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Notes on the future of the European "Social Market" Economy

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"*The net present value of future increases in health care and pension spending is more than ten times larger than the increase in public debt due to the crisis. Any fiscal consolidation strategy must involve reforms in both these areas. This includes Europe, where official projections largely underestimate health care spending trends. Given the magnitude of the spending increases involved, early action in these areas will be much more conducive to increased credibility than fiscal front-loading [...]. For health care spending, the outlook is much more challenging [than for pensions]. [...] Studies indicate that non-demographic factors - most notably technology, but also income growth and the expansion of insurance - explain the vast majority of spending increases in health [...]. Altogether, in the G-7 economies, the key policy challenge over the coming decades will be to make health care systems sustainable by containing costs as well as creating fiscal space in other areas so as to adapt to societal preferences and needs for a greater share of ageing-related spending [...]*"
(IMF, Ten Commandments for Fiscal Adjustment in Advanced Economies).

1. Introduction

Most European Union Member States run public welfare systems that are funded according to Pay-as-you-Go (PayGo) rules through social contributions and taxation.

Despite important architectural differences, two challenges related to demographical changes are endangering the sustainability of public finances and welfare systems in all European Countries.

First, lower fertility rates and higher life expectancy are not compensated by immigration flows and induce an ageing of the population. Second, the reduction of the share of active population is increasing the fiscal pressure on income and

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growth within PayGo budget rules, where higher entitlements for pensions and health must be paid for by tax increases or cuts in other mandatory spending programs.

The financing of health and pensions is facing common sustainability challenges, and it is important to consider these two entitlement programs within a unified framework. First, both pension and health expenditures are shaped by demography. Second, both pensions and health care are largely publicly funded within PayGo rules: contributions are made by the active population to pay benefits that are transferred, to a large extent, to the retired elderly. Third, each contributor to health and pension systems faces a certain degree of uncertainty on future benefits, which depend on the funding solutions and on the sustainability of the system as a whole.

Reforms to improve sustainability of public finances in relation to pensions and health have already been undertaken, and most European countries have adjusted retirement age and pension rules to account for increased life expectancy. However, in light of available projections, these reforms might not be enough to lessen future cost increases.

The increase in the ratio between the number of non-active old and the number of active workers is making it difficult to maintain a sound balance between future public expenditure and tax revenues.

Reconsidering the funding solutions for health and pensions might be more a necessity than an option for Europe.

2. Long-term projections for sustainability assessment

Projections on the evolution of age-related expenditure for health and pensions are of critical importance to inform policies, which can succeed in reconciling equity, economic growth, and fiscal consolidation.

Assessing the sustainability of a welfare system requires the analysis of future trends in expenditure and thus a forecast of future liabilities and entitlements.

The European Union set up a working group on Ageing Populations and Sustainability (AWG: Ageing Working Group), which develops medium and long-term projections for age-related expenditures. The fourth edition of the AWG Report was released in May 2012. The Report covers all the main items financed by member States through PayGo: pensions, acute health care, long-term care (LTC), education, and unemployment benefits. Medium and long-term projections on the sustainability of public finances incorporate some of the figures from the Ageing report and are regularly produced in the Sustainability Report, informing the process of budgetary consolidation within the Monetary Union.

While pensions will still constitute the most relevant budget item, health and long-term care costs are expected to grow at a faster pace.

The projections for both pension and health expenditure are subject to a certain degree of uncertainty, starting from the demographic component, for which AWG postulates a long- term convergence among member States.

In the past, projections exercises have constantly underestimated the magnitude of improvements in life expectancy. Those estimates have contributed to generating overly optimistic figures.

At present, stochastic frameworks used as best practice in actuarial projections (CBD, 2006), predict that (at a 90% confidence level) expected future lifetime at age 65 in UK, may range from 25.5 to 29.1 additional years in 2056. Taking the central value - instead of a lower or upper limit - for this figure may dramatically change the corresponding projected expenditure figures.

Against this background, stochastic modeling of longevity improvement should become a standard also for macro-financial official projections.[1]

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[1] Stochastic models provide, instead of point estimates, probability distributions. Hence, they not only report the most likely future scenarios, but also possible "best case" or "worst case", with corresponding likelihood. In practice, they represent the extent of uncertainty in the estimates.

Stochastic projections combine estimates of the predicted quantity of interest with an assessment of the uncertainty of these point predictions. The EU Sustainability Report – which already has incorporated a stochastic framework to project future debt – and some economists (e.g. Kotlikoff, 2013) have started to recognize the importance of a more comprehensive consideration and assessment of uncertainty in projections.

While pension expenditure projections are influenced mostly by the demographic component, health expenditure is influenced by a wider range of drivers: demography; individual preferences; health services productivity; income elasticity; public policies on cost containment and on copayment solutions; technological change, etc. Understanding the relationships between these different drivers and their relative impact seems particularly challenging.

While AWG projects a 2% increase in the incidence of EU health costs as of 2060, less conservative assumptions envisage more pessimistic scenarios[2]. Apart from the impact of the other relevant drivers, future health care cost projections are affected by a key, somehow neglected, source of uncertainty in the form of a "*longevity risk*", since life expectancy might grow faster than expected, together with the proportion of people's lives spent in disability or illness. This is especially true if we think that an increasing fraction of health expenses will be attributed to long-term care. If, as some studies already suggest, improvements in longevity will correspond to even longer periods of home care or residential care assistance and, to longer survivorship under treatment, ageing can be easily expected to play as a major driver of future increase in health expenditure[3].

In synthesis, the existence of large differences among different sources for health care expenditure projections points out the crucial importance of investigating further the cost drivers and their impact. The empirical literature has not yet come to a consensus on whether improvements in longevity and life expectancy are accompanied by improvements in health status or cause higher morbidity. A better understanding the relationship between technological change, longevity

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2 As an example, Oliveira Martin and De La Maisonneuve, 2013, focusing on the impact of technological change, predicts that a doubling of health expenditure by 2060 might happen.

3 Some authors (Zweifel, Felder and Meier, 1999) have argued that proximity to death is more important than age itself in determining healthcare costs. They suggest that demographic change per se has not a large impact on future aggregate health expenditure. However, the robustness of these results has been challenged with respect to the econometric methodology applied. On the contrary, Seshamani and Gray (2004) show that age indeed affects healthcare cost. Moreover, several recent contributions show that the proportion of people's lives spent in disability or illness has already increased to an average of 18.5 years, permanently modifying the expenditure profile at any given age cohort (Lancet, 2013).

improvements, and health costs for different age classes seem indeed particularly important.

In general, understanding and measuring uncertainty in health expenditure and pension projections are crucial, suggesting the importance of adopting stochastic rather than deterministic models. In fact, stochastic methods should drive a new generation of official projections on the impact of ageing on the sustainability of public finances. As the "solvency risk" assessment in risk management, this *stress test on future fiscal sustainability* is important to improve the quality of policy decisions and to contribute to a more transparent debate.

3. The sustainability assessment in Stability and Convergence Programs

In their annual assessment of public the sustainability of public finances, Stability Programs aim at promoting a coordination of the policy agendas of Member States.

Figure 1 conveys a synthetic representation of the incidence of PayGo funding for pensions and health on each occupied person, as a percentage of per capita GDP.
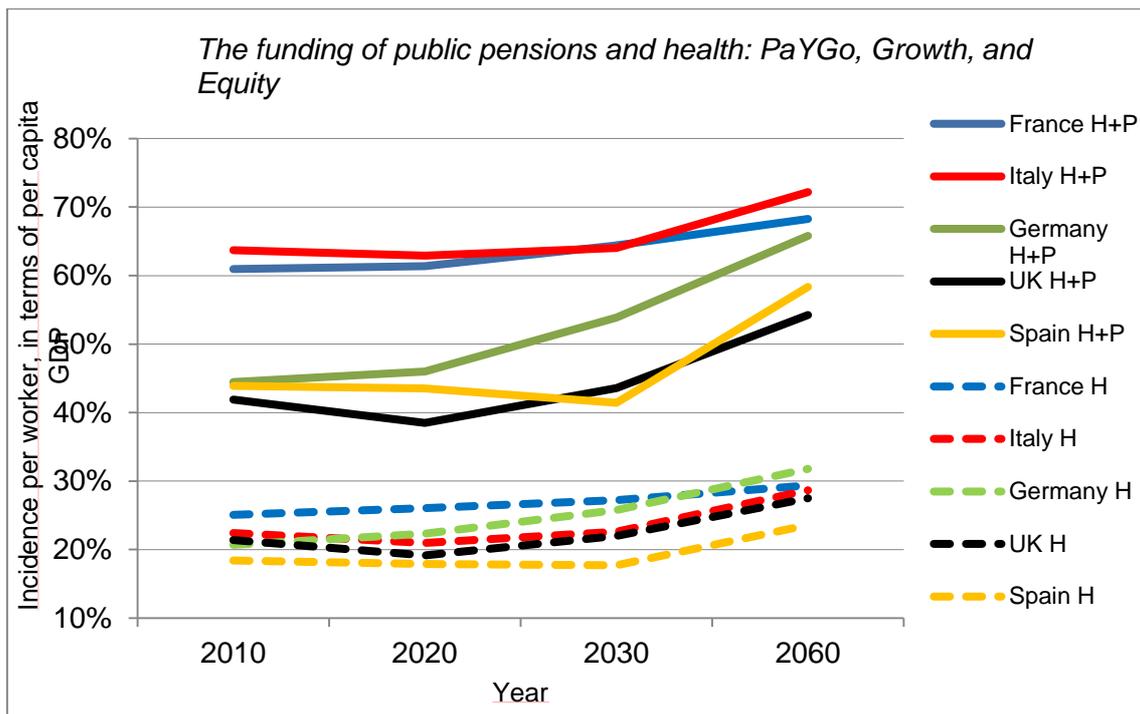

Figure 1: Funding requirement through PAYGO (solid line) for pensions and health per worker: incidence on GDP per capita; funding requirement through PAYGO (broken line) for health alone: incidence on GDP per capita (Source: our elaborations on CERM: see spreadsheets at: http://www.jdsupra.com/profile/nicola_carmine_salerno_docs/).

A general common trend, shaped by the rise of life expectancy and the fall of the share of working age population can be detected, with different intensities.

Italy and France show a negative initial outlook, influenced by demography, unemployment, and taxation, while the negative outlook for Germany in the long term is affected by the assumption of a convergence towards the EU mean adopted in the projections exercise.

Projections to 2030 predict a stable pension burden for all countries, except Germany, as a consequence of both higher initial levels and reforms already adopted. Projections beyond 2030 predict a rising PayGo burden for all countries, with a dynamics driven mostly by health and long-term care for Italy, France and UK and by both pensions and health for Germany and Spain.

In this new environment, Member States might soon be faced with a very difficult scenario, with a dilemma between reducing benefits and coverage and increasing taxes/retirement age.

Correspondingly, EU is facing a *welfare reform trap*, since there does not seem to be room for a further increase of taxes and social contributions in a context in which the great debate is how to create employment. The consequences of the current funding model on economic growth have to be assessed, and a balance must to be achieved, in which reforms that aim at maintaining the core distinctive features of the European Social Market Economy do not depress investment and production nor discourage employment.

4. Demography, Growth, and the Welfare System

In 1966, Aaron's "social insurance paradox" stated that the efficiency of PayGo social security schemes is when the sum of population and productivity rates of growth is greater than real interest rate.

While this condition was fulfilled during the thirty years following the end of the Second World War, thanks to high fertility rates and to high productivity growth, nowadays most OECD economies rely on PayGo but are far from the conditions that would justify its optimality (See Abel et al. 1989; Romer 1996, p. 89-91; Heijdra and Ploeg 2002, p. 596)[4].

Today, the almost exclusive reliance on PayGo rules for pensions and health cannot be justified based on efficiency conditions. Being financed mostly through payroll or personal income taxes, PayGo rules are designed to contribute to intra-generational redistribution. In addition, PayGo creates an inter-generational redistributive channel, which takes the form of a direct transfer of resources, and generates a risk-sharing mechanism between generations (Gordon and Varian, 1988)[5].

In PayGo systems for pensions and health, benefits are paid out of tax revenues collected in the form of payroll or personal taxes. Instead, benefits from funded systems are paid from individual funds built over time by the very same individuals who receive the benefits.

No reserves are accumulated in PayGo. Hence, future benefits are not directly affected by fluctuations in capital markets. At the same time, changing demographic and macroeconomic scenarios can affect the relationship between contributions and future benefits. In particular, in the context of ageing societies, PayGo entails increasing efficiency costs, and tend to induce distortions on labor and on capital accumulation. First, as argued by Feldstein (1996), an excessive reliance on payroll taxes can induce a deadweight loss, distorting demand and supply on the labor market, retirement decisions, occupational choices, and effort. Second, an excessive reliance on PayGo tends to depress savings and capital accumulation. This, in turn, affects investment and, ultimately, growth.

In fully funded programs, benefits are paid out of the capital accumulated during the working life. Future benefits are then influenced by capital market fluctuations,

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[4] In addition, important enough, Aaron's original argument on the optimality of PayGo or funded system was derived under a set of simplifying assumptions: constant age-structure of the population, individuals' full rationality, perfect functioning of labor and capital markets.

[5] Intergenerational risk sharing schemes can be introduced also in funded schemes (Cui et al., 2011).

while contributions produce fewer distortions on the labor market and individual entitlements are not directly affected by variability of demographic conditions[6].

While a transition from PayGo to fully funded schemes can produce a positive impact on the labor market and on economic growth in the medium long run, it will necessarily induce short and medium welfare losses for the "transition generation", which finds itself in the unpleasant position of "paying twice".

Until the transition is completed, current benefits of the elderly can be financed only through a reduction of public expenditure in other chapters of the budget, or, less credibly, through higher taxation or additional government borrowing. In any case, a Pareto-improving transition requires a compensation for the generations working immediately after the reform. This is difficult, but not impossible, since the transition can be smoothed through the adoption of "hybrid schemes", with both funded and PayGo-financed benefits[7].

Overall, a partial transition to a funded system can reduce uncertainty on future benefits, containing the impact of demographic trends and uncertainty, as well as the threat of ex post redefinition of the rules of the system due to sustainability "emergencies".

Medium term effects on growth will also likely occur, because a balanced funding architecture can contribute to capital accumulation and generate positive incentives for labor supply and demand.

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6 The features of funded systems are well known (Feldstein and Samwick, 1997; Kotlikoff 1996, 1998; Lindbeck and Persson 2003), the most relevant being: a) lower uncertainty on future earnings and benefits at an individual level; b) lower dependence of sustainability level on future demographic structure, at the cost of a higher vulnerability to capital market fluctuations; c) lower distortions in the labor market and dependence on domestic labor market; d) enhanced capital accumulation, increased capital stock available through funds.

7 Some authors have analyzed theoretically the implementation and the effects of a transition. Kotlikoff (1996, 1998) analyze the case for United States. They conclude that as long as the linkage between contributions and benefits is weak in the old PayGo pension system, while the transition cost is financed by a consumption tax rather than an income tax, a shift to a fully funded system is Pareto-improving. Raffelhüschen's (1993) analysis shows that a modest efficiency gain is possible for Germany's transition to a fully funded system by financing the old pensioner and compensating loser with borrowing and taxation. Based on the Auerbach-Kotlikoff(1987) approach Broer et al. (1994) conclude that to reduce the size of the Dutch PayGo system could be Pareto-improving as long as the PayGo pensioners are compensated by some fraction of the returns from the funded system.

5. Concluding Remarks

A few themes and priorities can be outlined, which can contribute to start a new dialogue on the future of the European Social Market Economy, with particular reference to pensions and health:

1. Increase the technical quality of pension and health care expenditure projections incorporated in the annual Stability Programs of EU Partners, developing adequate sensitivity analysis around the central scenario through sound stochastic models (*A stress test on fiscal sustainability of welfare systems*);

2. Strengthen the link between medium to long-term projections and economic policy guidelines in Stability Programs. Strengthen the link between EU policy guidelines and the annual budget of each Partner;

3. Promote a policy debate on the long-term consequences of an exclusive reliance on PayGo to fund health and pensions, in terms of economic growth and fiscal sustainability;

4. Promote a debate on how to achieve a broad convergence of solutions to finance health and pensions systems, to promote further mobility of labor and capital. For example, debating a possible evolution towards a common multi-pillar system for pensions and health – a PayGo universalistic pillar, a second, funded, mandatory tier, and a third private, voluntary pillar.

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