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ARC project on

# SAS Pensions

Sustainable, Adequate and Safe Pensions:

Financial architecture, Social justice and Governance

2018 - 2023

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The provision of replacement incomes (pensions) for old people is among one of the main achievements of modern advanced economies. Historically, the State and other entities successfully organized the provision of public pensions. There is no doubt that this contributed to the wellbeing of elderly citizens<sup>1</sup>. It is also likely to have played a significant role in the reduction of old-age poverty. However, public pension budgets are now increasingly challenged by demographic and economic developments, namely rapid population ageing combined with slow(er) economic growth. Hence, policy makers around the world are confronted with the challenging task of reforming existing pension systems.

This interdisciplinary research project aims at critically assessing the key conditions that a public pension system should fulfil to be successfully reformed. Our hypothesis is that there are three such conditions: *i*) financial sustainability, *ii*) social adequacy and *iii*) safe governance. Hence, the ‘SAS’ acronym.

Our goal is to identify the pension architecture that is the most likely to generate SAS pensions. That research will rest on diverse approaches (conceptual, numerical, empirical and normative) to assess the properties of various possible pension architectures, through the prism of SAS criteria.

#### i) Financial sustainability and risk management

The *financial sustainability* of pension systems relates to the fiscal and financial balance between revenues and liabilities.<sup>2</sup> In many developed countries, population ageing, caused by an increase of life expectancy and – to a lesser extent - by a decrease in fertility, has major impacts on the long-term financial equilibrium of publicly managed pension schemes<sup>3</sup>. This is notably so for those with pay-as-you-go financing<sup>4</sup> (PAYG) in which today’s workers are paying for today’s pensioners (Barr & Diamond, 2008). Thereby, ensuring the financial sustainability of public pension schemes is a crucial challenge for the next decades.

The key questions, at that level, to be explored in WP#1, are:

- What can we learn from recent innovations (conceptual or implemented ones) explicitly aimed at securing financial sustainability? Population ageing, and the risk of financial troubles have already generated a lot of innovations around the world. Among these, two systems seem especially interesting from the perspective of financial sustainability: the "notional defined contribution" (NDC) and the “point” systems (Börsch-Supan, A & M. Miegel, 2012).<sup>5</sup> In addition, some countries have adopted legislative measures enacting automatic adjustment mechanisms, by which staged adjustments are made mostly on benefits (and to a lesser extent on contribution rates) without the

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<sup>1</sup> Offering them reliable opportunities to smooth their consumption of their lifecycle (Barr & Diamond, 2008)

<sup>2</sup> There are different possible interpretations of financial balance (Godinez-Olivares et al 2016). A strong form of sustainability is the cash balance that requires that for any given period, revenues equal liabilities. A weaker form of sustainability is that on average the system is financially balanced over time, even if for each period liabilities don’t exactly match revenue.

<sup>3</sup> In the short to medium run, the challenge will also be to cope with the retirement of the post-WWII baby-boom generations.

<sup>4</sup> In PAYG systems, pensions are financed by a tax on currently working generations (they are not prefunded), while in a funded system, they are financed by the return on previously accumulated pension contributions. In a DC system the contribution rate is fixed, and pension benefits must be adjusted from time to time to ensure that the pension system remains financially balanced. In a DB system, by contrast, the level of pensions is fixed. And it is the contribution rate that must be adjusted from time to time to ensure financial balance.

<sup>5</sup> The NDC model retains PAYG state financing but mimics a privately funded defined contribution (DC) plan. Contributions are credited to notional accounts, which get a rate of return broadly linked to earnings growth. In a point system, workers are credited with points in individual account that are translated at the retirement into a pension annuity based on the value of the point.

need for new legislation once such mechanisms are in place. This part of the research project aims at analysing them in detail, through the prism of financial sustainability.

- Another related prism will be that of quantitative risk analysis. The latter can be performed in a couple of different ways. One approach relies on single-point estimates. This method assigns values to discrete economic and demographic scenarios to see what the outcome might be in each. For example, three different scenarios are commonly examined in most projections of pension models: worst case, best case, and most likely case. This approach is deterministic in nature. Another - and better - approach to perform quantitative risk analysis will be followed in WP#1. It consists in using a stochastic risk analysis (possibly using Monte Carlo simulations). In this case, contingencies are represented by using ranges of possible values drawn from some probability distributions. Stochastic risk analysis presents many advantages over the deterministic approach. Results show not only what could happen, but also how likely each outcome is (probabilistic results).

## ii) Social adequacy

Ensuring financial sustainability, even in the broad sense described above, is not enough. No pension reform, particularly in a context where the latter may imply making the system less generous, can do without an in-depth examination of what justice requires, both between and within generations. In particular, how to ensure that pension systems fulfil the idea of justice as equality of opportunities - broadly construed - (Roemer & Trannoy, 2016) involving some form of concern for equality, i.e. the idea that individuals and cohorts must be compensated for inequalities rooted in their (unequal) endowments, and clearly beyond their control (i.e. not their responsibility)?<sup>6</sup>

The key questions at that level, to be explored in WP#2, are:

- Is it possible to assess the fairness of a pension scheme *independently* of other social policies that operate massive transfers within and across generations (e.g. income taxation, publicly-funded education or even public debt)? The underlying question has to do with how a general theory of justice takes seriously the division of tasks between various public policies and social mechanisms. And it has to do with how we should adjust our pension fairness expectations accordingly. This connects with the isolation issue discussed in WP#3 from the governance angle (*policy isolation issue*).

- Moreover, what are the relationships between intra and intergenerational justice? Should the two issues be treated separately. For instance, in the point system there is the possibility of separating the intra-generational solidarity by the allocation of points and the inter-generational solidarity by the value of the points (see Schokkaert et al 2017). Or should we treat the two dimensions in an integrated manner? (*separability issue*)

- To what extent can and should pension systems reflect a *responsibility* concern? They could do so intra and inter-generationally. For instance, does a point system or NDC tend to leave more room for responsibility? And is it possible to hold entire cohorts responsible for some of their choices (e.g. fertility choices or choices about the structure of the labour market).<sup>7</sup> (*responsibility issue*)

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<sup>6</sup> A closely related issue is the ability of pension systems to guarantee a large political adhesion to the pension system, which points at the political economy dimension of adequacy/justice. This political adhesion depends on how the pension systems redistribute both within and across generations (De Donder & Hindriks 2002,2003). In theory, there is no real assurance that a scheme operated by one generation will be acceptable for subsequent generations, unless it involves an amount of intergenerational transfers. Hence, the political support for intergenerational redistribution requires intra-generational redistribution (Tabellini, 1991). However, pushing too far such redistribution may erode the political support. Indeed, pension systems with a weak link between contributions and benefits are often quite weak politically (De Donder & Hindriks, 1998).

<sup>7</sup> Responsibility-sensitive conception of justice requires that people are compensated for inequality in circumstances upon which they have no influence. At the same time, such conception of justice accepts – and does not require combatting -- the existence of inequalities to the extent that they result from people's choices.

- More generally, how could fair redistribution be achieved in a context in which (1) financial sustainability calls for more "actuarial fairness" (i.e. less interpersonal transfers to maximize incentives to work) and (2) increasing evidence points at rising differences in life expectancy across socio-economic groups; with low-income individuals collecting benefits for a shorter period than high-income individuals (Bosworth et al., 2016)?

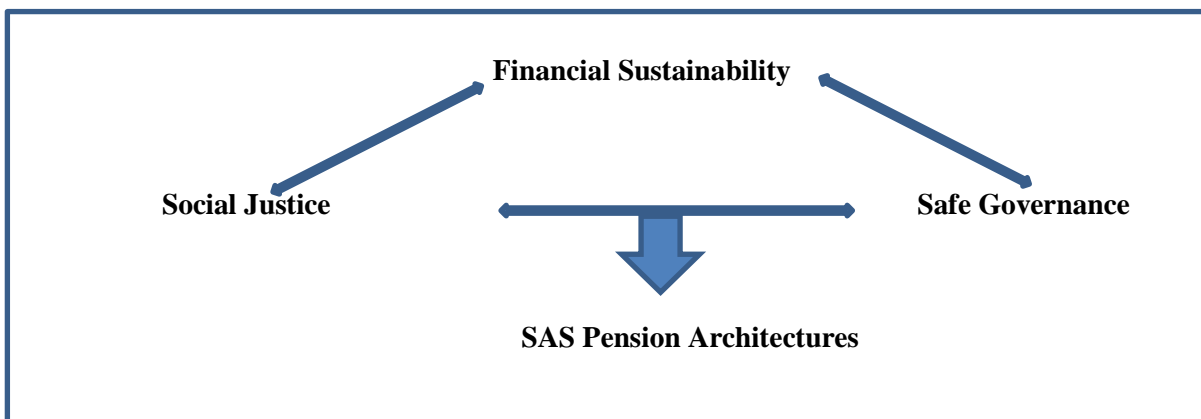
### iii) Safe governance

In addition to being "financially sustainable" and "socially adequate", pension systems also need to be buttressed by good governance. Anytime a group of people comes together to pursue a given goal, the need for such an ingredient obtains. As a result, this holds for pensions as well. Governance consists in the processes that support an important activity (ex: delivering pensions) by protecting rights, enforcing obligations, taking collective action to provide appropriate physical and organisational infrastructure, and dealing with (future) contingencies. These processes are carried out within dedicated institutions (i.e. governance bodies, staffed with individuals with a mandate to fulfil the above tasks and the powers associated with it) or embedded to some extent into agreed procedures (contracts, laws...).

In that respect, the questions to be explored in WP#3 are

- Can we identify governance rules that are suitable for public pension systems in (i) the literature on private pension governance and (ii) the literature that focuses on the design of central banks and institutions, involved in long-term perspective (e.g. provision of energy, treatment of nuclear wastes...)?

- What are the governance implications of changes in the architecture of our public pension regime? (i) Should an independent pension office be created to have jurisdiction over the whole public pension regime? (ii) Should we go for a system of auto-piloting through automatic adjustments, with governance implications (i.e. the idea that automatic adjustments should be independent from some of the other policies that a State adopts, such as deficit/debt policy)? (iii) Should we separate, to a certain degree, the decision-making process on the intra-generational solidarity and the intergenerational solidarity, and if so, how?



### iv) Identifying and implementing SAS pension "architectures"

A final and transversal work package will consolidate the results of the 3 previous ones, and address a series of transversal questions. The focus will be on identifying the best "architecture" that is likely to fulfil the SAS criteria. It will also relate to issue of "transition" to a SAS pension system.

- Various types of pension architectures that are the most likely to meet the three SAS criteria will be tested. By "architecture", we refer to a particular combination of key features which might be

differently combined: *i*) the public vs private nature of the organiser of the pension system, *ii*) the mandatory vs optional participation to the pension regime, *iii*) the Fully-Funded (FF) or PAYG nature of the pension benefits, *iv*) the intensity of the link between contributions and pension benefits (i.e. the so called "degree of actuarial fairness" *v*) the way financial balancing is achieved: via the adjustment of benefits (i.e. defined contribution- DC) or contributions (i.e. defined benefits -DB), *vi*) the discretionary vs. automatic adjustment of benefits and/or contributions (or other key parameters influencing financial sustainability).

- Another topic that we will treat in WP#4 is the "transition" problem. The term invariably points at the political feasibility of pension reform. Most reformists tend to ignore the difficult question of the transition from an existing system to a new one. Among all the SAS architectures that can, in theory, be implemented, which are the ones that are the most likely to become real? A first point is that architectures satisfying our SAS criteria, are more likely to enjoy broader democratic support, than, say, reforms that solely target either financial sustainability or social adequacy. Another point is that the options available to policymakers, whatever their intrinsic merits, are constrained by existing architecture. We cannot start from scratch. Welfare states, and pension systems especially, are the best illustration of "path-dependent change (Myles & Pierson, 1997). Path dependency does not mean that change cannot take place. It only means that the set of possible changes is constrained by the histories of pension development.

#### v) Need for multidisciplinary and transversal analysis

The SAS pension project will be conducted in an interdisciplinary perspective, based on the shared conviction among its promoters that this is the best way of thinking rigorously about pension systems. It will mobilise researchers with a solid research-track record at UCL on pensions, ageing and related issues, with a background in law, analytical philosophy, actuarial sciences, economics and econometrics. When it comes to pension design, these disciplines are closely intertwined and complement each other. Pension reforms must strike a reasonable balance between financial sustainability – an issue addressed by economists and actuarial scientists -- and social adequacy/justice – a topic on which philosophers at UCL have accumulated an internationally-acclaimed expertise. Secondly, the design of SAS pensions calls for governance principles that invariably point at legal and normative (understood, here, as referring to ‘norms’) issues for which the expertise of lawyers is highly desirable. Thirdly, the answer to many of the questions enunciated above require a proven ability to analyse panel data. And this requires a command of modern econometric/statistical methods.