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EXECUTIVE SUMMARY

Reforming European Pension Systems

24 and 25 September 2004

Castle of Schengen, Luxembourg

Abstract

On the first anniversary of the death of Professor Franco Modigliani, the Luxembourg Institute for European and International Studies (LIEIS) organised a conference on 'Reforming European Pension Systems' on 24 and 25 September 2004 in Schengen. Initially, the intention was to hold this conference in the presence of Professor Modigliani who had written a comprehensive paper for the LIEIS. However, due to ill health, such a meeting had to be postponed repeatedly. A third date was set two days before Professor Modigliani's death. One year on, the LIEIS convened colleagues and friends to honour his memory and life-long works and to discuss his ideas in relation to pension reforms in Europe.

In the course of 5 sessions, approximately 30 participants from about 10 countries debated the following questions:

(1) the open legacy of Franco Modigliani and European pension reforms

(2) the Modigliani-Muralidhar approach to pension reform

(3) various funding modes and issues of transition

(4) lessons and outlook on pension reforms in Europe

(5) alternatives for pension reform in Luxembourg

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I. Memorial Lecture: 'The open legacy of Franco Modigliani and European pension reform'

Jacques Drèze, Professor emeritus, Centre for Operations Research and Econometrics, Catholic University of Louvain

Franco Modigliani's works on pension reform, obviously inspired by his lifelong attention to the lifecycle, span approximately the last five years of his life. His first important papers on this topic date back to 1998, one with Maria-Luisa Ceprini on social security reform in Italy and another with Arun Muralidhar on taxonomy of pension reform, culminating in the book *Rethinking Pension Reform* (Cambridge: CUP, 2004) authored by Modigliani and Muralidhar, the manuscript of which was completed five days prior to Modigliani's death. It is an interesting example that flies in the face of all opponents to the adjustment of retiring age to longevity, which Franco Modigliani worked on between the ages of 80 and 85. One of the reasons for his extraordinary commitment both to the research and the advocacy of pension reform was concern for the welfare of the less affluent elderly, be it in the USA, Mexico or Europe. Another reason was the intimate conviction that good economic theory matters to economic policies which, if properly configured, in turn matters to welfare. Beyond this concern and this conviction was genius turned into talent and passion into hard work. One can speak of an open legacy in the sense that Modigliani was always open to new people and new ideas. He himself sought and encouraged others to take new ideas further and to improve upon both research and policy-design.

The starting point of Franco Modigliani's interest in pension reform is the recognition that many, if not all, social security systems around the world face a situation of persistent and growing disequilibrium as a result of an adverse demographic evolution. In their present configuration, these systems only survive if the rates of contribution rise or the levels of benefits fall. In a pay-as-you-go system (PAYGO), such changes would be painful and socially problematic. Four key ideas and premises characterise Modigliani's research on pension reform. First of all, efficiency could be improved because historical returns to capital are higher than rates of return implicit in PAYGO systems (7% per year for stock market investment *vs*. about 2% per year for PAYGO). This favours funded schemes rather than PAYGO. The second premise is that in terms of funded schemes, defined benefits (DB) are preferable to defined contributions (DC). This is because predetermined retirement income (i.e. DB) involves no risk, whereas DC involves uncertainty as a result of not knowing the rate of return on the input. The third idea is that a funded scheme can yield a guaranteed rate of return of up to 5% per year, via an 'interest swap' which is secured by indexed government bonds. Finally, mandated schemes are superior to private plans, which imply transaction costs and management fees. A small annual fee for private plans adds up to a significant reduction of the amount of the total capital invested, up to 20% over the lifetime of a scheme. No rational economic agent would prefer to pay a 20% management fee upfront. Together with Ceprini and Muralidhar, Modigliani advocated a two-pillar system, composed of a mandated DB funded part and a voluntary DC funded part.

Beyond the important detail of this proposal, there are three issues that relate more generally to the works of Modigliani:

a. household behaviour

b. finance
c. macroeconomics

In terms of household behaviour, DB pensions are not necessarily efficient from the viewpoint of risk-sharing in any given society. There are two principles. First, according to the mutuality principle, all risks are pooled and then shared so that any uncertainty borne by an individual (i.e. future pensioner) should depend only upon society's aggregate risk. Secondly, the sensitivity principle defines how sensitive an individual's income, wealth or consumption should be to society's aggregate risk. This depends, *inter alia*, on individual risk tolerance, which is a function of individual preferences and which tends to diminish with age. It also depends on society's average risk tolerance. Risk-sharing would be most efficient at the world level but in reality the national level is standard. The EU level would be very attractive. This raises the question of the uncertainties surrounding the rate of convergence of EU member states, old and new. Ideally, the richer part of the EU would provide insurance for the poorer part, but there are many practical problems with such a 'solution'.

The finance aspect of Modigliani's proposals follows directly from the idea of an EU-wide scheme. One of the prerequisites for such a scheme is to introduce two new types of assets: first of all, bonds indexed on consumer price index (CPI) of EU member states and, secondly, assets indexed on aggregate nominal income of all EU member states. An active market for these two assets would provide a guideline for expected returns on such assets and an instrument for investment for funded pension schemes. Asked about how to set up such a market among sovereign states and in the absence of EU taxation, Jacques Drèze argued that each EU member state could create bonds indexed on its own national income. One could then bring these bonds together into a fund that would thus be based on EU aggregate national income. These bonds would pool risks at the EU level, a prospect that is not available to individual member states. In response to a question about how bonds indexed to national income have a different rate of return than national growth, he said that the new asset, suitably designed, would have a real return driven by the real interest rate, not the growth rate in the EU. The latter matters only for the risk premium, which should be close to that implicit in long nominal rates.

The macroeconomic dimension is that there are two distinct reasons to favour additional savings and investment. First of all, to facilitate the transition to a funded system and, secondly, to smooth out the demographic hump as a result of the retirement of the 'baby boomer' generation and the constraints it will impose on PAYGO. Physical investment is key to such a transition and the question is whether additional savings will engender additional investment. The (neo-)classical answer is that extra savings reduces interest rates and therefore brings about an equivalence of savings and investment. The labour-market implications depend on whether extra investment is capital-widening or capital-deepening. Econometric evidence suggests that the former boosts employment, while the latter substitutes capital for unskilled labour. Higher aggregate demand in virtue of higher savings and investment makes a significantly positive difference to the underemployment of resources (both labour and capital). Indeed, a 1997 manifesto co-written and co-promoted by Franco Modigliani states that to absorb unemployment in Europe, two-handed policies are needed that address simultaneously demand efficiency and supply rigidity.

Given that markets are imperfect and incomplete, wage rigidities, which fail to clear labour markets, at the same time provide an insurance function to unskilled labour. But the risk is coordination failure: faced with severe underemployment, the same prices and wages yield a lower level of employment than the optimal level. In essence, if all firms were to increase their labour-force by 1%, the additional income would absorb the extra output. In the presence of coordination failure, aggregate demand policies are at least as important as supply-side policies. Investment stimulation is key to generate higher aggregate demand and to correct the underinvestment bias originating in the gap between the social and the private discount rates; that gap is a transfer to interest rates from the labour-market where private and social costs differ. The only level at which investment and aggregate demand promotion makes sense is the EU-level. This is because national expansion tends to benefit neighbouring countries and fails to stimulate local and national demand as much as an EU-wide initiative would. What is paramount is to ensure that extra savings translate into extra investment within the EU; otherwise the EU would face Keynes' 'paradox of thrift' (more savings, less aggregate demand due to the negative income effect, less employment, less activity, less investment).

II. Working with Franco Modigliani

Arun Muralidhar, Chairman, M^{cube} Investment Technologies; Managing Director, FX Concepts, New York

The need for radical pension reforms stems not only from the crisis of national social security systems in developed countries but also from specific problems in developing countries. For instance, the World Bank advised China to adopt a scheme whereby contributions are mandatory and the scheme is defined contribution (DC) – i.e., invested in markets through private managers. This makes no sense because a mandatory scheme works best if it is DB. The challenge for research in this field is to develop a conceptual framework that is applicable to a wide array of countries with very different needs, unlike the 'one-size-fits-all' approach of the World Bank and other international organisations. The current crisis of PAYGO schemes can hardly be overstated. Low population and productivity growth require higher contributions: in the USA from 12% to 20% and in Europe from levels already at 25-30% to much higher levels. Such levels are unsustainable and the volatility of contributions is very high for small changes in PAYGO parameters. There is moreover a poor link between contributions and benefits (pay-in and pay-out): benefits tend to be too generous and thereby provide the wrong incentives. Finally, there is no budget cushion in European and other countries to bail out the system in times of crisis as we are in today.

The only feasible and viable alternative is a transition to a (partially) funded system. The key benefit to funding is not that it provides a higher rate of return, but that it can minimise the volatility of contributions, which is very high under PAYGO schemes. Some international organisations and countries tend nowadays to copy the Chilean (and to some extent the Mexican) model, which is characterised by three transition features:

a. from a PAYGO scheme to funded system

b. from DB to DC

c. from publicly managed to privately managed funds

While the first feature is acceptable as problems faced by social security schemes globally are financing problems, the second and the third are not because the privatisation of social security only privatises risk, as Franco Modigliani put it. A privatised system is ‘Robin Hood in reverse’, robbing the poor and handing over wealth to asset managers. The argument that privatised systems are superior because they offer ‘choice’ is simply not borne out by empirical research, not least because the poor have neither the means nor the access to the necessary information and most participants in Sweden and Australia (and even the World Bank’s own staff) rarely exercise such choice as they are not educated on these topics. What is more, both the Chilean and Mexican cases do not track the overall accumulating debt as the government has an implicit contract to prevent people from retiring poor.

Franco Modigliani’s approach, as highlighted in the book, contrasts sharply with the current PAYGO scheme as well as the privatised model. First, the most efficient way to finance a pension scheme is to combine PAYGO and funding, and the best way for individuals to achieve retirement objectives is to have access to DB and DC funds. Secondly, pooling assets reduces not only the profits that accrue to asset managers but, crucially, also the risk that accrues to contributors and recipients (i.e. future and current pensioners). People worry about mismanagement of pooled funds under the control of governments. The best way to prevent this is to set a simple benchmark, i.e. a guaranteed rate of return through a swap between governments and social security. If this is done annually, it has the additional advantage of providing a check on government policy (no fiddling with pension accounts or with public finance as mismanagement of funds will lead to higher payments by governments and direct recognition in the budget). The implications of such a scheme are as follows. First, contributions would be lower and more predictable. Secondly, there would be a guaranteed rate of return on all contributions, thereby linking contributions to benefits. Thirdly, the costs of asset management would be lower. Finally, there would be sufficient scope for variation, e.g. dual-assets as a result of combining DB and DC or the pooling of assets and of liabilities. The point is that the greater the diversity of participants, the better the scheme and this makes it particularly appealing for a pan European system. But there are a number of transition problems, in both developed and developing countries because of levels of public debt and budget deficits. After all, a funded system is superior only because assets have been accumulated and to transition to a funded system requires additional contributions.

Asked about what would happen if the fund was doing better than the guaranteed rate of return, Arun Muralidhar said that this raises the question of inter-generational equity. In terms of the ratio of assets to liabilities, the principle is that if this ratio rises, additional assets can at first be kept in a ‘sinking fund’. If this rise is permanent, then it is possible and desirable to bring down the level of contributions in line with the higher realised rate of return. In other words, a publicly funded system allows for variable contributions and thus maximises efficiency. However, Jacques Drèze contended that a fall in this ratio would force up contributions over time, even if national governments that bear the risk have an infinite time horizon. There is also the danger that the Treasury not only funds the deficit but also pockets any surplus. Elsa Fornero wondered whether the infinite time horizon does not reintroduce the principle of PAYGO. To which Arun Muralidhar replied that in a funded system there is not absolute redistribution but inter- and intra-generational risk-sharing. The point is that in a mandatory system with an infinite time horizon, risk-sharing is inter-generational and ensured by national governments with no shortage of funds over time. Risk is therefore not borne by individual economic agents or the private sector.

III. 'The state we're in': Present and future challenges to the viability of European pension systems

1. Introduction: Sergi Jimenez-Martin, Associate Professor, Department of Economics, Pompeu Fabra University, Barcelona

There are some myths about why the current system is in crisis. Contrary to a widespread view, the unfavourable demographic evolution only accounts for about 1/3 of the total problem. The bulk of the crisis is the consequence of a wrong incentive structure (due to excessive generosity, e.g. disability benefits, early retirement settlements) and misuses within the system (inefficiency, public accounting tricks, etc.). If the current pension system is close to bankruptcy, which it is, and if the only viable alternative is a fully funded system, which it is, then the main challenge is how to share the cost of transition. Key to the financing of a funded system and of the related transition costs is the labour-market, which in part depends on demographic factors such as fertility, life expectancy and immigration. Based on conservative estimates and forecasts, the female participation rate will rise to as much as 80% and the active population will tend to work longer. In terms of the labour-market itself, it is crucial to reform a number of implicit taxes on work, such as minimum pension levels. One strategy is to adopt a mixed system: a first pillar based on PAYGO, complemented by a compulsory occupational pension and also private schemes. The point is that the pension system depends not only on demography but also on the labour-market and that a funded system would remove some negative incentives under the current arrangement. A funded system is evolutionary and thus has the additional advantage of being adaptable to new situations.

This raised a number of questions. First, why are occupational schemes better than the fully privatised, say Chilean, model (Arno Tausch)? The Chilean model does not work because it fails to provide pension for poorer workers and because it does not incorporate the costs of transition. Secondly, what is the status of occupational pensions (Arun Muralidhar)? The problem is that companies often have no or little expertise in managing pension funds. It is therefore preferable to have personal accounts that are transferable from one job to another. It is also preferable that the national system as a whole and not the individual contributor or the employer bears the costs of transition and the risk involved in a mixed pension scheme.

2. Discussant: Peter Scherer, Counsellor, Directorate for Employment, Labour and Social Affairs, OECD, Paris

Labour force participation is central to the question of pensions. There are a number of paradoxical developments. First of all, fertility is now a matter of choice but the female participation is still a problem. Secondly, employment levels are too low, yet many countries induce one parent to stay at home. Thirdly, early retirement is still seen as desirable, although it is adverse to the sustainability of pension schemes. Fourthly, disability benefits are not always and everywhere too generous; but they create no incentives to return to work because of their implications for pension entitlements. Finally, higher life expectancy is cited as a problem (pension, health, disability, etc.), but there is evidence to suggest that as people live longer, some costs are deferred (e.g. health care). All of which indicates that it is reasonable to link retirement age to life expectancy.

One of the ideas of Modigliani's work on the life-cycle hypothesis and his work on pension reform with Maria-Luisa Ceprini is that individuals are on principle free to decide when and where to spend or to save. There are however significant differences between Anglo-Saxon common law and the continental tradition. In continental Europe, individuals are not as free as in the Anglo-Saxon world, in the sense that those in work have a duty to support not only themselves and their spouses but also relatives. For instance, in France, children up to the age of 26 have a legal entitlement to a minimum income from their parents *(pension alimentaire)*. In other words, there is a bias towards earnings-related pension schemes. In Australia, on the other hand, there are plans to complement citizens' pension with earnings-related pension to create extra incentives. In Britain, such a system died a slow death, unnoticed and unopposed. In Germany, there is not only a looming pension crisis but also a funding crisis of the 4th-tier system of care for the frail elderly *(Pflegeversicherung)*. The point is that poverty alleviation cannot be the main consideration in reforming social security.

Asked about whether the looming crisis of the care for the frail elderly and for the disabled in both Germany and Austria might not be resolved by capitalisation (Arno Tausch), Peter Scherer said that the burden will only be unsustainable if the current trends in disability persist. But it is also envisageable that new drugs and new treatment might alleviate the problem. Capitalisation does not address the need in the short- and medium-term, but a shift to capitalisation could in principle include an element of care for frail elderly. In response to a question about whether pensions as a social benefit should not bear a relation to the wage level and whether wage levels should reflect this (Robert Kieffer), Peter Scherer explained that in a funded system the realised return takes account of wage inflation. A mixed system that is partially funded enables to hedge bet regarding future productivity growth. There was also a debate about whether the consumer price index (CPI) is the adequate benchmark and whether assets should not be indexed on quality of life estimates (Gerhard M. Ambrosi).

IV. Debating Franco Modigliani's ideas: Financing present and future pensions – pay-as-you-go, privatisation, or risk-sharing through a common portfolio?

1. Introduction: Elsa Fornero, Director, Centre for Research on Pensions and Welfare Policies; Professor, Department of Economics, University of Turin

Thus far European pension reform has focused on implicit funding and has taken the form of improving at the margins the long-run sustainability of PAYGO schemes. Franco Modigliani's work addressed explicit funding and showed that on the whole a publicly funded system based on risk-sharing via a common pool of assets is superior both to PAYGO and to privately managed funds. However, a funded system raises at least three problems. First of all, the calculation of risk in relation to projected rates of return; secondly, the costs of transitional processes; thirdly, volatility, if the rate of return is higher than GDP growth. Modigliani tended to favour a publicly funded system because of his distrust of financial markets and asset managers. The idea is not to set up a mixed scheme like in Italy but to inject funding in order to launch a process of capitalisation in the course of which contributions and benefits can be adapted in line with the overall economic development. There are substantial political risks involved with such a system because the costs of transition involve the sensitive issue of substantial redistribution (Italy is still paying for transition to a partially funded system). Although high returns make transition costs look small, a key problem is that the most appropriate level for a funded system – the EU – is not moving towards a uniform system, because pension policy falls under the principle of subsidiarity, which in practice means the national level. However, there have been intense discussions over a long time about a common framework and a set of 'good practices'. A move towards an NDC system (providing benefits indexed to GDP growth) integrated with a funded component seems a good policy.

2. Discussant: Pierre Pestieau, Professor, Research Centre on Public and Population Economics, University of Liège

The transition from PAYGO schemes to fully funded systems raises a number of key questions that have not been addressed. First of all, does a massive change in public debt produce more winners than losers or vice-versa and does it entail positive or negative inter-generational redistribution? Secondly, if such a transition is effectively about asking the private insurance business to buy social security at the price of liability, is there not a perfect equivalence between PAYGO schemes and fully funded systems because there is no fundamental change in terms of real economic efficiency or welfare effects? What takes place is a transition from a redistributional system to individual funded system, i.e. from inter-generational to intra-generational redistribution. This in turn raises questions as to whether this transition is costly and/or ineffective and whether risk aversion does not vary across different social classes and professions. Thirdly, the issue of generosity (benefit levels, early retirement, special care) is ambiguous because empirical evidence shows that there is no significantly positive correlation between poverty alleviation and the reduction of inequality. In an important sense, programmes for the poor are poor programmes! There are also doubts about the relation between poverty alleviation and the degree of openness of national economies.

3. Questions and discussion

There were questions about the following aspects: If the replacement ratio is more or less the same for the poor as it is for the rich (e.g. in Italy and France), then the rate of return is higher for richer than for poorer people and thus produces regressive, not progressive, redistribution (Elsa Fornero). Do not productivity, growth and investment matter to the rate of return in the transition to a fully funded system (Serge Allegrezza)? Does not the state have a short-term perspective dictated by the electoral cycle rather than an infinite time horizon (Arno Tausch)? Do not the costs of transition depend on the desirability of more capital accumulation in a society, taking into account its degree of openness, both to trade and to capital movements (Jacques Drèze)? Are there not significant differences across different sectors and professional categories that make a compulsory occupational pension problematic? Is not a rate of return of 5% per year excessively optimistic (Norbert von Kunitzki)?

In response to these questions, it was said that there is a difference between reducing inequality in terms of improving the GINI coefficient and helping the poor in terms of redistribution. There is equivalence between an immediate transition to a funded system with the concomitant increase in public debt and making explicit currently implicit debt that arises as part of a PAYGO scheme. What is crucial is not the level of debt in the case of one or the other pension system, but the rate of accumulation of capital. One way would be to have a fully funded system that is publicly managed but individualised (i.e. occupational individual pension accounts) and deal with poverty alleviation separately, but this might not be politically feasible.

V. Pension reform in Europe: Lessons and outlook

1. Introduction: Michael Orszag, Head of Research, Watson Wyatt, London; Research Fellow, Institute of the Study of Labour, Bonn

European pension reform raises five key points. First of all, expectations, social security and poverty. The issue is not whether poverty alleviation is possible, because all European countries have the means to do so, for instance by way of a minimum benefit. The issue is not to meet income but consumption needs (and health care needs). So the question is the level of replacement rates for those who are in the poorest brackets, especially the elderly. This in turn implies redistribution from the middle classes, who expect intergenerational resource allocation, to other groups. Private pensions might be a way to convince the middle class that their expectations will be met.

Secondly, there should not be an excessive focus on financial education. The extent to which people understand their current arrangements is very limited, including those with an advanced university degree and working in financial services. There is no evidence that financial education works. Unlike the World Bank approaches which have been predicated on the idea that financial education coupled with DC makes a significant difference, there needs to be much more improvement within the intermediary sector in the move to private scheme, i.e. the private pension funds and the advice and information private managers provide.

Thirdly, there is a clear need to innovate in design. There is no clear universal optimal design. Just like people's human capital takes different forms in different sectors and businesses, this sort of diversity can be transposed to pension schemes. The choices are structured by risk-adversity regarding human capital (young people) and financial risks (older people). So the optimal design is also a function of age and the nature of the profession and occupation. The point is to identify what people expect and want and what products they need, not what they are currently receiving or what theoretical models propose.

Fourthly, it is critical to take account of annuities and payment patterns. There is sufficient evidence to suggest that people do not insure against the risks of longevity, unless they are forced or induced to do so. Annuities markets tend to be very small in very different countries. Some say that annuities are too expensive, but this is not true for bond-backed annuities, which are more competitive than comparable government bond rates, but those in socio-economic groups with a lower longevity tend to be at a disadvantage. There are also supply-side problems, in the sense that private suppliers cannot replicate long-term government bonds and consumer understanding of private schemes.

Fifthly, there are significant decision-making problems not only for private individuals and governments but also for employers. The trustee structure of many occupational pension systems is showing some signs of weakness as the high financial exposure of pension funds is beginning to necessitate more specialist skills and risk management systems and products.

2. Introduction: Arno Tausch, Adjunct Professor of Political Science, University of Innsbruck

Against the background of a number of studies by the World Bank, there has been some pressure for the EU to set up a unified pension structure. This raises, *inter alia*, the question of the social implications of the three-pillar reforms. Drawing on the idea of 'long cycles' of world development and economic structures, it can be established that there are significant turns, such as occurred in 1880, 1930 and 1980 and that these turns engender dramatic changes in the overall socio-economic configuration. Given that private pension systems make up perhaps as much as 40% of total world GDP, they are a considerable force in the global economic system. Any pension reforms will therefore entail fundamental changes and have a significant impact on economic growth. For some, the World Bank's proposals (pension systems should be based on three pillars, where pillar one is a public (statutory) system (generally financed on the PAYGO principle), funded occupational or other funded systems constitute the second pillar and personal pension arrangements the third pillar) will have an unambiguously positive impact on economic development, spanning benefits such as increased saving and investment, higher growth, the devolution of power from the state to individuals and an improved work ethic. But what are the real societal effects of the World Bank proposed reforms? Based on UNDP criteria and indicators, there is no evidence that the implementation of these reforms produces impoverishment in the countries concerned, i.e. the 18 reformers among the sample of 109 countries. Such pension reforms might well constitute an important resource for future economic development. The question is how pension reform fits into a macro-sociological analysis of world systems.

3. Discussant: Eric Thode, Project Manager, Economics and Social Affairs Department, Bertelsmann Foundation, Gütersloh

In the light of current reforms, a number of recommendations can be made. First of all, to strip the existing pension system of all the inefficiencies caused by granting certain privileges to certain target groups, e.g. early retirement schemes and other forms of cumulative unintended redistribution that undermine sustainability. Germany is a case in point of systemic inefficiency and also of problematic financing mechanisms. For instance, in Germany, coupled with rigidities in the labour market, the employers' share in the contribution rates to the pension scheme is such that there are adverse effects on both employers and employees. Secondly, to make adjustments in view of increased longevity and the changes in the demographic structures of European societies. Such measures would include raising the retirement age and curtailing early retirement possibilities and also lowering benefits, which is the most controversial and problematic aspect of pension reform. One way to achieve the latter is to revise the existing pension formula and to make it safe from discretionary influence of politics. The third recommendation is to promote private scheme and occupational schemes, which could be embedded in private schemes and which are sensible instruments to provide pension insurance. This is because, precisely in the face of inadequate financial education, myopia and passivity, occupational pensions can confer a mandatory character to individual private schemes. If given the chance to opt out of such a system where the employees cover the whole contribution, employees tend to keep this scheme, possibly as a consequence of myopia and passivity. The fourth recommendation is to improve demand, both at the aggregate and at the individual level.

4. Questions and discussion

Asked about whether increased longevity implies only abolishing early retirement or also reducing benefits at the point of early retirement, Eric Thode said that abolishing early retirement would improve the efficiency of existing pension systems. The point is not to eliminate the possibility of early retirement as an individual preference, but to take into account the efficiency implications of this option, i.e. actuarially fair deductions, which is not done under current arrangements. In response to a question about the necessity to study the impact of pension reforms in relation to underlying socio-economic structures, Arno Tausch argued that there is a close correlation between UNDP social indicators and economic growth. But equally the next step is to use further economic variables in assessing the impact of World Bank pension reforms. There is not sufficient empirical evidence on old-age poverty to give a verdict on the social implications of World Bank proposals. On this point, Pierre Pestieau said that only the OECD has produced some data but that the World Bank lacks any figures on this aspect of the reforms.

The discussion also centred on the World Bank reforms and possible alternatives. One question was about whether it is at all possible to subdivide neo-liberal reforms and policies and therefore conclude that pension reforms have positive socio-economic effects (Philipp Thomas). There was also a precision why Franco Modigliani opposed World Bank reforms. According to Arun Muralidhar, to mandate the system to do anything other than provide DB causes very high costs. How to guarantee a benefit while minimising the contribution rate and its volatility, minimizing the potential implicit and explicit public debt and minimizing transaction costs? The entire focus of Modigliani's critique is analytic. The World Bank has made the mistake of equating funding with DC, i.e. to make DC look like DB. However, Michael Orszag replied that the problem is not the objective function but the nature of the constraints, which vary across different age and professional groups. Arno Tausch suggested that there be detailed empirical investigations of the five 'Modigliani model countries' (a term borrowed from a World Bank study): the Irish Republic, Canada, Japan, New Zealand and the former peoples' pension fund in Sweden. According to the international press, the model works very well in Ireland and Canada. But there are very severe problems in Japan, significant problems in New Zealand with respect to the use of 'super-annuation' funds, and mixed results in Sweden.

VI. Pension reform in Luxembourg: What are the alternatives?

1. Introduction: Georges Schroeder, Director, General Inspectorate of Social Security, Luxembourg

Aging population and lower contributions in Luxembourg mean that fewer resources will have to support more pensioners. There is suspicion on the part of political decision-makers, trade union and employers' representatives that higher contributions to the pension system regularly demanded by social security officials concern a horizon that lies beyond the next general election. As long as there was rapid economic growth and a widening of the active contributing population, fears of higher contributions proved to be unfounded. Indeed, over the last 20 years, the active insured population has more than doubled from about 140,000 to 300,000 people. Given that over the same period the number of pensioners increased more slowly, the contributor/pensioner ratio dropped from 48.6 to 41.2. There is a mandatory pension scheme in Luxembourg, with DB and pensions price- and wage-indexed. The replacement rate for low-income groups is higher than that of higher-income groups. The current mode of financing the pension system adopted in 1984 provides for a PAYGO scheme on a 7-year coverage period with a minimum of 1.5 times of annual spending. The mandatory contribution set by law at 24% is shared equally between the employee, the insured person and the state. The required PAYGO premium is 22% at the moment and excess revenues allowed over the years to increase reserve funds to a level of up to 3 times the annual expenditure.

Pension discussions in Luxembourg were poisoned as a result of the existence of separate public sector systems, which provided for a replacement rate of over more than 80% of the highest public sector employees and were financed by the state. The trade unions of the private sector sought equality with the scheme for their constituency. The 1999 reforms stipulated a reduction of the benefits of public sector scheme over a 40-year transition period. However, the benefits of the general pension system were raised by 7% in 2001 in order to establish what was called equity between the different schemes. Only an average annual economic growth of 4% will ensure that the maturation effects of the scheme could be compensated by the accumulated reserves that continue to grow at present and in the coming years. But lower growth will make adjustment necessary. The recent economic slow-down requires a more sober outlook. The end of the present 7-year coverage will take place in 2005. Will this be an opportunity to appraise the future of the pension system beyond the 7-year horizon set by law and engage in reflections and debates about a long-term reform process?

The discussions on pension reforms often boil down to a comparison of the merits and disadvantages of PAYGO and funded system and public and private system. But this is a secondary question, because pensions have the primary function of providing income security to the elderly and the disabled and their families. It is a key factor in maintaining social cohesion and therefore exceeds the question of the mode of contribution. The nature of pension schemes is directly relevant to questions such as the upbringing of children and part-time employment. There are in other words fundamental issues of inter- and intra-generational redistribution. Questions about the burden on employers and employees and health and long-term care also arise as a consequence of the nature of the pension system.

How could Luxembourg deal with higher costs? In anticipation of future costs, the existing compensation fund should be increased. But in the past excess revenues have led to higher benefits rather than lower contributions and increased reserves. Moreover, the average retirement age is already lower than the legal retirement age of 60. This is because of high invalidity rates and early retirement regulations. Raising the retirement age, extending the period of contribution and restricting the possibilities for early retirement could compensate for the higher longevity. Replacement rates are very generous and could be reduced without harming pensioners. Lower indexation is another way to cut costs. At the moment, fiscal incentives encourage complementary funded pension schemes, at the level of both the voluntary private base and company plans.

2. Discussants: Muriel Bouchet, Economist, Central Bank of Luxembourg
Serge Allegrezza, Director, Central Service for Statistics and Economic Studies (STATEC), Ministry of Economics, Luxembourg

Muriel Bouchet presented some stylised facts about the private sector pension scheme (the so-called 'régime général') and examined the long-term sustainability of the Luxembourg pension system. For a long time Luxembourg has seen substantial surpluses of about 2% of GDP per year and as a result the reserves of the private sector system amounted to 23% of GDP at the end of 2002. But while at first sight the situation is very favourable, the long-term sustainability is far from guaranteed. Not longevity but the influx of cross-border workers over the last decade is the main stylised fact of Luxembourg. Even if the long-term impact is unclear, the short-term impact of cross-border workers is undoubtedly very positive. This is because of the relative young age of cross-border workers as compared to the resident population. Thus they make a disproportionately high contribution to the revenue pension system, about 30% of the total revenue of the private sector system, against only about 15% of expenditure. Another phenomenon in Luxembourg is the average net inflow of immigrants, approximately 4,000 per year, with a comparably significant mismatch between contribution and expenditure. There is one important difference between cross-border workers and immigrants, which is that the long-term impact of immigrants is to raise birth rates and thereby alleviate population ageing.

Based on the Central Bank's model and based on the 'no policy change' assumption, the private pension system in Luxembourg is unsustainable with rates of annual economic growth below 5% in real terms. And 5% growth in real terms would require a significant increase in cross-border workers in order to ensure a viable pension system, from about 100,000 at the present to close to 600,000 by 2040. This is unrealistic in terms of the impact on the housing and transport infrastructure. Birth rate would also have to rise to improve the sustainability. Given the positive short-term situation, the political cycle might not grasp the urgency of tackling the long-term sustainability problem.

In his presentation, Serge Allegrezza argued that Luxembourg is in a very peculiar position, in the sense that the current situation is very favourable yet at the same time the long-term forecasts predict the non-sustainability of the existing pension regime. This is because the current system rests on a number of stringent conditions:

(1) a strong population growth of about 10% over the last 10 years

(2) an exceptionally low stock of public debt (only about 5% of GDP)

(3) budgetary and social security surpluses (even if in the course of the recent slowdown the budgetary surplus has all but disappeared and there might be a deficit in 2004)

(4) high employment (60% as compared with the benchmark of 70% in the Lisbon Agenda), but low employment of over-55s (only 28%); this is compensated by cross-border workers who represent over 1/3 of the total workforce

(5) figures on the median income and the GINI coefficient show that income equality is very high

The paradox of a short-term favourable situation and a long-term degradation raises the following questions: should Luxembourg reform its pension system? If so, how? What kind of reform? From PAYGO to funded system or to a mixed system? With 2% real growth, the pension system would be sustainable according to an ILO study but any lower growth rate would cause a deficit and lead to an unsustainable regime according to a Central Bank study. The main factor will be population growth, whether through immigration or cross-border workers; it is already clear that over time the natives will be a minority in their own country. The key question is the propensity to reform, which is a function of the worsening situation. This might suggest that Luxembourg will debate for a long time before taking any decisive action, i.e. engage systemic reforms.

3. Questions and discussion

About cross-border workers, Raymond Wagener from the Luxembourg General Inspectorate of Social Security insisted on the regional dimension of Luxembourg's economic situation, which can only be understood in the framework of the *Grande Région*. In this sense, Luxembourg is not unique but can be compared to cases such as Saarbrücken and Geneva. What is at stake is not only the sustainability of the pension system but that of the economic system as a whole, in Luxembourg, in the *Grande Région* and in the EU. The high level of benefits is unsustainable over 30-40 years and therefore requires reform, but of what kind? Parametric, structural or systemic? One limited structural change would be to index retirement age on life expectancy. Luxembourg already has a partially funded system and also an in-built cushion for the future benefits in the form of cross-border workers. This lends weight to increasing capitalisation. Perhaps the greatest challenge is to build a consensus and to take account of the various transaction costs.

Jean Langers from STATEC drew attention to some socio-demographic aspects, such as the evolution of the participation rate in the labour market and of mortality rates. Demographic projections conducted by Eurostat are rather more optimistic for Luxembourg than other studies would suggest, in particular with respect to life expectancy. He also argued that the neighbouring Land of Saarland is of a similar size but has 1.1 million inhabitants, so that a doubling of the population over 50 years is not unimaginable.

Georges Als, Honorary Director of STATEC, made three observations. First of all, is there any coordination between the four institutions that work on pension reforms (the General Inspectorate of Social Security, the Ministry of the Budget, STATEC and the Central Bank)? Secondly, the debates seem to focus on private pensions, but are there any reflections on public pensions? Thirdly, if the inflow of labour is crucial and if there are physical limits, are current trends (immigration and cross-border workers) sustainable and are there reflections on the implications?

Tom Dominique of the General Inspectorate of Social Security argued that pension reform in Luxembourg is not so much a national problem but a case in point of the sustainability of a certain system and the need to implement reforms or a different system in order to make pensions sustainable; it is a systemic problem.

There was also a question from Jean Olinger from the General Inspection of Finance of Luxembourg about whether the Central Bank had calculated the effects of the outflow of money, since cross-border workers and immigrants (who might not live in Luxembourg after retirement) will represent as much as 1/3 of all pensioners and what wider societal effects might be.

Robert Kieffer, President of the 'Union des Caisses de Maladie' of Luxembourg focused on the scope of the inflow of workers, which has spanned a period of about 17 years at 3% per year, which is unprecedented for a PAYGO system, while at the same time lowering retirement age and increasing benefits. The result is that the pension problems in 2004 exceed those in 1985.

Arun Muralidhar asked how the current reserves were being invested. In the presence of such reserves, the Modigliani-Muralidhar model shows that the contribution rate can fall over time to a much more sustainable level. For Arno Tausch, the specificity of the Luxembourg model is to combine employment with a tax element (splitting up evenly the 24% contribution between the employer, the employee and the state). He also said that a scheme of migration stabilisation should offer immigrants a long-term perspective of residence. According to Professor Florence Legros of Paris IX-Dauphine University, Luxembourg illustrates the impact of immigration for the sustainability of pensions. The cumulative effect of immigrants can also cause future burdens that might strain the pension system and it is therefore crucial to think about this perverse effect. Big inflows of immigrant workers are not a solution to pensions schemes unbalances. Elsa Fornero argued that the projected crisis of the Luxembourg model might be exaggerated and that if reforms are required pension reforms should be devised autonomously from other structural reforms.

In response to these questions and comments, Georges Schroeder said that the state contribution of 8% was the main reform in 1984. He also explained that the investment policy used to be limited to three types of loans but that since 2000 Luxembourg has been devising strategic portfolios to generate higher returns. Muriel Bouchet argued that the problem of Luxembourg is that it requires large and growing inflows of cross-border workers and also immigrants for the functioning of its pension model. There could conceivably be a conjunction of parametric and structural reforms, combining some punctual changes like indexation to life expectancy. More radical changes like funding elements could also be analysed. On the participation rate, the Central Bank's forecasts rest on the assumption that the male rate will tend to remain stable while the female rate will rise to 45% at the end of the projection horizon. If the outflow of money were to be taken into account, the overall predictions regarding the sustainability of pensions might well be more negative. Serge Allegrezza was adamant that limits on cross-border workers are an illusion because within the EU there is free movement of labour. The political choice that has been taken is to facilitate long-term residence of cross-border workers. Muriel Bouchet explained that a sudden downward adjustment in the inflow of cross-border workers and immigrants would induce a significant deterioration in the financial situation of the private sector pension regime in the short/medium term due to the conjunction of lower revenue and sticky expenditure.

Final observations

Three dimensions characterised this conference. First of all, honouring the memory and the works of Professor Franco Modigliani, his life-long academic research and teaching and his energetic policy advocacy. Testimonies from colleagues and friends such as Jacques Drèze, Arun Muralidhar and Elsa Fornero paid tribute to Franco Modigliani. There was also a video showing of the memorial service held at MIT in December 2003 with a.o. Paul Samuelson and Robert Solow. The second dimension was a detailed explication of Franco Modigliani's ideas on pension reform. In the Memorial Lecture, Professor Jacques Drèze outlined Modigliani's approach to pension reform from a wider economic perspective and in the context of Modigliani's works. In the first session, Arun Muralidhar gave a comprehensive account of the meaning and implications of his joint work with Franco Modigliani on pensions and replied to questions and criticism. Both these interventions were in the spirit of Franco Modigliani who had always urged his colleagues to continue their reflections and explore their intuitions. The third dimension was an intense debate revolving around Franco Modigliani's ideas on pension reform in the course of four discussion sessions. There was wide agreement that Modigliani's analysis of the current and future pension crisis is accurate and that his and Arun Muralidhar's ideas are innovative. However, some participants wondered whether the Modigliani-Muralidhar model has improved the pension system in those countries which have adopted it and whether it is applicable to a broad range of different configurations.

In combining longer expositions and short presentations with concise responses, the format of this conference was appropriate to these dimensions and propitious to a continuous exchange of ideas. There was an equal focus on economic theory and empirical evidence and a descriptive and analytical overview of a wide array of European pension systems. Conjointly, the lecture, the presentations and responses constitute ample material for an edited collection.

What would require more research and debate is the feasibility of adopting and implementing an EU-wide portfolio of assets. This in turn would require involving a number of key policy-makers and civil servants, both from member states and the EU institutions (Council of Ministers, European Commission, European Central Bank and perhaps the European Parliament). In this sense, this conference could give rise to a series of seminars on how to reform the welfare state, including social security and the provision of benefits, in the wider context of reducing (long-term) unemployment and restoring and enhancing European competitiveness.

Adrian Pabst
LIEIS

Conference on

Reforming European Pension Systems

24 and 25 September 2004
Castle of Schengen

List of participants

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Bouchet, Muriel, Economist, Central Bank of Luxembourg

Clesse, Armand, Director, Luxembourg Institute for European and International Studies

Dominique, Tom, Attaché de la sécurité sociale, General Inspectorate of Social Security, Luxembourg

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