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SYMPOSIUM ARTICLE

Voluntary collective pensions: a viable alternative?

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Abstract

This contribution discusses the central thesis in Michael Otsuka's book that collective pensions can be organized on a voluntary basis from the recent experience with pension reform in the Netherlands. Despite a long tradition of collective-funded pensions organized in a decentralized way by social partners, basis reform was necessary as population ageing made it increasingly harder to maintain the intergenerational solidarity implicit in these pensions. Although it is well-established that risk sharing between generations can be beneficial and welfare improving to all, it is far from certain that new generations will enter existing pension arrangements on a voluntary basis. First, there is a considerable 'discontinuity risk' if deficits in pension funding – caused by bad shocks – deter younger generations from entering the scheme. Second, even if it is to their own interest most people do not voluntarily engage in pension schemes due to several kinds of behavioural and psychological barriers.

Keywords: Collective pensions; intergenerational risk sharing; discontinuity risk

1. Introduction

Is it possible to organize collective pensions on a voluntary basis? The thesis in Michael Otsuka's book is that it is, if properly designed. In a succinct argument, Otsuka shows that the benefits of pooling individual contributions into so-called 'Collective Defined Contribution' (CDC) pensions are sufficient to allow for the existence of associations of workers and employers that operate pensions on a collective and permanent basis without the state having to make participation mandatory. Thanks to the advantages of collective pensions over individual saving each new generation of participants will enter the intergenerational arrangement out of free choice. It is thus based purely on mutual interest and rational choice; one does not have to invoke concepts such as solidarity, ethics or social norms. In the spirit of John Rawls[1] it represents a form of 'relative' reciprocity in the sense that

[1]See e.g. John Rawls' book *A Theory of Justice* (Rawls 1971).

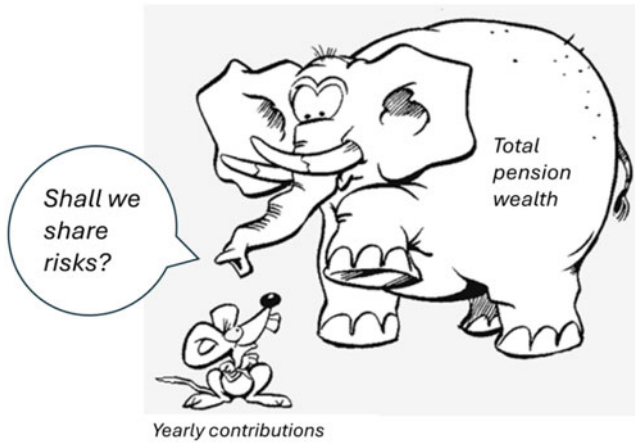

Figure 1. Intergenerational risk sharing no longer sustainable.

each individual receives a benefit – viz the pension – in proportion to his or her contribution.[2]

Unfortunately, actual experience is less favourable for the case of voluntary pensions. Take the example of the Netherlands. This country has a long experience of collective pensions organized at the decentralized level of industries and professional organizations, very similar to Otsuka's ideal of CDC pensions. This system has been successful for many decades after the Second World War resulting in a solid system of funded occupational pensions that is ranked among the best in the world.[3] Today, however, Dutch pensions are in the process of a thorough reform. This was inevitable because the implicit arrangement for mutual risk sharing between younger and older generations that underpinned CDC pensions was no longer sustainable. Due to population ageing and the maturing of pensions, the system has become top-heavy with a large burden of pension liabilities relative to the risk capacity of the younger generations. As a result, it was no longer possible to share risks on an equal footing; shocks in the funding of pension funds could no longer simply be accommodated by calling on younger generations. Figure 1 offers an illustration of this problem.

The problem became manifest when stock prices and interest rates plummeted during the credit and euro crisis around 2010. Pension funds were confronted with deficits that could no longer be restored by raising contributions of younger generations as it had been in the past when the system was less lopsided. After a long debate between social partners, pension funds and academics the Dutch parliament in the summer of 2023 agreed on a new pension law envisaging the – mandatory – transition to more 'personal pensions' with only a minimum of intergenerational risk sharing.

Let us look at why the experience in the Netherlands is so different from the ideal of a sustainable voluntary intergenerational arrangement as sketched by Otsuka.

[2]In Otsuka's terms, it is a case of reciprocity relative to an – unjustly – unequal baseline (Otsuka 2023: 87–89).

[3]The Netherlands is ranked first in the recent Mercer Global Pension Index, just above Iceland, Denmark and Israel (Mercer 2023).

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I will start with some general observations on the CDC pension and the merits of intergenerational risk sharing in pension contracts. Next, I will provide some more background on the pension reform in the Netherlands and the pension debate that preceded it. Finally, I will come back to the possibility and impossibility of the voluntary organization of pensions as sketched by Michael Otsuka.

2. The Merits of Collective Pensions

Otsuka gives a comprehensive account of the merits of collective pensions compared with individual pension saving. First, pensions offer insurance for individual longevity risk – that is the risk of running out of money when living longer than expected – by pooling this risk among all participants. This is known to deliver important welfare gains up to some 20% of total wealth without basically any cost (see e.g. Bauer 2017). In addition, joining a pension arrangement provides a commitment mechanism for an individual to save for her old age. Without such commitment most people fail to save for pensions due to a lack of financial knowledge and behavioural biases such as undervaluation of the future (myopia) and the tendency to postpone complex decisions (procrastination). Also, as well motivated by Otsuka, commitment is necessary to reduce adverse selection. This could happen when individuals pull out their capital at the moment they learn that they are only have a short time to live. Rightly so, Otsuka therefore requires that the pension arrangement can only be entered at the beginning of the working life – when risks are still behind the 'Rawlsian veil' – and one cannot pull out later during the life course.

Next to these merits, which are already sufficient to motivate life-long pension arrangements, Otsuka also emphasizes the intergenerational sharing of financial shocks. This is, however, less undisputed. Generally, financial risks are well traded in financial markets and households can choose their risk exposure according to their preferences by composing the proper investment portfolio. According to the famous life-cycle model of Merton (1969) and Samuelson (1969), one should hold a riskier financial portfolio at a younger age – when people still have a large earning capacity – and gradually move to a safer portfolio when growing older and human capital wears out. Such a life-cycle investment may just mirror the distribution of risk in a collective pension fund where younger participants typically bear more risk than older participants. Therefore, for such risk sharing one does not need a collective pension arrangement; it can be well arranged by trading on private financial markets. Even better so, as individuals tend to have different risk preferences which cannot be taken into account in a uniform collective contract.

However, financial markets are not perfect in all respects. For some risks, no well-developed markets exist, such as interest contracts over a very long time horizon. Also, markets are missing for wage-indexed bonds and sometimes for price-linked bonds as well. Also, aggregate longevity risk – that is unforeseen changes in the average life expectancy – is usually not traded in financial markets.

Even more fundamental, however, is the problem that one cannot trade risks with future generations via private markets, for the simple reason that these generations are not yet active or not even born. This provides scope for welfare-improving intergenerational risk sharing through long-term pension arrangements,

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either via the state or via private pension institutions. The gains of such risk-sharing with future generations can be considerable if fully exploited; estimates range up to some 20% welfare gain when shocks are smoothed over an infinite time horizon (Gollier 2008).

2.1. Discontinuity risk

In practice, it tends to be hard to exploit the full potential of such risk-sharing in a decentralized environment. Perfect risk sharing would imply running a deficit (or surplus) over an infinite time horizon. This may be possible for a nationwide pay-as-you-go pension (PAYG) with taxpayers providing a robust contribution basis. However, it is hard to imagine that this could also work in a more decentralized and voluntary setting, with a large variety of – often smaller – pension funds. For example, continuity of pension arrangements would require that all future generations must agree to join a pension contract even if this delivers them a negative net market value due to accumulated deficits in the past. For small deficits, it may be acceptable given the merits of an established pension arrangement. Also, it is easier to maintain risk sharing within well-defined groups of workers with few outside options, such as the pension schemes for teachers and civil servants that are central in Otsuka's argumentation. But in the case of smaller schemes, it will be easier for new entrants to look for alternative pension solutions, for example by joining other – larger – pension funds with better financial perspectives, or taking a pension at a private insurance company. In the end, this may cause the fund to close its operation and the intergenerational chain of risk sharing to be broken.[4]

Discontinuity risk was a major concern for the pension authority in the Netherlands, the Dutch central bank, during the past decade, leading to stricter supervision of pension funds, tightening funding requirements, and limiting the period whereover shocks could be smoothed. This effectively limited the scope for intergeneration risk sharing to the minimum. It was estimated that 96 percent of risk was borne by current generations and that only 4 percent was shared with future participants (Van Ewijk 2009).

3. Why CDC Pensions Proved Unsustainable in the Netherlands

The Dutch pension system features a strong 'second pillar' of 'occupational' or 'work-place' pension organized on a decentral level by social partners and organizations of professionals on top of a first pillar of basic pensions provided by the state. In the second pillar, participants receive a pension related to the contributions paid during working life. All contributions are collectively invested in well-diversified portfolios and the returns are shared between all participants. The system originated after the Second World War as a 'defined benefit' (DB) system in which participants build up 'pension rights' promising a certain pension linked to average wage growth. Essentially, these pension rights were guaranteed by younger generations together with employers. These two 'risk sponsors' took the case of buffering shocks in the funding of the pension fund. In the early days, shocks

[4]See e.g. Romp and Beetsma (2020) for an analysis of discontinuity risk in voluntary pension schemes.

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Figure 2. Pension wealth and contributions (billions of euros).
Source: Bettendorf *et al.* (2011).

could be smoothed over a long time horizon, thus shifting part of the risks to future generations of participants.

This risk-sharing arrangement was effective when accumulated pension liabilities were still small relative to the contribution base of younger generations. This changed, however, over time as the system became more mature and population ageing caused the contribution base to shrink relative to the number of pensioners, as illustrated in Figure 2. As a result, it became more and more difficult to live up to the pension promises and the systems gradually evolved into a CDC system, where the return on invested contributions became leading for the pension benefit and the pension promises no more than an ambition.

This became acute when financial markets plunged during the banking and euro crisis around the year 2010. Contribution rates which already had risen to over 20% – due to the falling interest rates in the preceding decade –could not be raised any further. As a result, pensions have fallen with some 15% in purchasing power since then for most pension funds, and several pension funds even had to cut pensions nominally. Many – smaller – pension funds discontinued their operation, transferring their pensions to private insurers or merging with larger pension funds. The total number of pension arrangements shrank from some 600 at the beginning of the century to less than 200 today. Because all this support for collective pension arrangements was waning this led to a growing number of employers and workers avoiding participation in the second pillar pensions. Nowadays some 25% of workers (employees and self-employed) are without a supplementary pension despite the substantial government subsidy on pensions and the fact that pension arrangements are mandatory for employers and employees in all sectors with a collective labour agreement.

In 2023 the Dutch government decided to reform second pillar pensions going to more 'personal pensions' which are in effect close to pure DC contracts, with only a

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minimum of risk sharing with future generations through a so-called 'solidarity reserve'. The decentralized organization of collective and mandatory pension arrangements was maintained. All current CDC pension contracts must be transferred to the new personal contracts before the year 2028.

The problem of waning participation in the second pension pillar was not really addressed in the current reform. There was an agreement with social partners that the so-called 'white spot' in participation should be halved before the year 2025. If this is not realized, further measures will be considered among which is introduction of mandatory supplementary pensions for all workers covering both employees and self-employed, comparable to Iceland, for example.

4. Viability of Intergenerational Risk Sharing in Pension Schemes: Some Lessons from the Dutch Experience

What are the lessons to be drawn from this experience concerning the viability of CDC pensions on a voluntary basis as proposed by Otsuka? The 'discontinuity' perspective taken by the Dutch supervisor is opposite to the 'continuity view' embraced by Michael Otsuka. In the discontinuity view the intergenerational chain may break down if there is too little value of younger generations in joining the pension contract. This view therefore emphasizes the market value of pensions as determined by actual prices in financial markets. This is in contrast with what Otsuka describes as the 'actuarial view' that focuses on incoming and outgoing cash flows over a long (infinite) time horizon. In this latter view also a pure PAYG contract could be viable on a voluntary basis as long as it is supported by younger generations.

The key feature of intergenerational risk sharing is that it involves 'trade' with generations that are not yet born or still too young to deal with. The risk-sharing arrangement thus does not follow from reciprocity – even not delayed reciprocity – as current and future generations are not linked in other respects at all. As there are no personal ties current generations have no means to 'punish' younger generations when they refuse to engage in the pension arrangement. An arrangement for intergenerational risk sharing on a voluntary basis will therefore not be viable from a longer time perspective. Generally, some form of commitment is necessary to avoid new participants opting out of the system. This could be done by the state, but also by well-defined groups such as organizations of professionals that can make participation in the pension scheme mandatory for getting registration as a professional.

This being said, while intergenerational risk sharing may not provide a basis for voluntary pension schemes there remain the other advantages that make collective pension arrangements possible at a voluntary basis. Pooling investments in well-diversified and efficient portfolios, sharing longevity risk and providing commitment for adequate pension saving over the life course could be a reason for joining mutually beneficial collective pension schemes. One problem remains, however. Michael Otsuka follows Rawls in presuming that people can make rational decisions in their own interest. This may be true in many decisions, but not so much for a complex decision over a long time horizon such as pension saving. Maybe, some coercion to start saving for old age in time may not be that bad in the end.

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