds contact retirees about their options for retirement (including the choice to change pension funds). In addition, companies may provide workshops or seminars on retirement to help their employees become familiar with the pension system.

Denmark also ensures that individuals have access to advice from pension administrators and independent financial advisors at no cost (provided by employers for employment-based

[3] Some reports referred to this as a zero pillar because it is means-tested rather than universal (Rocha et al 2010).

pension schemes; Oxera, 2014a). However, it is thought that the provision of seminars and workshops directed toward retirement planning and education minimises the need for financial advisors.

7 Decumulation in Germany

The German retirement system

In 2012, the German government began a process of increasing the retirement age to 67 (Clemens & Parvani, 2017). However, early retirement may be possible if they are eligible for early retirement under the social security pension scheme (which is 63 years; European Union, 2016; EIOPA, 2014).

The German retirement system follows a three pillar system. The first pillar is a state-based pay-as-you-go system (OECD, 2015b, 2017b). The amount of pension funding one is eligible for depends on the number of points earned during an individual's working life. The number of points an individual gains is based on earnings per year. Upon retirement, the total number of points is multiplied by a pension-point value to calculate a regular rate of pension income.[4] Additional means-tested supplements can be applied for to top up the primary state-based pension.

The second pillar is made up of voluntary occupational pension schemes with employers, external funds or life insurance companies (Fodor, 2018). In 2017, the German pension system introduced new plans and laws to boost the utility of occupational pensions in providing sufficient retirement funds for workers upon retirement. These provisions, initiated in 2018, included introducing new contribution-based pension schemes negotiated by collective agreements. These schemes only allow for annuities, with no lump sum withdrawals permitted, and enrolment is automatic (with the choice to opt out). In general, pension schemes in the second pillar have tax incentives attached and are subsidised by the government (Bundesministerium für Arbeit und Soziales, 2018).

The third pillar is made up of voluntary private pensions (European Union, 2016; OECD, 2015c). These are provided by banks, insurance companies or investment funds (*Riester* or *Rürup*

[4] For a more detailed description of the points system, see "OCED (2013) Pensions at a Glance 2013"

pension schemes). The *Riester* pension scheme is tax incentivised and subsidised by the government.

Taxation

Pension accumulation and decumulation are taxed, depending on the pension scheme (European Union, 2016). For *Riester* pensions, only contributions are taxed whereas decumulated funds are tax-exempt. For *Rürup pensions*, funds are partially taxed during both the accumulation and decumulation phases. Thus the German system is systemically more complex than the Netherlands and Denmark.

Decumulation options

The German retirement system allows for a variety of options for decumulation of pension funds (EIOPA, 2014). These options include annuities, lump sum, and programmed withdrawal (or drawdown). *Riester* pensions can be withdrawn as a lump sum for up to 30% of the total size of the pension point with the remaining funds used to purchase an annuity or drawdown product (European Union, 2016). *Rürup* pensions however, can only be decumulated as an annuity.

The most common products include the full range; from lifetime annuities, guaranteed annuities, deferred annuities, to lump sum withdrawals (European Union, 2016). For private pension schemes, lump sum decumulation is the most popular, while more generally it is the guaranteed annuities that are most popular.

In terms of risk coverage, consumer preference is for guaranteed annuities over drawdown products (European Union, 2016). Drawdown products are likely to be less popular because bequest motives are less influential in the German system. Drawdown products are also deemed to offer less value for money in terms of longevity.

Decumulation system performance

In terms of the MWR, guaranteed annuities have demonstrated higher MWRs overall relative to drawdown options. For example, in 2003, guaranteed annuities had a MWR of 0.881

compared to 0.671 for drawdown products. In 2016, guaranteed annuities had a MWR of 1.07 compared to 0.929 for drawdown products (European Union, 2016).

The average gross replacement rate of the German retirement system is 50.9 per cent (OECD, 2017a). The mandatory public system achieve a replacement rate of 38.2 per cent and voluntary pension plans achieve a rate of 12.7 per cent. When compared to 41 other countries, the replacement rate in the German system performs poorly on average, with the average replacement rate at 57.5 per cent.

Financial information resources

Several online resources exist for information on the pension products in Germany. For example, there are commercial-based comparison tools that provide information regarding different products, the project values of funds, evaluations of insurance companies (European Union, 2016). However, these resources are inadequate when it comes to comparing between products. Namely, comparison tools do not account for all annuity products nor do they give advice. Additionally, if these tools are managed by pension providers, there is a higher likelihood of bias in how these tools compare between products as the intention of the tool is to sell products rather than to inform retirees about their retirement options.

Financial advice for retirement can also be obtained through pension administrators, independent financial advisors, and consumer associations (European Union, 2016). In terms of legislation regulating financial advice, the Federal Financial Supervisory Authority (*BaFin*) oversees services provided by banks and financial services with the intention of protecting consumers. Finally consumers perceive financial advice as difficult to access, due to the cost. In addition, the quality of advice is perceived as likely biased and not easy to understand.

Barriers to decumulation and retirement

Consumers in Germany report that the introduction of new decumulation products such as unit-linked and hybrid products have made the retirement market increasingly complex (European Union, 2016). In addition with recent legislative changes in terms of transforming Pillar Two occupation-based pensions to encourage collectively-bargained pension schemes (Fodor, 2018), the complexity of the retirement system appears to have become increasingly

complicated. This suggests that while some choice is valuable, too much can result in increasing risk averse behaviours and confusion with navigating the retirement system.

In addition, some online tools and websites are perceived as providing biased information instead of giving an accurate picture of the retirement landscape (European Union, 2016). As such, retirees in Germany may be faced with difficulties in accessing useful and comprehensive tools for making retirement and decumulation decisions. For some, very limited options for decumulation may be available depending on their pension scheme, however more informative online resources may help with not only deciding one's preferred means of decumulation but also for navigating the pension market.

8 Comparisons with KiwiSaver: What options are available for decumulation under the KiwiSaver scheme?

At present, KiwiSaver does not have specific arrangements for decumulation (St John, 2006, 2016b). Retirees are able to retrieve a tax-free lump sum from their KiwiSaver accounts, typically at retirement age (65 years; Oxera, 2014b). However, this strategy is subject to longevity risk, where the funds do not last the duration of the retiree's life span, or inflation risk, where funds become insufficient as inflation occurs. Another common decumulation (although not actively encouraged) arrangement is through drawdown products, where individuals leave their pension pot funds with the provider and withdraw funds as required. (This is sometimes also considered a lump sum decumulation method). Like with more common lump sum withdrawal methods, drawdown strategies do not protect against longevity risk.

The importance of considering decumulation alternatives to the tax-free lump sum has been explored in some depth by Susan St John (2006, 2014, 2016). This is particularly the case given average life expectancy will rise, with resulting increased demand for health and long-term aged care in the next decade.

In terms of risks in retirement in the New Zealand context, St John (2006) notes the following:

- **Longevity risk:** about 50 per cent of New Zealanders are likely to live longer than average. Although New Zealand Superannuation provides a solution longevity risk, the amount paid is considered low. Although a drawdown product could last the entire duration of a lifespan, the income at the latter years of life would be vastly reduced. Although annuities protect against longevity risk, the market for private annuities has disappeared (factors associated with this decline will be explored in greater detail below).

- **Societal risk:** The presence of a universal Pillar One state funded pension (New Zealand Superannuation) means New Zealanders may choose to expend all of their finances before their death thereby becoming solely dependent on both National Super and publicly funded health services.

Indeed, a survey conduction by Inland Revenue (2013) suggests that the majority of eligible retirees withdrew the entirety of their KiwiSaver funds upon retirement. The majority of these funds were used for non-retirement purposes such as paying off debt or for travel. It is important to note that due to the infancy of KiwiSaver, these individuals would have had relatively small pension pots and may not reflect future trends of pension fund usage. However, these findings suggest that alternative decumulation options that protect against longevity and society risk may be more relevant in the future (Oxera, 2014a).

In New Zealand, information regarding retirement savings' decisions is provided through a range of sources. However, recent history suggests the focus of these been on pension fund accumulation rather than decumulation (Oxera, 2014b). New Zealand retirees also tend to make decumulation decisions at or near retirement (around 65 years), with pension fund providers tending to inform retirees about options for decumulation when they are nearing retirement. Despite this lack of early proactive engagement, fund providers may still provide information on decumulation methods. However, currently, the alternative option to a single tax-free lump sum withdrawal is the drawdown method. Due to the immaturity of the KiwiSaver scheme, this remains an uncommon strategy amongst retirees and one that does not appear to be actively encouraged by providers. In addition to accessing retirement information from fund providers, New Zealanders may also access information from online resources like Sorted.org.nz. However, the website does not provide comparison tools for the decumulation phase.

The private annuities market in New Zealand has seen a rapid decline, with the market disappearing briefly (Oxera, 2014b) until Lifetime, the single private annuities provider was established (Lifetime, 2019). Due to low state involvement in protecting consumers and high levels of taxation associated with annuities, these products have been unpopular and seen as poor value for money (St John, 2006, 2009).

Although annuity products have only been available through private markets in the past, their decline may be attributed to the following:

- **Taxation and regulatory issues:** while the private annuities market was still active in New Zealand, annuities were subject to higher levels of taxation relative to other

retirement products, leading to the perception that annuities were not good value for money.

- **Consumer related issues:**
    - **Adverse selection:** annuities are only attractive to those who think they are likely to live longer than average. For those who believe they are likely to have a shorter lifespan, annuities are less attractive. As a result, the financial market for annuities is under greater strain relative to other pension products.
    - **The bequest or precautionary motive:** people want to have money in the event of an adverse life event (e.g., for expensive medical bills) or to be able to afford long term care without any other form of financial support (leading to a preference for lump sums). Alternatively, consumers want to be protected against loss in the event of early death. As such, investing in an annuity may be seen as a poor use of pension funds.
- As previously mentioned, New Zealand is culturally inclined toward individual responsibility when it comes to using retirement funds. Consequently, investing in an annuity may be perceived as yielding individual autonomy and control over one's funds and insufficiently flexible.
- Finally, the existence of New Zealand Superannuation means people are less motivated to consider decumulation options for their KiwiSaver accounts. Indeed, New Zealanders are heavily reliant on New Zealand Superannuation for their retirement income, with 40 receipt of the average retirement income replacement rate being attributed to receiving this universal state-funded pension (OECD, 2017a).

9 What Lessons can New Zealand draw from Europe?

The three countries reviewed in this report represent a range of systems and decumulation choices. In terms of the Netherlands, only one form of decumulation is possible and that is mandated annuitisation (European Union, 2016). However, recent changes to legislation have allowed for greater flexibility in choice, such as the option to purchase a temporary annuity with the expectation that the individual eventually purchases a lifetime annuity.

There is greater choice available in Denmark, although lump sum withdrawals are permitted. However, with recent changes in legislation, lump sums have become less attractive, leading to increased subscription to annuity products (Oxera, 2014b).

Germany has a wide range of decumulation options, which is perhaps unsurprising given its population base. However, the retirement system is highly complex, with different decumulation requirements, depending on the scheme, and is very workforce-centric (European Union, 2016).

A distinct trend across all three countries examined is the provision and availability of annuity products; a recognition that such products are designed to protect against longevity risk, and which offer some protection against investment and inflation risks. Not only are they popular (or in the case of the Netherlands, inevitable), they are supported by a market of effective decumulation products. However, the countries in which annuities are most effective (measured in terms of both satisfaction and performance – i.e., Netherland and Denmark) are also those with historically high levels of annuitisation and greater preference for security, over flexibility.

This suggests that both institutional embeddedness and cultural acceptance of the annuity system (and trust in this system) are important factors in terms of take-up rates where annuities are voluntary (Denmark). Such widespread annuitisation may not be possible in the short term in New Zealand given our predisposition toward self-management over security, (Dale, 2015). However, this conclusion is clouded by the fact that the New Zealand system is one of the few remaining systems where a universal government-funded pension remains the primary source of retirement income. Moreover, due to the relative immaturity of the

KiwiSaver scheme, it is unclear whether demand for annuities could increase as retirement pension pots become larger at the point of retirement (Oxera, 2014b).

Furthermore, the suggestion to annuitise KiwiSaver is not new. Scholars from the Retirement Policy and Research Centre (Dale, 2015; St John, 2014, 2016b) have proposed a means of utilising KiwiSaver funds to provide a social insurance scheme, which they have named 'KiwiSpend'. The intention is to provide both a retirement income in the form of an annuity as well as finance for long term medical care. In order to execute KiwiSaver fund annuitisation, tax-incentives and government regulation and involvement is needed. This would enable the subject of annuities to overcome the public perception of the product as being poor value for money (St John, 2009). Furthermore, the popularity of New Zealand Superannuation, the option to invest KiwiSaver funds into a similar scheme may be attractive (Berthold, 2013), especially if the system adopts the branding of KiwiSaver itself, which 'KiwiSpend' aims to do (St John, 2014). Building a culture of acceptance for annuities will take some time, and would require public education campaign and careful attention to framing options as secure, flexible and voluntary.

Further lessons from international approaches can be applied to building financial knowledge of the broader issue of decumulation. At present, little information is available for safe self-managed decumulation with KiwiSaver funds. More information and resources can be provided to workers to better prepare them to not only plan for retirement, as both KiwiSaver ages, and funds increase in size. There are many examples available internationally about the skills and knowledge needed for further investment, provision options, and administration costs and processes (see ATP for example). This is a necessary next step even if additional decumulation options are not available.

A key example of the importance and utility in providing decumulation information during the accumulation phase can be seen both the Netherlands and Denmark. The majority of retirement-related decision making is made during working life, rather than when the individual is at or nearing retirement (Oxera, 2014a). This may be due to the high rates of annuitisation both countries, where contributions directly to annuity products are made throughout the working life. However, if decumulation information were provided early, it

might assist in increasing demand for additional products to the existing lump sum option for KiwiSaver.

However, there are currently no incentives to consider retirement early on, given lump sums are the only withdrawal option, and given the cultural and political value of New Zealand Superannuation (the universality of this scheme is an important feature for those whose labour force participation is interrupted by care giving responsibilities, disability or ill health, and long term unemployment).

Nevertheless, as New Zealanders are relatively financially savvy (CFFC, 2013), thus potentially motivated towards increased financial knowledge, meaning additional decumulation information may be well-received. For example, the Dutch system provides workers with a 'Dashboard' which is easily available through a universal identification system, allowing individuals to view their retirement outlook. The Danish system provides similar online tools, allowing individuals to examine their current projected retirement income and the outcome of any decisions they may choose to make. This strategy could be fairly easily implemented in New Zealand, given the popularity of the sorted.org.nz website. The website already provides a platform for comparison between different KiwiSaver funds, depending on an individual's goals and saving preferences. Adapting the website to educate individuals about decumulation as well as providing projections may be a feasible approach.

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