Rethinking Retirement Income Strategies – How Can We Secure Better Outcomes for Future Retirees?

Abstracts and key data

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Contents

1. Preface

Due to rising life expectancy, many European households may be faced with the prospect of insufficient pension savings to finance their desired level of consumption and lifestyle. In addition, their retirement income options are often constrained by a requirement to purchase an annuity to maintain an appropriate income level until the end of their life.

The report on *Rethinking Retirement Income Strategies: How Can We Secure Better Outcomes for Future Retirees*, prepared by Professor Maurer and Barbara Somova, shows that this requirement does not give individuals the level of flexibility needed to choose the best solution for managing their accumulated pension savings. By holding a proportion of pension assets in equities early on in retirement, and switching to bond holdings and annuities progressively over time, individuals can expect to achieve significantly higher retirement income, at a comparatively low risk.

The explanation for this result is simple: in an environment where individuals are living longer, the benefits of investment diversification extend well beyond normal retirement age, as diversification creates the kind of upside income potential not found in conventional annuities, while providing downside protection against the higher risks associated with a portfolio that is concentrated on equity holdings.

This is a striking result, which allowed Professor Maurer to formulate some important policy considerations. Particularly significant is the position that requiring individuals enrolled in defined-contribution schemes to purchase an annuity at retirement is questionable. The report shows that introducing more flexibility in this area would produce potentially large welfare gains, for four key reasons:

- Firstly, as explained above, individuals can expect to enjoy a substantially higher consumption level if they keep a balanced asset allocation of their pension savings, at least for an extended period after retirement.

- Secondly, permitting more flexible choice among investment solutions for the payout phase allows to take into account people's preferences, level of risk tolerance, and other sources of wealth to tap into retirement. This last factor is particularly relevant in countries guaranteeing a significant replacement rate in the form of first-pillar pensions. In this situation, individuals should be allowed to choose an asset allocation tailored to their personal situations.

- Thirdly, it is widely recognised that households wish to provide their surviving relatives with an inheritance and build a financial buffer to cope with the risk associated with critical illness. The key finding of the report – that people are better off not purchasing conventional annuities – is not dependent upon the assumption that bequest motives and contingency planning play a role in individual savings behaviour. Once these considerations are factored in, the disadvantage from enforced annuitisation becomes substantially bigger.

- Finally, a more balanced approach to payout solutions and a supportive tax and regulatory environment would also create incentives for the financial services industry to develop innovative alternatives to annuities. Although such alternatives have emerged in a number of countries, their market uptake remains modest and restrictions often make them unappealing. Greater innovation would also lead to greater competition between solution providers.

EFAMA is very proud to publish a report that includes such strong and practical policy recommendations, using a first-class methodology guaranteeing robust results and the respect from academic researchers. And we hope that this report, together with the study EFAMA published last year on defined-contribution pension schemes[1], will increase the awareness of policy makers on possible measures that could be taken to help households to reach or maintain sufficient retirement income.

The European investment management industry is fully committed to playing its role in assisting households by developing innovative and flexible payout products, capable of converting pension savings into a recurrent income stream after retirement.

Authorities also have a key role to play in creating a market dynamics stimulating the supply of new types of payout solutions as well as households' demand for these products. This requires a modernisation of pension regulation and tax incentives to achieve greater flexibility in the choice of products and facilitate market access for providers of pension saving products.

Mathias Bauer
EFAMA President

[1] The report Defined-contribution pension schemes: Risks and advantages for occupational retirement provision, was prepared by Oxera Consulting Ltd. It can be downloaded from EFAMA's website.

2. Executive Summary

<u>Challenges for pension payout phase</u> – The trend towards funded individual pension schemes calls for appropriate payout products

There is a trend internationally towards greater use of individual funded pension schemes and Europe is no exception. Faced with rising life expectancy of population and financial strains on pay-as-you-go pension systems, several countries have engaged in reforms of their pension systems to expand existing and/or create new private funded pension schemes. This development has coincided with an increasing number of occupational pension schemes being restructured from the defined benefit to the defined contribution type.

While attention is often focused on the savings or accumulation phase, it is crucial to recognise the importance of adequate solutions and regulation for the pay-out phase. For many people, their pension saving pot may well be their most significant financial asset, and deciding on how to convert it into retirement income is one of the most important financial decisions they will ever make.

Retirement solutions should mitigate and strike a balance between the main potential financial risks faced by individuals: inflation risk (risk that prices rise at a rate that erodes the value of the future retirement payments), investment risk (fluctuations in the value of the underlying assets of the funded pension), and longevity risk (threat of exhausting one's accumulated pension assets during retirement).

<u>Market solutions for the payout phase</u> – A variety of payout solutions exits

There are three broad payout products: annuities (pooled solution), phased drawdown plans (non-pooled solution) and integrated products (hybrid solution). These products offer different advantages and disadvantages for the retiree, in particular in terms of their flexibility and risk coverage.

Annuities offer protection against longevity risk and an additional return conditional on survival through pooling mechanisms, but tend to deprive the retiree of bequest opportunities, control over assets as well as the flexibility in the use of accumulated assets. Different kinds of annuities exist – by nature of payouts, number of people covered and duration of payouts. Importantly, the most commonly used type of annuities, i.e. level annuity, provides certainty of income in nominal terms, but offers no protection against inflation risk.

Phased drawdown plans provide periodic payments, typically progressively diminishing the capital by using a systematic withdrawal pattern. The various products in the market differ in term of the withdrawal pattern (fixed versus variable), and the portfolio strategy (dynamic, static) managing the different asset categories (stocks, bonds, money market) incorporated in the payout plan. These products have the advantage of providing retirees with greater control over assets and the opportunity of bequeathing any remaining assets to a beneficiary. While they expose the retiree to both longevity and investment risks, they also offer potentially higher retirement income resulting from superior investment returns and greater opportunity to hedge against inflation by using a diversified portfolio. Drawdown plans also allow for greater individual flexibility, as investment strategies and withdrawal rules can be adjusted to suit the preferences of the individual.

Integrated payout products combine certain characteristics of annuities and drawdown plans. These hybrid solutions provide both guaranteed retirement payments as well as the flexibility, bequest potential and upside investment potential of non-pooled solutions. They come in various forms. Investment-linked or variable payout annuities on the one side, typically offered by insurance companies, and asset management solutions with investment and/or income guarantees on the other, are both examples of solutions that allow participation in the capital market in combination with the longevity pooling component. They facilitate an efficient transformation of retirees' accumulated wealth into income streams, often by offering standardised solutions.

The continuous increase in the survival probabilities used by annuity providers for pricing purposes (and the discrepancy compared to the general population life expectancy) has enhanced the attractiveness of non-pooled solutions compared to the traditional life annuity. Further, thanks to the increase in life expectancy and the ensuring long investment horizon of pension assets, investments diversified across different asset classes might form a substantial part of a well structured payout program. It is possible to design drawdown plans or hybrid solutions that mitigate the major financial retirement risks (i.e. investment, longevity, and inflation risk) at relatively low costs.

Regulatory environment for payout solutions – Existing regulation and rules favour annuitisation

In the seven European countries surveyed in the report (Austria, Germany, France, Italy, Sweden, Switzerland, the United Kingdom), tax advantages and regulation favour annuities in the majority of pension programs. This has led to a vast dominance of annuities over phased drawdown and integrated products, with annuities with fixed payouts being the most frequently used solutions. The situation is markedly different in the United States where most funded pension schemes allow for some forms of drawdown plans, and where the majority of retiring workers choose this option.

In Europe, regulation tends to favour annuities in order to protect retirees from old age poverty by mitigating investment and longevity risk. A second regulatory objective is to prevent retirees from spending their accumulated funds too rapidly, thereafter reverting to living off social security benefits.

Public pay-as-you-go pensions, social security benefits and employment-linked defined benefit plans already prevent, to a reasonable degree, retirees from falling under the poverty line in most European countries. Moreover, available empirical evidence does not support the notion that retirees deliberately spend too much and too quickly. Finally, it is possible to design non-pooled payout solutions like drawdown plans or integrated solutions that minimise longevity and investment risk at relatively low cost. Hence, the bias of existing regulation towards substantial annuitisation early in retirement is not justified.

Economic modelling of payout solutions – Full annuitisation is costly

According to the modelling presented in this report, the best investment strategy for payout solutions is to hold a significant proportion of pension assets in well diversified equity portfolios early in retirement, and to switch to annuities and bond holdings progressively over time, taking into account individuals' specific circumstances. This strategy results in significantly higher consumption possibilities, at a relatively low risk compared to immediate full annuitisation at retirement.

The risk of being worse off in terms of retirement income in case of adverse stock market developments is limited for individuals adjusting their pension asset portfolio over the entire retirement period. The simulations of consumption levels under different financial market conditions show that the majority of individuals (70%) can expect to enjoy up to a third of higher lifetime consumption level if they hold equity at the beginning of retirement and gradually switch to annuity over time, instead of annuitising all their wealth at the age of 65. Moreover, the consumption level of individuals ending up in the worst financial market scenarios would be less than 10% lower than under full annuitisation.

As a consequence, compulsory full annuitisation of retirement wealth at the age of 65 results in significant costs in terms of foregone consumption. Taking into account the desire of individuals to leave money to their surviving relatives and/or build a financial buffer to cope with large and sudden expenses, the disadvantage from enforced annuitisation becomes substantially aggravated.

The report also demonstrates that retirees can enjoy a smooth consumption pattern during retirement if they keep their retirement wealth invested in pension products featuring a switching mechanism to increase the proportion of annuities and bonds as time goes by. This result reflects the fact that short-term fluctuations in equity markets become less important over long investment horizons when the gradual reduction in equity exposure limits the exposure of pension assets to market volatility.

Policy recommendations– Regulatory reform can balance the goals of policymakers and the needs of retirees

The regulatory framework in Europe should find a reasonable balance between satisfying the concerns of policymakers and addressing the needs of retirees. Enforcing compulsory conversion of pension savings into annuities does not give individuals the level of flexibility needed to choose the best approach to suit their circumstances and risk tolerance. This is particularly the case given the very different range of retirement income likely to be available, ranging from a very strong support from state and/or salary-related pension schemes through to greater reliance on a defined-contributions savings pot.

Ideally, regulatory frameworks across Europe should support, on equal terms, both annuities and other payout solutions. Restrictions on non-annuity products should be relaxed and pooled, non-pooled and hybrid solutions should enjoy equal tax treatment.

A more balanced regulatory framework for the payout phase of funded pension schemes would spark innovation in the European financial market and stimulate the creation of payout products tailored to meet individuals' retirement needs. Competition between providers of payout products would also increase, thereby lowering the cost of products. The evidence from countries where drawdown plans and other non-pooled solutions are not hindered by legislative or tax rules, highlights the benefits of innovation and competition.

Less restrictive rules and regulation towards non-pooled solutions would also create incentives for the financial services industry to create a variety of standardised pooled, nonpooled and integrated payout products, designed especially for retirement. As such prepackaged solutions are likely to include a range of choices with respect to risk attitude and preferences regarding the structure of periodic payments, improved information requirements, advice and financial education should assist individuals in deciding how to invest their accumulated pension savings. In addition, appropriate default options should be in place to help individuals who cannot or do not want to chose between the available payout products.

If nonetheless compulsion is still favored, then the upper age limit for compulsory annuitisation should be pushed towards 85 in order to achieve a right balance between the objectives of securing a sufficient level of retirement income and protecting retirees from longevity risk at very old ages. This can be achieved by using some part of the accumulated assets to buy a deferred annuity starting payments at age 85 or requiring a switching of assets into annuities at that age.

One possible compromise between compulsion and a more liberalised market would be only to make pooled solutions mandatory if a basic standard of living is not available from other annuity-like sources, such as state pension, defined benefit schemes etc. Above that minimum level, individuals should be allowed to make a free decision for themselves, given both that individual circumstances will vary considerably and that it is difficult to set regulatory restrictions that do not end up becoming burdensome for individuals.

3. Main results of the study

- Non-pooled payout solutions are not inferior to pooled solutions, especially when survival probabilities are taken into consideration. They have the advantages of liquidity, individual flexibility and can potentially deliver higher pensions as compared to pooled solutions, but are subjects to longevity and investment risks.

- The adoption of different investment strategies and withdrawal rules within a nonpooled solution allows for the variation of risk and return as well as payout profiles and enables the creation of custom-tailored cash flows in retirement. Innovative payout solutions consist of pooled and non-pooled solutions, and may be equipped with guarantees on income or investment return of the pooled part from product providers.

- In Europe, non-pooled solutions still remain a relatively unknown arrangement, with many programs still in the saving phase and little experience with the payout phase. Coverage with traditional pooled products is high, but the completely voluntary use of annuities is low.

- The regulation of funded pension plans in general, and on their payout phase in particular is very complex, differing even within the same country depending on the program. The majority of existing funded tax-supported old age programs have restrictions on the use of capital in retirement.

- The restrictions mostly take the form of prescribing the total or partial annuitisation by means of traditional pooled solutions and disadvantage both the non-pooled solutions and the innovative pooled solutions.

- In Europe, the main motives for restricting the use of retirement capital are paternalism as well as avoidance of moral hazard and double-dipping, evoked by paternalism. The primary goal of regulators is to avoid old age poverty resulting from myopic of irresponsible decisions by the retirees. Statistical data on the consumption and bequest behaviour of contemporary European retirees, however, does not support the hypothesis of widespread overspending or irresponsible financial decisions by the retirees.

- The diversity and complexity of pension regulations in Europe as well as the generally restrictive attitude towards non-pooled and innovative pooled solutions in retirement does not comply with the criteria of proper regulation and have economic consequences for the society as a whole and especially for those individuals affected. Research suggests that especially small and average savers are the most disadvantaged by the enforcement of annuitisation.

- Optimal investment and spending strategy, in the framework of lifecycle profile analysis, calls for considerable stock investments at the beginning of retirement and the gradual annuitisation of wealth, depending on individual risk aversion and wealth to pension ratio. This strategy considerably differs from the regulation-influenced reality observed in Europe.

- 70 out of 100 households can expect to enjoy substantially higher lifetime consumption levels, if they follow the optimal financial retirement strategy instead of annuitising all wealth at the beginning of retirement. For the worst 10% of the possible capital market developments in case of following the optimal strategy, the present values of probable minimum lifetime consumption are only 2-5% lower than the values obtained by the full immediate annuitisation. The consumption profile resulting from the optimal strategy is remarkably smooth over time.

- Enforcement of annuitisation results in high utility losses, depending on the risk aversion and the relation of wealth to pension income. The presence of a bequest motive makes the utility losses even more pronounced, ranging from 36% to 81% of the retirement wealth. The softening of the annuitisation requirements such as allowing for partial annuitisation or for annuitisation in the more advanced age, reduces utility losses while preserving the main goals of the regulators.

The results outlined above show that there are considerable differences between the optimum consumption and investment behaviour in retirement and between the observed preferences of the retirees on the one hand and the regulation-influenced reality on the other hand. Those differences result in substantial individual utility losses for affected individuals. The utility losses will accumulate and become even more pronounced than currently with the ageing of European society and with increased participation in funded pension schemes.

4. Policy recommendations to bridge the gap between the economic optimum and the reality

Changes in the overall regulatory framework for payout solutions in funded pension schemes

To increase the transparency and efficiency of the funded pensions, in both the savings and payout phase, framework changes in some countries might be needed on both the EU and country levels.

- **Apply equal (tax) treatment to schemes.** For the saving phase, the same basic statutory support framework (tax allowances etc.) should apply to qualifying programs, independently of whether they offer pooled or non-pooled solutions, are employment-linked or offered by independent financial institutions. Equally, the tax treatment of income from retirement payout products should be purely based on the periodic income amount, and identical taxation rules should apply to pooled or nonpooled products or their combinations.

- **Encourage aggregate view of wealth.** Immediately before and during the payout phase, the main regulatory framework should encourage an aggregate view of the total wealth available for the individual's spending after the retirement date. This view should include statutory pensions, pensions from all employment-linked and private pension programs, independently of whether they are defined benefit, defined contributions, funded or non-funded. Economically rational and far-sighted decisions on post-retirement consumption can only be made when all income sources and their characteristics are taken into account.

- **Facilitate consolidation of funds.** In order to help individuals to achieve an aggregate view of wealth, a regulatory and legislative framework should be created, which enables the retiree to aggregate pension funds within different defined contribution programs before deciding about the payout products and their combinations. This procedure could enable the retiree to oversee the available wealth better and to get better deals with the suppliers of the payout products. The abovementioned option should enable the tax-neutral transfer of funds between the institutions for the purposes of arranging the actual retirement. In the surveyed European countries, only the UK and Italy have adopted, to a certain degree, the procedures of aggregating funds and applying similar treatment towards the funded pension payouts, independently of the fund's origin.

- **Apply regulation across aggregated funds.** Possible payout restrictions for the payout phase of funded defined contribution pensions and among them, annuitisation requirements, should apply to the aggregated funds within defined contribution schemes after taking into consideration the total pension wealth of the retiree, and not on a program-by-program basis.

- **Employ selective restriction on the use of funds.** Restrictions on the use of funds should apply only if the pre-defined level of coverage with annuity-like or annuity payments from the statutory or unfunded pension programs is not achieved, and only to the extent which enables the achievement of this level. If a certain threshold level of lifelong income is secured by statutory annuity-like payments, by unfunded pension programs or by annuities from the private funded pensions, it should be possible to invest the remaining funds at the retiree's discretion.

- **Use deferred or partial annuitisation, if needed.** Should the compulsion to annuitise be used nonetheless above the minimum annuity coverage level, the annuitisation age should be set at a level where the utility losses are less profound, such as towards the age of 85 (like in German Riester plans), or use the partial annuitisation of funds. Thereafter, the retiree should be allowed to control the remaining funds.

- **Minimise legal uncertainty.** A fundamental framework which applies to all funded defined contribution pension programs should be established. In terms of consumer protection, it should ensure that suppliers of the payout products and their intermediaries uphold standards and codes of conduct in respect to customer treatment, especially in the areas of explaining the design, operation and performance of payout products. At the same time, the suppliers of payout products should be protected from the legal uncertainty caused by customers who may deliberately buy risky instruments and hope to take advantage in any future situation: for example, by suing the supplier of the product for losses. In almost all surveyed European countries, such legal uncertainty was highlighted as an important reason for not supplying innovative products.

- **Enhance financial literacy.** The current existing measures and programs for financial education should be further developed. A special focus should be given to financial planning in retirement, payout phase of funded pensions and available products. The cognitive abilities of different population groups should be taken into account with a special focus on young people, people with low savings or education level, as well as those approaching retirement[2]. The suppliers of pension products and sponsoring employers should be used to ensure the timely access to relevant independent information.

Tools and mechanisms to achieve the goal of creating reliable payout solutions and of motivating the market participants

The reforms of the regulatory environment would spark the creation of innovative retirement solutions by providing the reliable framework for the potential product suppliers and increase potential demand by reassuring prospective retirees. The products for the retirement payout phase should be constructed by assuming the following general approach to the organisation of retirement spending by the retiree:

- **Financial plan**. The retiree should be able to create a kind of financial retirement plan, where the main expected needs and sources of spending should be identified and largely quantified. As we outlined above, the individual should be able to efficiently re-group the available funds before the retirement in a way to achieve the optimal consumption patterns after retirement.

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[2] Our recommendations are in line with the OECD recommendations on good practices for financial education relating to private persons /for enhanced risk awareness and education on insurance issues from 28th March 2008.

- **Range of products.** The prospective retiree should be given access to a range of pooled and non-pooled products, which alone or in combination, could be easily understood and controlled by a person with average cognitive abilities. To support the prospective retirees in their decision-making, non-pooled and pooled payout products designed especially for retirement purposes should exist. Such products should give the retirees reasonable standardised choices in order to better fit personal risk aversion and preferences as to the structure of the retirement cash flows.

- **Provision of default options.** Sensible default choices must help those who cannot or do not want to decide on a particular course of action. Along with the pure pooled or non-pooled solutions, the integrated products should exist and be easily accessible. By using the integrated products, the retiree could completely delegate the task of monitoring the portfolio development and initiating the necessary changes according to the agreed scheme to the managing company.

- **Clear information.** The suppliers of the payout solutions should present information about their products in an honest, easily understandable and comparable way. The information on the risk and return profile of the product, the past performance of the product in question and its expected development under the reasonably realistic conditions as well as the product's total costs should be clearly communicated. Further, the rights of the retiree and the supplier as well as the information standards on the product supplied to the retiree should be clearly set. A unified scheme on this subject, applying to all suppliers of pension payout products might be an efficient solution. In the case that both saving and payout solutions for funded pensions can be offered by the same supplier, it could be easier to ensure that the access to the independent educational information is given to all members of the funded pensions' programs in due time during the saving phase.

- **Advice network.** In order to smooth the elaboration of procedures and organisational structures which could enable and simplify the introduction and proper use of payout products as well as in order to co-ordinate the efforts of the policymakers and the business, a network of practitioners should be created. The main goal of this network should be to exchange views on the best practice and advise European policymakers, similarly to the network created by the European Commission for advising on financial education.

5. Tables and figures

Table 1: Providers and characteristics of basic payout options

Basic types of payout products			
	Life annuity	**Hybrid solutions**	**Income drawdown**
Provider	Insurance company	→ **Combinations of pooled and non-pooled solutions** ←	Mutual fund company
Legal position of retiree	Creditor		Owner
Nature of product	Collective (pooled)		Individual (non-pooled)
Role of provider	-Organising risk pool -Provide guarantees		-Organising asset pools (mutual funds) -Provide professional asset management service -Offer systematic payout options

Table 2: Net replacement rates and gross pension wealth for selected European countries and the USA

Country	Total Net Replacement Rate Base Case: 100% of Average Earning (Male)	Total Gross Pension Wealth (USD) Base Case: 100% Average Earner (Male+Female)
Austria	93%	273,000
France	69%	221,000
Germany	72%	262,000
Italy	89%	244,000
Sweden	68%	280,000
Switzerland	67%	400,000
UK	48%	172,000
USA	51%	183,000
OECD Average	**69%**	**202,000**

Note: The numbers for Switzerland are for both the statuary pubic as well as the mandatory occupational pension program. Source: OECD (2005)

Table 3: Total and aged population in selected countries

Year	2007			2017			2027		
Population, in millions	Aged 65 and over	Total	*Share of 65-over in total, %*	Aged 65 and over	Total	*Share of 65-over in total, %*	Aged 65 and over	Total	*Share of 65-over in total, %*
Austria	1.4	8.3	*17%*	1.6	8.3	*19%*	2.0	8.5	*23%*
France	10	62	*16%*	12	63	*20%*	15	65	*23%*
Germany	16	82	*20%*	18	83	*22%*	21	82	*26%*
Italy	12	59	*20%*	13	59	*23%*	15	57	*26%*
Sweden	1.6	9.1	*17%*	1.9	9.5	*21%*	2.2	9.8	*22%*
UK	9.7	61	*16%*	12	62	*19%*	14	64	*22%*
EU-25	**79**	**466**	***17%***	**92**	**468**	***20%***	**110**	**470**	***23%***
Year	**2007**			**2020**			**2030**		
Switzerland	1.2	7.5	*16%*	1.6	8.0	*20%*	2.0	8.1	*24%*
USA	36	294	*12%*	55	336	*16%*	71	364	*20%*

Source: *Eurostat* (2008), *BFS* (2006), *US Census Bureau* (2008)

Figure 1: Classification of the restrictions on the use of funds during the payout phase of funded pensions

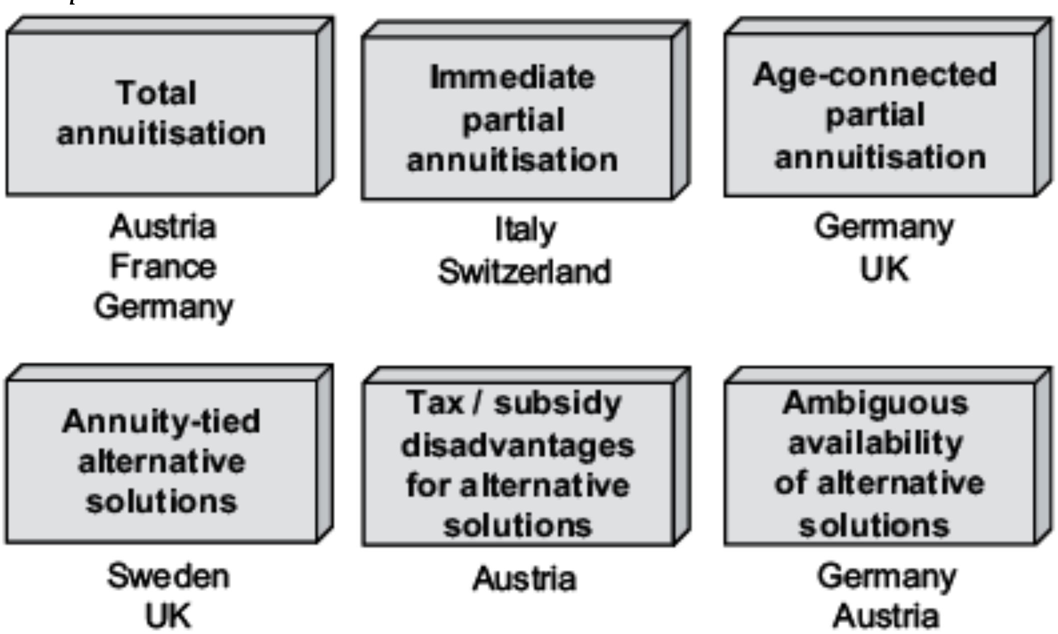

Table 4: Overview of representative funded pensions programs in selected countries

Name of representative old age saving program [a]	Scheduled retirement payouts in 2007	Size of the program [b], billion of assets / relation to life insurance sector [c]	Annuity payout enforced / encouraged	Payout restricted by means of
Austria				
Pensionskasse	Yes	EUR 13 bn / (24%)	Yes	Regulation
Prämienbegünstigte Zukunftsvorsorge	No	EUR 2 bn / (4%)	Yes	Taxation, regulation, refund of subsidies
Mitarbeiter-vorsorgekassen	No	EUR 1 bn / (2%)	Yes	Taxation
France				
Article 83 of Code General des Impôts	Yes	EUR 28 bn / (3%)	Yes	Regulation
Article 39 of Code General des Impôts	Yes	EUR 19 bn / (2%)	Yes	Regulation
Madelin-Law	No	EUR 9 bn / (1%)	Yes	Regulation
PERP	No	EUR 1.3 bn / (0,1%)	Yes	Regulation
PERCO	No	EUR 0.6 bn / (0,05%)	No	None
Germany				
Pensionskasse	Yes	EUR 89 bn / (13%)	Yes	Regulation, articles of association
Occupational life insurance	Yes	EUR 45 bn / (7%)	No	Working agreement
Riester-Program	No	EUR 16 bn / (2%)	Yes	Regulation
Rürup-Program	No	EUR 2.5 bn / (0,4%)	Yes	Regulation
Pensionsfonds	Yes	EUR 1.2 bn / (0,2%)	Yes	Regulation
Italy				
Closed Funds	No	EUR 9.3 bn / (2%)	Yes	Regulation
Retirement insurance policies	No	EUR 4.5 bn / (1%)	Yes	Regulation
Open Funds	No	EUR 3.5 bn / (1%)	Yes	Regulation
Sweden*				
Occupational	No (for new schemes)	EUR 156 bn / (90%)	Yes	Collective agreement
PPM	No	EUR 18 bn / (10%)	Yes	Regulation
Individual pension account	Yes	EUR 5 bn / (3%)	No	None
Switzerland*				
Occupational	Yes	EUR 310 bn / (220%)	Yes	Regulation
Pillar 3a insurance	Yes	EUR 97 bn / (69%)	No	None
Pillar 3a restricted accounts	Yes	EUR 0.26 bn / (0,2%)	No	None
UK*				
Occupational (all types)	Yes	EUR 937 bn / (55%)	Yes	Regulation, articles of association
USA*				
Total IRA	Yes	EUR 2,384 bn / (76%)	No	None
Total 401(k)	Yes	EUR 1,625 bn / (52%)	No	None

*Notes: data on exchange rates as per 23.03.2008 as published by the Financial Times.
a) Programs open to the new entrants participants, without government employees.
b) The data on size of the programs is based on the latest available information ranging 2003-2006.
c) Figures in brackets show the assets of the respective program as percentage of the assets in the life insurance sector.
Source: Own calculations, data from Österreichische Finanzmarktaufsicht (2006), Fédération française des sociétés d'assurances (2006), GDV (2007), Covip (2006), Statistics Sweden (2006), Schweizerische Nationalbank (2007), GAD (2004).

Table 5: Classification of funded pension programs by payout restrictions

Name of representative restrictive old age saving program	Brief description of restrictions applying to the payout phase	Short classification of annuity-related restrictions
Austria		
Pensionskasse	Annuity payout required by the regulation.	Total annuitisation
Prämienbegünstigte Zukunftsvorsorge	Annuity payouts are not taxed, all other payout arrangements are taxed. All other payout arrangements trigger partial refund of state subsidies, received during the saving phase.	Tax / subsidy advantages of annuitisation
Mitarbeiter-vorsorgekassen	Annuity payouts are not taxed, all other payout arrangements are taxed.	Tax advantages of annuitisation
France		
Article 83 of Code General des Impôts	Annuity payout required by the regulation.	Total annuitisation
Article 39 of Code General des Impôts	Annuity payout required by the regulation.	Total annuitisation
Madelin-Law	Annuity payout required by the regulation.	Total annuitisation
PERP	Annuity payout required by the regulation.	Total annuitisation
Germany		
Pensionskasse	Annuity payout required for older contracts, some new contracts allow for partial lump sum payments. Riester-program contracts available.	Restricted availability of non-annuitising solutions
Pensionsfonds	Payout restrictions as for the Riester-programs.	Age-connected partial annuitisation
Riester-Program	Annuitisation of the funds at 85 at the latest. Non-decreasing periodic payouts before the annuitisation. 30% of the capital can be paid out as a lump sum.	Age-connected partial annuitisation
Rürup-Program	Annuity payout required by the regulation.	Total annuitisation
Italy		
Closed Funds	50% of the funds should be annuitised at the beginning of retirement.	Partial annuitisation
Retirement insurance policies		
Open Funds		
Sweden		
PPM	Annuity payout or an annually re-calculated drawdown based on the relevant annuity factor.	Drawdown tied to relevant annuity factors
Switzerland		
Occupational	25% of the funds can be paid-out as a lump sum by legislation, the remaining conditions are ruled in the articles of association of the relevant scheme.	Partial annuitisation
UK		
Occupational (defined contribution)	25% of the funds can be paid-out as a tax-free lump sum by legislation. Effective compulsion to annuitise the funds at 75 at the latest. Alternative to annuitisation (ASP) disadvantaged in terms of tax treatment and payout mode.	Age-connected partial annuitisation. Drawdown tied to relevant annuity factors

Source: Own research