

# Economic Globalisation and Swedish Pensions

Peter A. Diamond

I am grateful to Annika Sundén for guidance, to Pontus Braunerhjelm and Agneta Kruse for providing information and to Nick Barr for comments.

EXPERT REPORT NUMBER 28 TO SWEDEN'S  
GLOBALISATION COUNCIL  
(C) THE GLOBALISATION COUNCIL 2009

AUTHOR Peter A. Diamond  
GRAPHIC DESIGN Nina Gergi  
ORIGINAL Pangea Design  
PHOTO Getty Images  
PRINT Edita, Västerås 2009

ISBN 978-91-85935-27-7  
ISSN 1654-6245

ORDER The Globalisation Council  
PHONE 0046 8 405 10 00  
E-MAIL [globaliseringsradet@education.ministry.se](mailto:globaliseringsradet@education.ministry.se)  
[www.sweden.gov.se/globalisation](http://www.sweden.gov.se/globalisation)

## Preface

Economic globalisation has resulted in growing opportunities for life-time working careers to span a number of different countries while pensions systems still are nationalized. Similarly, globalisation has increased the possibility of pension funds being invested and consumed abroad. From the perspective of Swedish pension institutions there are two separate dimensions of effects: whether increased globalisation affects the anticipated financial functioning of the pension institutions and whether it affects the way the institutions fulfill their social role of providing retirement incomes.

The report *Economic Globalisation and Swedish Pensions* finds that the Swedish pension system – by and large – is well suited to handle the effects of globalisation. Nevertheless this report has identified several research issues and reform proposals that seem worth pursuing. For example should workers be allowed to make additional contributions to their premium pension accounts and to rollover pension accumulations abroad into their premium pension accounts. Also the income related pension should allow transfers of credits between spouses and registered partners and joint life annuities, as does the premium pension and there should be offsets against the guaranteed pension for mandatory public pension benefits in countries where residence counts toward the level of guaranteed pension.

Peter A. Diamond is an Institute Professor at the Massachusetts Institute of Technology, MIT, and a former president of both the American Economic Association and the National Academy of Social Insurance. The author takes full responsibility for the results and the analyses presented in this report.

Stockholm, January 2009  
Pontus Braunerhjelm  
Principal Secretary, The Globalisation Council

## Globalisation Council members

The Swedish Government has established a Globalisation Council to promote a deeper knowledge of globalisation issues, draw up economic policy strategies and broaden public dialogue about what needs to be done to ensure that Sweden can compete successfully in a world marked by continued rapid globalisation. The Council's work is expected to lead to proposed measures whose purpose, broadly defined, will be to boost Sweden's competitiveness and attractiveness on the international scene.

In addition to regular Council meetings, background reports will be written by independent researchers and other experts. These will be quality assessed by reference groups composed of representatives from academia and the Government Offices and by leading economists on the Council's Advisory Board. The work of the Council, which must be completed well before the 2010 general election, will be documented in a final report along with economic policy recommendations. Plans are also being drawn up for a number of external activities, such as conferences and seminars.

The Council comprises representatives from the business sector, the Government, social partners, the government administration, the media and the research community. It is chaired by the Minister for Education and Research, Lars Leijonborg. The Principal Secretary is Pontus Braunerhjelm.

The other members are:

Kristina Alsér, Mercatus Engineering AB, County Governor, Kronoberg County

Hans Bergström, columnist and reader in political science

Carl Bildt, Minister for Foreign Affairs

Urban Bäckström, Director-General, Confederation of Swedish Enterprise (Svenskt Näringsliv)

Lars Calmfors, professor of international economics

Per Carstedt, CEO, SEKAB Group

Dilsa Demirbag-Sten, journalist, author

Anna Ekström, Chair, Swedish Confederation of Professional Associations (SACO)

Lars Leijonborg, Minister for Higher Education and Research

Sven Otto Littorin, Minister for Employment

Wanja Lundby-Wedin, President, Swedish Trade Union Confederation (LO)

Karin Markides, President, Chalmers University of Technology

Elisabeth Nilsson, President, Swedish Steel Producers' Association (Jernkontoret)

Aina Nilsson Ström, Head of Design, AB Volvo

Sture Nordh, Chair, Swedish Confederation of Professional Employees (TCO)

Mats Odell, Minister for Local Government and Financial Markets

Maud Olofsson, Minister for Enterprise and Energy and Deputy Prime Minister

Carl-Henric Svanberg, President and CEO, Ericsson

Lena Treschow Torell, professor of physics, Royal Swedish Academy of Engineering Sciences (IVA)

Harriet Wallberg-Henriksson, President, Karolinska Institutet

Marcus Wallenberg, Chair, International Chamber of Commerce (ICC)

Olle Wästberg, Director-General, Swedish Institute (Svenska Institutet)

# Table of contents

1. Introduction	6
2. Financial security in old age	7
2.1 Objectives	7
3. Swedish institutions	17
3.1 Financing of public pensions	18
3.2 Premium pension	19
3.3 Inkomstpension	20
3.4 Guaranteed pension	20
3.5 EU regulations and bilateral treaties covering public pensions	21
3.6 Occupational pensions	23
3.7 EU concerns about occupational pensions	25
3.8 Tax-deferred individual (private) pensions	25
3.9 Income tax treatment of pensions	26
3.10 Normative analysis of the income tax treatment of pensions	27
4. Economic globalisation and pension replacement rates	31
4.1 Workers	32
4.2 Families	36
4.3 Earnings growth and inkomstpension benefit determination	37
4.4 Sweden as a place to work	39
5. Economic globalisation and financial stability	42
5.1 Earnings inequality	45
5.2 Financial capital mobility	47
6. Proposed reforms	48
7. References	50

# 1. Introduction

Pensions play a key role in financial security in old age. The Swedish government mandates participation in the public pension system and regulates voluntary occupational and individual (private) pensions. Good design of both mandatory and regulatory rules is important for the well-being of the elderly and for the workings of the economy broadly. Historically, pension systems have undergone repeated changes as the economy and demography have changed, as politics has changed, and as understanding of the workings and effects of pension systems has evolved. Looking to the future, it is appropriate to ask how ongoing increasing economic globalisation might affect the workings of the pension system and what changes might be worthwhile in light of these anticipated changes.

Economic globalisation has resulted in growing opportunities for workers to spend considerable time working in several countries and has increased the availability of financial investments abroad. This report considers the effects of these trends on the functioning of the Swedish pension system and proposes some reforms. Consideration is given to the ability of the pension system to fulfill its social goal of providing retirement income while preserving financial stability.

Section 2 briefly reviews the role of pensions in providing economic security in old age, including definitions of some key terms in Box 1 at the end of the section. Section 3 briefly reviews relevant Swedish institutions. Analyses of the pension impacts of anticipated trends due to economic globalisation are in the next two sections, with Section 4 considering pension replacement rates and Section 5 considering financial stability of the system. Recommendations are in Sections 3, 4, and 5 and are listed in Section 6.

## 2. Financial security in old age<sup>1</sup>

Provision for old-age economic security includes two groups of primary objectives of pension systems. Pension systems should

- provide insurance against low income and wealth in old age and offer a mechanism for consumption smoothing<sup>2</sup> across one's lifetime, and should
- relieve poverty and redistribute income and wealth.

Addressing these objectives involves interactions, since saving for old age and insuring against the risk of outliving one's assets also help to relieve poverty and affect the distributions of income and wealth. In addressing these objectives it is necessary also to consider the costs of achieving them. As a useful shorthand:

- The primary objective of pensions is economic security in old age, achieved through consumption smoothing, insurance, poverty relief, and redistribution.
- The primary objective of pension design is to optimize old-age security, including the cost of providing it.

### 2.1 Objectives

Two distinctions are useful: between primary and secondary objectives, and between the objectives of individuals and of government. This section discusses the primary objectives with respect to pensions of individuals (section 2.1.1) and governments (section 2.1.2), and then (in section 2.1.3) some secondary objectives.

---

<sup>1</sup> This section is drawn from Nicholas Barr and Peter Diamond, *Reforming Pensions: Principles and Policy Choices*, Oxford University Press, 2008.

<sup>2</sup> This term is explained in Box 1 at the end of this section, as are a number of other terms used in this report.

### *2.1.1 Individual objectives*

From an individual viewpoint, income security in old age requires two sets of instruments: a mechanism for smoothing consumption, and a means of insurance. For the lifetime poor, income security additionally includes transfers provided to them in old age.

#### *Consumption smoothing*

People seek to maximize their well-being not at a single point in time, but over time. Most people hope to live long enough to be able to retire. They save to that end, in effect redistributing income from their younger to their older self. Thus a central purpose of pensions – consumption smoothing – is to enable a person to transfer consumption from her earnings in middle years to her retired years, allowing her to choose a better time path of consumption over her working and retired life. The extent to which a pension provides such smoothing is referred to in terms of a replacement rate, reflecting the size of pension benefits relative to previous earnings.

#### *Insurance*

In a world of certainty, individuals would save just enough during their working life to finance their retirement. However, people do not live in a world of certainty, not least because they do not know how long they are going to live. Thus a pension based on individual saving confronts the individual with a choice: either risk outliving his or her retirement savings, or consume very little throughout old age to prevent that from happening. But although any one person does not know how long he or she is going to live, the average life expectancy of a group of people is much more predictable. Pooling of individual risk can be organized through insurance companies or through the government. There remains risk that the aggregate life expectancy is somewhat different from what was anticipated.

This is the essence of annuities, whereby an individual exchanges his or her pension accumulation at retirement for monthly payments for the rest of his or her life, however long it may be. Alternatively, a defined benefit pension plan can provide benefits for as long as the recipient is alive. Insurance in the form of an annuity increases individual welfare by reducing the need for people to accumulate very large savings to avoid destitution should they live longer than their

life expectancy. While some annuitization (at reasonable prices) is part of a sensible plan, both uncertainty about future expenditures and bequest motives imply that not all wealth should be annuitized, even if prices were actuarially fair. Annuities can also be used to provide resources to a spouse who outlives a worker.

Alongside the risk of outliving one's savings, which annuities can cover, there are also risks to future earnings during working life. The latter risks can be insured in part through unemployment insurance and disability insurance, but they also have consequences for retirement, which pension systems can at least partly address through their redistributive elements. Pension systems can also insure against disability, and they can protect young children should a working parent die before retirement, issues not addressed in this report.

#### *Consumption smoothing for the family*

People are concerned about their children and their partners. Pension systems commonly include life insurance benefits for workers with young children. Pension systems commonly include the option or the requirement of benefits for a surviving elderly spouse, commonly as an annuity.

Studies find that a single survivor of a couple typically needs more than half of the couple's income – commonly 65 to 70 percent – to maintain a broadly constant standard of living. That is, a desirable “survivor replacement rate” is thought to be larger than one-half. Consistent with the perception that more is needed for a single person, the maximum guaranteed pension in Sweden is larger for a single pensioner than for a married pensioner - 2.13 price-related base amounts (SEK 7,153 per month in 2007) for a single pensioner and 1.90 for a married pensioner. Thus, in the absence of survivor benefits, if two spouses have identical pension benefits, the death of one may lower the living standard of the other, depending on the level of non-annuitized wealth available to the surviving spouse. The issue is more important with the death of the higher benefit recipient of the two if their benefits differ. With men typically having higher earnings and so higher benefits than women, men more commonly older than their wives than vice versa, and men having higher annual mortality rates than women, inadequate survivor benefits is part of the mechanism that results in higher poverty among widows than among married elderly women in many countries as well as significant drops in living standards for many of the survivors with incomes above the poverty line. Survivor pensions are therefore an

important element in preserving the living standards of the elderly.

There are many ways of organizing and financing survivor pensions. In a funded defined-contribution or notional defined-contribution pension, the accumulation could be used to purchase a joint-life annuity, with a suitable fraction for the survivor. In a two-earner couple this can be done by both earners. A defined-benefit system could offer a similar set of options, based on the actuarial conversion of a single-life annuity into the relevant joint-life annuity.

*Are voluntary arrangements sufficient?*

In the simplest of all worlds, a person would provide for his or her pension through voluntary saving during working years so as to achieve an optimal time path of consumption and by buying an annuity to protect against the longevity risk. There are two strategic sets of reasons why this approach, on its own, is insufficient. First, it ignores additional public policy objectives such as poverty relief and redistribution that can be addressed within a pension system. Moreover, since a means-tested program to provide income to the poor elderly is a disincentive to retirement saving for workers with low earnings, referred to as free riding, compulsory retirement savings can lessen the cost of this disincentive. Second, the simple model assumes that insurance markets work perfectly. In fact, there are multiple reasons why they do not work perfectly, including a lack of perfect information, the absence of some possible market opportunities, and other distortions. Another reason is that individuals do not always do a good job of making and executing decisions about saving and insurance in the face of continuing pressure to spend more now, and with often limited understanding of the nature and value of insurance and of different investment opportunities. The assumptions of idealized markets are useful for formulating a simple theory as a start to understanding the issues, but bad guides to policy design.

- Imperfect information and understanding are widespread. People are often badly informed, particularly about complex pension products. Moreover, there are serious concerns about the ability of individuals to make the most of the market opportunities that are available to them, not least because not everyone has a time horizon that gives appropriate weight to future consumption. There is considerable evidence that if pension arrangements were left to people's voluntary decisions, many would not save

enough: as older people they would regret their earlier choice not to have saved more. Similarly, on a voluntary basis people make little use of annuity markets. And many people do not do a good job of selecting long-term investments.

- Markets are often incomplete; that is, not every product that people would benefit from buying (in this case specific kinds of annuities or other insurance products needed to optimize over the life cycle) is available. The market for privately indexed contracts is thin, and the market for annuities is affected by difficulties in measuring the longevity risk. Moreover, the administrative and transaction costs of voluntary individual arrangements are considerably higher than those with well-run mandatory public pension programs.

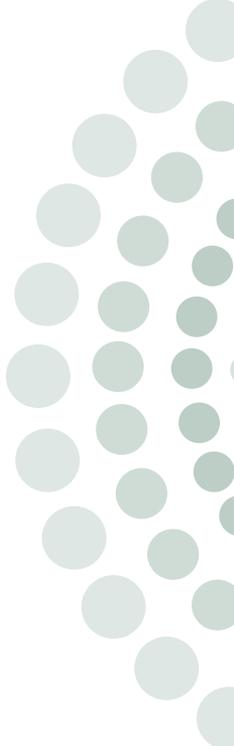
Given these and other problems, both economic and political arguments support government intervention, for example compulsory participation in a pension system, to prevent destitution in old age. For the same reasons, also called for is regulation of pension systems. More broadly, public policy may seek to reduce systemic uncertainty and increase social stability. Protecting people against uncertainty is important.

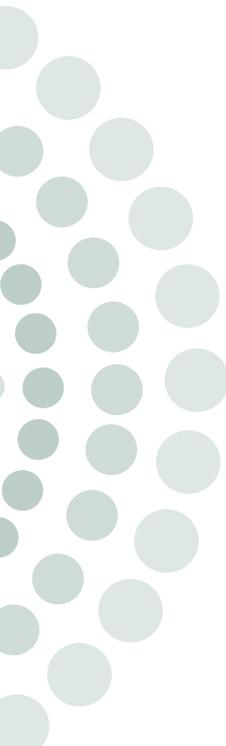
### *2.1.2 Public policy objectives*

In the face of these market imperfections, government intervention in a variety of forms can improve the efficiency of consumption smoothing and insurance, thus helping (and, where necessary, forcing) individuals to make better use of the resources they command to benefit themselves and their families. In addition, as already noted, public policy has further objectives, notably poverty relief and redistribution.

#### *Poverty relief*

In pursuit of this objective, pension systems target resources to people who are poor on a lifetime basis, and thus unable to save enough to support themselves in old age. In some respects the design





of poverty relief is simpler for older people: potential labor earnings are less a consideration for people beyond retirement age, and therefore outright transfers to the elderly are less likely to weaken incentives to work. (Of course, such transfers may also influence labor supply and savings among the younger population looking forward to retirement, and this has to be taken into account.) With less concern about possible impacts on the labor market, it is potentially advantageous to have separate rules for the elderly. Such programs can target all the elderly or can concentrate on those who have contributed to the pension system. Many countries have both types of program.

### *Redistribution*

Pension systems can redistribute income on a lifetime basis, and this may complement the role of progressive taxes based on income year by year. Lifetime redistribution can be achieved by paying pensions to low earners that are a higher percentage of their previous earnings (that is, a higher replacement rate) than higher earners receive, thus subsidizing the consumption smoothing of people who are less well off (but not necessarily in poverty). Since lifelong earnings are highly uncertain from the perspective of any one individual, such a system can also provide some insurance against the consequences for retirement of low earnings during an extended portion of one's career. There can also be redistribution toward families: for example, a married couple might receive a larger pension than a single person even though both households paid the same contributions.

When individuals with different life expectancies are joined in a single pool with a single (explicit or implicit) price, there is also redistribution *ex ante* from those with short life expectancy to those with long life expectancy.

Pension systems can also redistribute across generations. For example, a government may reduce the contribution rate or increase the benefits of the present generation. Such a move requires future generations to pay higher contributions or have lower pensions, thus redistributing from those later generations to the earlier elderly generation. This has been a common feature in the startup of pension systems as those who worked before the pension system was created would otherwise generally have relatively low retirement incomes. Also, depending on timing, they may have had adverse economic opportunities, for example depression or wartime.

### 2.1.3 Other objectives

Alongside the primary objectives of consumption smoothing, insurance, poverty relief, and redistribution, policy may have secondary objectives that are not direct purposes of the pension system itself but are related. One is economic development broadly, and economic growth specifically. Even well-designed pensions create some adverse labor market incentives, and badly designed ones can have a large impact. Excessive public pension spending may contribute to high tax rates, putting economic growth at risk, and may excessively decrease national saving. The goal of pensions, after all, is to increase consumption by the elderly, since their increased consumption comes out of current national income (unless it was fully-funded out of previous consumption), it means less consumption and/or less saving somewhere in the economy, which may mean less investment (or more foreign borrowing), which may mean less national income in the future than otherwise. The real issue is how much less saving and investment is appropriate. Conversely, pension mandates and regulations can assist the operation of labor markets and may encourage saving, which may contribute to economic growth.<sup>3</sup>

### 2.1.4 Recognizing costs

It is always important to recognize that providing resources – in this case consumption for retirees – has costs. Not only are the resources themselves costly, but costs also arise from the rules that determine how benefits are provided and how revenue is collected in order to pay for those benefits and from administrative costs, which are inevitable in any private or public arrangement for retirement incomes. In considering pension design it is important to recognize that there are other distortions, including those caused

---

<sup>3</sup> For example, some employer pensions have inadequate portability, interfering more with labor mobility than is good for the economy. Regulations can enhance portability and unified public systems are fully portable within the country. A pension mandate that is fully funded will add to savings. A pension system that offers better retirement savings opportunities may lead to more voluntary savings.

by taxation: governments need tax revenue in order to function. Thus a key concern is to avoid implementing a system that costs more than is necessary to accomplish its objectives, and to balance the level of achievement of those objectives with the costs of achieving them.

### 2.1.5 Concluding remarks

The combination of mandatory and voluntary pensions in Sweden plays a key role in financial security in old age. Good design of both mandatory and regulatory rules is important for the well-being of the elderly and for the workings of the economy broadly.

#### Box 1. Terminology

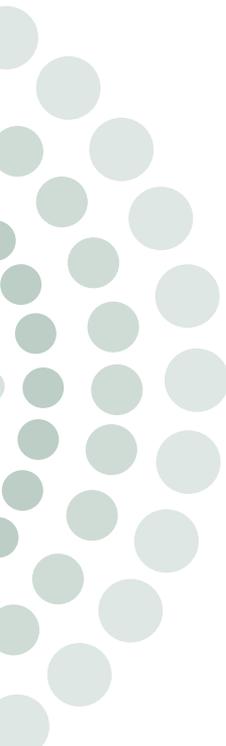
*Actuarial benefits.* If a person's pension is fully actuarial, the expected present value of all of his or her future monthly pension benefits is equal to his or her pension accumulation at the time the pension starts. The price of an annuity that satisfies this condition is referred to as an *actuarially fair price*. Higher prices are said to reflect a *load factor*, which would reflect administrative costs and profits. Also, prices that are fair for a population on average can not be fair person-by-person in the presence of diverse life expectancies. For a given accumulation, the size of an actuarially fair pension therefore depends on the person's remaining life expectancy and the rate of return on assets available to the provider of the annuity over the person's remaining expected life span. Similarly, actuarial adjustment of benefits for a delayed or an early start in benefits means that monthly benefits are raised or lowered to maintain equality in present value, reflecting both of the above factors. A pension system that follows this approach in broad outline, but without precise use of projected life expectancy and market interest rates, is referred to as *quasi-actuarial*.

*Annuity.* An arrangement that pays benefits (for example, annual or monthly) as long as a person is alive. A *single-life* annuity pays an income for the life of one person. A *joint-life* annuity (also called joint-and-survivor annuity) pays a regular income to two people until both have died. The size of the monthly payment typically depends on whether one or both are still alive and may depend on which of the two is still alive. The payments can be from a defined benefit system, or in a defined contribution system when an individual exchanges his or her pension accumulation for an annual or monthly benefit, or from a purchase using some other lump sum. This allows the individual to insure against the risk of outliving his or her pension savings. With an immediate annuity, payments begin immediately; with a deferred annuity, payments are delayed until some point after the purchase date. Different forms of annuities adjust payments over time on different bases.

*Consumption smoothing.* Behavior that allows a household to maintain its desired level of consumption over time despite variations in income. Pensions assist consumption smoothing by allowing individuals to redistribute their resources over their lifetime, by saving in their earning years so as to consume more in retirement.

*Defined-benefit pensions.* A pension in which a person's pension benefit is based on his or her wage history and commonly also upon length of service, and does not depend on the value of assets accumulated in the person's name. Thus, the sponsor's contributions are adjusted to meet obligations. Insofar as the degree of funding is maintained, contributions are adjusted to meet changes in anticipated obligations; thus the risk of varying rates of return to pension assets falls on the sponsor, that is, the employer or the government. A defined benefit plan may be but need not be fully funded.

*Defined-contribution pensions.* A pension in which a person's pension benefit is determined by the value of assets accumulated toward his or her pension. In general, the accumulated funds can be used to purchase an annuity, to finance a series of withdrawals, or taken as a single lump sum. Thus, a pure defined-contribution plan adjusts obligations to match available funds, and so the individual faces the risk that the portfolio might perform poorly. Funding need not be complete as in notional defined contribution systems.



*Fully funded pensions* pay all benefits from accumulated funds. *Partially-funded pensions* pay benefits both from accumulated assets and from current contributions. *Pay-as-you-go (PAYG) pensions* are paid out of current revenue (usually by the state, from tax revenue) rather than out of an accumulated fund. The term PAYG pension system is also used for systems that may have some assets and so be partially funded.

*Notional defined-contribution pensions.* A pension system that is financed on a pay-as-you-go basis (or with partial funding) through social insurance contributions. As with a funded defined-contribution pension, an individual has an account that grows from contributions and from returns credited to the notional value in the account. The notional rate of return for this crediting is set by legislated rules. A person's pension bears a quasi-actuarial relationship to his or her lifetime pension contributions, so that pension benefits are adjusted for a measure of the cohort's life expectancy.

*Replacement rate.* The replacement rate is the ratio of the monthly income a pensioner receives to the income he or she received while working (both net of taxes and transfers). Thus defined, the replacement rate is a measure of the effectiveness of consumption smoothing. The term is also used to mean the ratio of the average pension to the average wage, in which case it is a measure of the pension system's ability to maintain the relative incomes of retirees. A *survivor replacement rate* is the ratio of the benefit going to a widow or widower compared with what was received by the couple when both were alive.

*Voluntary pensions.* Pensions can be voluntary in two different ways. They can be voluntary for an individual worker, or a firm may voluntarily introduce an employer plan, membership of which may be compulsory for its workers.

### 3. Swedish institutions<sup>4</sup>

This report reviews Swedish institutions that play an important role in providing income for the elderly. The review is confined to the rules of these institutions as they affect currently young workers, ignoring the ATP and occupational pensions that are being phased out. The review also ignores the roles of institutions providing or financing services – health care, housing, long-term care, social services and maintenance support. The institutions considered are:

- three public pensions: the premium pension, the inkomstpension, the guaranteed pension,
- four occupational pensions: SAF-LO, ITP, PA 03, KAP-KL,
- individual private pensions,
- income tax treatment of pension savings.

This section briefly describes these institutions, with particular focus on details that might matter in light of globalisation. Tables 1 and 2 summarize key aspects of the public and occupational pensions for the analysis; some details are provided after the tables. Also discussed are some European Union rules.

Swedish rules make use of two indexing systems. One is the income-related base amount (SEK 45,900 in 2007), which grows with average incomes.<sup>5</sup> The other is the price-related base amount

<sup>4</sup> This section draws particularly on the *Orange Report, Annual Report of the Swedish Pension System 2007*; Gabriella Sjögren Lindquist and Eskil Wadensjö, *National Social Insurance – not the whole picture*, Report for ESS, 2006:5; Eskil Wadensjö, *The Swedish Public-Private Mix in Pensions*, Swedish Institute for Social Research; Swedish Tax Agency, *Taxes in Sweden 2007, An English summary of Tax Statistical Yearbook of Sweden*.

<sup>5</sup> The change in the income index satisfies

$$\frac{\text{Income Index } (t)}{\text{Income Index } (t-1)} = k \left( \frac{u(t-1)}{u(t-4)} \right)^{1/3} \left( \frac{\text{CPI}(t-4)}{\text{CPI}(t-1)} \right)^{1/3} \left( \frac{\text{CPI}(t-1)}{\text{CPI}(t-2)} \right) = \text{where}$$

$u(t) = Y(t) / N(t)$ ,  $t$  = calendar year,  $\text{CPI}(t)$  = consumer price index for June of year  $t$ ,  $k$  = adjustment factor for error in estimation of  $u(t-2)$  and  $u(t-3)$ ,  $Y(t)$  = total pension-qualifying income without limitation by the ceiling, persons aged 16-64 in year  $t$ , after deduction of the individual pension contribution,  $N(t)$  = number of persons aged 16-64 with pension-qualifying income in year  $t$ .

(SEK 40,300 in 2007) which is adjusted each year by the change in the Consumer Price Index for June.

### 3.1 Financing of public pensions

There are three public pension systems.

Table 1. Public pension systems

Name	Type of pension
Premium pension	Funded defined contribution
Inkomstpension	Notional defined contribution
Guaranteed pension	Minimum pension guarantee

For the premium and inkomst pensions, individuals pay 7 percent of *earnings up to 8.07 income-related base amounts*. There is a full tax credit for this pension contribution (not merely a deduction from taxable income), making general revenues the source of this pension financing. Employers pay 10.21 percent of *total earnings*, with the amount of revenue resulting from earnings above 8.07 income-related base amounts going to general revenues, not the pension system. The individual pension contribution is not included in the pension base, making the combined contributions 18.5 percent of earnings (less contributions) up to 7.5 income-related base amounts (SEK 344,250 in 2007).<sup>6</sup> This contribution is divided between the premium pension (2.5 percent) and the inkomstpension (16 percent). The guaranteed pension is financed from general revenues.

## 3.2 Premium pension

The premium pension is a fully-funded defined contribution system.<sup>7</sup> It has a 2.5 percent contribution rate, applied to earnings up to 7.5 income-related base amounts.<sup>8</sup> Pension credits may be transferred between spouses or registered partners (subject to a 14 percent reduction in light of anticipated longer life expectancies of recipients on average).<sup>9</sup> The contributions are used to make purchases from up to five mutual funds from the available mutual funds, 785 as of the end of 2007. In addition, credits, financed out of general revenues, are given during working life for periods when a person has small children, during studies and compulsory national service, or when collecting unemployment or sickness benefits. In addition to returns earned by the assets in the accounts, accounts are credited with inheritance gains, the sharing of the accounts of persons dying before retirement with the surviving members of the decedent's annual birth cohort.

Benefits may first be claimed at age 61, and this age is not scheduled to change. Partial benefits may be claimed. The value of the assets in the account is used to purchase an annuity from the government. This can be a conventional nominal annuity, which is calculated based on forecasted life expectancy and calculated to provide an assumed nominal return that is presently -0.1 percent after the deduction for costs, although the amount distributed may be greater because of so-called rebates if the conventional life-insurance operation reports a positive result. Alternatively, the retiree can choose a variable annuity (fund insurance) based on the funds chosen by the insured. Thus, apart from the guarantee (the nominal annuity apart from possible rebates), all of the risks of future cohort annual mortality rates and asset returns are borne by the annuitants.

The annuity may be individual or include a survivor benefit.

---

<sup>7</sup> See the definition in Box 1.

<sup>8</sup> Annual earnings are not pension-qualifying if they are below the minimum income for the obligation to file a tax return.

<sup>9</sup> This reduction is the same whether it is a transfer from a man to a woman or from a woman to a man.

### 3.3 Inkomstpension

The inkomstpension is a notional defined-contribution system.<sup>10</sup> It has a 16 percent contribution rate, applied to earnings up to 7.5 income-related base amounts, with additional credits in some circumstances, on the same basis as for the premium pension. The system is referred to as a pay-as-you-go notional defined-contribution system, complemented with a buffer fund. Buffer fund capital as a ratio to pension disbursements for the year has averaged slightly less than five since 1990. Thus the system is partially funded and the rate of return on assets held for the system matters. The system uses a notional interest rate equal to the rate of growth of average earnings. However, if at any time the calculated financial balance of the system shows liabilities above assets, that rate is lowered automatically; no legislative action is required.

Benefits may first be claimed at age 61, and this age is not scheduled to change. Partial benefits may be claimed. The initial benefit is set by a quasi-actuarial calculation based on a mortality table, the age at which benefits are first taken, and the anticipated rate of increase in benefits. Benefits increase each year after retirement based on the difference between the notional interest rate (normally the rate of wage growth) and the anticipated annual increase of 1.6 percent.

In contrast with the premium pension there is no opportunity for purchase of a joint-life annuity or for transfer of account credits between partners.

### 3.4 Guaranteed pension

Residents of Sweden are eligible for a guaranteed pension beginning at age 65. A full guaranteed pension is available based on residence in Sweden for 40 years after age 25; for fewer years of residence the benefit is reduced proportionately. Residence in another EU/EEA country is also credited toward a guaranteed pension.<sup>11</sup> In 2007 the

---

<sup>10</sup> See the definition in Box 1.

<sup>11</sup> I am not aware of whether there are treaties providing similar recognition of years of residence elsewhere abroad.

maximum guaranteed pension for a single pensioner was 2.13 price-related base amounts (SEK 7,153 per month) and 1.90 for a married pensioner. The guaranteed pension is reduced for a person with inkomstpension income, based on 18.5/16 times the inkomstpension,<sup>12</sup> with a 100% offset up to 1.26 price-related bases and 48% thereafter. There is no adjustment for occupational agreement-based or private pensions or actual premium pension rights. The guaranteed pension can only be paid to persons who live in Sweden or in EU/EEA countries or in other countries with which Sweden has an agreement providing for payment.

There is also an income-tested minimum pension, which mainly goes to individuals with low guaranteed benefit due to short residence in Sweden, e.g. immigrants who have arrived in mid life. In addition to the income-tested minimum pension, beneficiaries with low income could qualify for a housing allowance.

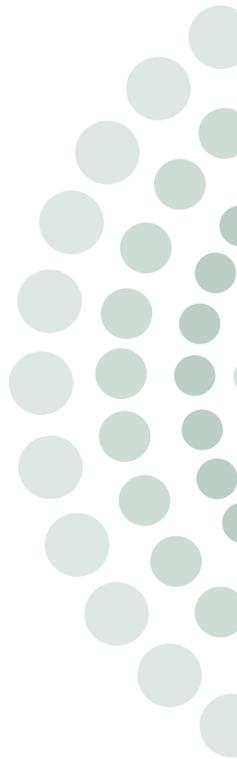
### 3.5 EU regulations and bilateral treaties covering public pensions<sup>13</sup>

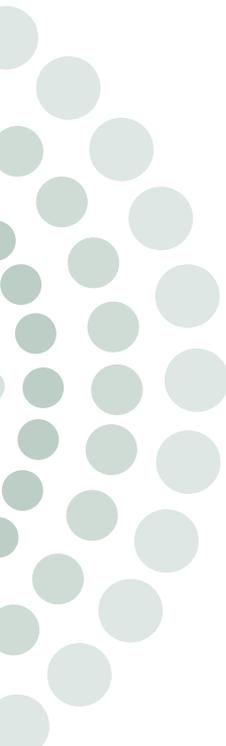
The EU has legislation affecting the workings of public pension systems for mobile workers, focused on having mobile workers treated the same as resident nationals. The summary of the regulation states: "Rather than adopting measures designed to harmonise Member States' legislation, Community law provides for coordination of the national systems. In effect, the social security systems are the outcome of long-standing national traditions and reflect the culture of each State. In the framework of coordination, Member States retain the right to determine the types of benefits and the conditions for granting them. However, Community law imposes certain rules and principles so as to ensure that application of the different national systems does not harm persons who exercise their right to free

---

<sup>12</sup> Thus the guaranteed pension reduction is not based on the actual public pension amount (inkomstpension plus premium pension), but on what the pension would be if the entire contribution had gone to the inkomstpension.

<sup>13</sup> This section considers the rules directly affecting workers, but not rules relating to supervision and regulation of pension schemes.





movement.” Among the rules are: “all persons residing in the territory of a Member State are subject to the same obligations and enjoy the same benefits under the legislation of any Member State as the nationals of that State.” “The Regulation also recognizes the principle of the aggregation of periods, pursuant to which periods of insurance, employment or residence in the legislation of a Member State are taken into account in all the other Member States. This means that a Member State must take into account, for the purposes of the acquisition of the right to benefits, periods of insurance, employment, self-employment or residence in another Member State.”<sup>14</sup>

In addition to EU concerns about effects on mobile workers of both public and private arrangements, countries have been concerned about how public pension systems affect workers potentially subject to public pensions in two countries. Concerns arise in both contribution and benefit phases of systems. These are long-standing concerns and have long been addressed in treaties between Sweden and other countries. As an example of addressing such concerns, Sweden’s treaty with the United States addressing public pensions is briefly reviewed. One concern is that workers pay contributions to only one system. This is done by specifying the rules as to which country’s system applies for a worker potentially subject to both systems.<sup>15</sup> While the new Swedish system has no lags in vesting, the old one did and the US system still does. In order for a worker to be eligible for retirement benefits from US Social Security, there must be ten years (40 quarters) of covered work. Thus, absent a treaty, a Swede working in the US for just nine years would not be eligible for US benefits despite having paid US Social Security taxes. Under the totalization agreement, eligibility is based on covered work in both countries. The calculation of benefits is complex, reflecting coverage in both systems and benefits rules in both systems.<sup>16</sup>

The EU is also exploring issues arising from the tax treatment of contributions, pension asset returns, and benefits paid. Diversity of

---

<sup>14</sup> Regulation (EC) No 883/2004 of the European Parliament and of the Council of 29 April 2004 on the coordination of social security systems.

<sup>15</sup> For example, a Swede sent to work in the US by a Swedish employer is subject to US or Swedish contributions depending on the length of stay in the US (with a divide at five years).

<sup>16</sup> The complexity arises from addressing the progressivity of the benefit formula in the US. Workers with short careers would have low lifetime earnings. Without adjustment for employment under a different pension system, they would receive a larger return on taxes paid than someone with the same annual earnings but a long career. Adjustment in the US is done similarly for government workers covered by pensions for government employees who are outside the Social Security system for parts of their careers.

treatment is recognized as a potential problem for workers accumulating rights under one tax system and receiving benefits under a different one. This is relevant for all of the pension systems.

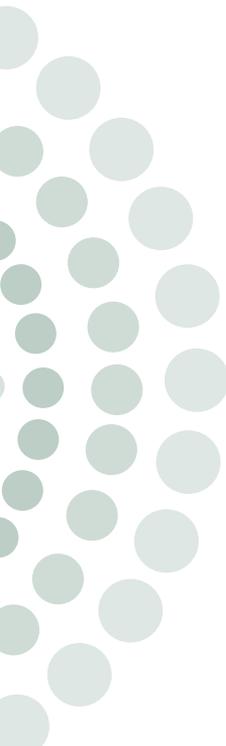
### 3.6 Occupational pensions

There are four large agreement-based occupational pension systems. I review only the latest versions of the agreements, which apply only to younger workers.

*Table 2. Large agreement-based occupational pension systems*

<b>Name</b>	<b>Covered workers</b>	<b>Type of pension</b>	<b>Starting age</b>
SAF-LO	privately employed blue-collar	Funded defined contribution	25
ITP	privately employed white-collar	Funded defined contribution	25
PA 03	central government employees	Funded defined contribution and PAYG defined benefit	23 28
KAP-KL	county council and municipal employees	Funded defined contribution and PAYG defined benefit	21 28

The SAF-LO and the new ITP agreement-based occupational pensions for privately employed blue-collar and white-collar workers respectively are funded defined-contribution systems. In SAF-LO, contributions are 3.9 percent of the wage bill and start at age 25. This contribution rate will increase gradually until 2012, when it will be 4.5 percent, the same as the ITP contribution rate. In ITP, contributions are 4.5 percent of salary up to 7.5 times the income base



amount and 30 percent on salaries over that ceiling and the pension is earned after age 25.

PA 03 and KAP-KL for central government and county council and municipal employees respectively have defined-contribution and defined-benefit components.

Under PA 03 defined contribution credits for the two separate defined-contribution portions start accumulating at age 23, with contribution rates of 2.3 (up to 30 income base amounts) and 2.0 percent respectively. For those with a pension basis larger than 7.5 income base amounts per year there is also a defined-benefit portion, calculated on the average of the pensionable wages in the last five years prior to retirement above 7.5 income base amounts, up to 30 income base amounts. The full benefit is available after 30 years of covered work, with proportional amounts for shorter careers. Credit toward this pension is earned starting at age 28. An employee leaving before retirement age (and not to receive a disability pension) receives a paid-up policy with an amount equal to the pension entitlement earned, which is then adjusted upwards based on the price base amounts. The defined-benefit pension is pay-as-you-go.

The KAP-KL agreement was reached in December 2005. It has a defined contribution portion and a defined benefit pension for high earnings. The defined contribution credits accumulate starting at age 21, with a contribution rate of 4.5 percent in 2010. For those with a pension basis larger than 7.5 income base amounts per year there is also a defined-benefit portion. The full benefit is available after 30 years of covered work, with proportional amounts for shorter careers. Credit toward this pension is earned starting at age 28. The defined-benefit pension is calculated on the pensionable wages in the five highest years in the seven years prior to retirement. The defined-benefit pension is pay-as-you-go.

Occupational pensions offer joint life annuities; in some of the occupational plans joint life is the default.

### 3.7 EU concerns about occupational pensions

A set of rules similar to those for public pensions has been applied to occupational pensions.<sup>17</sup> The EU has been concerned that “insufficient portability of supplementary pensions may create significant obstacles to the mobility of workers and therefore to the free movement of persons within the EU. While coordination of social security schemes allows migrant workers to fully preserve their accrued statutory pension rights, measures to improve the portability of supplementary pensions are still in their early stages. The difficulty in this area lies in the variety of supplementary pension schemes available and in the fact that they are often voluntary.”<sup>18</sup>

At present, work is proceeding toward new rules, that may well require changes in Swedish occupational pensions, for example if the rules were to require that “where a minimum age is stipulated for the accrual by an active scheme member of acquired rights, this age shall not exceed 21 years.”<sup>19</sup> Application of such a rule to the defined benefit portions of both the PA 03 and KAP-KL pensions would call for changes in benefit rules. Currently full benefits are paid after 30 years of covered work, with credit toward this pension earned starting at age 28. Thus retirement on a full pension can be available at age 58. A reduction of the start of covered work to age 21, with no other changes, would permit retirement on a full pension at age 51, making the pension considerably more expensive since remaining life expectancy would be considerably longer.

### 3.8 Tax-deferred individual (private) pensions

Deductions from taxable earnings are allowed for contributions to tax-deferred retirement savings accounts up to limits. The pension is taxable along with earnings when received. There is also partial taxation during the accumulation. The limit on deductions depends

---

<sup>17</sup> Council Directive 98/49/EC of 29 June 1998 On safeguarding the supplementary pension rights of employed and self-employed persons moving within the Community.

<sup>18</sup> SCADplus: Pensions Committee

<sup>19</sup> SCADplus: Workers' mobility: facilitating the acquisition and preservation of supplementary pension rights.

on the level of earnings and whether an individual is covered by an occupational pension plan.

Private pensions offer joint life annuities.

### 3.9 Income tax treatment of pensions

Payments by employers for both public pensions and occupational pensions are tax deductible to the business.

Employees get a tax credit equal to the 7 percent contribution for the public pension contributions. Thus, this contribution is financed out of general revenues, with the amount determined by payroll tax rules. Payments to occupational pensions by the employer are not taxable income to the employee; there are no payments by employees. Contributions to private pensions are tax deductible up to limits.

The self-employed are treated as both employer and employee with both sets of rules applying.

A difference between occupational and private pensions is that social insurance payroll taxes are not levied on contributions to occupational plans, without comparable treatment for wages used to buy private pension insurance.

Pension benefits used to be taxed the same as earnings, but the tax reduction on work income implies that benefits are taxed more heavily.

Returns on assets held by public pensions (both premium pension and inkomstpension) are not taxed when earned. In contrast, earnings on assets held through occupational and private pensions are taxed.

“To establish neutrality with other forms of saving, the tax reform of 1991 introduced a special tax on pension fund earnings. This tax also applies to premiums paid by employers. The tax is paid by insurance companies and other financial institutions that administer such funds.

The tax base is the estimated yield of the fund capital. The yield is calculated by multiplying the fund capital by the official State lending rate. In income year 2005, the tax rate applied to this yield was 15 percent in the case of pension capital funds and 27 percent for other (otherwise tax-privileged) funds. The total yield in 2005 was SEK 11.7 billion.”<sup>20</sup>

<sup>20</sup> Taxes in Sweden, op cit., 2007, 3.2.9 pages 13-14.

### 3.10 Normative analysis of the income tax treatment of pensions

Pensions represent both delayed compensation for earlier work and the accumulation of returns on the delayed compensation. There are several complications in doing normative analysis of the taxation of pensions. One complication is that the normative theory of the taxation of capital income is itself complex and not settled. Also, the current state of optimal tax research does not include much analysis of the optimal taxation of retirement savings relative to other capital income.<sup>21</sup>

Several patterns of taxation appear in different countries. As noted on an EU website:<sup>22</sup>

Most current Member States tax occupational pensions according to the EET system (Exempt contributions, Exempt investment income and capital gains of the pension institution, Taxed benefits) or ETT principle (Exempt contributions, Taxed investment income and capital gains of the pension institution, Taxed benefits). This means that:

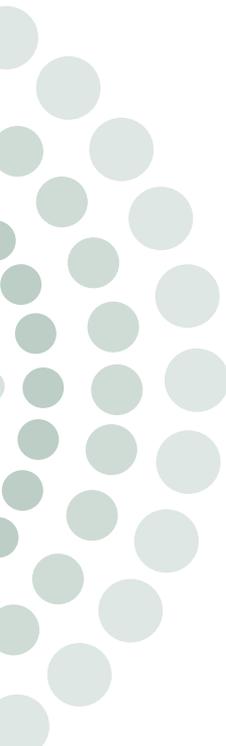
- the contributions by both employer and employee are tax deductible,
- the investment results of the pension fund are usually exempt (they are taxed only in Denmark, Italy and Sweden) and
- the benefits are taxed.

This system of deferred taxation is logical, since contributions to pension funds diminish a person's ability to pay taxes; at the same time it encourages citizens to save for old age. In addition, it will help Member States to deal with the demographic time-bomb, as the State will receive tax revenue by taxing the pensions paid to people when more people will be dependant upon state aid.

However, many Member States do not allow tax deduction for pension contributions paid to a pension fund in another Member State. This effectively seals off their national markets from competition

<sup>21</sup> For discussion (and the basis for Box 2) see James Banks and Peter Diamond, The Base for Direct Taxation, written for Reforming the Tax System for the 21st Century: The Mirrlees Review, Institute for Fiscal Studies, 2008, <http://www.ifs.org.uk/mirrleesreview/reports/base.pdf>.

<sup>22</sup> [http://ec.europa.eu/taxation\\_customs/taxation/personal\\_tax/pensions/index\\_en.htm](http://ec.europa.eu/taxation_customs/taxation/personal_tax/pensions/index_en.htm)



from other Member States, it makes it difficult to create pan-European funds and it constitutes a major obstacle to the free movement of workers within Europe.

Thus Sweden is in a minority in the EU in using ETT taxation of pensions rather than EET. One of the problems generated by repeated annual taxation of capital income is the compounding of taxation when assets are accumulating over a long time. Thus saving for consumption in the distant future is taxed far more heavily than saving for consumption in the near term. It is plausible, as argued in tax theory, that such a pattern is not optimal. This argument is spelled out in Box 2 below. Saving for retirement has the property that the accumulation is going on for a relatively long time, compared with precautionary savings or saving for house purchase. And the link of withdrawal rules to age gives a handle for allowing lower taxation and recognizing the long holding period. Thus, I think that the current practice in Sweden is not likely to be optimal and speculate that the more common EET taxation is likely to be better. That is, the principle of neutrality of taxation for assets held in different forms, cited above, does not appear to be a good principle.

With an increased potential role for private pensions from increased labor mobility with globalisation, and possible concern that the heavier taxation of occupational and private pensions in Sweden than many places abroad might affect labor mobility, reviewing the taxation of private pensions has great relevance. Increasingly, there will be EU pressure to harmonize the tax treatment of defined contribution pensions. At this stage there is limited economic theory to determine an ideal toward which the EU should go. Hence, reviewing this aspect of taxation is an important part of responding to globalisation. I note that both EET and ETT taxation represent deferred taxation of earnings and should to be structured to reflect the possibility of work in one country and retirement in another. Taxation of withdrawals incorporating recognizing a delay in earlier taxation, rather than treatment similar to current earnings may have some useful role.

**Recommendation 1.**

It would be good to commission research to review the tax treatment of pension asset income relative to other asset income and taxation of deferred compensation in the case of retirement in a different country than where the work occurred. It would be good to stay abreast of ongoing research on the taxation of capital income generally.

## Box 2. The effect of annual taxation of asset returns

When capital income is taxed, the gross-of-tax and net-of-tax returns differ. The former represents the return to the economy as a whole, while the latter represents the return to the individual saver. The difference between the two is a key part of the analysis of the distortions caused by capital income taxation. Of course, distortions are a necessary part of overall taxation, and one needs to consider the relative sizes of distortions and impacts on income distribution in deciding how heavily to tax different sources of income.

To understand the effect of annual taxation of returns in retirement savings accounts, one can examine the relationship between the intertemporal consumption marginal rate of substitution (MRS, the tradeoff between present and future consumption available to the individual saver) and the intertemporal marginal rate of transformation (MRT, the tradeoff available to the economy) that are implied if there is a constant annual tax rate on capital income. Assuming the same tax rate for the deduction for retirement savings and for the taxation of withdrawals from the account, we can focus simply on the impact of the taxation of capital income. Assuming a gross-of-tax rate of return on assets in the retirement account,  $r$ , which is constant over time, then a unit of consumption today can be converted by the economy into  $(1+r)^T$  units of consumption  $T$  periods from now (in period  $T+1$ , if we denote today by period 1).<sup>23</sup> Thus the  $MRT_{1T+1}$  is  $(1+r)^T$ . If an investor is subject to a tax at rate  $\tau$  on capital income, then the investor can convert one unit of consumption today into  $(1+(1-\tau)r)^T$  units of his own consumption after  $T$  periods. The ratio between the MRS and MRT between consumption today and consumption  $T$  periods from now is  $\{(1+(1-\tau)r)/(1+r)\}^T$ . This gives the fraction of the available social return that goes to the investor. With a positive rate of tax this expression declines with  $T$  and gets small for long time spans, such as savings by young workers for consumption late in retirement. Some examples, are given in Table 3.

<sup>23</sup> This ignores the difference between the estimated yield of the fund capital and the actual yield as well as uncertainty in rates of return.

Table 3. Ratio of MRS to MRT –  $\{(1+(1-\tau)r)/(1+r)\}^T$ .

<b>T</b>	<b>r=.05, τ=.15</b>	<b>r=.10, τ=.15</b>	<b>r=.05, τ=.30</b>	<b>r=.10, τ=.15</b>
1	.993	.986	.985	.973
10	.931	.872	.866	.758
20	.866	.760	.750	.575
40	.751	.577	.562	.331
60	.650	.439	.422	.190

Comparing the table to a tax on labor earnings makes several points. A 30 percent tax on earnings puts a 30 percent wedge between contemporaneous earnings and contemporaneous consumption. A 30 percent tax on capital income puts only a 3 percent wedge between consumption today and consumption in a year (when the rate of return is 10 percent). But it puts a 67 percent wedge between consumption today and consumption in 40 years. The difference comes from the shifting relative importance of principal and interest in the financing of future consumption as we look further into the future. The table makes clear that the size of the intertemporal consumption tax wedge depends on whether nominal or real incomes are being taxed. This table raises the issue of how far into the future people are thinking when making consumption-saving decisions. It suggests that if people have long enough horizons, capital income taxation that impacts distant consumption will be inefficient. And it points to potential welfare gains from reducing the taxation of returns in tax-favored retirement savings accounts, since that saving tends to be for long times.

## 4. Economic globalisation and pension replacement rates

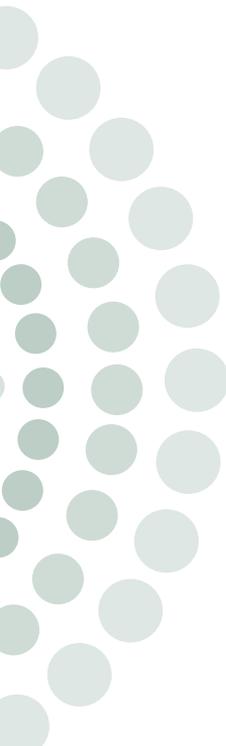
The ongoing increases in opportunities for trade, investment and labor mobility that are part of globalisation are present for Sweden, both within and outside the European Union. For the former, Swedish policies need to reflect relevant EU rules. While changing opportunities and risks and changing rules are important in many dimensions, from the perspective of Swedish pension institutions, the primary effects relate to increased labor mobility and pension fund investments abroad. Two separate dimensions of effects are whether increased globalisation affects the anticipated financial functioning of the pension institutions and whether it affects the way the institutions fulfill their social role of providing retirement incomes. This section considers the impact on retiree replacement rates, including the attractiveness of Sweden as a place to work, while the next considers the financial functioning of the system.

Increases in labor and capital mobility and trade in goods and services will affect equilibrium wages, may affect earnings volatility,<sup>24</sup> and is likely connected to increased inequality in earnings. This report focuses on the role of pension institutions in providing retirement income given earnings patterns, with little consideration of possible changes in wages. However, in light of the role of the limits on earnings subject to mandatory pension coverage, increased earnings inequality is briefly considered in Section 5.

It is anticipated that to a greater extent than in the past, Swedish citizens will spend extended periods of time working outside Sweden, particularly, but not exclusively in other countries within the European Union. Some of these workers will be accompanied

---

<sup>24</sup> I am not aware of analysis of Swedish data but note that the Congressional Budget Office found that for the US “The variability in individual earnings and household income has changed little since the mid-1980’s.” (Recent Trends in the Variability of Individual Earnings and Household Income, June 2008.)



by their spouses, some of whom will work (in part or in full) and some will not.<sup>25</sup> Conversely, it is anticipated that to a greater extent than in the past, non-Swedes will spend extended periods working in Sweden. Some of these workers will be accompanied by their spouses, some of whom will work (in part or in full) and some will not. Whatever the work pattern, retirement may occur in Sweden or outside Sweden. None of these patterns is new. At issue is the presumed increase in their frequency.

## 4.1 Workers

The size of replacement rates for mobile workers is primarily affected by the relative sizes of pensions in Sweden and in other countries where workers spend parts of their careers. This includes both mandatory public pensions and occupational pensions. With voluntary individual private pensions, take-up may vary with the country of earnings in response to differences in tax treatment of these pensions. Taking together the public and occupational pensions (and the degree of coverage of occupational workers in the kind of jobs associated with mobile workers) some countries provide larger replacement rates than Sweden and some provide lower rates. In addition, there is the likelihood that some mandatory foreign pension plans will change, given their financing difficulties.

There is asymmetry in the interaction of mandatory and occupational pensions with private pensions. There is the potential to offset lower pension levels abroad through private pensions, to which there can be contributions after a return to Sweden if the overall pension level appears too low to a worker. There is no comparable way to offset mandatory pensions that are much larger abroad. There is a similar asymmetry relating to occupational pensions, where mobility decisions might involve higher or lower occupational pensions than in Sweden.

---

<sup>25</sup> A decision by a couple to move outside Sweden may be in response to two job offers that are both more attractive than their Swedish alternatives. Alternatively, there may be an attractive job offer abroad, along with a less attractive second opportunity. A couple planning to be a one-earner couple (for the relevant time period) whether in Sweden or abroad is concerned with a single job offer.

Recommendation 2 is made in light of concern about the potential impact of time working abroad on replacement rates.

**Recommendation 2.**

Data should be gathered to permit monitoring of retirement benefit accruals of workers spending time abroad to check the potential importance of implied replacement rates that seem too large or too small. Depending on these findings, consideration should be given to allowing additional tax-deductible private pension contributions as a “catch-up.”

A key issue for pensions size and labor mobility is the portability of pensions.<sup>26</sup> The portability issue is different for defined contribution and defined benefit pensions. With funded defined contribution pensions, effective portability can be accomplished either by leaving behind the assets for financing later pension benefits or by taking them along to incorporate in a new defined contribution option. Combining pension accumulations is advantageous for avoiding additional charges if there are any charges that are other than proportional to assets. Combining is also advantageous since with multiple pension sources, a worker may lose sight of minor ones. Since costs (as opposed to charges) have a significant fixed cost element, pension costs in aggregate are reduced insofar as workers combine defined contribution pensions. Recommendation 3 would allow rollovers into the premium pension to enhance the ability to combine pension accumulations. The recommendation also proposes to allow voluntary contributions into the premium pension, thereby having competition between the premium pension and private pensions. It also proposes to enhance the competition between the premium pension’s default fund and privately managed mutual funds.<sup>27</sup> Both of these recommendations for public-private competition are made in light of the considerable importance of administrative charges, as spelled out after the recommendation.

---

<sup>26</sup> Historically, the delay in the vesting of pensions (the triggering of a legal right to a pension accrual) was important, but that is no longer the case.

<sup>27</sup> Currently, if a newly covered worker does not select a mutual fund, the worker’s contributions go to the default fund. However a worker who previously chose privately supplied mutual funds can not switch to the default fund.

### Recommendation 3.

To make contributions as easy and efficient as possible, as part of voluntary individual contributions, workers should be allowed to make additional contributions to their premium pension accounts and to rollover pension accumulations abroad into their premium pension accounts. This would offer the convenience of combining two sources of pension income and may have lower administrative charges than private pensions. Competition between public and private providers should work both ways, with a level playing field. Similarly, workers should be allowed to shift their premium pension accumulations in privately supplied mutual funds into the default fund.

Competition between the premium pension and private pensions might lower the cost of retirement savings by lowering annual charges. It is easy to underestimate the importance of charges on asset accumulation since they do not seem large when considering those charges in the context of a single year. However a more relevant picture arises from considering the charges in the course of a working career. An annual charge of one percent of assets under management reduces the accumulation available for annuitization at the end of a 40-year career by nearly 20 percent, a significant amount. The relationship between annual charges and career length accumulations is shown in Table 4.

Table 4. Cumulative effects on account value of annual asset management charges<sup>a</sup>

<b>Annual management charge (percent of account balance)</b>	<b>Decline in value of accumulation after forty years</b>
0.1%	2.2%
0.5%	10.5%
1.0%	19.6%

Source: Peter Diamond, "Administrative Costs and Equilibrium Charges with Individual Accounts," in John Shoven (ed.), *Administrative Costs and Social Security Privatization*, Chicago: University of Chicago Press, 2000.

<sup>a</sup> Calculations assume real annual wage growth of 2.1 percent and a real annual return on investments of 4 percent. With a larger difference between the rates of wage growth and annual return, the charge ratio with annual management fees is slightly larger.

With the inkomstpension, as with a funded defined contribution pension, the rate of return on balances is the same for those still contributing and those not contributing. Thus the value of accrued pension accumulations is not affected by mobility, meeting the needs of portability. Moreover, the notional rate of return is the same on large and small accumulations. Suggestions to combine notional defined contribution accounts in different countries (with some transfer of financial assets) seem misplaced since notional rates and annuity pricing are likely to differ across countries and therefore would open up opportunities to game the system.

Portability issues do arise with the defined benefit portions of the occupational pensions for government employees since accruals after departure get adjusted just for inflation, not real earnings, and benefit levels depend on earnings late in a career. Recommendation 6, below, is to change these pensions to be either funded or notional defined contribution pensions. Fortunately, the EU seems likely to move from defined benefit to defined contribution occupational pensions, leaving fewer barriers to mobility.<sup>28</sup> Such a change would make it easier to monitor the level of replacement rates for their suitability, as proposed in Recommendation 2.

A worker planning to move abroad might conceivably prefer a different defined contribution portfolio than a worker planning on staying in Sweden indefinitely. However, this effect is likely to be small for two reasons – the limited relevance of relating a portfolio to the anticipated future consumption uses of its returns and the wide array of alternative investments in funded accounts and the international diversification of the premium pension default fund. Thus it is unlikely there is any serious consequence for a worker moving abroad from the portfolio design of the defined contribution pensions.

---

<sup>28</sup> “During the next five to ten years, employers throughout Europe will be seeking to move away from burdensome defined benefit schemes and to develop more portable and easily administered pension arrangements. Financial institutions have long enjoyed an era where their expertise has been focused on complex schemes designed to maximise tax effectiveness and to provide complete customisation to client requirements. The sheer volume of reforms that have recently taken place have also led them to regard the emerging constraints as far more complex than they actually are. The market for pension and insurance products is, in fact, being opened up by these changes and the future lies with much simpler and more standardised financial products.” Federation of European Employers, Guidance note on pan-European pensions, available at <http://www.fedee.com/pensions.html>.

## 4.2 Families

Female labor force participation in Sweden is relatively high. Contributing to this outcome is a variety of forces, including subsidized child care, many employment opportunities, and social perceptions. In addition, there are pension credits provided for those with small children. When a family goes abroad, there may be an increased tendency for the woman to look after children as a consequence of decreased opportunities in the labor force, decreased child care subsidies, and a different social milieu. And, with minor exceptions, they will not be eligible for the Swedish pension credits for having small children. Thus for some women in families going abroad, there is a decreased accumulation in both the inkomstpension and the premium pension, without an offsetting increase in public pensions abroad. Of course, the change in opportunities for the lower earner in a couple will be part of the consideration of whether to move and work outside Sweden. But there are likely to be many cases where the opportunities for the higher earner in a couple are sufficiently strong to warrant a move even though there are decreased opportunities for the lower earner.<sup>29</sup>

Conversely, foreign families are plausibly more likely to be two-earner couples than if they stayed in their home countries, but probably still less likely to be two-earner couples than Swedes.

For both Swedish families going abroad and foreign families coming to Sweden, there is thus an enhanced need for retirement income provision for family members with lower (or no) earnings. In terms of retirement income support, the premium pension and inkomstpension offer very different possibilities for a couple to arrange its relative pensions during their time in Sweden since the premium pension can be used to finance a joint-life pension and credits can be transferred between registered partners, opportunities that are not available with the inkomstpension. This difference between the two systems, which appears to me to be anomalous in any case, becomes more pressing from increasing labor mobility, calling for a change in the inkomstpension to match the opportunities in the premium pension.

---

<sup>29</sup> Who is the higher and who the lower earner may be different in Sweden and abroad, a possibility that is not examined.

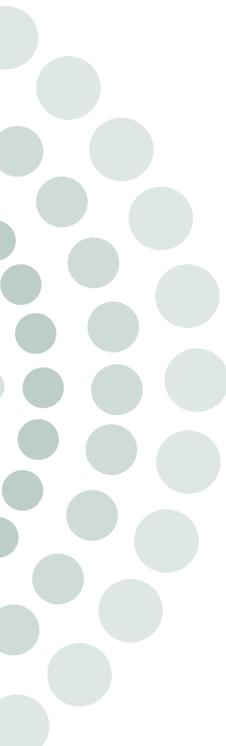
**Recommendation 4.** The inkomstpension should allow transfers of credits between spouses and registered partners and joint life annuities, as does the premium pension.

Family concerns as well as worker concerns support Recommendations 2 and 3, enhancing the ability to provide pension income on a voluntary basis.

Currently, survivor insurance for active workers can be purchased as part of both occupational and private pensions. This is not the case with either the premium pension or the inkomstpension. I have not looked to see if there have been studies of the adequacy of survivor protection through public and private arrangements. If adequacy has not been studied, it should be, including policy inferences about both the level of insurance and the ability to convert it into annuities.

### 4.3 Earnings growth and inkomstpension benefit determination

Anticipated average real wage growth of 1.6 percent enters inkomstpension benefit determination in two ways. First, benefits in payment grow with the notional interest rate less 1.6 percent. Thus if real wages do grow at 1.6 percent and the notional interest rate equals the (nominal) wage growth rate, then real benefits are constant over time (ignoring the possible application of the brake due to fiscal imbalance). With the notional interest rate equal to the wage growth rate, if real wages grow faster or slower than 1.6 percent, then real benefit growth is different from zero, implying that the beneficiaries are sharing in the risk of real wage growth – for each 1 percent faster or slower real wages grow, benefits grow 1 percent faster or slower. Second, initial benefits are determined quasi-actuarially, based on an assumed real (notional) interest rate of 1.6 percent. The 1.6 percent rate is set by legislation, not automatically adjusted in light of real wage growth experience. Economic globalisation plausibly adds to uncertainty about future average wage growth. Thus, it may make sense to revisit this rule. To see a potential problem, consider the possibility of a decade of 0.6 percent real



wage growth. Then, with the notional interest rate equal to the wage growth rate, the notional interest rate would equal 0.6 percent plus the inflation rate, and pensioners would see nominal benefits grow at the inflation rate minus 1.0 percent, so the real values of their pensions would decline by 1 percent per year for a decade.

As an example of an alternative approach, some countries base the growth of benefits in payment on a proper weighted average of price growth and wage growth. With positive real wage growth, real benefits do not decline. Also, such an approach has the benefit growth rate closer to the wage growth rate, unless the wage growth rate is very large. Closer rates of growth is viewed positively as coming closer to maintaining the benefits of each cohort of pensioners relative to earnings over their retirement period.<sup>30</sup> Moreover, while the elderly would still share in the risk of wage growth, their share would be less, as benefits vary with only a fraction of the growth rate of wages. With the elderly less able to handle risk than workers, who can adjust labor supply, this risk pattern is attractive. Of course, anything that increased the expected growth rate of pensions in payment would have to reduce the initial benefit level if expected costs were to be left unchanged. Any such change has distributional implications since the more elderly are typically less well off, women tend to live longer than men and higher earners of each gender tend to live longer than lower earners. Evaluating the range of implications of such a change is beyond the scope of this report, so the recommendation is for further study.

**Recommendation 5.** There should be a study comparing the current determination of inkomstpension benefit increases with alternative rules, including a proper weighted average of price and wage growth.

---

<sup>30</sup> With current rules, real wage growth less real benefit growth is 1.6 percent (ignoring the possible effect of the brake in case of fiscal imbalance). With a weighted average formula real wage growth less real benefit growth is a fraction of real wage growth equal to the weight on price growth. For example, with a weight of one-half, the difference in growth rates is larger with current rules for real wage growth below 3.2 percent, and smaller otherwise.

## 4.4 Sweden as a place to work

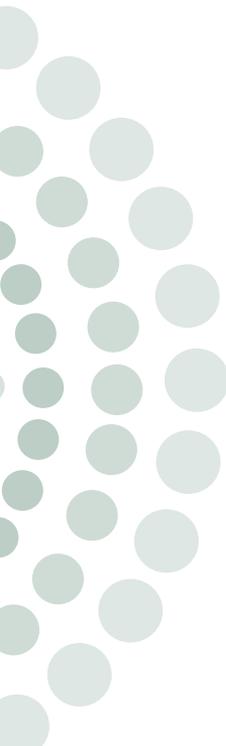
Relative to both immigration and emigration, with increased opportunities for jobs in other countries, there is increased concern to preserve the quality of Sweden as a place to work. The attractiveness of Sweden as a place to work depends, inter alia, on (1) the quality of and pay with available jobs, (2) the level of taxes and publicly provided services, and (3) the pension system. It is plausible that the pension system is the least important of these three.

Occupational pensions are set with their attractiveness to workers in mind, and there is little reason to think they would be unattractive to mobile workers, apart from issues raised by final pay defined benefit systems.

Public pensions can discourage location based on implicit taxation, on the overall size of pension contributions, and on details of access to benefits. The premium pension has no implicit tax. There is a legacy debt aspect to the inkomstpension in that the notional rate of return is likely to be below market rates (being less than fully funded).<sup>31</sup> This is similar to the extent to which a country cannot use all of current revenues to provide redistribution and services insofar as a larger public debt needs to be serviced. The magnitude of the implicit debt is not large by international standards and there is the offsetting tax credit for the 7 percent contribution. In any event, a move to increase funding in order to increase the return on contributions would require additional taxes inside or outside the pension system, therefore involving a tradeoff between being less attractive while building up funding in order to be more attractive after funding has been built up. This is similar to the intergenerational distribution issue inherent in decisions about the degree of funding of pensions. My conclusion is that this is not likely to be important, and in any case is subsumed in the general issue of taxes and government provided services.

---

<sup>31</sup> A legacy debt is the value of assets not present in a pension system as a consequence of having paid larger pensions to earlier cohorts than could have been financed by their contributions in the absence of financing from outside the pension system. This results in a lower rate of return on current and future pension contributions. For discussion of the legacy debt concept see Peter A. Diamond and Peter R. Orszag, *Saving Social Security: A Balanced Approach*, Washington: Brookings Institution Press, 2004, revised edition 2005.



That is, from the perspective of keeping Sweden an attractive place for workers, the proportion between the pay-as-you-go and the funded elements of the system need not be modified in response to globalisation.

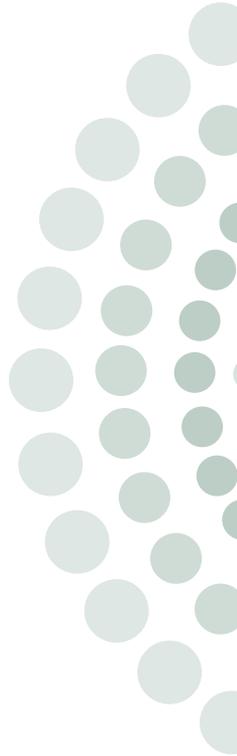
Overall pension contributions in Sweden are less than in some and larger than in other large countries, without an indication that contributions are supporting an excessive replacement rate. There is little reason to be concerned that pension design is less attractive in Sweden than elsewhere. I would think that the great flexibility in retirement benefit decisions and the strong financial stability overall of the pension system are both attractive features of Swedish pensions. Similarly, the political stability of the basic pension structure (with a possible exception for defined benefit portion of pensions for government employees for which a change is recommended and in recognition of the trend away from defined benefit pensions in some other places) should be attractive to workers who might otherwise fear changes in a pension system that would be detrimental to them. The one element on the other side is the heavier taxation of tax-favored retirement savings in Sweden compared with countries that use EET taxation.

Relative to accompanying families, Swedish pensions could be made more attractive with the added flexibility from extending pension sharing rules of the premium pension to the inkomst-pension as proposed in Recommendation 4.

In addition to considering the mix of fully funded and unfunded pensions, it is appropriate to consider the mix between mandatory and voluntary (private) arrangements. The mix between mandatory and voluntary arrangements is meant to balance on the one hand, the advantages of a mandate in ensuring that accumulation and annuitization are not too low and in providing a lower cost method of accumulation with, on the other hand, the disadvantages inherent in the greater uniformity in public arrangements. We can contrast the uniformity in the public system with the flexibility in private pensions. Apart from the defined benefit portion of the public pensions (which are recommended below to be changed into defined contribution), there is not all that much more diversity in the four major occupational schemes than in the public system. Since private arrangements can adapt to the rules in the mandatory system, there is only a concern about balance when the mandatory portion has become so large as to squeeze out the room for flexible adjustment. There is no sign that this is the case in Sweden given the sizable

investment rates in occupational pensions and their wide coverage. There is little apparent reason to think that globalisation would make a significant change here. In combination with much higher mandatory pensions in some other countries, mobile workers may save too much for retirement. Recommendation 2 called for data gathering and monitoring for this possibility. Insofar as the total of mandatory and occupational pensions is sensible, there is little reason to think that shifting the balance would be helpful - the relatively low rate of mandatory Swedish contributions compared with other large EU countries suggests little need for a change.

In sum, globalisation does not seem to require significant changes in order to preserve the ability of Sweden to attract and hold workers.



## 5. Economic globalisation and financial stability

This section considers how increased globalisation affects the anticipated financial functioning of the pension institutions, particularly financial stability, including possible effects from increased inequality in earnings.

The public and private funded defined contribution pensions are automatically financially stable up to determination of annuitized benefits. Apart from seemingly small risk elements coming from the guaranteed level of annuity returns, payment of annuitized benefits from these funded accounts are also automatically financially stable. That is, the rules determining benefits adjust automatically to prevent financial imbalances that could threaten solvency.

The inkomstpension benefit level for new retirees is based on current mortality rates of the Swedish population. They are not based on mortality projections and do not incorporate non-Swedes with previous earnings in Sweden who have returned to their countries of origin, and so are not appearing in Swedish mortality data. The presence of the automatic adjustment of the notional interest rate for an asset-liability imbalance implies that there is little or no financial stability issue. There may be a small effect on benefit levels from pension coverage of non-Swedes from countries that may have different levels of improvement of mortality rates. There may also be an issue insofar as projections are based on Swedish data, not addressing the changing mix of nationalities of covered workers.

The PAYG defined-benefit portions of the occupational pensions for government employees are based on earnings at or near the end of a career. Thus the analysis is basically different than that with the funded and notional defined contribution pensions. These pensions have no automatic adjustments for financial balance. Thus it is possible that they may become more expensive relative to the cost of wages and salaries as a consequence of increased labor mobility. Taking the aggregate level of employment as given, an increase in cost can occur through two mechanisms.

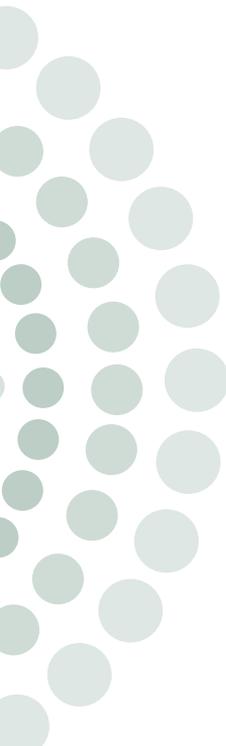
If there is a shift in relative employment among Swedes (average lengths of careers constant) toward those with more rapidly rising earnings toward the end of their careers, the pension system becomes more expensive relative to total wages, since benefits are based on pay late in a career. Increased employment opportunities through globalisation may result in relatively more frequent departures of those with lesser wage growth prospects. Given the greater incentive to stay with the job of those anticipating the greatest growth in earnings, increased opportunities to leave public employment, associated with increased opportunities abroad and increased private opportunities in Sweden generated by private workers going abroad (and possibly not fully offset by foreign workers taking such jobs) may increase the cost of these pensions.

Second, insofar as pensions are paid with credit for years of service in other countries, an increase in the employment of such workers would raise costs relative to the wage bill. Higher Swedish wages relative to civil service wages in some places abroad can encourage such a trend. The savings from workers leaving before retirement, which comes from price indexing accrued benefits, rather than wage indexing, is not likely to be as important on a per person basis.

Without having seen data on changing mobility associated with long-term public employment or on the extent of hiring of foreigners receiving credit for years of service abroad, it is not possible for me to quantify these effects. The possible increase in cost from hiring of non-Swedes receiving credit for work abroad seems potentially the more important effect. Insofar as hiring does not distinguish among different nationalities, the attractiveness of a defined benefit Swedish pension for civil servants in countries with lower pay scales and/or smaller pensions may make this an issue. Moreover, as noted above, defined benefit pensions based on pay toward the end of a career discourage mobility. Thus, increased international mobility makes the defined benefit portion of the occupational pensions for government employees less satisfactory, with a change recommended.

**Recommendation 6.** In light of the unsatisfactory properties of defined benefit pensions that rely on a short earnings period, increasing globalisation adds to the case for changing the defined benefit pensions for government employees to either funded or notional defined contribution pensions.

The guaranteed pension is based on years of residence in Sweden, with an offset based only on the inkomstpension. Since foreign



workers resident in Sweden are covered by the inkomstpension, and both the guaranteed pension and the inkomstpension have linear rules, there is no apparent reason for concern relative to increased immigration of workers. If accompanying family members of foreign workers coming to Sweden are less likely to work than Swedes, there may be increased demand on the guaranteed pension from families coming to work in Sweden. This can be thought of as part of the overall interaction between immigrant families and the fiscal system, including all taxes paid and all services received.

Residence by a Swede in another EU/EEA country is credited toward a guaranteed pension. I do not know if there are treaties providing similar rules in counting residence for countries outside the EU. Thus, there may be reason to be concerned about increased guaranteed pension costs from Swedes living and working abroad since benefits received from mandatory pensions abroad do not generate an offset against the guaranteed pension in the same way that the inkomstpension does. This asymmetry does not seem appropriate.

**Recommendation 7.** There should be offsets against the guaranteed pension for mandatory public pension benefits in countries where residence counts toward the level of guarantee pension.

Even if this recommendation is adopted, there may still be an impact on the cost of the guaranteed pension insofar as Swedish spouses accompanying a Swedish worker abroad to a country where residence counts toward the guaranteed pension may be less likely to work than if they had stayed in Sweden.

Apart from the guaranteed pension, there is no apparent source of financial instability from accompanying family members. Consideration of accompanying family members who do some work abroad further supports Recommendation 3 above, to make rollover of pensions more efficient.

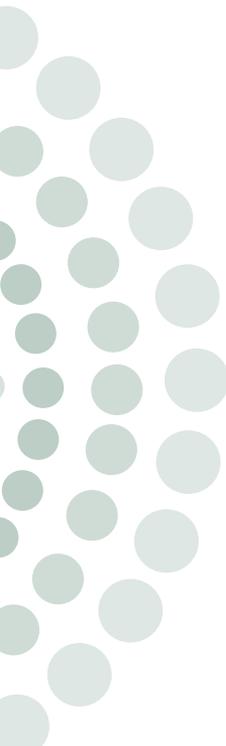
In sum, globalisation does not seem to require large changes in order to preserve financial stability of the pension system. There does appear to be possible increased financial pressure from greater mobility on both the guaranteed pension and the defined benefit portions of occupational pensions for government employees. The recommended changes would ease this potential pressure. From the perspective of financial stability, there is no need to alter the proportion between the pay-as-you-go and the funded elements of the system in response to globalisation.

## 5.1 Earnings inequality

Increasing inequality in earnings is a widespread phenomenon. It is plausible that globalisation is one of the contributing factors to this. The true effects of globalisation coming through increased earnings inequality depend on the full pattern of wage growth changes. That is, it might be the case that without globalisation, lower inequality might come from slower earnings growth for higher earners or faster earnings growth for lower earners. The case we will examine assumes both of these in a way that is assumed to preserve the average growth of earnings. There is no claim that this assumption is supported by empirical work, just that this is a natural base case to consider. Indeed, globalisation may be increasing uncertainty about future real wage growth. This suggests a reexamination of the inkomstpension benefit determination, which is based on an assumed real wage growth of 1.6 percent, as was discussed above.

The implications of increased inequality are different for fully-funded defined contribution pensions and partially-funded defined benefit pensions. I ignore a possible change in interest rates as there are multiple factors pushing in opposite directions. With a fully-funded defined contribution pension, given their earnings, workers with earnings below the maximum covered by the pension are not directly affected through the workings of the pension system from increased earnings above the limit. Turning to high earners, when some workers have a larger fraction of their earnings above the limit, then they are receiving a lower replacement rate from the pension. For the premium pension, this means a lower overall replacement rate. Occupational pensions have higher limits for defined contribution coverage or defined benefit pensions above the limit for public contributions. Thus there is limited social concern about replacement rates for highest earners for the same reason that there are these limits to begin with – a sense that those above the limit have adequate pension incomes and adequate opportunity to save for additional incomes, leaving little additional social concern.

In contrast, with the inkomstpension, a partially-funded notional defined contribution pension, the level of benefits of workers with earnings below the covered maximum can be affected by increased earnings above the maximum for a given growth of the income index (average earnings) if the reduced revenue of the system from an increased fraction of earnings above the taxable limit triggers a



decreased notional rate of interest by lowering the asset-liability ratio.<sup>32</sup> The notional rate of return is expected to be below the average return on assets as the growth in earnings is expected to be below the return on assets. While the pattern of implied decreases in benefits from this legacy cost is complex, the overall idea is clear.<sup>33</sup> If the inkomstpension were fully funded, there would be more assets. Those assets would earn market returns that could be used for benefits. The absence of those assets is the legacy cost that is then borne by all future workers in some pattern. While the pattern across cohorts is complex, within a cohort, the sharing of the lower return on contributions is proportional to contributions. Thus the cap on earnings subject to tax affects the pattern of sharing of this legacy cost within the pension system. With greater inequality of earnings, those with earnings below the cap bear more of the total legacy cost. The tax credit for the 7 percent contribution appears to strongly address this issue. Without the tax credit, then a phased increase in the level subject to the mandatory contribution might be called for.

A decreased growth of earnings for the bulk of the population raises the issue of the sharing of the inkomstpension legacy cost across cohorts, an issue that can be addressed by altering the degree of funding. Since it is not apparent what will happen to earnings growth of the bulk of workers from globalisation per se, given the historic variations in earnings growth from other causes, this does not appear to be an important matter to address.

Insofar as increased earnings inequality shows up in public employee compensation, the cost of the defined-benefit portion of their occupational pensions will increase. This adds support to Recommendation 6.

---

<sup>32</sup> The income index adjusts for the growth in pension-qualifying income without limitation by the ceiling.

<sup>33</sup> This issue is similar to the financing issue that arises in systems that do not include automatic adjustment or full tax credit. For example, in the United States, the fraction of workers with earnings above the taxable maximum has not noticeably changed from 7 percent in the 25 years since the last major Social Security reform, but the fraction of earnings above the maximum has increased from roughly 10 percent to roughly 16 percent. For a given growth in total earnings, the decline in taxable earnings relative to total earnings reduces both revenues and future benefits. Given the shape of the benefit formula in the US, this has a negative impact on financial sustainability. As a consequence, a number of reform proposals in the US have called for increasing this maximum faster than does the automatic indexing. See for example Diamond and Orszag, *op. cit.*

## 5.2 Financial capital mobility

Increasingly, financial investments by workers will include an international component as access to foreign financial assets becomes easier, more familiar and less expensive. Increased diversification in funded defined contribution pensions and the buffer stock for the inkomstpension can represent an improvement in the risk-return frontier. Countries that have trouble attracting foreign investment might be concerned about the need for paying a country premium when attracting financial and real investments, including those offsetting the flows abroad. This does not seem an issue in Sweden. Thus there is no reason to resist increased investment outside Sweden by pension funds.

All types of Swedish pensions appear to have sufficient ability to invest abroad. The only restrictions of which I am aware are that the first four pensions funds (AP-fonder 1-4) face a 40% maximum of exposure to currency risks, and the need for some private pension funds to satisfy regulations concerning asset-liability matching. It is not apparent that these restrictions are important enough to change.

With globalisation, firms will have greater flexibility in location decisions for physical investments and enjoy greater competition from possible locations. This will put pressure on wages and on tax setting and may be connected to increased inequality in earnings. Thus, coordination in taxation will have increased value and is likely to happen, at least within the EU. Since the cost of pensions is thought to be primarily borne by workers through wage adjustment, greater flexibility in firm location does not appear to have implications for pension design insofar as pensions primarily affect wages, not profits.

In sum, globalisation does not seem to require significant changes in order to preserve the financial stability of Swedish pension.

## 6. Proposed reforms

By and large, the Swedish pension system is well suited to handle the effects of globalisation. Nevertheless this report has identified several research issues and reform proposals that seem worth pursuing, which are repeated here.

**Recommendation 1.** It would be good to commission research to review the tax treatment of pension asset income relative to other asset income and taxation of deferred compensation in the case of retirement in a different country than where the work occurred. It would be good to stay abreast of ongoing research on the taxation of capital income generally.

**Recommendation 2.** Data should be gathered to permit monitoring of retirement benefit accruals of workers spending time abroad to check the potential importance of implied replacement rates that seem too large or too small. Depending on these findings, consideration should be given to allowing additional tax-deductible private pension contributions as a “catch-up.”

**Recommendation 3.** To make contributions as easy and efficient as possible, as part of voluntary individual contributions, workers should be allowed to make additional contributions to their premium pension accounts and to rollover pension accumulations abroad into their premium pension accounts. This would offer the convenience of combining two sources of pension income and may have lower administrative charges than private pensions. Competition between public and private providers should work both ways, with a level playing field. Similarly, workers should be allowed to shift their premium pension accumulations in privately supplied mutual funds into the default fund.

**Recommendation 4.** The inkomstpension should allow transfers of credits between spouses and registered partners and joint life annuities, as does the premium pension.

**Recommendation 5.** There should be a study comparing the current determination of inkomstpension benefit increases with alternative rules, including a proper weighted average of price and wage growth.

**Recommendation 6.** In light of the unsatisfactory properties of defined benefit pensions that rely on a short earnings period, increasing globalisation adds to the case for changing the defined benefit pensions for government employees to either funded or notional defined contribution pensions.

**Recommendation 7.** There should be offsets against the guaranteed pension for mandatory public pension benefits in countries where residence counts toward the level of guaranteed pension.

By and large, the Swedish pension system is well designed. Nevertheless, there is room for improvement to better handle the effects of globalisation.



## 7. References

- Banks, James and Diamond, Peter A. (2008), *The Base for Direct Taxation, Prepared for the Report of a Commission on Reforming the Tax System for the 21st Century, The Mirrlees Review*, Institute for Fiscal Studies, 2008, <http://www.ifs.org.uk/mirrleesreview/reports/base.pdf>.
- Barr, Nicholas and Diamond, Peter A. (2008), *Reforming Pensions: Principles and Policy Choices*, Oxford University Press, 2008.
- Congressional Budget Office (2008), *Recent Trends in the Variability of Individual Earnings and Household Income*.
- Diamond, Peter A. (2000), *Administrative Costs and Equilibrium Charges with Individual Accounts*, in John Shoven (ed.), (2000), *Administrative Costs and Social Security Privatization*, Chicago: University of Chicago Press, 2000.
- Diamond, Peter A., Orszag, Peter R. (2005), *Saving Social Security: A Balanced Approach*, Washington: Brookings Institution Press.
- European Commission, Taxation and Customs union, [http://ec.europa.eu/taxation\\_customs/taxation/personal\\_tax/pensions/index\\_en.htm](http://ec.europa.eu/taxation_customs/taxation/personal_tax/pensions/index_en.htm)
- National Social Insurance Agency (2007), *Orange Report. Annual Report of the Swedish Pension System*.
- Official Journal of the European Communities (1998), *Council Directive 98/49/EC of 29 June 1998 On safeguarding the supplementary pension rights of employed and self-employed persons moving within the Community*.
- Official Journal of the European Union (2004), *Regulation (EC) No 883/2004 of the European Parliament and of the Council of 29 April 2004 on the coordination of social security systems*.
- SCADplus: Workers' mobility: facilitating the acquisition and preservation of supplementary pension rights, <http://europa.eu/scadplus/leg/en/cha/c10139.htm>.
- Sjögren Lindquist, Gabriella and Wadensjö, Eskil, Report for ESS, 2006:5, *National Social Insurance - not the whole picture. Supplementary compensation in case of loss of income*.
- Swedish Tax Agency (2007), *Taxes in Sweden 2007. An English summary of Tax Statistical Yearbook of Sweden*.
- The Federation of European Employers, *Guidance note on pan-European pensions*, available at <http://www.fedee.com/pensions.html>.
- Wadensjö, Eskil, *The Swedish Public-Private Mix in Pensions*, Swedish Institute for Social Research.



