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### **How can we maintain pension levels in pay-as-you-go schemes?**

Maintaining Pension Levels in PAYG Schemes in Ageing  
Societies: Rules versus Discretion

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# How can we maintain pension levels in pay-as-you-go schemes?

## Maintaining pension levels in PAYG schemes in ageing societies: Rules versus discretion

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### 1. Introduction: Pension schemes – objectives, rights and techniques

Pension schemes naturally have multiple objectives,<sup>1</sup> of which the most important, according to national circumstances, are usually the prevention of poverty and the securing of a minimum level of income security for individuals in old age. Another major objective is that of "income smoothing", which encompasses not only the need to provide income in a reasonable proportion to an individual's earnings during his or her working lifetime, but also the extent to which pensioners are able to maintain their capacity to consume goods and participate in the ordinary way in the cash economy. The notion of *benefit adequacy* relates to the degree of success achieved by pension systems in meeting these objectives as a whole.

It will of course be well-known to the readership of this paper that pension systems typically comprise different components, which may, for example, be contributory or non-contributory, defined-benefit or defined-contribution, mandatory or voluntary and publicly or privately-managed. The specific mix of components generally reflects the circumstances, policy stance and the history of economic development of each individual country, so as, for example, to focus provision towards the provision of "adequate" benefits (in the sense noted above) or, alternatively, poverty prevention.

Individuals are accorded rights in relation to pension benefits, in the sense that pension schemes form a major component of social security systems. The right to social security protection is enshrined in a range of international instruments, including, notably, the Universal Declaration of Human Rights, with the result that this right, however difficult to realise in practice, has an inalienable status for citizens of every nation in the world. The

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<sup>1</sup> For an extensive discussion, see, for example, Barr and Diamond: 2008.

International Labour Organization (ILO) offers a more specific approach, through the set of Conventions (and Recommendations) which set out formulae for determining benefits deemed "adequate". Conceptually, it is envisaged that benefits will be provided on a basis which is essentially "defined benefit" ("DB"), in terms of regular pension scheme terminology, but the format may nevertheless be one in which pensions are calculated on a basis proportional to pre-retirement earnings (and, usually, contribution payment period) or granted on a flat-rate basis. If basic income security is to be provided mainly through earnings-related pensions, a minimum replacement rate should be guaranteed at least for those with earnings lower than prevailing, typical or average levels. For an old-age earnings-related pension paid to such lower income beneficiaries, Convention 102 requires the minimum replacement rate to be at least 40 per cent of previous earnings and, if benefits are contributory, after no more than 30 years of contributions. The same replacement rate is required, respectively, for a survivor's earnings-related pension and a disability pension.<sup>2</sup> In the case that disability and survivors' pensions are contributory; a pension should be paid in full amount to those with 15 years or more of contributions, while pensions of reduced amount may be provided for those with shorter contribution periods.

If pensions are paid at a uniform ("flat") rate, the amount should not be lower than 40 per cent of the prevailing level of earnings of unskilled manual workers. This applies equally to pensions provided on a means-tested basis, but the level should also then meet another criterion: "... shall be sufficient to maintain the family of the beneficiary in health and decency". The amounts of all kinds of pensions awarded originally to the beneficiaries should be reviewed regularly and adjusted accordingly following any "substantial changes" in the general level of earnings or costs of living.<sup>3</sup>

The relevant ILO standards attach considerable importance to the question of sustainability, to which further consideration is given in the following sections of this paper.

## **2. The context: Pension schemes – sustainability, political will and "reforms"**

The context in which a social security pension scheme operates has many dimensions, ranging from demographic trends, through cultural and societal attitudes, to economic and financial imperatives. This section of the paper seeks to trace a line of development which may be seen to have brought many national pension systems to a position, if not of crisis, then of reassessment, which, in the light of the ongoing international economic and financial crisis, has called into question the level of countries' commitments to pensions generally, or at least to the maintenance of the levels of benefit adequacy hitherto seen as appropriate. This issue is overlaid, of course, on that of ageing societies, the implications of which for pension funds have already resulted in successive waves of pension reform.

It may be observed, firstly, that there is a strong link between the adequacy and the sustainability of pension systems, and, crucially, that the link is bidirectional. Generous benefit promises within financially unsustainable schemes will never be delivered; on the other hand, benefit schemes providing inadequate benefits will, sooner or later, become unsustainable as the political will to support them is eroded by the unwillingness of contributors and tax payers to meet the bill.

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<sup>2</sup> Convention No. 128 requires higher benefit levels: respective percentages are 45 per cent in case of old-age and survivors' pensions and 50 per cent in case of disability pensions.

<sup>3</sup> For more details see also Hagemeyer: 2009.

The problem of ensuring financial sustainability has become increasingly evident in recent decades in the light of demographic ageing of societies around the world, reflecting not only increases in the proportions of populations entering the age brackets traditionally regarded as "pensionable", but also increases, in virtually every country, in longevity, with the result that pensions, once in payment, must continue to be paid for much longer periods of years than in the historical past. The differential longevity of women, especially those for whom pension provision should be made following widowhood or divorce, has, moreover, highlighted weaknesses in the gender-specific areas of general structural design of pension schemes.

At the broadest level, when it is observed that pension costs exceed the resources currently devoted to the system, there can be very few corrective mechanisms. Either benefit levels must be reduced, or resources (mainly contributions) must be increased, or some other "parametric" change must be introduced (typically an increase in the standard age at which retirement takes place and drawing of pensions begins). Each of these "options" is, to a greater or lesser degree and in most circumstances, politically unpalatable.

In fact, the trend, following early experiences in Chile and some other countries of Latin America, has been strongly towards a model of pension reforms which replaces defined-benefit (DB) schemes in national social security systems by defined-contribution (DC) schemes.<sup>4</sup> The typical DC approach, through schemes based on Individual Retirement Accounts (IRAs) can be seen as, and has certainly been presented as, providing a vehicle more naturally in balance than the DB approach.

The impact of the global financial and economic crisis bursting into this picture has been profound, most obviously in relation to (but by no means confined to) the value of pension fund investments.

Recent developments have focused on aspects of the trend towards individualized retirement provision which can be seen as "automatic balancing (or stabilizing) mechanisms", and has intensified interest in the approach adopted by a small group of countries (Sweden, Italy, Poland, Latvia) described as "NDC"<sup>5</sup> which seems (or, until recently, seemed) to offer an "even more" automated or dispassionate approach to the problem of balance and sustainability. At the heart of this brief exploration of the subject lies the question as to whether this trend reflects an approach which is either effective in its own terms or is properly-considered in terms of political will and equity.

### **3. The issue: What is needed for sustainability and adequacy of pension schemes?**

It has always been fundamental to the design and implementation of pension schemes that *adequacy* should be ensured to the utmost degree possible. However, a range of subtleties underlie this issue. For pension schemes built on the earnings-related defined benefit model, then the ILO Conventions<sup>6</sup> provide the most authentic international guideline as to minimum benefit levels. For most Organization for Economic Co-operation and Development (OECD) countries, provision has been made for the majority of the (employed) labour force through schemes of essentially this type, and this approach is reflected for most

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<sup>4</sup> As advocated in particular in the well-known report "Averting the old age Crisis" World Bank. 1994.

<sup>5</sup> Variously rendered as "Notional Defined Contribution" or "Non-Financial Defined Contribution" schemes, see Holzmann and Palmer. 2006.

<sup>6</sup> The Social Security (Minimum Standards) Convention No. 102 of 1952, and the Invalidity, Old-Age and Survivors' Benefits Convention No. 128, of 1967.

European countries in the rubric of the European Code of Social Security.<sup>7</sup> Alternatively, a range of countries whose labour markets have progressed less fully towards maturity, or "formality", have found it more practical to put in place a minimum "underpin" for old-age pensions in the form of a flat-rate, minimum pension, perhaps as one "tier" or "pillar" of a system including further components designed to offer, in chosen proportions, the specific advantages of earnings-related or contribution-related benefits. A range of institutional vehicles may be used to ensure, as far as possible, that national systems do achieve (or seek to do so) adequacy; these may include the establishment of a minimum level of individual pension (possibly contingent on the fulfilment of a threshold contribution period), the provision of social assistance or means-tested pensions, the provision of "universal" pensions, or subsidization of contribution rates, to enable lower-paid workers to participate *pari passu* with the better-paid in the ordinary schemes. It is not at all clear, however, that such mechanisms have been, or are proving, sufficient in relation to the overall objective of benefit adequacy.

The *affordability* of systems – whether, in any given national circumstances a scheme is perceived as being "cheap" or "expensive" – reflects the capacity of the stakeholders to meet their contribution obligations, and, more broadly, the capacity of governments to underwrite from treasury funding any shortfall of contribution income below expenditure (on benefits and administration). These issues may be somewhat disguised, but by no means removed, in the case that a scheme is supported by a fund comprising invested assets and the associated investment income. The capacity of workers and employers in relation to paying their assessed contributions – or the comfort with which they may do so – is closely related to labour market conditions, reflected in the availability of jobs and the buoyancy, or otherwise, of wages and salaries. This issue is clearly of particular concern at the present time, in the light of the global financial and economic crisis which has led to very widespread loss of jobs, particularly in the formal economy worldwide. In the longer term, it remains a question of deep concern as to whether national policies in relation to social security can be adequately integrated with labour market policy. If, for example, a country chooses to "balance its books" in relation to pension obligations by increasing the retirement age, probably for men and women alike (a particular "parametric" reform), then success can be expected only if there are jobs sufficient in number and suitable in type for the additional group of middle-aged workers joining the labour market.<sup>8</sup>

There is inevitably an aspect of subjectivity in assessing both adequacy and affordability of schemes and systems in any particular national context. Nevertheless, the concern of policy makers will be to seek an optimum, overall balance, taking into account national conditions and sensibilities. Economic conditions naturally change from month to month, social conditions perhaps less rapidly but nevertheless continually, and there is thus an ongoing need to reassess and perhaps make adjustments, in a generally flexible manner. It is an attractive proposition that schemes may be designed in such a way that the necessary adjustments can be implemented automatically, and therefore both rapidly and without incurring political costs. Mechanisms reflecting concepts of this general type have been described under a range of titles, such as "self-" or "automatic-" "balancing", or "stabilizing" mechanisms; for simplicity the comments below refer generally to "automatic stabilizing mechanisms". Several countries, mostly having social security systems of a relatively sophisticated nature, have in recent years put in place features of this kind, naturally with variations, and section four, below, notes a selection of these.

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<sup>7</sup> European Code of Social Security, compiled and published by the Council of Europe. The definitive text dates from 1964, although work has progressed towards an updated version.

<sup>8</sup> See Scherman, K.G., June 2009.

Automatic stabilizing mechanisms seek to secure financial or actuarial equilibrium for pension schemes, either in the shorter or the longer run. It is, however, in the nature of such a mechanism that when conditions take an adverse turn, then the result is necessarily to reduce benefit levels and so is likely to be detrimental to the overall benefit adequacy of the system. Recent experience in several countries, including Sweden, and to some extent Germany and Canada,<sup>9</sup> has resulted in conditions which were not fully predicted at an earlier stage and will now be reflected in reductions in the actual value of benefits, either at the average collective level, or the level of individuals' pensions. At a time of generally increasing individual hardship, the perception has arisen at the political level that "something must be done", and in many cases safeguards to benefit levels have been implemented on a basis which has often been both *ad hoc* and discretionary. In these circumstances the question then arises as to how effective "automatic" stabilizers, *per se*, actually are.

#### **4. Some responses, mechanisms which are automatic or otherwise**

The history of the ongoing pension reform process is dominated by the experience of one major group of countries, amongst the earliest being Chile which, together with a number of emulators in Latin America, implemented what were in fact rather drastic, "paradigmatic" reforms of their national social security pension systems. For a number of reasons, some fortuitous, these reforms took place without, in the beginning, seriously adverse political consequences. Typically, such reforms entailed the replacement of schemes built, wholly or partially, on defined benefit models by defined contribution schemes, whose principal vehicle has been the so-called Individual Retirement Account (IRA). Schemes of this kind may be viewed as having the advantage of a natural financial balance, being (virtually by definition) at all times "fully funded". From another point of view, however, such schemes shift the inherent financial risks, at times of economic and investment downturn, towards the individual account holder and away from residual financiers (either employers or governments).

However, it may be observed here that this particular model of reform embodies to some extent a second set of "automatic" correctives, certainly in relation to the issue of increasing longevity, in relation to which the reduction of annual pension amounts is brought about by a "market mechanism", namely through an increase in (average) annuity prices.

Noting the disadvantages, in terms mainly of risk-bearing by the account-holders, and at the same time the advantages, including transparency, of DC schemes, technicians have tried over recent years to find a mechanism which would at the same time maximise the positive and minimise the negative features of this approach to scheme design. One result has been the development of so-called Notional (or Non-Financial) Defined-Contribution schemes, which retain the structure of an individual accumulating account, but replace strictly market-related interest accrual rates by rates determined on alternative, often labour-market related, bases. Because there is no direct link between an individual account and an identifiable "pot" of investments, there is no direct need for such a scheme to subscribe to the funding principle, and a scheme may be (indeed, typically is) managed on a PAYG basis. The conversion of accumulated lump sums to annual pension amounts is accomplished, rather than by reference to market annuity rates, by reference to age-related outstanding life expectancy tables. In recent years, schemes of this type have been implemented in Italy, Latvia Poland and Sweden, the last of which is seen to some extent as a "flagship" for the concept.

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<sup>9</sup> See Scherman, K.G. *ibid.* and OECD (2009), on its part devoted to impact of the 2008/2009 financial and economic crisis on pension schemes.

The impact of the global economic and financial crisis has shown, nevertheless, that schemes of the NDC type may in some circumstances produce unsatisfactory results. In Sweden, for example, the prospective "loss" of benefit income for a typical, individual pensioner over the next five years may amount to the equivalent of more than USD1,000 per year.<sup>10</sup>

While the general thrust of pension reforms worldwide has been to reduce the long-term level of pension liabilities (at least, those effectively underwritten by national governments) for successive cohorts of pensioners, the rather sudden loss of benefits, actually or prospectively, resulting from the economic crisis, but in a manner which is so obvious to individuals, has given rise in a range of countries to the implementation of measures, on a more or less *ad hoc* basis, but in any case over-riding the prevailing framework of rules, to mitigate the adverse effect on pensions (and other social security benefits). Such interventions have been justified, both in terms of social policy reflecting the need to protect living standards, and of economic policy, taking account of the importance of protecting levels of aggregate demand.

Some examples of such *ad hoc* measures include, in Germany cost-of-living pension increases above the formulaic "norm" over 2/3 years, and in Sweden some abatement of the reduction otherwise implied in the application of the automatic stabilization system.

## 5. Quo vadis?

If there is one conclusion to be drawn in the light of the present global economic and financial crisis, it is surely that there will be more crises in the future. Accordingly, we can be sure that any mechanisms by way of automatic stabilization which are put in place now, or in response to this crisis, will again face challenges in terms of the then adequacy of benefits and ability of schemes to protect the living standards of beneficiaries. These mechanisms will, almost as surely, betray new weaknesses. What, then, will be the fate of such rules-based systems? There is no doubt that then, as now, there will be pressures on the supervisors, at the political level, to intervene once again, on a discretionary basis, to correct systemic malfunctions, or even to abolish malfunctioning rules-based mechanisms.

Should, then, the questions of benefit adequacy in the future be left completely to political discretion? A preferable approach may be to supplement the approach to maintaining financial and actuarial equilibrium by a set of rules or principles which would ensure that benefit amounts do not fall below accepted levels. Criteria certainly exist in the international arena, which would provide the basis for establishing national standards. However, such national levels must clearly reflect the prevailing circumstances and considerations in each country. A key prerequisite must be to ensure through social dialogue the full participation of each group of stakeholders – workers (together with their families), employers and governments – in establishing the relevant standards, and in creating and maintaining the permanent structures through which they may be monitored, verified and adjusted.

## Bibliography

Barr, N.; Diamond, P. *Reforming Pensions: Principles and Policy Choices*, Oxford University Press, 2008.

Council of Europe. European Code of Social Security.

Hagemejer, K. "The Right to Social Security: the ILO View," in *Closing the Coverage Gap: Role of Social Pensions and other Retirement Income Transfers*, eds. R. Holzmann, D.A. Robalino and N. Takayama, World Bank, Washington, June 2009.

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<sup>10</sup> According to calculations noted in Scherman, K.G., *ibid*.

Holzmann, R.; Palmer, E., eds. Pension Reform: Issues and Prospects for Non-Financial Defined Contribution (NDC) Schemes.

International Labour Organization. "Social Security (Minimum Standards) Convention", 1952 (No. 102).

International Labour Organization. "Invalidity, Old-Age and Survivors' Benefits Convention", 1967 (No. 128).

OECD. "Pensions at a Glance 2009"; OECD, Paris August 2009.

Scherman, K.G. "Politicians Dodge the Pension Issue", opinion article in Svenska Dagbladet, 3 June 2009, elaborated and privately circulated in English translation.

World Bank. "Averting the Old Age Crisis: Policies to Protect the Old and Promote Growth"; Washington, 1994.