ASSOCIATION ACTUARIELLE INTERNATIONALE
INTERNATIONAL ACTUARIAL ASSOCIATION

May 9, 2006

Mr. Robert Holzmann
Director, Social Protection Department

Mr. Richard Hinz
Pension Policy Advisor
Human Development Network

The World Bank
1818 H Street, NW
Washington, DC 20433
United States

Dear Sirs,

Re: Old-Age Income Support in the 21st Century: An International Perspective on Pension Systems and Reform

I am pleased to transmit on behalf of the International Actuarial Association (IAA) our comments on the *Old-Age Income Support in the 21st Century* report released by the World Bank in February 2005.

These comments have been prepared by the Committee on Social Security of the IAA. If, upon reading these comments, you identify any points that you would wish to pursue, please do not hesitate to contact the chairperson of the committee, Hillevi Mannonen, or any of the other members of the committee. The IAA will be pleased to develop these ideas further with you.

Yours sincerely,

Yves Guérard
Secretary General

Attachment

cc: Ms. Hillevi Mannonen
Mr. Ken Buffin

Secrétariat: 800–150 Metcalfe, Ottawa, ON Canada K2P 1P1 ☎ 1-613-236-0886 1-613-236-1386
secretariat@actuaries.org / secretariat@actuaires.org — www.actuaries.org / www.actuaires.org

Table of Contents

1. International Actuarial Association ... 1
2. Historical perspective ... 1
3. The actual experience of the original World Bank model ... 2
4. The 2005 *Twenty-first Century* report ... 5
5. General overview ... 6
6. The complementary but essential role of the actuary ... 8
7. The multi-pillar approach and diversification ... 10
8. Sovereign government employees ... 11
9. The pay-out phase: the legacy of the shift to DC ... 13
10. DB versus NDC ... 15
    10.1 The case of the new Swedish system ... 17
11. Funding versus financing ... 18
12. Taxation: EET versus TEE ... 20
13. Comments with respect to other specific issues in the report ... 20
    13.1 Automatic stabilizers ... 20
    13.2 Employment savings accounts ... 21
    13.3 Risk of economic catastrophe ... 21
    13.4 DC Conversion ... 22
    13.5 Management of public assets ... 22
14. Comments on the feasibility of adopting the new 5-pillar system in the Gulf region ... 22
    14.1 Middle East region ... 22
    14.2 The GCC region ... 23
15. Conclusion: the need for a prospective approach ... 23
    15.1 A blue print for further research ... 24
    15.2 The informal sector ... 24
    15.3 Retirement age and future lifestyle ... 24
    15.4 A potential partnership in risk reduction ... 25

Appendix A - Full Member Associations of the IAA ... 26

Appendix A - Members of the IAA Social Security Committee ... 28

A Commentary on the
OLD-AGE INCOME SUPPORT IN THE 21ST CENTURY:
AN INTERNATIONAL PERSPECTIVE ON PENSION SYSTEMS AND REFORM
Released by the World Bank: February 18, 2005

1. International Actuarial Association

The International Actuarial Association (IAA) represents the international actuarial profession. Our Full Member actuarial associations total fifty-five in number, and represent more than 95 percent of all actuaries practicing around the world. The Full Member associations of the IAA are listed in Appendix A to this letter. The IAA promotes high standards of actuarial professionalism and practice and serves as the voice of the actuarial profession in relationships and communications with supranational and international organizations on matters falling within or likely to have an impact on the areas of expertise of actuaries.

These comments have been prepared by members of the IAA Committee on Social Security. The members of this committee are listed by name and association in Appendix B to this letter. Page number references in our comments refer to the print version of the Report, as released in book form. We appreciate the opportunity to make comments on this important World Bank *Report on Old Age Income Support in the 21st Century* and we look forward to participating in a meeting with representatives of the World Bank to discuss our comments.

2. Historical perspective

Until the beginning of the 1990s public pensions had not been a major focus for the World Bank. In 1994, a new approach for public pensions was considered by the Bank and promoted as the world paradigm for public pension reform.[1] This new approach was in fact inspired by the reform of the Chilean pension system (1980).[2]

In the 1994 report *Averting the Old-Age Crisis: Policies to Protect the Old and Promote Growth* the World Bank advocated a three-pillar approach and actively promoted the perceived advantages of the 2nd pillar mandatory system of individual savings accounts.

But it appeared at that time that the Bank's first priority in promoting this new approach was to contribute to solving the increasing public debt problems of governments in a number of developing countries. Many developing countries had found their debts growing due to the expected increasing financial obligations of expenditures of their national pension systems, among other major economic problems.

---

[1] The World Bank produced in 1994 a major report: "Averting the Old-Age Crisis," a comprehensive research study aimed at providing the main guidelines for the introduction of the new reformed pension system with a view to solving the current social security problems witnessed in developing and other countries.

[2] The Chilean social security pension system was reformed in 1980 and started operating in 1981, switching from the collective pay-as-you-go (PAYG) financed, publicly managed, defined benefit pension scheme to defined contribution, fully funded, individual accounts, with privately managed pension funds.

At the same time, the domestic market economies of target countries of interest might have found themselves in a better situation with the creation of private pension funds, which might have provided their economies with considerable amounts of savings thus channelling new investments and consumption, for the benefit of economic growth. Actually, the Bank's report appeared as a green light for many interested lobby groups and a number of politicians to launch a series of reforms based mainly on the Chilean experience.[3]

The 2005 World Bank Report on *Old Age Income Support in the 21st Century* evaluates the performance of structural pension reforms in several Latin American countries, ratifies some fundamental issues of the Bank's 1994 report and contests and rectifies others.

3. The actual experience of the original World Bank model

Before commenting on the contents of the World Bank's report, it seems appropriate to view the topic retrospectively, in order to understand better the reasons for the Bank's new approach.

Averting the Old-Age Crisis has been a factor in moving towards funded individual Defined Contribution (DC) accounts and, as World Bank policy, it influenced other donors and was thus far-reaching in its effect.

This move towards funded individual DC accounts was a reaction against unsustainable pay-as-you-go Defined Benefit (DB) systems and the fact that non-allocated assets had been used by Governments as sources of soft money. The individualization of DC accounts was expected to help prevent such abuses and, by creating a more direct link with the contributions, improve compliance and reduce evasion.

Experience seems to indicate that linking benefits and contributions does not persuade evaders to contribute; people evade because they prefer money now rather than later. And, of course, Governments have remained sovereign entities and typically act in an expedient manner with respect to decisions as to how to utilize available tax receipts and other resources.

It would be interesting to have a more explicit scorecard as to the emerging experience since there has been a price to pay starting with a major shift of risks to individuals:

- Participants have been moved to DC formulas more or less at the time real interest rates and mortality rates have been decreasing;

- This combination is resulting in highly variable replacement ratios and in lower pensions than we would see in the expected column of the scorecard.

This shift has been a major undertaking in social engineering away from solidarity, pooling of risk and redistribution, towards individual wealth accumulation, inheritance and gender differences that should be benchmarked separately against the objectives of poverty alleviation vs. asset accumulation or maintenance of standards of living.

---

[3] Alejandro Bonilla-Garcia: "Recent reforms and experiences of pension schemes." International Social Security Association: Regional Conference for Africa, Lusaka, August 2005.

Another feature of recent history is that the complementary essential step of providing for the payout over the life time of the retirees of the capital accumulated under the DC formula has not occurred, thus significantly reducing the probability of achieving the fundamental objective of a scheme that exists first to provide sustainable financial security in retirement. A greater emphasis on the payout phase would have helped at an early stage to develop the capacity of the insurance market to provide life annuities, the collation of statistics, and the exploration of alternative payout methods. However, it appears that annuity mandates may not always be easily implemented in Individual Account systems, due to the desire for total ownership even if it puts an individual's retirement security at risk and the nation's welfare systems at risk. Requirements to buy annuities reduce a person's ownership rights to use the funds as they desire.

We consider that actuaries and economists view Social Security systems in remarkably different ways.

When considering these models, it appears that economists have as their priorities:

- individual equity
- reduction in labour force distortions caused by social security (contributions and age of retirement)
- national savings
- strong financial institutions
- wealth creation

Some economists believe this naturally leads one toward a Defined Contribution model. However, this does not have to be the case. For example, a DB system can be individually equitable if it eliminates the subsidies to low-income, part-time, and temporary workers and the subsidized benefits to spouses and other dependents. Further individual equity can be enhanced by rated annuities and/or death benefits for less healthy workers, if desired. Labour force distortions can be reduced (to the same levels as found in DC systems) by reflecting all years of work (not just the last few years) in pay averages and benefit accrual rules, and by providing actuarially equivalent benefits at all retirement ages. National savings in DC systems may not be any safer than in DB systems if the nation borrows in order to divert contributions to the DC system. Strong financial institutions are best assisted through employer-based DB pension plans, and individual wealth creation can be very much improved by DB plans that create adequate pensions (i.e., larger than many individuals will save for themselves).

By comparison, actuaries tend to focus more on:

- insurance and risk sharing (based on the law of large numbers)
- annuitization for the longevity risk (or other similar mechanisms)
- low expenses
- a long-term view of stability and sustainability (not an annual balancing requirement)
- predictable benefits
- improvement in societal utility (of wealth)
- transparency and understandability

This focus on insurance, risk-sharing, and the law of large numbers, leads more naturally to Defined Benefit national social security models. Although some of the above can be obtained through DC systems, it is more difficult to maintain the above principles for all time, as can be seen from United States benefits history. For example, individuals with individual accounts who see their account balance every quarter will be more likely to demand access to them, and resist required annuitization (as experience has shown in the United States with IRAs and 401(k) arrangements).

It has been widely accepted that the original 1994 World Bank model has not been successful in meeting the proposed goals, i.e. providing adequate social security protection to the populations concerned and favouring the national economies of countries of interest.[4] The change in the Bank's original approach is nevertheless significant, since it reflects a clear divorce between the theory based on economic (macro and micro) assumptions and the practice that did not always work in the expected manner.

In particular, out of the Latin-American experience, that is by and large the only laboratory where pension reform has matured so far, many shortcomings have been recorded. An international social security expert, Carmelo Mesa-Lago, pointed out in 1998 that:

- There is no single universal structural pension reform model. It is therefore inappropriate to refer to a single reform as applying throughout the Latin-American region.

- Reforms have not generated increased labour force coverage, not even as far as membership is concerned; in fact coverage has diminished in terms of effective contributors.

- Ownership of individual accounts and the close link between contributions and pension benefits have not succeeded in solving the problems of compliance (evasion).

- To work properly, there has to be a number of private pension fund administrators. Experience shows that initially administrators proliferate, only to end up merging or disappearing, leaving only a small number in operation (oligopoly). Therefore competition has not worked efficiently.

- Capital accumulation has been important, but varies significantly from country to country.

- There has been an enormous fiscal cost due to three responsibilities of the State vis-à-vis the reformed systems:
    - the original public system deficit;
    - the recognition bonds of past acquired rights of the insured populations;
    - the level of minimum pension guarantees.

[4] Literature in this respect is quite abundant and it would be arbitrary to cite a limited list of them. But not all authors are critical of the WB policy (as it has been applied in the past). In fact, some of them are skeptical and even surprised to see the WB new policy developments and approaches.

A number of other shortcomings could be mentioned:

- high cost of transactions (administrative costs);
- low returns on investments;
- low projected pension levels;
- effects on capital and financial markets;
- general and gender inequity;
- isolation from politics.

No doubt this experience has influenced the Bank in undertaking a rethinking of its original model and proposing new solutions for national pension systems.

4. The 2005 *Twenty-first Century* report

The IAA welcomes the new World Bank report: *Old-Age Income Support in the Twenty-first Century: An International Perspective on Pension Systems and Reform.* The purpose of the report is to clarify and update the World Bank's perspective on pension reform; it is intended to conceptualize and explain current policy thinking within the Bank and communicate to the international public the Bank's framework for pension reform and, more specifically, to provide a guide to the criteria and standards that the Bank will apply in providing financial support for development projects that include an element of pension reform.

Since the last report, the actuarial profession and the World Bank have learned much about how social security systems work in a variety of contexts and with different designs.[5] The report is a welcome updating and a redefinition of the World Bank's policy and perspective on pension reform, based on its ten years of experience in promoting, introducing and implementing structural reforms[6] to public pension schemes at the national level. These reforms have been proposed and introduced mainly in Latin America and Central and Eastern European countries.

The main changes to the Bank's perspective concern the enhanced focus on basic income provision for all vulnerable elderly as well as the enhanced role for market-based, consumption-smoothing instruments for individuals both within and outside mandated pension schemes. The Bank increasingly recognizes the importance of initial conditions and the extent to which

---

[5] A related World Bank publication is Keeping the Promise of Social Security in Latin America (October 2004). The World Bank Independent Evaluation Group published Pension Reform and the Development of Pension Systems – An Evaluation of World Bank Assistance (February 2006). Another recent World Bank publication is Pension Reform: Issues and Prospects for Non-Financial Defined Contribution (NDC) Schemes. Although the current IAA comments are focused on Old Age Income Support in the Twenty-first Century, the IAA is aware of the contents of these three publications and their relevance to the debate of critical issues

[6] Also called "systemic" reforms. A structural pension reform is a complete change to the existing features of current schemes, i.e., a radical transformation of its social and financial bases, schedules of benefit provision, financial organization, administration and roles of the public and the private sectors in its implementation. A "structural reform" is different than a "parametric reform," i.e., reforms (made as a matter of current practice to existing national pension schemes) to specific functions or variables (rates of contribution, benefit amounts, retirement age, minimum periods of contributions, etc.).

conditions in a particular country necessitate a tailored or tactically-sequenced implementation of the multi-pillar model.
The new report reflects on the experience of the Bank over the last decade and acknowledges five main additions to the Bank's perspective:

a) a better understanding of reform needs and measures;
b) the extension of the multi-pillar model beyond the three-pillar structure to encompass as many as five pillars and to move beyond the conventional concentration on the 1st and 2nd pillars;
c) an appreciation of the diversity of effective approaches, including the number of pillars, the appropriate balance among the various pillars and the way in which each pillar is formulated in response to particular circumstances or needs;
d) a better understanding of the importance of initial conditions in establishing the potential for and limitations within which reforms are feasible; and
e) a strong interest in, and support of, country-led innovations in pension design and implementation.

The Bank's view incorporates several principles that are deemed essential to any successful reform. Three are featured as Key Principles:[7]

a) all pension systems should have elements that provide basic income security and poverty alleviation across the full breadth of the income distribution;
b) if the conditions are right, prefunding for future pension commitments is advantageous for both economic and political reasons; and
c) in countries where prefunding promises could be beneficial, a mandated and fully funded 2nd provides a useful benchmark against which the design of a reform should be evaluated.

The World Bank specifies certain goals and criteria for this purpose in stating that the primary goals of a pension system should be to provide adequate, affordable, sustainable and robust retirement income while seeking to implement welfare-improving programs in a manner appropriate to an individual country.

The Bank's mission is to achieve economic and social development goals in client countries around the world. The Bank emphasizes that the design of a pension system or its reform must explicitly recognize that pension benefits are claims against future economic output and, for pension systems to fulfill their primary goals, they must contribute to future economic output. Thus, reforms should be designed and implemented in a manner that supports growth and development and diminishes possible distortions in capital and labour markets.

5. General overview

This new World Bank report *Old-Age Income Support in the Twenty-first Century: An International Perspective on Pension Systems and Reform* is a more practical well-reasoned set

[7] Old Age Income Support in the 21st Century, World Bank 2005, page 5.

of thoughts compared to those contained in the more theoretical *Averting the Old Age Crisis* (1994), which was the Bank's first significant foray into the area. In the light of a good deal of practical experience of discussing, agreeing and implementing pension reform, the World Bank team of experts has developed a more balanced perspective, as indicated in the following points that are reflected in the Bank's current thinking, to which most actuaries agree:

- pension reform has to be tailored to the specifics of each country's situation, and all countries are different; cultural and regional differences require recognition and careful attention;
- introducing funded pension schemes can play an important part in pension reform, but it is important that a number of preconditions are fulfilled, and funding is certainly not a panacea; the status of economic development and the existence of appropriate financial infrastructure and institutions may be factors that influence the approach to considering funded pension schemes;
- funded individual accounts really need to be built on top of a firm base of basic publicly-financed social security, which can be flat-rate and should have much more widespread coverage than has often been the case in low to middle income countries;
- a basic citizenship pension (or demogrant) or a means-tested guaranteed minimum income may in some circumstances be more suitable mechanisms for providing the foundation than contributions-based social security;
- funded pension arrangements require substantial sophistication by those operating them and need to be well regulated;
- the pay-out phase is vital and much more attention needs to be paid to it than hitherto.

The IAA broadly welcomes the new approach, although noting the relative absence of recognition of an actuarial role in social security, and offers comments on a number of issues including the revised multi-pillar approach and the optimization of the financing path beyond a binary choice between funding and pay-as-you-go. The IAA believes that the Bank's thinking on annuitization and the pay-out phase appears to have not been fully developed and could benefit from expert actuarial input. These issues are further addressed in sections that follow.

The IAA also is of the opinion that the current World Bank views and commitment to notional defined contribution (NDC) schemes (of the Swedish variety) are controversial and subject to challenge from diverse viewpoints, inasmuch as there are other ways of achieving similar objectives. Moreover as they generate only virtual funding, the NDC fail to comply with the second key principle stated on page 5 of the Report. There are question marks over whether the World Bank's enthusiasm for individualization has led to forsaking employer-based systems of delivery for more costly and less efficient individual financial contract models. We note however that as per note 16, the concept is still under discussion.

There are various priorities in providing old age income support, all good and important but which may at times be in conflict with each other:

- Poverty alleviation, which has become a higher priority for most international donors *(Poverty alleviation is a prime objective and fundamentally is what justifies Government*

intervention and subsidies to support such interventions. In the absence of redistribution, a system can be operated on a commercial basis)

- Income replacement to maintain a decent standard of living in retirement
- Protecting the fiscal position of Governments
- Accumulating long-term assets that will help finance infrastructure and economic development which in turn will alleviate poverty but over a longer term *(although it may be noted that to the extent that assets are accumulated within social security systems, asset accumulation may be prevented elsewhere in the economy)*

So different tracks intertwine in the report where Pillar zero and 1 focus on poverty alleviation while Pillar 3 is more focused on the maintenance of standards of living. Pillar 2 plays a role in attempting to mitigate individual myopia but, because it is generally mandatory, it can greatly affect the fiscal position of the sponsoring Government. Pillar 4 gives more recognition than before to the creativity of individuals and collectivity.

However there may be advantages in separating the tracks in the analysis. For example, the justification of the switch to DC is much weaker for poverty alleviation where linkage with contributions is a non-starter and the exposure to volatility risks is more damaging. There is also a much weaker argument for funding at that level as the burden on the fiscal balance is manageable and does not expose Governments to the risks of large accumulations of liabilities. The NDC accounts appear to be more linked to concerns about Government fiscal balance or might be proposed as a way to remove the variability resulting from real DC plans.

6. The complementary but essential role of the actuary

In planning the reforms in the various countries that have followed the Bank's advice, the dialogue was in general established and followed-up largely between the Bank's economists and the national authorities responsible for fiscal policies (Ministries of Finance, Treasury). There is relatively little apparent evidence that actuarial advice or the resources of social security policy-makers (or those responsible for social security national pension schemes) were called upon to contribute to the upfront discussion about the reform. Although some actuarial advice was provided in connection with many technical assistance projects, relevant actuarial advice in most countries was not widely requested by the Bank, (commensurate with available actuarial resources, experience and knowledge within the international actuarial community), in the Bank's assessment of its experience and in making proposals to devise and recommend a new approach to national pension systems.

The IAA believes that the actuarial profession can play a major role in the design, organization, implementation, and financial and actuarial monitoring of the reformed schemes. Actuaries possess significant expertise in modeling and preparing long-term financial projections. It is vital that all demographic and economic analyses carried out provide reasonable projections of long-term future costs and financial impact on which important decisions can be based. Therefore the IAA also promotes high quality of actuarial work by e.g. setting practice standards. Other professionals, such as economists and demographers, have specific roles and functions with respect to social security and pension provision. The IAA also believes that it can assist the World Bank in making this upfront planning role become real and in providing the scientific and

technical actuarial expertise to the national pension reform process. More specific comments are as follows:

- Page 12 Financial Sustainability, para 2. The last sentence of this paragraph refers to the need for analytical studies and modeling, but, as elsewhere in the document, does not mention the word actuary in this context. We draw attention to the fact that actuaries are well placed to provide this analytical support for pension reform.
- Page 12 Financial Sustainability, para 3. Here, we would mention the IAA guidelines on social security as setting the standard for communication of assumptions, methodology and uncertainty in such exercises.
- Page 13 Financial Sustainability, para 4, last sentence. We would like to draw specific attention to the ISSA Guidelines for the Investment of Social Security Funds.
- Page 17 The Importance of the Political Economy, para 3. Reference in the middle of this paragraph to the need for strong long-term projections is clearly an appeal for the role of actuaries who normally provide these.
- Page 20 "Actuarially" and "actuarial" are used here (and elsewhere) in the sense of "actuarial soundness", for which we acknowledge the reference to the actuarial profession, although it would appear that the authors have a narrow concept of what they would term actuarially sound. It could be argued that few, if any, social security schemes are inherently actuarially sound in the long-term. They all require regular actuarial control mechanisms and a political willingness to make adjustments, or to build in automatic regulators, in order to respond to developing circumstances. The statements about most schemes not being designed in a way that is financially sustainable even in the absence of demographic change are controversial and subject to challenge from diverse viewpoints. However, what is (or was) often missing in these sorts of schemes is a firm actuarial basis for the original design and regular actuarial monitoring and control.
- Page 56 Primary Goals: Adequate, Affordable, Sustainable and Robust Pensions, para 6. The discussion about sustainability is notable for the absence of a mention of the critical need for actuarial assessment at the start and at regular intervals if any system is to be sustainable and to remain so.
- Page 58 Reform Criteria, para 3. This reference is clearly to actuarial models. We are concerned that here and elsewhere it seems to be implied that such a model can be used as a mechanical tool and possibly even without an actuary's direct involvement. Making projections requires professional skill and judgment, and the model must be adapted to the particular circumstances of a given situation. We believe that it is important to emphasize that actuaries should be actively involved in this process.
- Page 104 Financial Sustainability Issues, para 1. In line 6 there is a reference to "credible financial projections." Again what is lacking is a reference to the need to have projections carried out by a qualified actuary. In para 2 on this page there is a reference to commissioning projections from actuarial bodies. It is unlikely that member associations of the IAA would themselves accept such a commission. There is a clear need to make a distinction between actuarial associations and actuarial firms. We re-iterate the caution that any model, including the PROST model, needs to be used with

care and professionalism, and not in a purely mechanical way. Some of the points in this paragraph and in para 3 are covered fully in the IAA Guidelines for reports on social security systems.

- Page 130 What Regulatory Practice to Follow? Para 3. It is encouraging to note the recognition that periodic actuarial reviews are required. This should be for DC as well as for DB schemes.

The social security actuary should play a major role in the design, organization, implementation and financial and actuarial monitoring of the reformed schemes. It is recognized that other professionals, including economists and demographers, have specific roles and functions that are complementary to the role of the actuarial profession with respect to social security and pension provision.

7. The multi-pillar approach and diversification

The Bank continues to perceive advantages in multi-pillar designs that contain some funded element when conditions are appropriate but increasingly recognizes that a range of choices can help policy makers to achieve old-age protection in a fiscally-responsible manner. In 1994, the World Bank proposal was:

1. A mandated, unfunded and publicly-managed defined-benefit scheme.
2. A mandated, funded and privately-managed defined-contribution scheme.
3. A voluntary savings retirement scheme.

In *21st Century*, the World Bank states its goals in terms of broad social protection, poverty alleviation and consumption smoothing. To achieve the goals with respect to pension provision, the Bank proposes a multi-pillar system comprised of some combination from among five basic elements:

0. A non-contributory, “Zero-pillar” providing a minimal level of protection.
1. A mandatory “First-pillar” publicly-managed system linked in varying degrees to earnings (DB or NDC), redistributive, providing some longevity insurance financed by intergenerational contributions
2. A mandatory “Second-pillar”, fully funded, private asset-management, contributory, that can be constructed in a variety of ways, more likely by individual savings accounts but may be by DB.
3. A voluntary “Third-pillar” funded, regulated, privately managed, flexible and discretionary in nature.
4. An informal intra-family or intergenerational “Fourth-pillar”, including financial and non-financial support to the elderly, including access to health care and housing.

The Report points out that the definition of the 2nd pillar varies with the interpretation given in different countries and that the definitions cannot be too rigid. In fact in different pages the emphasis is on different characteristics. For example, the taxonomy in Table 5.1 does not quite follow the description on page 81 in putting DB and DC on a more equal footing but curiously

would allow a 3rd pillar DB to be partially funded even though voluntary whereas the 2nd pillar needs to be fully funded even though mandatory. In our opinion, the annuitization of a DC scheme at retirement does not make it a DB scheme.

In the Final Remarks on page 171 "reasonably sized universal" is an added characteristic to the new Zero pillar. It could be added that the reform induced shift to DC in 2nd or 3rd pillar occupational plans combined with increasing longevity and more volatile real returns, makes more necessary the provision of a minimum level of DB pension to ensure a sufficient security net for future retirees. Even though *21st Century* is better balanced it lacks a clear recognition that DB or guaranteed life annuities are the better instrument to bring financial security in retirement and that second or third best solutions should be used only when found more optimal in various imperfect contexts.

The Final Remarks clarify that the multi-pillar benchmark is a framework for evaluating pension reform rather than a collection of pre-designed components to be retro-fitted. This flexibility is most welcome as there are a variety of circumstances where the choice between DB or DC, publicly managed or privately managed, redistributive or not, funded or not, is not a simple binary option. In the tool kit of the pillars there is a linkage between the design options (DB, DC, flat, earnings related) and the financing path for the retirement system as a whole since the pace and the degree of funding can be varied by using different financing methods for different pillars. By making funding a benchmark rather than a target, the Report has added flexibility in both the design and the financing which can facilitate the diversification of the sources of financial security in retirement.

We agree with the notion that a public scheme that is funded through an "expanded supply of government paper" is not really funded and to us that makes the NDC schemes non-funded and thus not quite in line with the description of a second pillar. We have more difficulty with the concept that a corporate scheme that invests in Government bonds is "as unfunded as a non-financial defined-contribution scheme." The corporate sponsor cannot be held responsible for the way the Government is managing the public accounts. Note 17 sees merit in being fully invested in Government bonds but unfortunately such situations are likely to arise when investment in Government securities is made mandatory and do not really enter the market but rather represent a move towards less transparency, disguising taxes into contributions. We think there is a clear distinction between a NDC scheme and a corporate scheme that invests in Government bonds. We recognize that note 16 expresses reservations on the NDC approach and so do we.

8. Sovereign government employees

There is a small reference to civil service pension plans on page 81 and numerous comments also appear elsewhere mentioning many of the issues: the implicit debt that may result from the low wages/generous pension combination, the lack of mobility when portability is not provided or made difficult by a lack of alignment, the lack of fiscal discipline especially when not funded, the comparability of compensation across sectors, etc. But the lack of a more structured treatment of that issue appears to us as a significant gap. We believe that the World Bank would be of great service to its clients if the issue of civil service pensions were given more visibility and adequate review. The civil servants, who often comprise a large segment of the formal

labour force especially if it encompasses health and education, and to a lesser extent the Armed Forces, may have a large impact on equity, on the labour force and on the fiscal position of the Government. Whether they are integrated in the common multi-pillar system with a distinct top-up higher pillar or constitute a dual mono-pillar system, these plans play quite an important role in the political economy of pension reform and in the fiscal equilibrium of governments.

The civil service plans remain in many countries the weakest part of the retirement system and a bad model for the design of DB programs. Depending on the pension formula and the financing path, it may result in implicit cross-subsidization. But more importantly it has often resulted in overly-generous design and a level of promises that is not affordable in the long term even for the government.

A review of the merit of integration versus a dual system should address not only the design but also the financing. A civil service pension plan is an occupational plan where the sponsoring employer is a sovereign entity. That puts in a different context the distinction between funding and financing as well as the distinction between financing and reporting. In particular, the possibility of funding through Government obligations or virtual funding where the liabilities are recognized as part of the government's interest-bearing debt, blurs the difference between funded and non-funded or pay-as-you-go financing as discussed in note 17 of the Report.

Best practices call for the accounting and the reporting of civil service program costs to be on a fully-funded basis for compensation purposes including cost sharing, for transparency and for comparison with other public and private plans. Financing strategies are then dealt with separately and need not influence the accounting or the reporting. This allows for a clearer definition of the policy options regarding labour, fiscal and monetary issues. It also clearly disconnects the financing issues and investment decisions from the day-to-day administration of the benefits. Unlinking the accounting, the reporting and the financing allows more flexibility in choices about an integrated approach or a dual-system approach since it does not require that the funding mechanism be aligned. It facilitates transparency because it makes it affordable to account for the real costs instead of reporting on a cash flow basis.

Under each funded actuarial cost method, to the normal annual cost for current benefits corresponds a liability for accrued pension benefits. The normal cost under a funded method is lower than the pay-as-you-go cost because the returns assumed to be earned by the assets cover part of the benefit payments. If there are no assets, this unfunded liability is recorded as the Government pension obligation and becomes part of the overall government interest-bearing debt.

The liabilities being the discounted value of future payments, increase each year by the discount rate, an increase that in a funded situation should be matched by the return on invested assets. If the assets are virtual, an assumed return, that is the cost of servicing the pension debt, must be capitalized. This cost is part of the overall cost of servicing the Government debt and is a Treasury obligation, not a pension cost. Various rules can be used to calculate the virtual return on the virtual assets so that the calculation of the funded costs reflects the market reality and ensures a visibly-fair basis for cost-sharing and comparison purposes.

The pension obligations for civil servants form an integral part of the Government debt which should be managed globally in the best interests of the country, taking into account the overall fiscal and monetary policy, opportunity costs and other priorities. Real funding is investing in marketable securities freely-traded in the open capital-market and generating returns that need not be financed by future taxes. Virtual funding can be just an entry for the pension debt in the liability side of the balance sheet or the virtual asset matching the pension obligation can be made more explicit by converting it into IOUs or Government bonds. As part of the budgetary process, the United States issues non-marketable bonds to cover part of the debt. The United Kingdom appropriates the resources necessary to pay the pensions directly from the Consolidated Fund. Malaysia, Canada and Australia follow the UK approach. The option to convert part of the virtual assets carried as Government debt into external assets generating real returns remains available at all times on an opportunistic basis. A few countries have taken steps in that direction in order to mitigate the potential rise in future budget appropriations.

Investing in market assets supposes there is adequate market capacity and prudential framework which is not always the case in developing countries. It requires special qualifications, strong governance and a decision-making structure to invest such funds at arm's length in an efficient and neutral way to avoid political interference in the markets in contradiction to a privatization policy. And assets are more prone to leakage and misappropriation than debts!

9. The pay-out phase: the legacy of the shift to DC

The World Bank report discusses the concept of individual funded accounts and notional defined-contribution arrangements. The main focus of the report is with respect to the accumulation phase. However, the question of how account balances are distributed to provide old-age income security raises several issues concerning distribution options including annuitization. The actuarial profession is the appropriate resource for the provision of advice regarding major policy questions such as:

- whether to require the use of annuities
- when to convert account balances to annuities
- what annuity benefit forms to use
- how to provide the annuities
- how to price the annuities
- alternatives to annuitization

Annuities may be designed to address longevity risk, investment risk and inflation risk, so as to provide protection to individuals during the distribution phase. A review and analysis of questions pertaining to Annuitization of Social Security Individual Accounts appears in an Issue Brief published by the American Academy of Actuaries, November 2001. With respect to inflation risk, there is a need for true inflation-indexed annuities outside of the government context. However, there are difficulties in providing inflation-indexed annuities; even when provided by the private sector, they are almost always backed by inflation-indexed government bonds that could be problematical in times of significant inflation.

But more importantly, if the key objective is financial security in retirement rather than asset accumulation, the need for annuitization has been neglected to some extent in practice. This problem was known and foreseeable. The *21st Century* version is surprisingly succinct on that

issue whereas there are many means of solution or at least of research that could have been delineated or shown as work in progress.

In Canada, the Life Income Fund (LIF) is a restricted registered retirement income fund that is used to hold and pay out tax-sheltered pension assets upon retirement. The LIF provides an alternative to the traditional life annuity purchased from an insurance company offering the opportunity to maintain control over pension capital, its investment, and the flow of income. The LIF cannot be cashed out in one lump sum, except to purchase a life annuity. It must be used to provide lifetime retirement income subject to an annual minimum and maximum withdrawal amount. The withdrawal range is set so that enough money remains in the fund to provide income for the lifetime of the beneficiary.

Since the LIF is tax sheltered the Income Tax Act prescribes that a minimum amount must be withdrawn each year to prevent indefinite deferral of taxable income. Below age 71 this minimum is equal the balance of the fund divided by 90 minus the attained age; above age 70 decreasing divisors apply until the divisor becomes 5 for age 94 and above.

The maximum amount that can be withdrawn each year is equal to the LIF fund balance divided by the value of an annuity certain to age 90. The prescribed factors applicable at each attained age are determined annually on the basis that current interest rates apply for 15 years and 6% thereafter. There is no discount for mortality.

For example in 2006, a LIF owner having attained age 65 with a fund balance of $100,000, would have the choice of taking an income within the following range, with comparative numbers for age 70:

Minimum Withdrawal: $4,000.00 ($5,000 if 70)
Maximum Withdrawal: $6,396.40 ($7,228.60 if 70)

A LIF owner may, at any age, purchase a life annuity with some or all of the LIF funds. This may result in more attractive annuity-purchase rates at higher ages since the capital required by the insurer to support the statutory reserves is less than for annuity purchase at an earlier age.

But there are other possibilities. The risk of mortality can be segregated from the investment risk. An insurer's full guarantee can be replaced by a more flexible risk-sharing formula or retirees can benefit from risk reduction through pooling and the law of large numbers. Longevity bonds are a new development that could be used to mitigate risks.

We would like also to comment on specific issues mentioned in the report:

- Page 14 Administrative Preparedness and Implementation Constraints, final paragraph. The penultimate sentence talks about "the products permitted to be offered" as relatively settled. We do not share this view and feel that there is much work to be done on devising new types of annuitization products and in getting regulators to accept different degrees of risk-sharing between the stakeholders.
- Page 42 The Multi-pillar Approach: Diversification and Efficiency, para 4. The reference in the penultimate sentence to participants being subject to demographic risks

"if they require some mandatory annuitization" seems to be inappropriate. They are certainly subject even more to demographic risks if they are either not required to annuitize or choose not to do so. In this section of the report on pages 42 to 44, the analysis of risk is inadequate, mainly because it does not properly distinguish between the risks that affect different stakeholders. Little mention is made of the value of DB schemes in reducing the risk of members, albeit at the potential cost of increased risk for scheme sponsors, although that balance can be varied by different designs. It is implied that annuitization causes risk for individuals, but without explaining that without annuitization individuals are subject to inherently unmanageable demographic risk. There is a reference to the "inefficiencies" of private annuity markets, but even an inefficient annuity market may reduce the individual's risk considerably compared to no annuitization, albeit with some frictional cost.

- Page 123 What Types of Providers Should be allowed to Offer Annuities? The recommendation at the end of this paragraph that an argument can be made for specialized annuity companies is unsubstantiated. This recommendation perhaps suggests that a good argument can be made, when it has not been argued at all. On the contrary, it can be argued that a specialized pension annuity company for mandatory annuitization business represents much too great a concentration of particular types of risk and that the business would be much better handled by a multi-purpose life insurance company with a variety of risks that can be managed and hedged.
- Page 124 What Kinds of Products Should Be Allowed? The definition of actuarially fair implied in line 3 is not one that most actuaries would recognize, although it regularly gets quoted by economists. It is based on applying population mortality to the so-called average individual and therefore ignores the risk group into which the individual falls and hence by definition fails to address the issue of actuarial fairness. The implicit criticism in the third sentence of the difference in pricing between deferred annuities and immediate annuities at retirement seems to ignore entirely the need to price for guarantees given well ahead of time.

There is no doubt that a guaranteed life annuity is the optimal form of long term financial security in retirement provided it can deliver an optimal amount of secure retirement income. Many obstacles must be overcome:

- the general preference for lump sums or short term pay-outs,
- the capacity of the market given statutory capital requirements
- the reluctance to eliminate inheritances,
- the fear of a bad deal as interest rates fluctuate,
- the high risk-premium if mortality is uncertain and returns volatile.

10. DB versus NDC

The DB programs have been under attack mainly on two fronts. They were often poorly funded, or rather, poorly priced (especially in the public sector) and entailed large risks for the sponsor. Occupational DBs have been criticized as making a non-credible promise of final-average-pay pensions with generous indexation. This criticism was a curious transfer of guilt to private sector plans from overly generous public DB not based on actuarially sound advice, especially civil servants' programs. Granted that by imitating public employees' plans, some private employers

also made promises that proved too expensive in a changing economy. But even though some parameters were wrong, the use of a DB formula was beneficial and many private sector plans were more prudent: fewer plans had the automatic indexation that was the rule in public plans; and career average plans, or later target plans, were used to make risks more manageable.

Labour or socially-inspired pressures contributed to kill the cow that was providing the better type of protection: by asking for too much they contributed to shift the risks to the very people they claimed to protect. Vesting, locking-in, non-discrimination provisions pursued valid social purposes but made pension plans less valuable as a way to retain qualified employees and balance training costs.

But more importantly, occupational DB plans were victims of government and judicial interventions on several counts. In Canada, for example, employers that were prudently funding their plans suddenly found that the surpluses had been more or less confiscated, limits on the funding were imposed for tax purposes, short term solvency requirements were added, all sorts of standards were imposed adding unforeseen costs, supervisory requirements escalated as rules were added to address single events, the various jurisdictions could not harmonize, etc. All of this led employers to try to prevent overfunding and some were more successful than expected.

In the search for sustainability, the solution should not be a switch to DC but to less risky formulas, such as indexed career- average which (for example) is the one used in the Canada Pension Plan.

One type of scheme that has been introduced lately is the NDC concept. These schemes have the same qualities as indexed career-average DB programs in achieving the direct linkage with contributions that was on the “Switch to DC” scorecard. The Notional Defined Contribution formula is by many described as a closing of the circle since it seems to return to what in fact is a DB formula indexed on a simulated investment performance or on an arbitrarily-determined set of factors, which is a managed DB formula, with no real funding. But this description needs further elaboration.

The way in which these schemes are made to provide a direct link between benefits and contributions is that it is the contributions themselves that create benefit rights. Hence, every unit of contribution creates corresponding pension rights. The consequence is that an adjustment of contributions in order to meet a financial imbalance would create new pension rights, hence would increase directly the risk of financial problems in the future. As a matter of fact, the NDC concept is designed with the wish to create systems that keep contributions unchanged into the indefinite future, in spite of the fact that they are pay-as-you-go schemes. But this is not guaranteed by the NDC formula itself. Instead, the wish for a stable contribution-rate must be met by a conservative choice of indexation parameters.

In Sweden this choice is made once and for all by the introduction of a so-called automatic-balancing mechanism. Under a set of calculation rules this mechanism adjusts the indexation to what seems financially sustainable in the long run.

From this description it follows that a NDC scheme functions as “a well-designed DB scheme” as long as, *but only as long as,* the indexation methods used manage to provide adequate pensions and at the same time keep the system financially sustainable in the long run. A public DB scheme can and should react in a nuanced way to a disturbance of the financial situation, a disturbance that can be caused by demographic shocks, a structural deterioration of a country’s economy, or from some other reason. In such a situation a new balance must be struck between benefits, contributions and retirement eligibility, taking into account the overall economic and social situation in each particular country. In a NDC scheme such an approach is not possible; one must let the full consequence of a financial imbalance result in lower pensions. In the Swedish case, pensions will be reduced automatically, without any discussion of the consequences for pension adequacy.

The NDC scheme has a potential for sound financial performance. But we have reservations on a couple of counts, primarily due to the fact that these schemes, as just described are inflexible, easily misrepresented and subject to manipulation. In such a system there is no way to monitor the generational contract and no way of adjusting the system in the face of changes in external conditions to attain a fair balance between social goals and financial constraints in the future. This balance, after all, is the ultimate objective of a public intervention in the pension area. The resemblance to a conventional DB scheme obscures the fact that all risks are transferred to the individual. Indeed, many participants have a false perception that their pension is “guaranteed” by real assets, which is not the case.

In this regard, we would criticize the new NDC plans on the principle of transparency. We believe that the participants of such plans have little or no awareness of the risk to which their future benefits are now exposed because such information has not been widely circulated, e.g., in the form of benefit illustrations under “expected” scenarios.

10.1 The case of the new Swedish system

The new Swedish state pension system has been the model in the World Bank’s report for how new systems can be designed. The state system is the major pension-provider for the vast majority of people in Sweden. Occupational schemes negotiated by the parties in the labour market provide an extra layer of pension to salaried workers, especially high-income employees. Individual private pensions play an important role primarily for people with their own businesses.

The Swedish state pension system consists of two parts, a pay-as-you-go system, which in the international debate is called the “NDC-scheme”, and the system of private accounts, which has nothing in common with insurance. The Turner Report from the UK seems to have its focus on the latter part of the Swedish system, but it also has learned some lessons from the Swedish experience. The number of possible funds in the UK proposal is limited to between six and ten, while the Swedish system has around 700 alternatives (which in practice are ignored by the Swedes, since they don’t find the choice meaningful – only 8% of new entrants to the system last year acted to choose funds).

The pay-as-you-go system was designed in principle in 1994 to have a fixed contribution-rate and be based on lifetime earnings. It was intended to be stable, sustainable and immune from

political involvement. When designing the details, the politicians who were responsible for the overall concept discovered that, with a fixed contribution-rate and under the assumed conditions, the system would not automatically be sustainable. Therefore, at a late stage, they built in an automatic balancing mechanism (commonly known as "the brake" since it would, in effect reduce pensions). It was said that this was a safety valve *only* for unforeseen and very unlikely developments in the Swedish economy. However, it is now apparent that the safety valve, believed to be only for extreme conditions, is very close to being activated already in 2006, even though growth in recent years of the Swedish economy has been very good. The buffer funds in the old system had the function of making sure that, in the short term, benefit levels could be maintained regardless of premium payments (the funds amounted to roughly 4-5 years of benefit payments). The funds were primarily invested in bonds. In the new system, the funds are part of the asset side of the fictitious balance sheet, and are primarily invested in stocks – which leads to a direct influence on the so-called "brake" and therefore on the benefits that can be paid.

The designers of the Swedish state pension system call it "aktuariskt" in Swedish, which is neither a Swedish word nor translatable into English. They coined this term instead of the normal word "actuarial", possibly because no actuaries took part in the design work. To a great extent, the system was designed based on often-contradictory economic and political objectives. It was assumed that the technical problems could be solved by complicated computer calculations. Technically, the system is anything but simple!

The current Swedish model can scarcely be suitable for less-developed economies. Pay-as-you-go systems, on the other hand, can quickly be introduced into developing economies, since in this way pensioners can partake in economic advances. The Swedish ATP-system was an excellent example of this.

The notional defined-contribution model (Swedish style) has become the new mantra of at least some of the World Bank team, instead of mandatory funded individual accounts. Obviously it is a particular case of structural reform, which has a lot of good characteristics, but it surely does not justify being item b) in a list on page 73 which starts with a) parametric reforms and goes on with c) a market-based approach, etc., Item b) should refer to structural reforms, perhaps citing the notional defined contribution model as one particular example which has proved effective in some reforms (see also page 75 to 77, under the heading Notional Defined-Contribution Reform, where this type of reform alone is discussed in a section which should be looking at a variety of possible structural and fundamental reforms).

11. Funding versus financing

Implicitly the report recognizes that there are a variety of financial paths leading to different levels of asset accumulation and that different approaches can be combined to diversify the risks and reduce the burden on any social partner. The goals of "adequate, affordable, sustainable and robust retirement income" can be better served by a flexible approach.

Specific references to the report are as follows:

- Page 42 The Multi-pillar Approach: Diversification and Efficiency, para 2. Most actuaries would support the multi-pillar approach, albeit for a variety of reasons and probably with differing degrees of emphasis on the importance of the funded pillars. The

importance of diversification (as mentioned here) is, however, a powerful argument in its own right.

- Page 42 The new Swedish state pension system has placed the risk entirely on the workers, but hidden behind slogans such as freedom of choice, flexibility and an ownership society. Citizens must work until 68 years of age in order to have a chance of obtaining a pension above the guaranteed amount.
- Page 44 The (Net) Benefits of Funding, para 1ff. This World Bank report is considerably more balanced than *Averting the Old-Age Crisis* on the issue of the benefits of funding. The view from the Bank appears to be biased in favour of more funding rather than less, but the case is now stated more even-handedly and it is probable that under the appropriate circumstances most actuaries would support their new position, although there are well-supported opinions within the actuarial profession that funding is not a panacea and may not be appropriate in less-developed economies. NDC should not be used as a palliative to give a perception of funding when real funding is not deemed appropriate.
- Page 49 Improved Individual Welfare, para 3. The statement that a partially-funded scheme should provide a higher rate of return than an unfunded system is unsubstantiated and somewhat at odds with the argument over the previous few pages. Theoretically it will depend on rates of real earnings growth on which contributions are paid as against real rates of return on assets, and is certainly not as clear-cut as implied in this sentence. The July 2005 issue of the Journal of Pension Economics and Finance has an interesting comparison of the rate of return in a scheme financed on a pay-as-you-go basis.
- Page 53 A Benchmark, Not a Blueprint. This sub-title represents the most significant change from the World Bank position in *Averting the Old-Age Crisis*. The sentence in para 4 "The World Bank explicitly recognizes that the primary determinants of an appropriate pension reform are the unique conditions and circumstances of the environment in which it occurs" should be at the beginning of any treatise on pension reform and was lacking from the 1994 "*Averting*" position. The revised position of the Bank is a welcome step forward and says in effect that a mandatory system of individual savings accounts can work in some circumstances and is a useful "benchmark" or baseline for analysis. It is unclear what this means and how a system of individual savings accounts can be the benchmark for an entirely different type of reform that is appropriate to a particular environment, but its use is noted in this context (albeit as a somewhat abstract concept).
- Page 105 Financial Sustainability Issues, paras 4 to 6. This section places too much weight on the concept of implicit pension debt (IPD), although this is clearly another of the Bank's major points of focus and concern. This topic merits considerable debate and discussion, but briefly, it may be argued that IPD as defined here has all the disadvantages of a mark-to-market accounting standard but is even less relevant in the context of national accounts than it is for corporate balance-sheets. The probability of wind-up of most national social security schemes is very close to zero. The size of the IPD they obtain largely reflects the structure of a pension system conventionally organized through funded vehicles. Funding adequacy for a national scheme has to be looked at as a long term enterprise, as has been recognized by the IMF in the measures

they have used to compare the potential stresses which the systems of different countries are likely to be under.

Although the *21st Century* position is backing away from funding targets, there is still a bias towards funding as a benchmark and references to Implicit Pension Debt which is a very misunderstood and misinterpreted notion. It seems that there is still a step missing in recognizing that for public plans what is important is not the funding but the solvency and the sustainability which are related to long-term cash flows and not to assets and liabilities.

Regrettably *21st Century* remains too much in a binary world of pay-as-you-go versus full funding whereas there is a continuity of financing paths between the two that would be good policy instruments in the large number of countries where the emphasis is on poverty alleviation and where the fiscal balance is more important than asset accumulation. We would like to see more attention paid to level average financing where the target rate of contribution is the rate that on an open-group basis would be sufficient to sustain the system indefinitely on the basis of reasonable assumptions. It could have been an alternative to NDC where the fiscal burden was a key consideration.

A practical approach is to base the rate on very long-term projections and to rework the calculations at frequent intervals, such as three to five years, so that changes in emerging experience or in assumptions do not result in dramatic changes. Such a financing method aims directly at intergenerational equity but the accumulation of assets is much more limited since only a stabilization fund is required rather than building assets up to liabilities. It recognizes that what is important is a sustainable capacity to pay benefits rather than accumulating assets that become over-exposed to a number of risks in many countries.

12. Taxation: EET versus TEE

The World Bank presents a well-reasoned discussion of taxation and essentially argues for consistent tax treatment of retirement savings, being neither exempt nor subject to penal taxation. Under the EET regime, contributions as well as interest earned are exempt from taxation and benefits are subject to taxation. Under an alternative TEE regime, contributions are taxed while interest earned and benefits are not subject to taxation. The Bank report notes that, for political purposes, EET treatment may be preferred since a TEE approach may be less credible and entails the risk that future governments might renege on the promise of future exemption from taxation. It may also be noted that EET in particular implicitly creates a reserve of future taxes to help the government cover future health-care costs for more retirees and results in leaving more productive assets at work in the economy. In general, the IAA is in agreement with the main points and conclusions of the Bank on the subject of taxation.

13. Comments with respect to other specific issues in the report

The IAA would also like to offer comments on a number of miscellaneous points in the Bank's report.

13.1 Automatic stabilizers

Pages 24 and 56. Conceptually, automatic regulators may serve as a safety valve to mitigate the effects of procrastination in reaching political decisions to revise contribution rates or benefit

levels. They may also serve to replace entirely the traditional focus on balancing social goals and financial constraints. However, societal systems do not permit automatic regulation. A theoretically well-developed evidence of this is found in Nicholas Georgescu-Roegens book, "The Entropy Law and the Economic Process" (1971). The new Swedish state pension system demonstrates that it is not possible, as the constructors had thought to steer a societal system automatically without political responsibility.

Comparing Canada to Sweden illustrates how automatic regulators may differ in their impact on contributors and beneficiaries. In Canada, the contribution rate is set at 9.9% for the Canada Pension Plan (CPP). If the government actuary determines that a rate above 9.9% is required to keep the CPP in a healthy financial condition, then in the event of no action being taken to restore the health of the system, the contribution rate will automatically increase by one-half of the requisite increase, and benefits will be reduced by a corresponding equivalent amount; this is achieved, for example, by suspending the indexing of benefits for a period of time. The result is that the burden of the divergence of the required contribution rate from the established 9.9% rate is shared equally by both contributors and beneficiaries. In Sweden by contrast, politicians have withdrawn from the responsibility of making parametric reforms to uphold any intergenerational contract to maintain consistent levels of old-age income support over time. The Swedish system is designed to achieve financial stability regardless of demographic or economic changes over time by financing its obligations with a fixed contribution-rate and employing an automatic regulator or "brake" that adjusts pensions by means of a balance ratio that relates the system's assets, comprising contributions and buffer fund, to a measure of the system's liability. The effect of the balance mechanism that is automatically activated when the balance ratio falls below 100% is to disregard the objective of keeping pension increases in line with growth in average income. The automatic-balancing mechanism switches the indexation of pensions to a reduced indexation basis to reflect the balance ratio of less than 100%. This mechanism places the entire risk and financial burden on the beneficiaries as contrasted with the Canadian adjustment-system where the burden is shared equally between contributors and beneficiaries.

13.2 Employment savings accounts

Page 38 The Social Risk Management Framework, para 4. We do not necessarily accept the usefulness of unemployment savings accounts as a solution for the financial viability of unemployment schemes. Unlike retirement, which the vast majority aspire to, and it therefore makes sense for everyone to save for, unemployment is more akin to sickness or death before retirement, as a risk that will only affect a few, and is therefore more suited to insurance treatment and some degree of "fair" cross-subsidy, rather than everyone saving to meet the costs of their own unemployment.

13.3 Risk of economic catastrophe

Pages 39 to 41. It is noteworthy that the World Bank report does not discuss the economic catastrophe risk or for how long a period pre-funding can secure the pension system. During the 20th century, the Germans (twice) and the French (once) saw all their savings become completely worthless.

13.4 DC Conversion

Page 99 Design choices for Pillars One to Three, para 2. The statement that a DC scheme that has to be converted to an annuity at retirement is therefore not purely DC is surely inaccurate. The label DC relates to the fact that the benefits are determined directly by what is paid in and not by some independent benefit formula. Converting the accumulated account into an annuity at retirement does not stop it being DC.

13.5 Management of public assets

Page 106 Management of Public Pension Funds, para 2. This is another controversial topic where the Bank appears to take the view that funds cannot be soundly and prudently invested if they are managed by the public sector. Although there are plenty of examples to support this view, there are also plenty of counter examples (Canada), and the interest of member institutions of the International Social Security Association recently in the development of guidelines of governance and investment suggests that there is a huge groundswell of interest in making the whole process more professional. Reality is that in many countries outsourcing to the private sector on a competitive basis will remain politically impossible. Thus this is an alternative that the Bank should also be supporting.

14. Comments on the feasibility of adopting the new 5-pillar system in the Gulf region

As stated in the report, "the mandatory schemes have received large mandates regarding income replacement." As a result, the development of additional pillars is hindered, since from the perspective of the population they become simply not needed. Acknowledging the financial difficulties many of the schemes are facing, a reform to a multi-pillar system is necessary. This would ensure a diversification of pension benefit provision, spreading the risks of meeting retirement promises.

The development of a multi-pillar system though, may be constrained by the lack of developed financial markets and the culture in the region (both the expectation of the government providing sufficient benefits at retirement and the close family ties that are still there).

The 1st pillar is not dependent on the markets but lack of developed financial markets hinders the development of the 2nd and 3rd pillar. This would necessitate a slow implementation of a multi-pillar model, allowing time for the financial sector to develop and as a result respond successfully to the needs of the new system. The community stereotypes mandate that there is intergenerational family support, which means for the time being the 4th pillar not so relevant at least from this respect (although this may change in the future).

The embedded expectations of the people that the government is responsible for providing for their old age and the fact that they have been providing at a more-than-satisfactory level will make timely reform difficult to implement.

14.1 Middle East region

The report states that "all countries in the Middle East and North Africa region have put in place defined-benefit pension systems, which are financed on a pay-as-you-go basis." However, most of the schemes in the Middle East and especially schemes in the GCC countries are partially funded with the exception of Kuwait that uses the financing system of full-funding.

It is true that most schemes in the Gulf region do not enforce ceilings on the covered wage and offer generous minimum pensions – in excess of 35% of the average wage. The generosity of the minimum pensions together with the increased early retirements is a significant source of financial strain on the funds in the Gulf region. Low pensions in the region are not usually a result of low salaries but they are caused by the short service of the members. Even though minimum years of contributions for pension eligibility apply, these are sometimes not followed especially in countries where there are Royal Decrees.

As mentioned in the report, despite the favourable demographics in the region, the financial sustainability of the pension systems is a cause of concern. The level of the annual pension expenditures compared to the GDP is significant. The main reason for the deterioration of these schemes is the inequality between the level of the benefits and the level of the contributions with the contributions being significantly lower than the generous benefits offered. Early retirement pensions are not reduced based on actuarial cost-neutral factors and therefore the cost of these pensions is significant.

14.2 The GCC region

A Gulf country that has proceeded to fundamental reform is Kuwait and in particular the Public Institution for Social Security. It has introduced the gradual increase of the minimum retirement age, with the minimum retirement age gradually increased by a half or one year until 2020 where it will reach 55 for men and 50 for women. Furthermore, a separate fund was set up to finance the pension increases. The contribution rate of the Public Institution for Social Security fund has increased so that the level of the benefits is aligned with the contribution level. For basic pensions the contribution is 25% (plus 6% for pension increases) and for supplementary pensions there is an extra 15%.

Among the countries that have carried on with the reform of their schemes and in particular the private sector, is Oman, although still not facing financial problems, as the scheme is relatively new (started in 1992). However, as with most of the social insurance schemes in the Gulf region, the rules of the scheme promote early retirement and there is inequality between the level of the contributions and the level of benefits. Therefore, to anticipate the future adverse effects from the current rules, it has implemented parametric changes, which include an increase in the contribution rate, an increase in the number of years that are taken into account for the computation of pensions, a maximum salary, a minimum early retirement age and actuarially-neutral reduction-factors are imposed. In addition a minimum pension was imposed to secure a minimum standard-of-living for the beneficiaries of the scheme.

Finally, Bahrain is in a process of reforming its social security system (both the public service scheme as well as the scheme that insures the private sector). Both schemes have increased their contribution rates. They are also now in the process of adopting certain parametric reforms of their schemes in an attempt to reduce the gap between the contributions and the benefits level.

15. Conclusion: the need for a prospective approach

The World Bank's 2005 report *Old-Age Income Support in the Twenty-first Century* represents a significant step forward, drawing on the Bank's experience in many countries over the last

decade. The IAA has offered a number of comments and suggestions in a constructive spirit on strategic and tactical issues. Looking forward with a view to a cooperative partnership with the Bank, the IAA would like to propose a number of far-reaching targets for mutual consideration and development by the Bank and the IAA.

15.1 A blue print for further research

A fundamental question in any research project is “Qui bono?” or “Who benefits?” The IAA advocates ongoing research to establish the benefits of any reforms affecting old-age income support. It is, in our opinion, important to identify who gains and who loses from any reform. Other questions to be addressed include whether the system improves the lifetime standard of living of the participants and affected individuals, and whether expenses are reasonable for the collection, administration, marketing and management of contributions and assets. A pertinent question is: “Are expenses at such a level that participants may not be deemed to be the primary beneficiaries as opposed to the providers?” Another concern is whether the use of the coercive power of the state is justified by the benefits that could not be obtained otherwise, such as socially-desirable redistribution goals in contrast to a pooling of risks with a charge of appropriate equitable premiums.

15.2 The informal sector

In the World Bank target countries there is often a large informal sector that cannot easily be covered through the multi-pillar system, as implicitly recognized in Table 5.1 Multi-pillar Pension Taxonomy. There is some indication the informal sector, or only the part that generates regular income, could be covered under the 1st pillar but is not explicit as to the segments that could be targeted: urban, rural, farmers, professionals. The report distinguishes between Lifetime poor, Informal sector workers and Formal sector workers but falls short of a complete analysis of the issue and potential solutions. Given the wide range of countries that the World Bank can review, it would be useful to report on the experiences (mostly unsuccessful) so that countries do not repeat the same mistakes. For example, commingling what is in fact an assistance program with a social security program, or burdening payrolls with what should be a wider-based tax to alleviate poverty in the informal sector.

We take no issue with the fact that the Report is focused more on the formal private sector segment of the labour force that is more generally targeted by multi-pillar systems. However deepening the analysis of the issues downwards to the informal sector and upwards to an often privileged public sector, as suggested in our chapter 7, would be a useful complement.

15.3 Retirement age and future lifestyle

We attribute a significant educational value and influence to any World Bank publication. Accordingly, this *21st Century* report would have been a good opportunity to preach more than it does about the importance of getting out of the trap of a low retirement age that is falsely seen as a tool to create jobs and reduce unemployment. Looking forward, this will become more and more important and it is one policy decision that requires long-term policy-planning as any change must be gradual and must be introduced well in advance of its impact.

The report could have gone a step further by using the lessons learned from experience to try to anticipate future evolution and macro-issues related to the dual decrease in mortality and fertility,

the balance between savings and dis-savings as the retiree ratio moves up, lifestyle issues like the balance between leisure, work and retirement as both life expectancy and productivity increase, retirement age policies or maybe a new non-linear approach to retirement (for example). The exploration of creative retirement policies and of less-risky delivery-mechanisms may bring benefits in the areas of labour, fiscal balance, competitiveness, economic development and the reinforcement of the social contract thus better serving the public interest.

15.4 A potential partnership in risk reduction

In Section 6 of our comments, we described the complementary but essential role of the actuary. The IAA, with its global network of actuarial resources, is able to offer to make unique contributions to the challenges of providing old-age income support, not only in the application of actuarial methodologies, but also importantly in the area of risk controls. In particular, actuaries are able to bring their skills and experience to bear in the application of risk theory and analysis to the issues involved in meeting the challenges of annuitization. The IAA offers to support future study of pending issues and future scenarios. We believe we can contribute to the identification, measurement and mitigation of the risks in an uncharted future. Beyond enhancing the quantity of financial security in retirement, a better control of the risks will increase the perceived value of the promise for participants, especially current and future retirees who, being more vulnerable, are more averse to uncertainty. Enhanced quality would provide value-added for a large community that represents a major focus for the actuarial profession which, by its Statutes, aims at serving the public interest.

APPENDIX A

Full Member Associations of the IAA

Consejo Profesional de Ciencias Económicas de la Ciudad Autónoma de Buenos Aires (Argentina)
Institute of Actuaries of Australia (Australia)
Aktuarvereinigung Österreichs (AVÖ) (Austria)
Association Royale des Actuaires Belges (Belgique)
Instituto Brasileiro de Atuária (IBA) (Brazil)
Canadian Institute of Actuaries/Institut Canadien des Actuaires (Canada)
Institut des Actuaires de Côte D'Ivoire (Côte D`Ivoire)
Hrvatsko Aktuarsko Drustvo (Croatia)
Cyprus Association of Actuaries (Cyprus)
Ceská Spolecnost Aktuárù (Czech Republic)
Den Danske Aktuarforening (Denmark)
Egyptian Society of Actuaries (Egypt)
Eesti Aktuaaride Liit (Estonia)
Suomen Aktuaariyhdistys (Finland)
Institut des Actuaires (France)
Deutsche Aktuarvereinigung e. V. (DAV) (Germany)
Hellenic Actuarial Society (Greece)
Actuarial Society of Hong Kong (Hong Kong)
Magyar Aktuárius Társaság (Hungary)
Félag Islenskra Tryggingastærðfræðinga (Iceland)
Actuarial Society of India (India)
Persatuan Aktuaris Indonesia (Indonesia)
Society of Actuaries in Ireland (Ireland)
Israel Association of Actuaries (Israel)
Istituto Italiano degli Attuari (Italy)
Institute of Actuaries of Japan (Japan)
Japanese Society of Certified Pension Actuaries (Japan)
Latvijas Aktuaru Asociacija (Latvia)
Lebanese Association of Actuaries (Lebanon)
Persatuan Aktuari Malaysia (Malaysia)
Colegio Nacional de Actuarios A. C. (Mexico)
Het Actuarieel Genootschap (Netherlands)
New Zealand Society of Actuaries (New Zealand)
Den Norske Aktuarforening (Norway)
Pakistan Society of Actuaries (Pakistan)
Actuarial Society of the Philippines (Philippines)
Polskie Stowarzyszenie Aktuariuszy (Poland)
Instituto dos Actuários Portugueses (Portugal)
Academia de Actuarios de Puerto Rico (Puerto Rico)
Singapore Actuarial Society (Singapore)
Slovenska Spolocnost Aktuarov (Slovakia)
Slovensko Aktuarsko Drustvo (Slovenia)

Actuarial Society of South Africa (South Africa)
Col.legi d'Actuaris de Catalunya (Spain)
Instituto de Actuarios Españoles (Spain)
Svenska Aktuarieföreningen (Sweden)
Association Suisse des Actuaires (Switzerland)
Actuarial Institute of the Republic of China (Taipei)
Faculty of Actuaries (United Kingdom)
Institute of Actuaries (United Kingdom)
American Academy of Actuaries (United States)
American Society of Pension Professionals & Actuaries (United States)
Casualty Actuarial Society (United States)
Conference of Consulting Actuaries (United States)
Society of Actuaries (United States)

APPENDIX B

Members of the IAA Social Security Committee

Name	Organization
Hillevi Mannonen	Chairperson
Robert Brown	Vice-Chairperson
Hiroshi Abe	Institute of Actuaries of Japan/ Japanese Society of Certified Pension Actuaries
Gorakh Nath Agarwal	Actuarial Society of India
Jânis Bokâns	Latvijas Aktuaru Asociacija
Robert Brown	Society of Actuaries
Kenneth Buffin	American Academy of Actuaries
Jan Hagberg	Svenska Aktuarieföreningen
Klaus Heubeck	Deutsche Aktuarvereinigung e.V. (DAV)
Martin Kosztolanyi	Slovenska Spolocnost Aktuarov
Jan Kuné	Het Actuarieel Genootschap
Gunnar Kvan	Den Norske Aktuarforening
Marie-Thérèse Lance	Institut des Actuaires
Richard Madden	Institute of Actuaries of Australia
Jean-Claude Ménard	Canadian Institute of Actuaries
Mary Frances Miller	Casualty Actuarial Society
Geoffrey Mutunga Nzau	Actuarial Society of South Africa
George Psaras	Cyprus Association of Actuaries
John William Reilly	Society of Actuaries in Ireland
Luis Maria Sáez de Jáuregui Sanz	Instituto de Actuarios Españoles
Jose Luis Salas Lizaur	Colegio Nacional de Actuarios A.C.
Bruce D Schobel	Conference of Consulting Actuaries
Fructueux Tétiali	Institut des Actuaires de Côte d'Ivoire
Ana Topolovec	Hrvatsko Aktuarsko Drustvo
Wilma Torres	Instituto Brasileiro de Atuária (IBA)
Tamás Varga	Magyar Aktuárius Társaság
Yigal Vilozny	Israel Association of Actuaries
Andrew Young	Institute of Actuaries