1. INTRODUCTION

1. The growing importance of defined contribution (DC) pension plans has caused increased attention to be focused on the forms of payment that should be allowed and/or encouraged under such plans at retirement. Many of the newly created defined contribution pension systems (first in Latin American and more recently in Eastern Europe) have successfully launched the capital accumulation phase of their pension systems. Policymakers introducing these new systems have focused on this phase as the number of retirees (beneficiaries) is initially low, as older workers are often excluded from joining the new schemes. Attention has therefore been centred on getting the regulation and protection of the accumulation phase right and making sure the system is administratively efficient (which is vital when handling so many small accounts).

2. However, these new DC systems are still in the initial stage of the pensions decumulation or payout phase. For example, the first pensions under the new system will be paid out in Hungary from 2012 and in Poland from 2009. Yet a framework for how to transition between the accumulation and decumulation phases has yet to be outlined in detail, or even put in place at all, in several countries. Nonetheless, the decumulation phase is just as important if the new systems are to achieve their goal of providing efficient and effective retirement incomes: “the success of a new pension system depends on its ability to use whatever capital has been amassed at the end of the active life of covered workers to provide a reasonably sufficient regular income to them and their dependents.”

2. Pension supervisors need to handle the transition to the decumulation phase carefully to avoid beneficiaries making choices which could lock them into a suboptimal pension payout for the rest of their retirement.

3. This paper will attempt to address the basic question of “what should be the main forms(s) of benefit payment at retirement?” The advantages and disadvantages of each alternative will be identified in general international terms. The paper also will address the difficult question of who should provide such “products” (e.g. pension funds, insurance companies, other financial institutions or public authorities).

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1 This report is based substantially on an OECD paper prepared by Colin Pugh, FSA, FCIA, Consultant to the OECD, in connection with a separate project.

2. ROLE OF LIFE ANNUITIES (AND SOME PROBLEMS)

4. In North America and Western Europe, the traditional forms of benefit payments from DC pension plans have been either a lump sum payment or some form of life annuity. In several of these countries, especially in Western Europe, the only permitted form had been an annuity, with a minority allowing the commutation of a relatively small part of the annuity for cash. This may reflect (1) a continuation of the philosophy of most traditional defined benefit (DB) plans of paying a lifetime pension, or it may simply reflect (2) a strong belief that the true role of a pension plan is to replace pre-retirement employment income with post-retirement pension income. The first consideration is not particularly relevant to this paper, but it is important to discuss the second (philosophical) consideration about the real role of occupational pension plans.

5. In other countries, there is similarly an active debate concerning the most appropriate forms of benefit payment at retirement – even in mature DC markets where little had changed for many years. Indeed, this issue is part of a larger debate that has been taking place in recent years around the fact that pure, conventional DC plans are not the perfect solution that many stakeholders, regulators and providers may have tried to claim. This is not to say that all conventional DC plans are inherently poor or inappropriate – indeed they will undeniably become the increasingly dominant form of retirement income provision in the majority of countries throughout the world. It simply confirms that there is no single perfect solution to providing adequate retirement income on a consistently effective basis. Much discussion thus is being focused on trying to address and improve some of the aspects of traditional DC plan design and regulation. As already mentioned, this paper will focus on one major subset of these issues – retirement payouts. The problems of the last few years have given us some valuable lessons in this regard.

6. Under the traditional DC pension approach, an employee approaching retirement is required to liquidate the assets that had been accumulated and invested on his/her behalf and immediately purchase a life annuity from an insurance company. This point-in-time sale of investments and point-in-time purchase of an annuity is fraught with problems. Indeed, there is a large amount of luck involved in having a retirement date that coincides with favorable investment market conditions and favorable annuity purchase rates. Two people with identical careers and identical pension plan contributions can retire with amounts of lifetime retirement pensions that are substantially different, simply because their retirement dates were separated by a relatively short period of time. Nothing that happens after retirement can correct this apparent injustice.

7. Excellent investment and annuity markets lasted for about two decades in developed economies and thus tended to mask any potential problems. The honeymoon is over. Investment markets no longer provide favorable performance on a year-in-year-out basis. And, unattractive annuity purchase rates almost seem to have become a permanent fact of life.

8. **What are the solutions?** This paper will not directly address the investment issues during the accumulation phase prior to retirement or the changes in investment strategy that arguably should take place as a pension plan member approaches retirement. This paper briefly will discuss and identify alternatives to the point-in-time sale of such investments at retirement, but the main focus of the paper will be on the form(s) of payment that should be allowed or even encouraged upon and after retirement.

9. The potential problems of an immediate annuity purchase have already been identified, but the other traditional option - a lump sum payment - also can be far from ideal. Some of the concerns associated with lump sum payments will be discussed later. One of the many alternatives that have been identified and discussed is that of programmed withdrawals, but there are other alternatives.

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10. It should be emphasized that this paper will focus exclusively on DC plans. Many of the issues are different for (DB) plans. It could be confusing and distracting to expand the scope of this short paper beyond such DC plans.

### TABLE A – DEFINITIONS OF PAYMENT FORMS OTHER THAN ANNUITIES

- **Lump sum.** A single payment.
- **Programmed withdrawals.** A series of fixed or variable payments whereby the annuitant draws down a part of the accumulated capital (and continued investment earnings thereon). Each payment is often restricted to a maximum, e.g. the greater of the current investment income and the equivalent of an annuity based on average remaining life expectancy. However, it does not guarantee payments for life; there is no longevity insurance involved. If the annuitant lives to an advanced age, there is a clear possibility of the money being exhausted before death.
- **Scheduled withdrawals/income drawdowns (UK)/allocated annuities (Australia)** → similar or identical to programmed withdrawals.
- **Programmed withdrawals followed by mandatory annuity conversion.** Programmed withdrawals, but with the remaining capital being applied to purchase a life annuity (a) at a maximum age set by the government (e.g. within 10 years after retirement) or at any earlier date chosen by the annuitant or (b) at a relatively advanced age (see later discussions on “longevity insurance”).

### 3. MAIN FORMS OF BENEFIT PAYMENT AT RETIREMENT

11. A very large number of different forms of benefit payment now is to be found, e.g. lump sums, programmed withdrawals and life annuities. There are several types of programmed withdrawals and many different types of annuities – most of which will be described. There are often specific national reasons for some of the less common forms of pension, for example several payment forms simply reflect concerns about the weaknesses of the traditional DC approach of paying lump sums and/or conventional life annuities, and the efforts of all stakeholders to resolve these concerns.

### TABLE B – BASIC ANNUITY DEFINITIONS

- **Annuitant.** The person covered by an annuity and who normally receives the payments.
- **Annuity.** A stream of payments for a pre-established period of time. Payments can be weekly, monthly quarterly, etc...
  → Immediate annuity. Payments start immediately.
  → Deferred annuity. Payments start at a later date.
- **Annuity certain.** A stream of payments for a fixed period of time, independent of whether the annuitant dies before the fixed period or is still alive at the end of the fixed period.
- **Life annuity/single life annuity.** A stream of payments for as long as the annuitant lives.
- **Indexed annuity.** Payments increase at a prescribed rate, whether fixed or variable.
- **Variable annuity** (traditional definition). An annuity where the payments vary with the performance of market-sensitive investments. Normally, an annuity where the benefit varies according to the investment results of the funds set aside to provide it.
- **Variable annuity** (second definition). Same as the traditional definition, except that the payment also varies with subsequent changes in the average life expectancy of the annuitant and his/her cohorts.
- **Temporary annuity.** An annuity where the payments cease at the earlier of the annuitant’s death and a fixed date (e.g. the annuitant’s 65th birthday). This approach is often used under occupational pension (enterprise annuity) plans to provide a “bridging pension” from the employee’s early retirement date until such time as social security benefits become payable.
- **Annuity rate/annuity conversion rate.** The present value of the series of payments of unit value (e.g. $1.00 or €1.00 or RMB 1.0).
- **Laddered annuities.** Purchasing annuities in increments, to smooth annuity purchase rates.
- **Unisex annuity rates.** Annuity rates that are the same for both men and women.
12. We will later identify some more complex forms of life annuity. These other forms attempt to address some of the concerns about conventional single life annuities, such as the needs of the retiree’s spouse or a desire to guarantee at least a minimum level of aggregate payments in respect of someone who dies in the early years following retirement. The downside of these more complex annuities is that they are more expensive. In other words, for a given amount of accumulated capital in the employee’s DC account, the amount of the starting pension will be lower.

13. International examples will be used throughout. Examples will be provided describing how the payout phase and/or annuity markets are structured in selected countries, and whether the country context affects the “products” that are permitted and the institutions that are allowed to provide them.

4. LUMP SUM PAYMENTS – PROS AND CONS

14. The most obvious advantage of lump sum payments, from the perspective of the plan sponsor and especially the plan administrator, is that they are so easy to operate. They do not require any complex calculations or even the active maintenance of plan records. The entire obligation of the pension plan (enterprise annuity) to the retiree is discharged at retirement. Ongoing contact with the retiree, who could even be an ex-employee who has not worked for the plan sponsor for many years, is unnecessary.

15. There are also several potential advantages to the retiring plan member. One purported advantage, especially applicable to early retirements in countries where the culture and economy are conducive, is the ability to invest part of the money to establish a personal company and thus continue some form of fulltime or part-time self-employment for several years thereafter. Another advantage is the immediately ability to liquidate significant debt, of which a house mortgage is usually the most significant, and thus be free of such financial burdens in the years following retirement. It also satisfies the “bequest motive”, whereby any balance of the lump sum remaining at the retiree’s death is payable to the estate and distributed accordingly to the individual’s spouse, family and other beneficiaries.

16. More directly in the area of providing pension income after retirement, a major advantage of lump sum payments is the ability of retirees to “self-annuitize”, at a time and on a basis that best suits their financial needs. The retirees can replicate, or at least attempt to replicate, a system of scheduled withdrawals. This is more complex, and there is at least anecdotal evidence that such individuals generally do not manage such arrangements very well.

17. To be successful, the self-insurer should be able to choose an efficient and not excessively risky investment portfolio and to stick to a conservative withdrawal strategy. The risks entailed by a strategy of self-insurance should not be downplayed. Many people, including well-educated and intelligent people, have a lot of difficulty turning a stock of wealth into a sustainable flow of income. The standard test of this difficulty is to ask people how much money they will need at age 65 to sustain their current standard of living. Few people realize how small the rate of withdrawal has to be, regardless of the particular allocation of assets. Individuals still have a poor understanding of how long they will live and myopia is still present.

18. Retirees can still annuitize by using all or part of their accumulated capital to buy a conventional annuity from an insurance company, either at retirement or at some later date of their choosing. This would be their choice, rather than being mandated by law. The purchase date could be chosen when long term interest rates are relatively high and therefore – all other things being equal – annuity purchase rates would be more attractive. However, the flexibility to choose whether and when to purchase an annuity means that annuities purchased on this basis will almost inevitably be more expensive than annuity purchases mandated by law (see section 11 on anti-selection issues). In addition to doubts about the financial skills of individuals to self-annuitize, there is the wider and more
general policy concern about individuals simply spending the money in an accelerated and reckless manner, thus exhausting their funds within a short period of time and thus failing to provide adequate longer term protection to themselves and their families. In countries where the government or social security comes to the aid of the very poor, generally through the payment of means-tested welfare payments, problems of moral hazard arise. Those who rapidly spend their retirement savings through excessive consumption eventually become a permanent burden of the state. This is hardly an appropriate reward for those other individuals who annuitize conventionally or who manage their capital in a responsible manner.

5. PROGRAMMED WITHDRAWALS – PROS AND CONS

19. As already defined in Table A, programmed withdrawals consist of a series of fixed or variable payments whereby the annuitant draws down a part of the accumulated capital (and continued investment earnings thereon). The key word here is “programmed”, thus implying considerably more discipline than the less structured erosion of a lump sum payment. Programmed withdrawals are more complicated to administer, but they are financially uncomplicated. They still do not involve longevity guarantees requiring the involvement of an insurance company or other third party or the more complex actuarial operation of the pension fund itself.

20. From the perspective of the retiree, programmed withdrawals are more constraining than a lump sum payment, but less constraining than purchasing a life annuity. And, in a similar manner to lump sum payments, programmed withdrawals satisfy the “bequest motive”, whereby any balance remaining at the retiree’s death is payable to the individual’s estate and distributed accordingly. An even more important advantage of programmed withdrawals is for the capital to continue to be invested in the pension fund and to earn a higher rate of return in expected terms than is assumed by an insurance company or other provider in setting life annuity purchase rates.

21. Many programmed or scheduled withdrawals attempt to replicate the duration of a life annuity, by setting a maximum limit on the amount that can be withdrawn each month. The limit often would be a function of the amount of remaining capital and the retiree’s remaining life expectancy. In practice, the latter factor is more likely to be a function of the average remaining life expectancy of the retiree’s cohorts (those of the same age and, where allowed, of the same sex).

22. Programmed withdrawals became a popular alternative to life annuities in times when long term bond yields were low and the corresponding price of life annuities was high. In countries where full or substantial annuitization at retirement was mandatory (e.g. developed pension markets in Anglo-Saxon countries), legislation was relaxed to avoid committing the retiree’s capital to an annuity purchase in a volatile and perhaps uncertain annuity environment. Hence Programmed Withdrawals provide an outside option for retirees that face disadvantageous annuity market conditions to postpone annuitization but not retirement. New options included a deferred purchase of the annuity, based on the theory that annuity markets would eventually improve, and some relatively disciplined form of drawing down the capital. In countries that simply did not have a developed annuities market, or where the annuity market was even more volatile (e.g. several countries in Latin America), programmed withdrawals assumed an even greater importance. Some of these countries allow lump sum payments, but also allow (or even encourage) the option of programmed withdrawals. Programmed or scheduled withdrawals were an innovation in the Chilean pension reform of 1981, which has since been copied in other countries.

23. The main disadvantage of programmed withdrawals is the risk that the capital will be completely exhausted while the retiree is still alive. The amount and duration of programmed withdrawals are generally calculated on the basis of “average” life expectancies, so an individual retiree can easily outlive these averages. Even where the payments are recalculated each year based on the projected future life expectancy of the retiree and the declining group of his/her surviving
forms of benefit payment

cohorts, the capital to be re-spread can eventually decline to such a level that the re-spread periodic payments will be correspondingly unattractive.

24. A more complicated feature of programmed withdrawals is that, under most forms, whilst the monthly payment at the beginning is generally higher than under a conventional life annuity, the monthly payments can be very much lower in the later years. The amount of each payment can also fluctuate as a result of the volatility of pension fund returns. In other words, the individual is not covered against longevity risk and investment risk.

25. As a result of these various factors, there is again the possibility that the retiree will eventually become dependent on state means-tested or income-tested welfare payments, albeit without the clear moral hazard issues associated with lump sum payments.

6. (LIFE) ANNUITIES – PROS AND CONS

26. Under the traditional and most commonly found annuity approach, the plan member’s DC accumulation is transferred at retirement to a life insurance company. In turn, the insurance company provides an annuity that, in its simplest (single life) annuity form, will make payments to the retiree for the rest of his/her life. These payments will be made on a regular basis, e.g. weekly, monthly or quarterly. Reference should be made to Table B for further clarifications. The retiring plan member normally would be allowed to choose the most competitive and appropriate insurance company to which the DC accumulation should be transferred. However, another disadvantage of annuities is their issuance cost.

27. One alternative to the insurance company approach is for the annuity obligation to stay in the pension fund, e.g. under closed DC pension funds in Brazil and under somewhat comparable arrangements in Denmark and Iceland. This provides an opportunity for the pension fund to earn profits by generating investment returns higher than those assumed by insurance companies in their pricing structures. Such profits then could be applied to increase the pensions in payment – a form of indexing. However, this approach also can present serious complications, as the pension fund becomes a de facto insurance company subject to actuarial reserving requirements. This in turn poses a problem for supervision and regulation, especially in countries without integrated supervisory authorities. Questions can then arise as to what actions to take when the annuity promises become unsustainable. This could arise if the subsequent investment performance of the pension fund is poor. More importantly, it exposes the pension fund to all the problems arising from retirees living longer than expected – the much publicized problem of increasing longevity. In a DC pension fund where the plan sponsors have completely fulfilled their obligations by making their required contributions in respect of active members, and when there is no third party supporting the annuity guarantees, the problems have to be addressed within the pension fund itself. The two most obvious approaches to addressing the problems then become (a) reducing future payments to the retirees and (b) taking away some of the investment earnings from the accounts of non-retired plan members. Clearly, neither of these options is particularly attractive.

28. Another alternative, which seems to be generating increased interest in a number of countries, is a form of state annuity fund. The government then would become the insurance company of choice. The state, and thus taxpayers, would become the ultimate guarantors of the solvency of the fund.

29. The obvious advantage of the annuity approach is that payments will be fixed and will be made for the entire lifetime of the retiree. This contrasts with the lump sum and programmed withdrawal approaches, where there is a clear risk of the retirement capital being exhausted during the retiree’s lifetime – causing problems for both the retiree and family members. Also, the programmed withdrawal formulas set by the regulator in several countries lead to periodic payments that are higher at the beginning than those under life annuities, but which decline materially in the later years. For all
of these reasons, the annuity approach tends to reduce the government’s potential exposure to retirees subsequently becoming a burden of the state.

30. However, it is equally clear that the annuity approach involves the retiree foregoing future control over investments and losing the potential to earn superior investment returns. It also runs counter to the bequest motive, i.e. the desire to leave money to spouse and children. Some more expensive forms of annuity start to address this concern by providing residual payments to a designated survivor or to the retiree’s estate, but they are not the perfect answer in this regard.

31. Finally, it should not be forgotten that the critically important guarantee of payments for the retiree’s entire lifetime is only as good as the financial strength of the institution making such guarantees. Aggravated by declining investment returns and the problem of increasing longevity, the permanent solvency of such institutions cannot be taken for granted.

7. MORE COMPLEX FORMS OF LIFE ANNUITIES

There are several independent dimensions to classify annuity products (Figure 1):

**Financing:** Annuity products can be classified according to how they are financed. In this context, there are single-premium annuities, those funded by a single payment or lump-sum, and flexible-premium annuities, those intended to be funded by a series of periodic payments or contributions. This series of payments can be fixed or variable, depending on whether the contributions are a fixed or a variable amount.

**Primary Purpose:** Annuity products can also be classified according to their primary purpose into deferred and immediate annuities, as some annuity products are designed to facilitate accumulating resources over a certain period while the payment(s) is deferred, other annuity products are designed for immediate pay-out. Flexible annuities are only deferred.

**Investment:** There are fixed, equity-indexed and variable annuities depending on the underlying investment, that is, according to how annuity products create future value. Fixed annuities are more conservative while variable annuities are more financially aggressive. Fixed annuities guarantee the principal and a minimum rate of interest for a specific period.
while you are accumulating money and guarantee you a payout of a specific amount. Equity-indexed annuities are fixed annuities with an interest tied to one of the major stock indexes. Variable annuities are essentially fixed annuities wrapped around a group of mutual funds, called sub-accounts. Variable annuities give you the opportunity of participating in stock market returns.

**Pay-out:** Annuity products, according to the nature of the pay-out commitment, i.e. its duration, can be split into life annuities, that paid a stream of income for the entire life of the annuitant, fixed-term or certain annuities, that paid a stream of income for a fixed amount of time, temporary annuities that paid a stream of income for the earlier of the two, and guarantee annuities that paid for the later of the two. The duration of the pay-outs is the more important feature in connection with longevity risk.

**Providers:** According to the providers, qualified annuity products are those where the provider during the accumulation and pay-out phases is the same (e.g. annuities as vehicles attached to certain retirement plans, such as 401(k)s or IRAs in the United States), while non-qualified annuity products are those when the provider in the pay-out phase is different.

**Coverage:** According to the number of people covered there are single life annuities and joint-and-survivor annuities.

**Purchase:** According to the way the annuity product is purchased there are individual or group annuities.

**Others:** There are other features that distinguish annuity products further, for example, whether the annuity product qualifies for tax advantages. Generally, most annuity products are tax deferred, i.e. the capital and investment proceeds are generally tax-exempted while the annuity payments are subject to income tax. Additionally, new annuity products address the problem of shorter life expectancy of people with impaired lives: enhanced and impaired annuities. There are also annuity products that protect you against inflation.

33. There are several reasons for the development of the more complex annuities to be discussed in this section. One is quite straightforward, which is to protect the retiree’s spouse/partner after the death of the retiree. Traditional defined benefit (DB) pension plans have long provided their pension benefits in the form of joint and last survivor pensions that continue a percentage of the pension (usually 50% or 60%) to the survivor spouse for the rest of her/his life. This is often the mandatory, or at least default, form of pension for ‘married’ retirees. The same philosophy has been extended in several countries to DC plans. Where an annuity is purchased – by choice or because it is mandated – a joint and survivor annuity is one of the choices available. In Chile this is the mandatory option, since beneficiaries and the size of survivorship pensions are defined by law. Sometimes, it is the default form for married retirees, and a single life annuity only can be purchased with the written consent (sign-off) of the spouse.

34. The next two reasons are related. The first is the concern that, at least under a conventional single life annuity, the pension payments stop immediately upon the retiree’s death. If the retiree only lives for a short period of time after retirement, the expenditure of a large amount of capital on the purchase of an annuity was an extremely poor investment! The second relates to the bequest motive. The individual’s entire retirement capital has been transferred to an insurance company that invests the money for the aggregate support of its entire portfolio of annuity business, not for the individual account of each pensioner. This is indeed “insurance”, where there are the inevitable winners and losers. The latter (the losers) are those who die in the early years of retirement – where, in contrast, a lump sum or programmed withdrawal approach would have seen substantial residual assets being passed on to the deceased retiree’s family.
As a result of these very important concerns, and other concerns, a whole range of annuity choices have been developed. The following Table C identifies the most common forms.

**TABLE C - MORE COMPLEX FORMS OF ANNUITY**

- **Joint and (last) survivor annuity** – J&LS. An annuity payable for as long as the (primary) annuitant lives and thereafter for the lifetime of the named survivor or contingent annuity if still living (e.g. the annuitant’s spouse). The amount of the payment may reduce on either the first death or the death of the primary annuitant.
- **Contingent annuity** → Joint and (last) survivor annuity.
- **Cash refund annuity.** An annuity with a lump sum payment made on the death of the annuitant equal to the excess (if any) of the annuity purchase price over the sum of the periodic pension payments already made up to the death of the annuitant.
- **Modified refund annuity.** An annuity with a lump sum payment made on the death of the annuitant equal to the excess (if any) of a pre-determined amount over the sum of the periodic payments made up to the death of the annuitant. It is sometimes found under a pension plan to which the employees contribute, where the ‘pre-determined amount’ is equal to an accumulation of the employee’s own contributions.
- **(Life) Annuity with N year guarantee.** An annuity payable for the life of the annuitant, but with a minimum of N years’ payments in any event. “N” is usually 5 years or 10 years. In other words, if the annuitant dies before N years of payments have been made, payments will continue to the annuitant’s estate or dependents for the remaining balance of the N-year period. This is an approach used under contributory plans in Canada and elsewhere as an approximation to ensuring that the aggregate pension payments are at least equal to the employee’s own accumulated contributions.
- **(Life) Annuity with N year period certain → idem.**

What distinguishes the different type of annuity products is the type of guarantees they provide. These guarantees determine the size of the risks involved in annuities – i.e. longevity risk, investment risk, interest rate risk and inflation risk. The different type of annuity products and their embedded guarantees will determine the magnitude of the impact of the different risks. For example, the impact of longevity risk will be larger for annuity products that are deferred (because the uncertainty surrounding future improvements in life expectancy have a longer period to work through), fixed (because the guarantee a fixed return independent of returns), life (because they are paid until the individual passes away), joint-and-survivor (because the life expectancy uncertainty is tied to more than one person), and for an individual instead of a group. The impact of investment risk is higher for annuity products that are fixed premium (contributions are fixed in advance), deferred (the period for the risks to work through is the longest), fixed (because they guarantee a return), and life. Inflation risk is larger for fixed premium, deferred, fixed, life and non-inflation indexed annuity products.

As all these forms of annuity have stronger guarantees than a single life guarantee, they are more expensive. In other words, for a given amount of capital accumulated in the retiring employee’s DC account, the starting pension under any of these other forms will be lower. This is a particular problem for DC plans, as will be discussed in the next paragraph. In contrast, when enhanced forms of pension are paid under DB plans, they only rarely affect the retiree’s starting pension. In the majority of DB plans, there is indeed a structural bias in favor of “married employees” (however defined). Only a small minority of countries (e.g. the Netherlands) have seen this as a problem and have taken legislative action to mandate the provision of pensions of equal value for single employees, i.e. higher starting pensions. One also can argue that there is a structural bias in DB plans in favor of female plan members, as they will on average live some years longer than their male counterparts. This is most pronounced under single life annuities. This bias also is to be found in DC plans using unisex mortality tables.
38. The fundamental difference between DC and DB plans regarding these more complex forms of pension is that their costs are more transparent under DC plans, and it is the retiree (rather than the pension fund) who must absorb the extra costs. As already mentioned, for a given amount of accumulated capital, the starting pension will be lower – sometimes substantially lower. This presents the retiring plan member with a dilemma. Indeed, if there are no constraints imposed by legislation or by the plan rules, it will only be human nature for the individual to choose the higher starting pension. The sad plight of women in their later years, including the very large numbers of widows, is already well documented. Male retirees choosing single life pensions under the growing number of DC pension plans will just aggravate these types of problems.

8. VARIOUS ANNUITIES

39. The tradition type of variable annuity is one where the payments vary with the performance of market-sensitive investments, e.g. an annuity where the benefit varies according to the investment results of the funds set aside to provide it. One can conceptualize it as being similar to selling N units in a mutual fund each month, such that the pension fluctuates with the performance of the fund and the resultant progression of its unit values. But, it is also a traditional annuity in that it guarantees payments for the remainder of the annuitant’s lifetime. This type of variable annuity has existed for decades in some countries, but this paper will instead focus on a more complex “variable annuity” now being actively debated.

40. The primary objective of this more complex type of annuity is to protect the insurance company or other annuity provider against longevity improvements that had not been anticipated in the original pricing structure or annuity conversion rate. Payments to the annuitants and their cohorts in future years are adjusted downwards to reflect changes in the average remaining life expectancy of this group of annuitants. Thus, they shift the longevity risk to annuitants. The disadvantages to the annuitants are obvious, namely that future reductions in their periodic payments are almost a certainty under this approach. There are a number of variations of this approach that can partially protect the annuitants from this downside risk.

41. One is to combine the two types of variable annuity just described. The so-called CREF annuity in the USA is one example of this approach. It does this by adjusting the value of units in the light of both investment performance and mortality risk. In other words, if the investment performance is more than good enough to offset the effects of increasing longevity, then the annuitant’s pension could actually increase. However, poor investment performance combined with increasing longevity can have an even more disastrous effect on the level of payments to the annuitant. New financial instruments may allow the construction of annuities that have some modest upward potential whilst also partially protecting against downside risk (Bodie 1998).

42. Another approach uses as a base the old “participating” annuities sold for many decades by insurance companies in several countries, especially in Europe. Participating annuities have justifiably been receiving bad press in the UK in recent years, in some degree because they did not properly address the longevity issue. The basic concept is that the annuity purchase price will be calculated using a relatively low interest rate (e.g. in Belgium, where the rate is not allowed to exceed 3.75% and where several insurers use only 3.25% for all their insurance policies). Excess interest is earned each year by the insurance company and, in the absence of any constraints, a large portion of the excess interest is credited to the various types of policyholders. However, in the case of annuities in payments, the excess interest would be an offset against the effects of further increases in longevity. The annuity payments would never decrease, because they are guaranteed by the insurance company, but unexciting investment performance combined with ongoing longevity problems could also mean that they will never increase either. Thus, the distinguishing feature between these participating annuities and variable annuities is that payments under the former can only stay unchanged or increase, whereas payments under the latter can both increase and decrease.
43. The problems with these more complex variable annuities are that they are far from transparent. Insurance products are especially subject to this accusation. As the basic intent is to shift post-retirement longevity risk to the pensioner, the annuitant needs to be careful about choosing this type. Viewed from another direction, however, this type of approach has many attractions when the annuities are being paid by a closed entity that is not an insurance company, e.g. the pension fund itself. It could also be an interesting approach for a State Annuity Fund, where a more communal approach may be more palatable to the annuitants and the general public. This would be especially true in regard to mandatory pensions. This is already the situation in Sweden, where annuities under the mandatory program must be purchased from the state-controlled Premium Pension Authority (PPM). The PPM offers both “traditional annuities” (fixed minimum periodic pension payments plus annual profit-sharing) and “fund annuities” (variable pension payments that depend on the performance of the underlying fund).

9. LONGEVITY INSURANCE

44. This is another area that is receiving an increased amount of attention, although the market has hardly started to develop. It can be a particularly interesting approach for individuals who would prefer to control (self-annuitize) a very large portion of their retirement capital, but who also fear the financial effects of outliving these assets. In practice, longevity insurance should have attractions for almost everyone.

45. Longevity insurance is equivalent to the purchase at retirement of a deferred annuity, where the annuity payments will not start until a specified date well into the future. Depending on the age at retirement, the deferred period could be as long as 20–25 years. To be most effective, the deferred period should approximately equate to the average life expectancy of the annuitant. This is true “insurance”, as the deferred annuity policy has no surrender value, and nothing is payable in the event of the death of the insured during the deferral period. Only those who live beyond the deferred commencement date will collect the periodic payments, which will then be payable for the rest of the individual’s lifetime. Under these circumstances, the price of this longevity insurance is very reasonable, and its design is focused entirely on paying benefits to those who will need them. It is estimated that retirees only need to spend about 10%-15% of retirement capital on such longevity insurance, and they could then use programmed withdrawals or self-manage the remaining 85%-90%.

10. INFLATION PROTECTION

46. Another major risk which basic annuity products do not cover is that of inflation. The question therefore arises as to whether annuities be indexed to inflation, thereby protecting annuitants from changes in the price level and reducing the chance that they would require government assistance even with rising prices. However, purchasing such insurance can be expensive. Whilst avoiding large declines in real income during inflationary periods, indexed annuities reduce initial incomes for fixed annuities and may require the individual to forego the benefits accruing from equity investment in variable annuities.

47. Real annuities, which are widely used in Chile and are growing in popularity in the United Kingdom, provide protection against inflation but require the availability of index-linked government and other bonds. In the United States the recent issue of indexed treasury securities has yet to be reflected in a supply of real annuities.

11. ANTISELECTION ISSUES

48. One of the main reasons for the perceived high price of annuities is the issue of asymmetric information. In the context of insurance in general and annuities in particular, this is also referred to as “anti-selection”. Potential purchasers of insurance policies know more about the state of their health than the underwriter (insurance company). For a conventional life insurance policy that pays a
lump sum or survivor’s pension on the death of the policyholder, the problem for insurance companies is that individuals in poor health buy more death benefit (life) insurance. This can be addressed to some degree by requiring applicants to complete medical questionnaires or even to undergo a complete medical examination. The insurance premiums still will be calculated on the assumption of some degree of anti-selection on the part of the applicants, but it is possible to control the problem to some degree and to reject individuals or charge them higher premiums if they are in poor health. As regards annuities, the anti-selection comes from the other direction, and the challenges for the underwriter are more complicated. Individuals in extremely good health are much more likely to purchase annuities than those in poor health and thus financially anti-select against the insurance company.

49. The end result is that annuities are conservatively priced, as the insurance companies correctly include an allowance for better-than-average longevity experience among their policyholders. However, of course, this adds another layer of costs to the purchase of annuities and further discourages the average individual from choosing an annuity over other benefit payment forms.

50. There are several ways for addressing this problem of anti-selection. They include:

1. Making annuity purchases mandatory. In this manner, as everyone in the occupational pension universe must purchase an annuity, the anti-selection issue largely should disappear. Longevity will probably be better than the entire population, because it is confined to the working population, but it will otherwise include a comprehensive mix of those with below average, average and above average life expectancy. Mandatory annuitization is common in Western Europe and North America, but rare in other parts of the world.

2. Forcing the decision to choose a lump sum payment instead of an annuity to be made before retirement, e.g. at least three years before retirement. This does not totally eliminate anti-selection, but it can substantially reduce its effects. Several, old, traditional insurance policies include such a provision. Under insured occupational pension plans in Denmark, where lump sum payments and instalment withdrawals are allowed within limits, and annuities are the default, the choices must be made upon joining the plan.

12. REGULATING CHOICE v. ENCOURAGING CHOICE

51. There are many arguments both in favor of and against regulating choices regarding retirement benefit payouts. Complete agreement on the best approach is impossible, even within a single country. The debate becomes even more complicated across cultures and between countries with very different social security and tax systems. This paper will restrict the debate to occupational DC pension plans – a complicated enough subject in itself.

52. One phenomenon needs to be identified from the beginning. Given the choice between a lump sum payment and other retirement payment options of equal (or even better) value, a substantial majority of individuals will choose the lump sum - figures as high as 96% have been seen in the USA. Thus, the analysis is not just about helping individuals with open minds to make the logical financial choices. There is also the need to counter the effects of human nature. Individuals simply do not start the decision process with open minds. They will favor the lump sum, even if it is not in their own bests interests. Individuals for whom annuities would be the best choice will still resist making this decision. The need for effective education and communication (and even moral suasion?) is paramount. However, it is a fine line between moral suasion and “paternalism”. Under the latter, the government or the pension plan does not trust the retirees to make sensible decisions, and so these decisions are made for them. For example, annuities are mandated.

53. Thus, one basic argument for imposing restrictions and otherwise regulating choice is to protect some individuals, perhaps a significant portion of the population, against their own short-
sightedness. This paternalistic approach can be further supported by evidence that the majority of individuals retiring from occupational pension plans simply do not have the financial expertise to self-annuitize, and do not have access to the necessary financial instruments and advice. This is a bigger problem in some countries than others. The USA would be one of the better prepared countries in this regard, even as compared with Western Europe, and the problems can be more severe elsewhere in the world.

54. From the government’s perspective, there are risks in allowing a full range of choices to retirees. This issue has already been discussed. Some people will spend their lump sums carelessly and too quickly and will eventually become a burden on the state. This is especially true in countries with government-supported guaranteed minimum incomes/pensions.

55. Setting aside all the human factors discussed above, it is easier to analyze the other reasons for and against allowing choice. This paper will only touch on some of these considerations.

56. In the context of regulating occupational pension plan payouts, one first needs to understand the social security benefits on top of which sit the occupational plan benefits. If the amounts of social security pensions payable to the retiree are sufficiently large to sustain at least a minimum standard of living, it is easier to argue that more flexibility could be allowed for supplementary benefits payable from occupational pension plans. Under this line of argument, lump sum and other options could be allowed when it is known that the retiree’s basic living costs will be covered by state social security pension payments. Viewed from a more defensive perspective, it is less likely under this scenario that the retiree subsequently will become a financial burden to the local, regional or central government through the requirement to pay means-tested welfare benefits. Although this philosophy seems sensible and is widely accepted in theory, it does not seem to be implemented in practice. There are a small number of countries, especially those where social security takes the form of a Provident Fund, where large portions of an individual’s retirement benefit accumulation can be taken in lump sum cash – although even these now require at least a minimum level of annuity purchase. In contrast, there are other countries where social security pensions are substantial, but where annuitization of occupational pension plan benefits is mandatory.

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<td>UK</td>
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57. Some countries argue that only lump sums and programmed withdrawals are practical, because mature and well-regulated annuity markets do not exist in their countries. On the surface, this would seem to be a solid argument. However, the example of Chile suggests that – where full or partial annuitization is mandated – the insurance industry will rise to the challenge. This still does not remove the requirement for the market to be well-regulated.

58. Another issue that receives substantial attention in the USA, and is also relevant in several other countries, is the probably need to set aside a reasonable large amount of cash to cover medical and other such emergency costs in retirement. This would argue in favor of allowing retirees to take lump sum payments. Here, logic seems to be applied more consistently. In Western Europe, where large out-of-pocket medical costs (in retirement or earlier in life) are hard to imagine, lump sum pension payments are generally discouraged, and vice-versa. Indeed, the Singapore Provident Fund makes a direct link between its retirement and medical coverages.

59. The role of tax provisions also must be taken into account. If the government wants to allow some choice, but it really favors one form of retirement payout over the others, then its tax code should be designed to nudge individuals in that direction. Where a country allows partial cash commutations (e.g. the one-third rule in the UK) or full cash payments – and especially if the lump sum is given preferential tax treatment – it must be either because the government genuinely believes it is in everyone’s best interests to allow such lump sums or because of extremely poor planning on its part. Equivalent tax treatment of various forms can also be defended, but favorable tax treatment of forms of payment that the government does not want to encourage is a highly questionable approach!

60. Many countries compromise and allow a restricted number of choices. For example, a lump sum is only allowed after a certain amount of pension income has been annuitized, or a minimum overall replacement ratio has been achieved through a combination of social security and annuitized occupational pensions. “Replacement ratio”, in this context, generally refers to the ratio of individual’s aggregate retirement pensions to pre-retirement employment income. A replacement ratio of around 70% of final salary (perhaps to a salary cap) is often deemed desirable, and some of the stricter regulatory environments would not allow lump sum payments until after this pension level is achieved. Some would set the threshold much lower – around half of this level and allow programmed withdrawals, perhaps coupled with the ability to withdraw extra money for medical and other emergencies.

13. PAYOR - LUMP SUM AND INSTALMENT PAYMENTS

61. In the event the occupational DC pension plan only provides for lump sum payouts - or the retiring member elects a lump sum payment - the plan trustee or its representative (e.g. the administrator) or, in other countries, the pension fund management company normally would pay the benefit directly. It simply needs mechanisms in place to withhold and remit income and social security taxes (where applicable) and/or to report the payment to the relevant authorities.

62. In the event of programmed withdrawals, the administration is more complicated, but again the payments would normally be made directly from the pension fund to the retiree. The same is true for annuities certain, i.e. fixed payments for a fixed period of time.

63. Where choices are available – including the annuities to be discussed below – there also need to be facilities in place to assist the retirees in making the choices best suited to their circumstances.

14. PAYOR - ANNUITIES

64. Here, life is far more complicated. It is perhaps for this reason that some countries choose to restrict payouts to lump sums and programmed withdrawals. But, if the only reason for not including
annuities is defensive, one could argue that the situation is temporary and eventually will evolve to include annuities. There are so many positive reasons for encouraging annuities, including the governments own self-interest (i.e. avoiding moral hazard and focusing welfare payments on those men and especially women who never had the chance to accumulate a decent retirement income).

65. The first question to be addressed is whether a third party, normally an insurance company, is needed for the provision of annuities. Under this scenario, the retiring employee’s accumulated capital would be transferred from the pension fund to a third party. The pension fund’s obligation terminates at this point in time. Another alternative is for the pension fund to retain the funds and be responsible for the annuity payments. Although this is common under DB pension plans, where the plan sponsor is almost always available to finance any resulting shortfalls, it is a difficult approach to adopt for DC pension funds without any guarantor other than the fund itself. This point has already been discussed in Section 6. However, if insurance companies are not well regulated or the annuities market is not well developed, this may be the only option in the short term.

66. If one follows the conventional route and a third party will indeed assume responsibility for the annuities, the second question is whether these annuities should be provided by the private sector or a public source. Would one central provider be more efficient, through economies of scale, elimination of excessive marketing and distribution costs and commissions, and perhaps through alleviating the problems of anti-selection (see Section 11)? Alternatively, would competition between several private sector life insurance companies provide better annuity rates for the retirees? Conventional life insurance companies have some natural advantages in supplying annuity products, being able to derive economies of scale from their overall life insurance business and from their strong internal actuarial and administrative skills and experience.

67. In many countries, the insurance company already is involved in the pre-retirement accumulation phase, so it would seem a natural progression for it to be involved in the annuity (decumulation) phase. One lesson to be learned in this regard is that retiring plan members must not be restricted to purchasing their annuities from that same insurance company. This has been the source of some abuse in the past. The retiring members must be able to “shop around” in the market for the best annuity rate. If a better rate can be found elsewhere, the funds should be transferred without additional charge to the other insurer Systems for comparing annuity prices have been set up, notably the SCOMP system in Chile.

68. The SCOMP system is designed to advance the quality of information provided to customers as well as to permit them to access directly a full range of annuity quotations, and operates via the following steps:

i. The retiring member goes to his/her AFP and initiates procedures for a pension. The AFP sends the member’s balance certificate with personal data to the SCOMP system;

ii. The member selects a participant in SCOMP to solicit quotations. Participants include AFPs, brokers and life insurance companies;

iii. The member sends a request for annuity quotes, with or without the assistance of brokers or sales agents. Members can make up to three separate requests for each certificate issued by his / her AFP;

iv. The central information system validates the personal information of the member (e.g. age, sex, eligibility, balance), assigns a code and sends the information with the request to life insurance companies;

v. The life companies send their annuity quotes, while the SCOMP itself calculates programmed withdrawal payments, which are regulated;

vi. SCOMP send the programmed withdrawal and annuity quotes to the member. The quotes are valid for 15 days;

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4 Description of the SCOMP (Sistema de Consultas y Ofertas de Montos de Pensión) taken from R, Rocha, C. Thorburn, ‘Developing Annuities Markets: Experience of Chile’, World Bank 2007
vii. The member must either accept one of the offers, or accept another offer made outside SCOMP. Alternatively the member can request bids from at least three companies (an auction) and accept the best offer, or simply decide not to retire.

The SCOMP: electronic market for annuities

Electronic market for annuities: Closed market for companies allowed to sell annuities or programmed withdrawals (6 AFP, 23 LIC, 751 brokers)

Blind system: All companies receive relevant data of a potential pensioner and voluntarily make offers

Allow each individual to obtain, at no cost, all relevant offers of annuities or PW for her.

Several possibilities: Bargain (offer must exceed minimum offered in SCOMP)

Auction

What does SCOMP do?

1. Makes quotes through an AFP, Insurance Company or broker

2. Participant sends quote to the system

3. System sends quotes to suppliers

4. Suppliers send pension offers to the system

5. Informs the Affiliate

- Make a new quote
- Select an offer and obtain a pension
- Request an external offer
- Desist from pensioning
- Request a bidding process

6. After receiving offers affiliate may choose between the following options:

- AFP
- Life Insurance Companies
- Insurance brokers
- Several possibilities:
  - Bargain (offer must exceed minimum offered in SCOMP)
  - Auction

69. Initial data suggests that the system is working well and transparency has been improved. Although only a small percentage of participants has used to option to request bids from annuity providers, the final selection of provider implies that price competition has improved. Brokers commissions have also been reduced and market concentration has resulted.

70. A comparative system, known as the OMO has also been developed in the UK, hoping to encourage more people to switch provider on annuitization (only around 30% currently do so). Problems identified with switching include inertia, lack of awareness, complexity of forms, time delays in making transfers, lack of alternative offers, the gain ‘not looking big enough’ (i.e. a lack of understanding), or (on a more positive if not entirely economically rational note) wishing to stay with the company one has built a good relationship with. The UK government is working to improve the OMO system which provides alternative annuity quotes. For example a more structured approach to annuity purchase is being considered. One stage will involved the individual deciding what type of annuity best suits their needs (aided by suitable information and guidance), with the following stage allowing the consumer to then chooses the provider which offers the best deal on this type of product, with the help of comparative tables provided by the financial sector regulator.

71. In both OECD and middle income countries, life insurance companies typically are the sole providers of annuities. However, in some well developed annuities markets, the number of insurance companies interested in selling annuities has fallen dramatically in recent years. This is not just because many life insurance companies now prefer to focus more on purely financial products and less on “insurance”, but also because annuity business can be particularly unprofitable (low investment returns and increasing longevity, coupled with high reserving requirements). This reduction in private sector competition quickly can lead to further increases in annuity rates. At least one country, Ireland, is now giving serious consideration to the alternative of a state annuity fund. Another alternative being discussed is the creation of separate financial institutions that focus entirely on retirement annuities. This is already the case in Argentina, for example.

14. INTERNATIONAL PRACTICE

72. This paper simply highlights some of the main issues and attempt to find any natural and logical groupings in this regard. It will attempt to answer the questions:

- “How are the payout phase and annuity markets structured in different countries?”; and
• “How does the country context affect what products should be allowed and which parties should provide them?”

73. As has already been discussed in preceding sections, logic does not always prevail in dictating the balance between, for example, lump sums and pensions. Countries with high social security pension benefits still insist on occupational pension plan benefits also being taken in the form of life annuities. In contrast, countries with virtually no social security pension benefits allow (mandatory or voluntary) occupational plan benefits to be taken as lump sums. Thus, there must be other considerations that drive the scenario in many countries.

74. Setting aside purely political pressures and considerations – still a consideration even in some advanced economies – there are at least a couple of major reasons to explain differences. One reason has already been mentioned several times, namely that some markets are not well developed or well regulated, with the result that the financial institutions are not yet ready to provide efficient and reliable services in certain areas (e.g. the provision of annuities). Another reason revolves around issues of culture. In a related matter – although this is again where logic seems to break down – individuals in some countries are better educated and have more experience in managing their own financial affairs. In theory, these people should be allowed more flexibility, especially as regards lump sums and self-annuitization. In practice, the correlation breaks down.

75. The following are general summaries about legal constraints and customary practices regarding occupational DC pension plans (enterprise annuities). These summaries do not pretend to be comprehensive. Minor features are ignored, e.g. the option in several countries to take a lump sum payment when the accumulated funds are below a certain amount or are too small to buy a viable amount of pension. Also ignored are the treatment of additional voluntary contributions (AVCs) that employees in some countries can make in addition to their required contributions and personal (third pillar) arrangements.

76. Countries without any material occupational DC plans are excluded from the following analysis. In order to avoid presenting an excess of information, smaller countries and African countries, even those with occupational DC plans, also have been excluded from the analysis.

77. When references are made to social security benefit levels in various countries, and where a country has undertaken structural social security reform, only the new program is referenced. These references to social security are only an attempt to find a link between the level of social security retirement benefits and the flexibility allowed with respect to retirement payout options under mandatory or voluntary occupational DC plans that supplement social security. The latter plans are the subject of this paper. Thus, the payment options described below relate to these supplementary plans and not to the underlying social security programs.

| TABLE C – PAYOUT SYSTEM VS. SOCIAL SECURITY SYSTEM |
|---------------------------------|-----------------|-----------------------------|---------------------------|-----------------------------|
| Countries with no social security in retirement other than mandatory DC plan | Countries with low/modest social security retirement benefits | Countries with average social security retirement pensions | Countries with relatively high social security retirement pensions |
| Lump sum only | Hong Kong – mandatory provident fund | India – mandatory provident fund | Czech Republic | Luxembourg – SEPCAV |
| | | Thailand – voluntary provident fund | | |

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<table>
<thead>
<tr>
<th>Programmed withdrawals only</th>
<th>No countries</th>
<th>No countries</th>
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<td>Lump sum + programmed withdrawals</td>
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**Malaysia** - provident fund                                                 | China - EAs                                                                  |                                                                               |                |
<p>| Annuities only                   | <strong>Colombia</strong> – mandatory DC for those electing not to participate in DB social security | <strong>Brazil</strong> – open and closed funds                                          | <strong>Austria</strong>                                                                  |                |
|                                  | <strong>Hungary</strong> - mandatory Pension Fund for those not electing, or not eligible for, old DB social security | <strong>Bulgaria</strong> – mandatory 2nd pillar                                          | <strong>Poland</strong>                                                                  |                |
|                                  |                                                                               | <strong>France</strong> – mandatory Agric, Arco                                           |                                                                               |                |
|                                  |                                                                               | <strong>Germany</strong> – depending on financing vehicle                                 |                                                                               |                |
|                                  |                                                                               | <strong>Netherlands</strong>                                                              |                                                                               |                |
|                                  |                                                                               | <strong>Poland</strong>                                                                   |                                                                               |                |
|                                  |                                                                               | <strong>Russia</strong> – funded DC part of social security (annuity retained within fund) |                                                                               |                |
| Life Annuities with partial lump sum | <strong>Indonesia</strong> – up to 20% can be received in the form of a lump sum cash payment | <strong>Ireland</strong> – up to 1/3 can be received in the form of a lump sum cash payment |                                                                               |                |
|                                  | <strong>South Africa</strong> - up to 1/3 can be received in the form of a lump sum cash payment | <strong>Italy</strong> - up to 1/3 can be paid in cash on a tax effective basis, or up to 1/2 on a less favourable basis, with the balance used to purchase an annuity – immediate or delayed purchase |                                                                               |                |</p>
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<tr>
<th>Annuity or lump sum</th>
<th>Belgium</th>
<th>USA – lump sums dominate</th>
<th>Belgium</th>
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<tr>
<td>Annuity or programmed withdrawals</td>
<td>Chile – mandatory programmes replacing or supplementing social security</td>
<td>Russia – non-state funds</td>
<td>Canada - DC</td>
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<td></td>
<td>Costa Rica – mandatory programmes replacing or supplementing social security</td>
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<td>Mexico - mandatory programmes replacing or supplementing social security</td>
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<td></td>
<td>Peru - mandatory programmes replacing or supplementing social security</td>
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<tr>
<td>Complete range of options</td>
<td>Singapore – provident fund</td>
<td>Australia – mandatory plan</td>
<td>Denmark – DC plans with insurance companies</td>
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</table>

5 In Chile lump sums are also permitted if funds allow to obtain a pension equivalent to at least 70% replacement rate and 150% of minimum pension.
6 Except that a minimum lump sum cannot be taken in cash and must be withdrawn in instalments or used to purchase an annuity.
16. CONCLUSIONS

78. As already mentioned, and as can be seen from the international comparisons provided above, it is not easy to find logical groupings of different types of approach. However, some conclusions are quite clear, namely:

1. Aside from the ex-British provident funds still found in Asia, a surprisingly small number of countries allow a full lump sum payment.
2. A large number of countries require the retirement benefit to be paid as a life annuity or only allow the choice between a life annuity and a series of programmed withdrawals that attempt to reproduce a form of life annuity.