CEIOPS-BOS-11/024 (final)
8 July 2011

DC Project

RISKS RELATED TO DC PENSION PLAN MEMBERS

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I Objective

In recent years many socioeconomic factors have influenced the global pension landscape. In many Member States (MS) there is an increasing trend away from Defined Benefit (DB), which used to be traditional pension plan design for many countries, and an increasing importance of Defined Contribution (DC) pension plans in providing funding retirement benefits for employees.

In comparison to DB, DC schemes are more demanding in relation to the individual scheme participants. There is reallocation of risks and responsibilities between sponsors, IORPs and participants where risks and responsibilities are shifted to the participants. Therefore participants are now substantially bearing the risks and choices made are directly influencing their potential retirement benefits. Hence potential participants and those involved in the decision making process, must understand their role and be sufficiently educated to make their right choices according to the future needs and risk appetite of those concerned.

The purpose of this project is to map out the risks for members of DC schemes and to find out what tools are in place in Member States to help DC pension plan members to make their best individual decisions and to manage the risks and how effective these tools are.

The project covers three phases of the life-cycle model (joining, accumulation and payout) and consists of two stages: the first step focuses on mapping out risks borne by members of DC pension plans while the second stage would be dedicated to the analysis of selected risks and the related risk mitigation mechanisms MS have in place.

The 1st stage of the project focuses on "pure" DC occupational pension plans only, i.e. the plans where no guarantees are provided and the risks are born by pension plan members.

The 1st stage mapping exercise was performed by workstream of the CEIOPS' Occupational Pensions Committee comprised of:

- Hungary (Ferenc Szebeledi)
- Italy (Elisabetta Giacomel)
- Latvia (Ieva Ose)
- Romania (Corona Radulescu)
- UK (Janice Lambert, Chris Clark)

II Responding countries

Code	Country	questionnaire
AT	Austria	answered
BE	Belgium	informed - out of the scope
BG	Bulgaria	informed - no answer
CY	Cyprus	informed - out of the scope
CZ	Czech Republic	informed - no IORPS
DK	Denmark	informed - out of the scope
EE	Estonia	informed - no IORPS
ES	Spain	answered
FI	Finland	no reply
FR	France	no reply
DE	Germany	informed - out of the scope
GR	Greece	no reply
HU	Hungary	answered
IR	Ireland	answered
IS	Iceland	answered
IT	Italy	answered
LV	Latvia	answered
LI	Liechtenstein	informed - no answer
LT	Lithuania	informed - no answer
LU	Luxembourg	answered
MT	Malta	answered
NL	The Netherlands	answered
NO	Norway	answered
PL	Poland	answered
PT	Portugal	answered
RO	Romania	answered
SK	Slovakia	answered
SI	Slovenia	answered - out of the scope
SE	Sweden	answered
UK	United Kingdom	answered

Since the project was performed considering only pure DC five MS are out of the scope of the questionnaire because no pure DC schemes exist in these countries. Two MS are out of the scope because no IORPS exist in these countries. Accordingly the report is based on information provided by 17 respondents.

III Methodology

This mapping exercise started by identifying the choices and decisions necessary during the 3 key stages of the individual's life-cycle (joining, accumulation and payout), taking into account issues which should be evaluated before the choice / decision is made and highlighting the risks arising which in their turn could affect the potential benefits (see also Appendix 1).

When answering the questionnaire respondents were invited to mark the risks which are relevant to their countries and to assess the rate and effect of those risks according to the scale 1 to 5 where 1 is the lowest exponent and 5 is the highest accordingly. The weight of the risks indicated has been used to select the risks with the highest value for the second stage of this project.

The "Risk impact indicator" for each risk has been created as a weighted sum of the risk rating evaluated by respondents according to level of importance and impact of the respective risk in each country.

The "Risk frequency indicator" has been created as a weighted sum of the risk implication evaluated by respondents according to the frequency of the risk and number of the pension scheme participants affected in each country.

The risk based supervision is mostly based on the likelihood of an event and the impact that this event might have. The substantial possible events supervised with special attention are events that score high on both likelihood and impact. Also possible events supervised are events that score high on either likelihood or impact, while possible events that score low on both parameters could be subject to marginal supervision only.

As the project concerns risks and the possibilities to mitigate them, it was decided to apply similar approach to select the risks for subsequent investigation. For this purpose, the risk value indicator was developed that combines likelihood and impact.

The risk value for each of the risks identified has been calculated by combining these two indicators. The risk indicators measurement is done on maximum probable value basis considering maximal likelihood and impact. Risks with the highest risk value have been selected for the second stage of this project.

IV Results

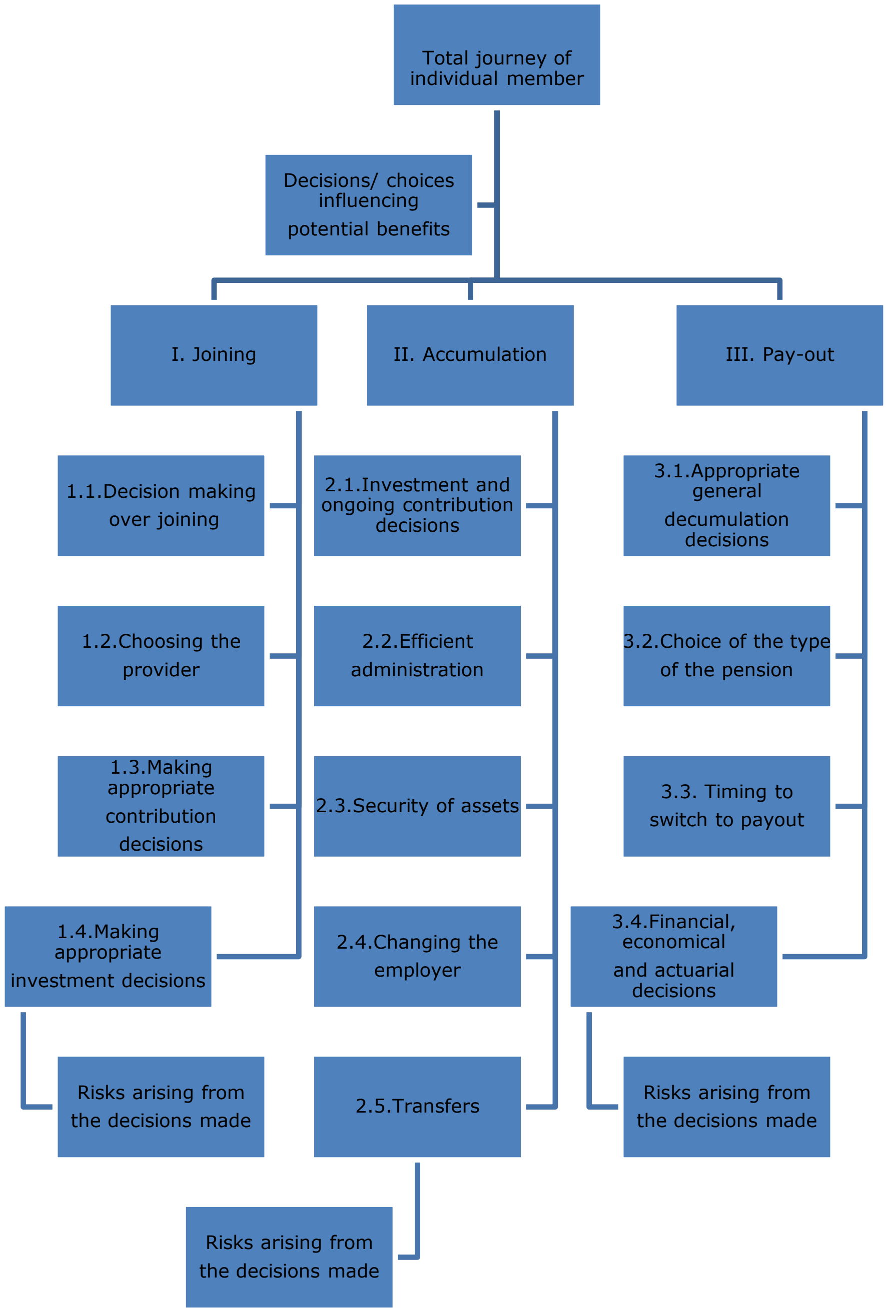
The results of the mapping exercise show which of the risks are indicated to be most relevant for the responding countries, using the above methodology.

The risk name shown at each of the graphs No.2-No.16 contains the number which refers to the decision the respective risk arises from (see Diagram 1) and shortened name of the risk. For full name of each risk and decision related to the risk please refer to the Tables in Appendix 1 (i.e. risk name "1.3.contribution level" means that this risk relates to joining phase decision "1.3.Making appropriate contribution decisions" and full name of the risk is "Insufficient level of contributions for accumulating sufficient level of pension"

IV.1. All phases

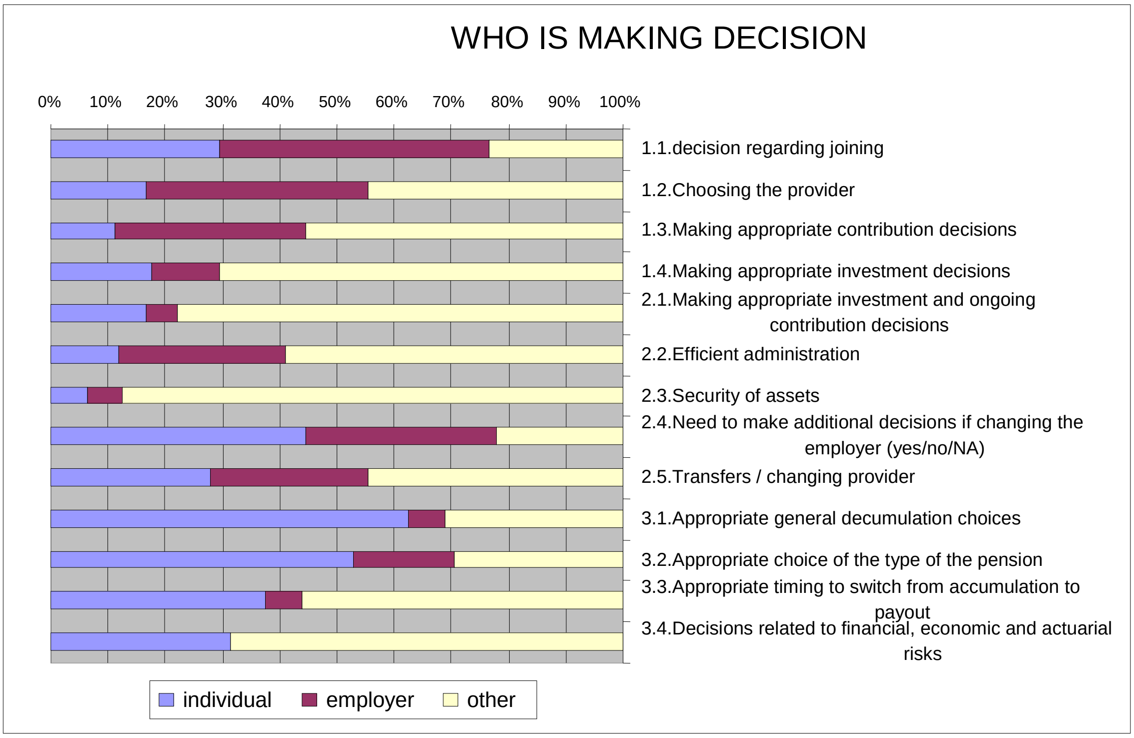
The decision making process is a cornerstone in providing for an adequate retirement income in the future. Diagram 1 shows the decisions to be made at each phase of the life-cycle.

Diagram 1



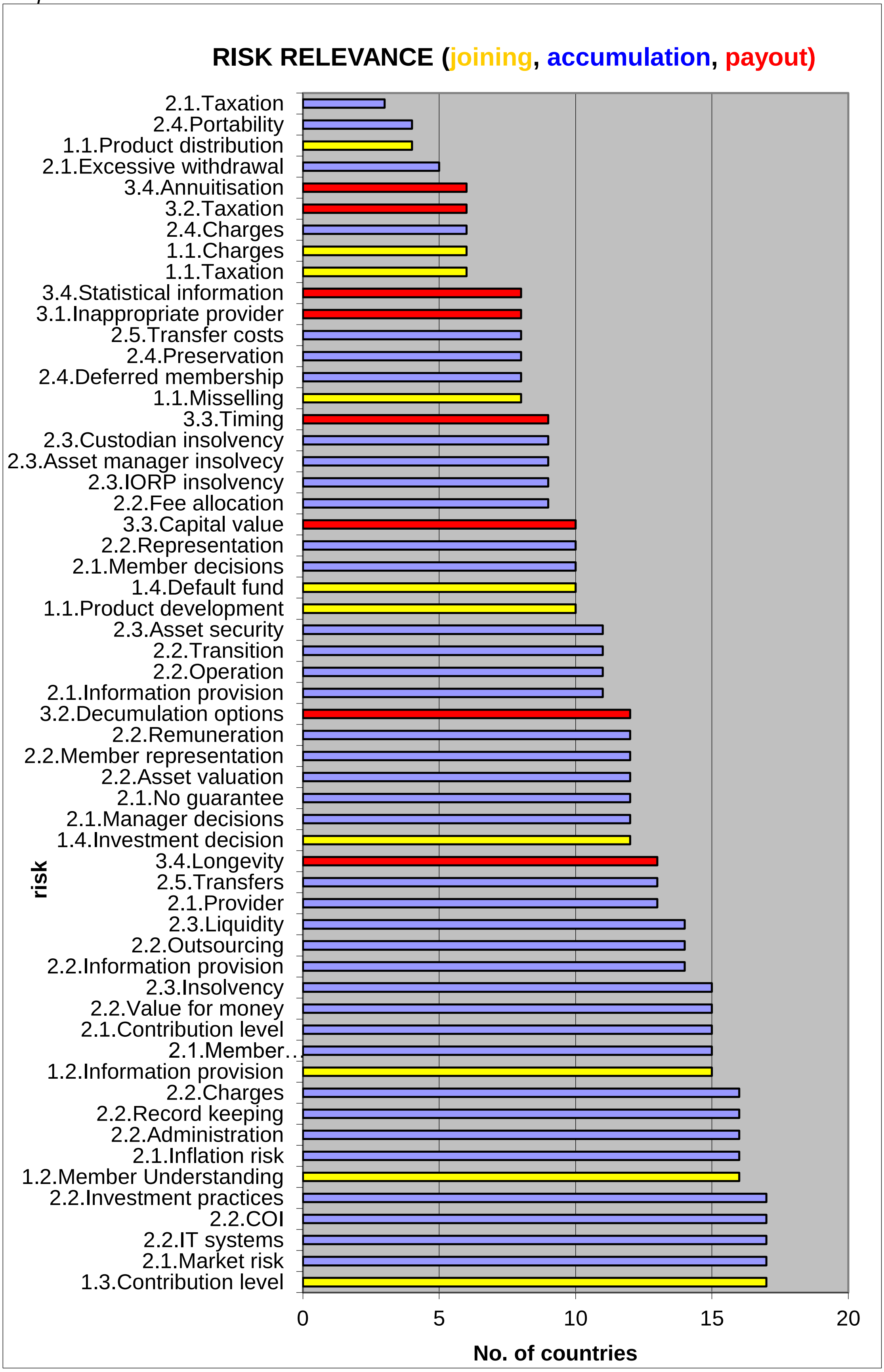
In DC schemes participants are those who are mostly bearing the risks and the choices made are directly influencing their retirement benefits. However the graph below shows that in many cases the participant's involvement in the decision making process is quite limited. In these cases decisions are not made by individuals themselves but by employers and in many cases also by other persons like trustees, IORPs, managers, etc.

Graph1



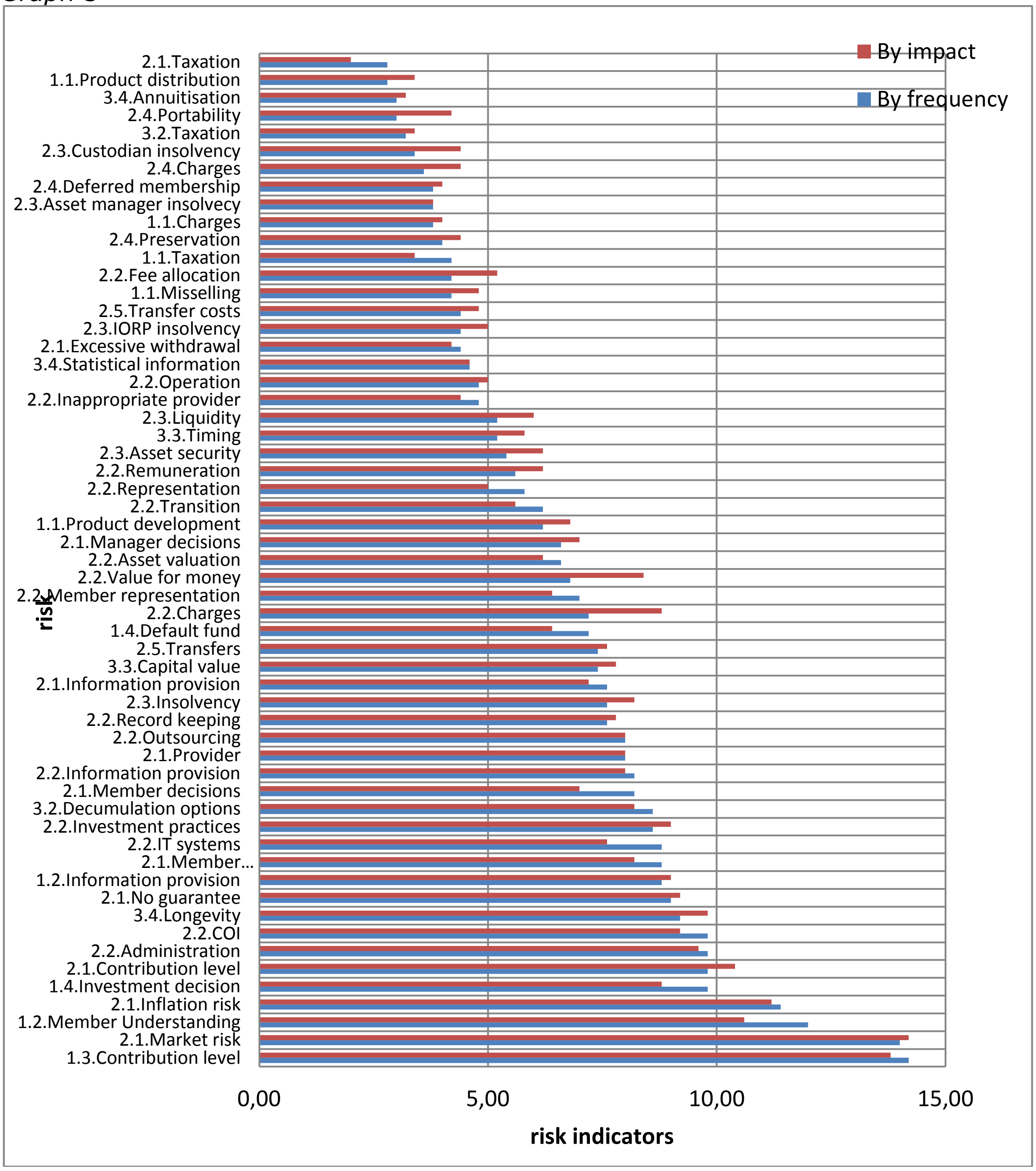
The graph below shows how relevant for the responding countries are the risks related to each of the decisions and choices made during the life-cycle of the scheme participant (see also Diagram 1 for related decision at each phase).

Graph2


RISK RELEVANCE (joining, accumulation, payout)
2.1.Taxation
2.4.Portability
1.1.Product distribution
2.1.Excessive withdrawal
3.4.Annuitisation
3.2.Taxation
2.4.Charges
1.1.Charges
1.1.Taxation
3.4.Statistical information
3.1.Inappropriate provider
2.5.Transfer costs
2.4.Preservation
2.4.Deferred membership
1.1.Misselling
3.3.Timing
2.3.Custodian insolvency
2.3.Asset manager insolvecy
2.3.IORP insolvency
2.2.Fee allocation
3.3.Capital value
2.2.Representation
2.1.Member decisions
1.4.Default fund
1.1.Product development
2.3.Asset security
2.2.Transition
2.2.Operation
2.1.Information provision
3.2.Decumulation options
2.2.Remuneration
2.2.Member representation
2.2.Asset valuation
2.1.No guarantee
2.1.Manager decisions
1.4.Investment decision
3.4.Longevity
2.5.Transfers
2.1.Provider
2.3.Liquidity
2.2.Outsourcing
2.2.Information provision
2.3.Insolvency
2.2.Value for money
2.1.Contribution level
2.1.Member…
1.2.Information provision
2.2.Charges
2.2.Record keeping
2.2.Administration
2.1.Inflation risk
1.2.Member Understanding
2.2.Investment practices
2.2.COI
2.2.IT systems
2.1.Market risk
1.3.Contribution level
risk
0
5
10
15
20
No. of countries

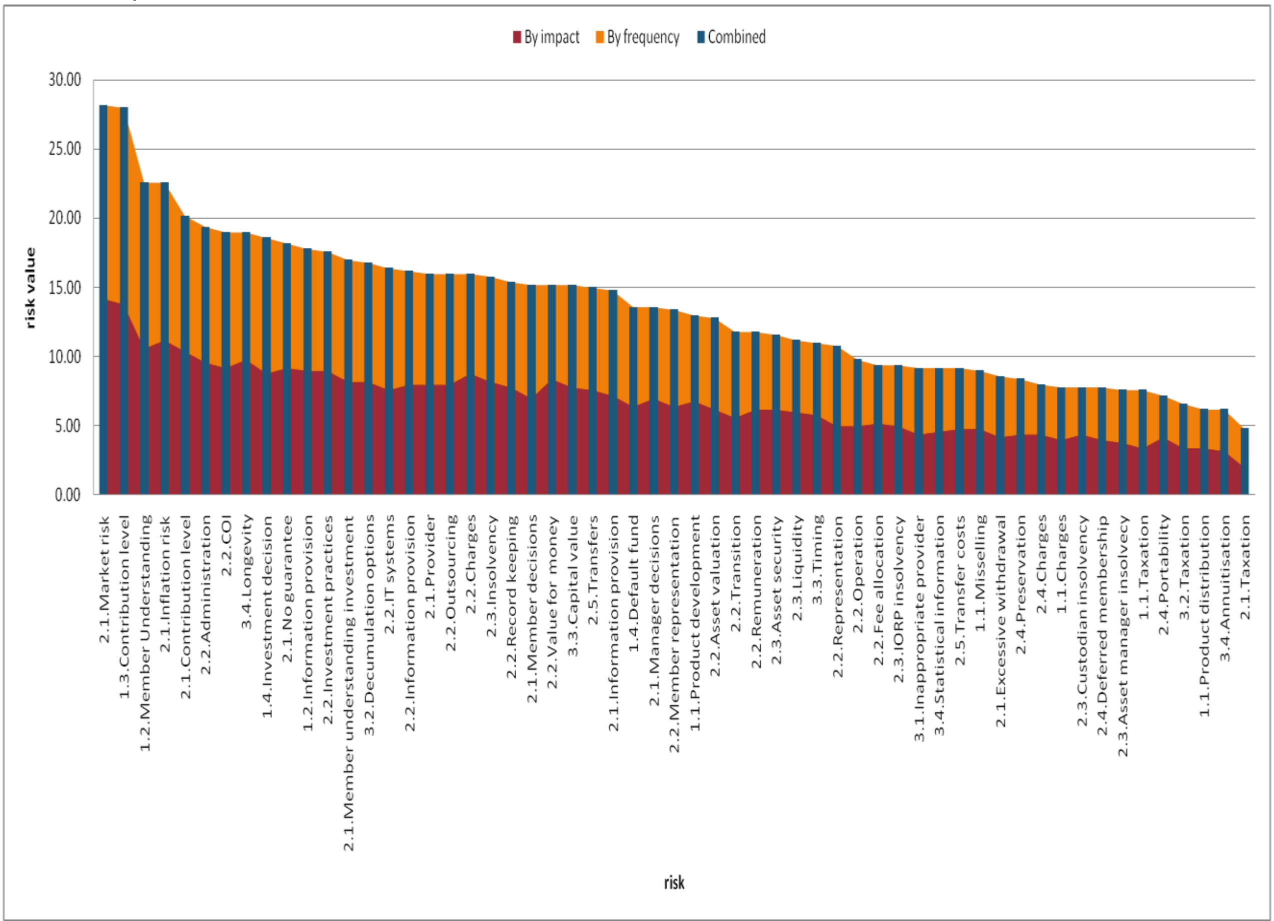
The graph below shows the risk distribution by impact and frequency in all three phases of the life-cycle. One can see that in most cases there are not big differences between impact and frequency and risk indicators are addressing similar scores at both chance and impact, i.e., the risks having the highest impact indicator show also the highest frequency indicator.

Graph 3



The distribution of the combined risk value for all phases is shown below. The market risk (which relates to the value of the assets accumulated by members) in the accumulation phase as well as the risk of an insufficient contribution level at the joining phase, are shown as having the highest risk value. This is followed closely by risk of a lack of member understanding in the joining phase and inflation risk in accumulation phase. At the same time, risk of different taxation policies for different products in accumulation phase has very low risk value as well as the annuitisation risk at payout and inappropriate product distribution risk at joining.

Graph4

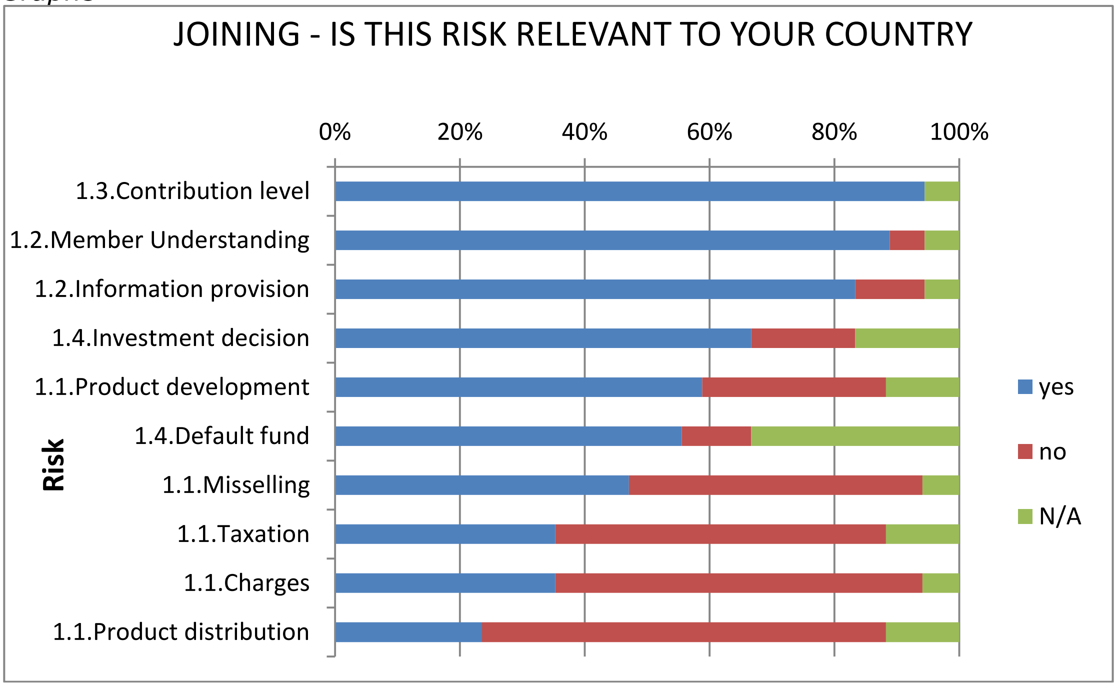


IV.2. Joining phase

There are many risks arising from the decisions made during the joining phase of the life-cycle and influencing the future benefits of the participants in pure DC pension schemes. Table 1 (Appendix 1) shows the risks corresponding to each of the decisions made.

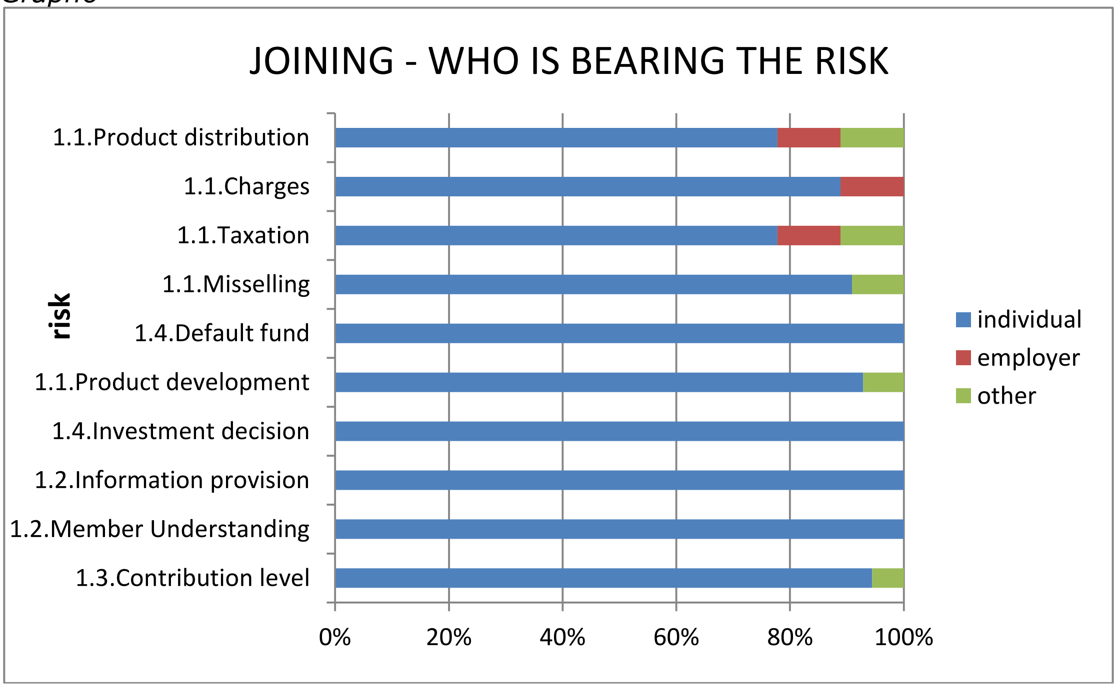
The graph below shows how relevant for the responding countries are risks related to decisions made at the joining phase of the life-cycle. One can see that the most relevant risks at joining are insufficient level of contributions to accumulate sufficient level of pension and a lack of member understanding followed by poor information provision. At the same time inappropriate distribution of the product, unduly high charges when enrolling and specific taxation policy for particular products are not indicated as relevant for the majority of respondents. 34% of the respondents also indicated risk of inappropriate default fund is not applicable to their systems.

Graph5



The graph below indicates who is ultimately bearing the risks during the joining phase.

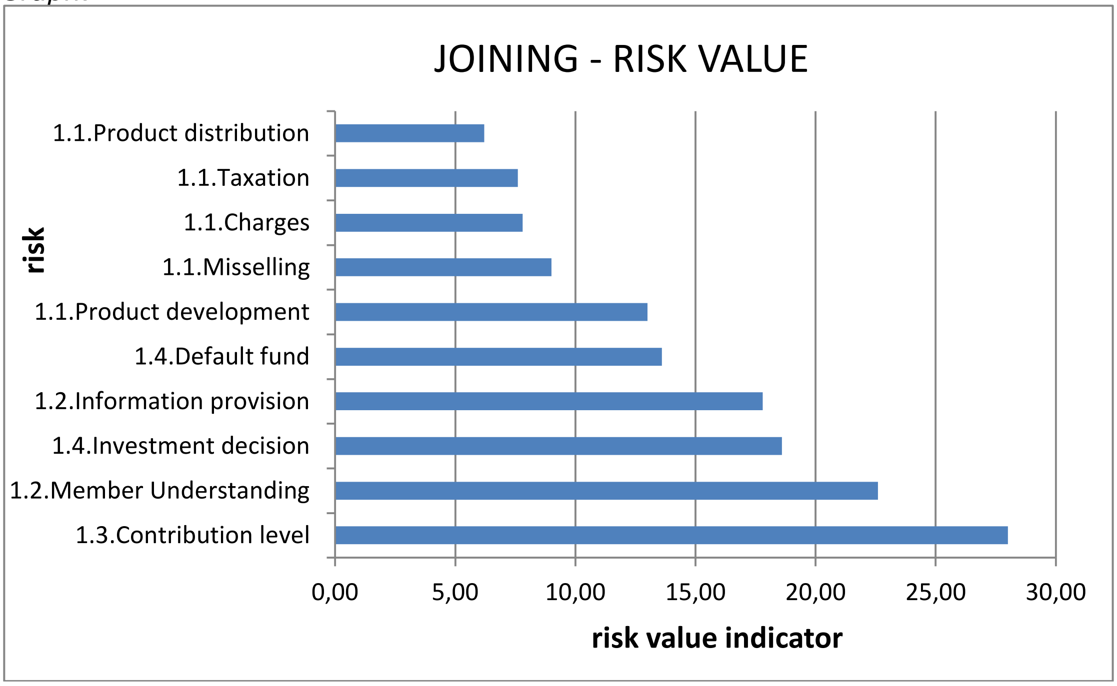
Graph6



One can see that mostly the risks are borne by individual members while decisions in many cases are made by other persons (see also graph 1).

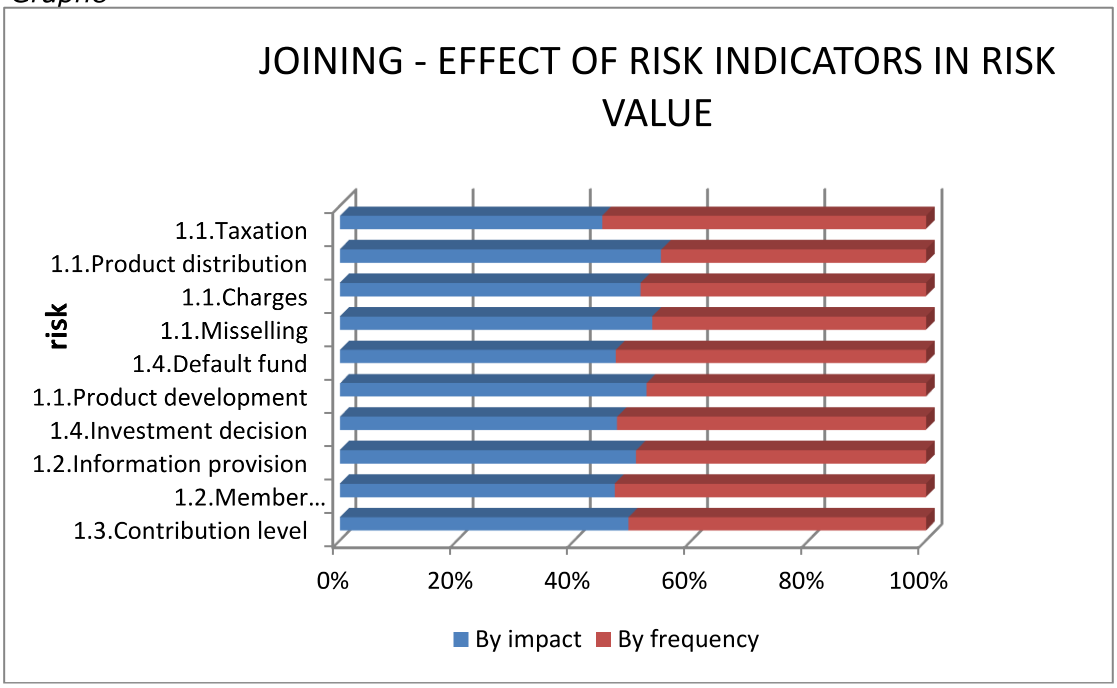
The joining phase risk indicators show that the risk of an insufficient contribution level for accumulating a sufficient level of pension has the highest level of importance as well as the highest number of members affected according to the respondents. Also a lack of member understanding has very high risk impact and frequency indicators. At the same time inappropriate product distribution has the lowest risk frequency indicator as well as the risk of specific taxation policies for particular products.

Graph7



The graph below shows how are the weights of each risk indicator addressing the risk value of the risks concerned.

Graph8

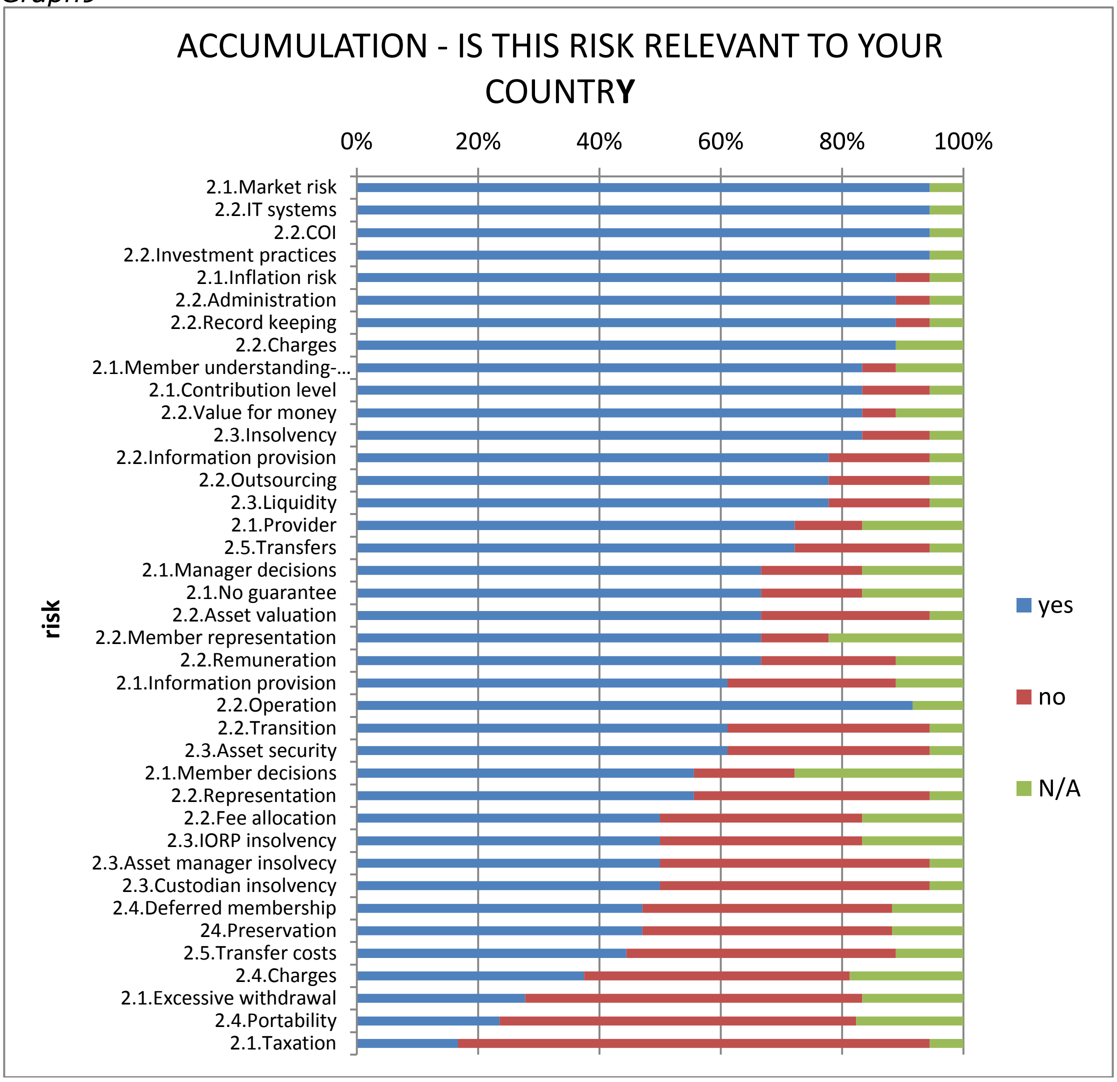


IV.3. Accumulation phase

Similarly to the joining phase also decisions made during the accumulation phase influence the potential benefits of the pension scheme participants. Table 2 (Appendix 1) shows what are the risks identified to be concerned to each decision made during the accumulation phase.

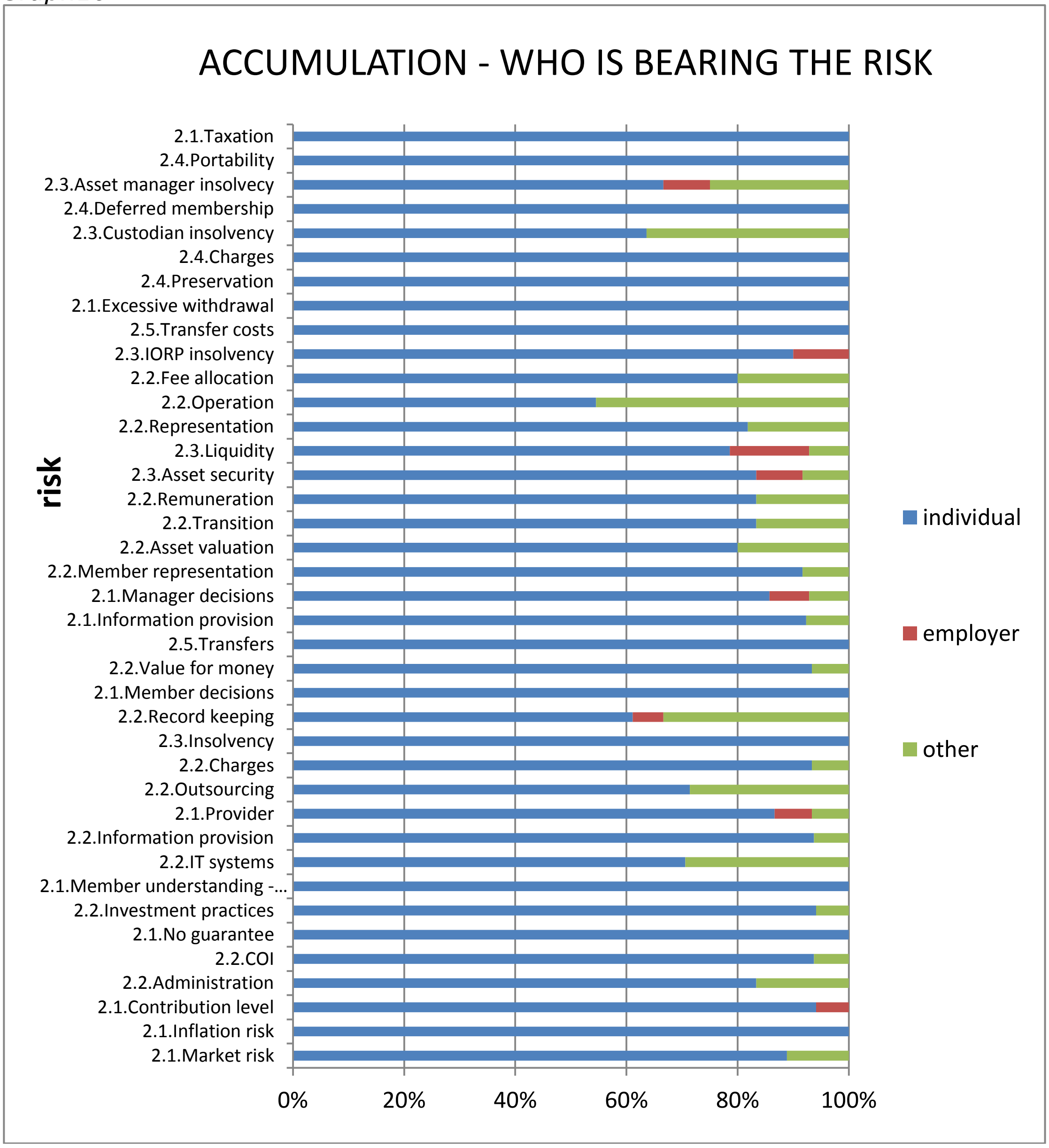
The graph below shows the risk relevance in accumulation phase according to the answers given. Most of respondents indicated risks related to investment decisions and efficient administration to be most relevant while portability and taxation policy seem not have big impact on pension capital. The answers provide that market risk, inappropriate IT systems, risk of conflict of interest where fund managers fail to protect the interest of participants and inadequate investment practices risk being the most relevant risks at accumulation. At the same time differences in taxation policy for different products, inadequate portability and too much withdrawal before retirement are the risks which are not relevant for the majority of respondents.

Graph9



Similarly to the joining phase, the accumulation phase risks are mostly borne by individuals while decisions in most cases are made by others (see also graph 1). Only risks related to the decisions regarding efficient administration for significant number of respondents are pointed as not being borne by individuals.

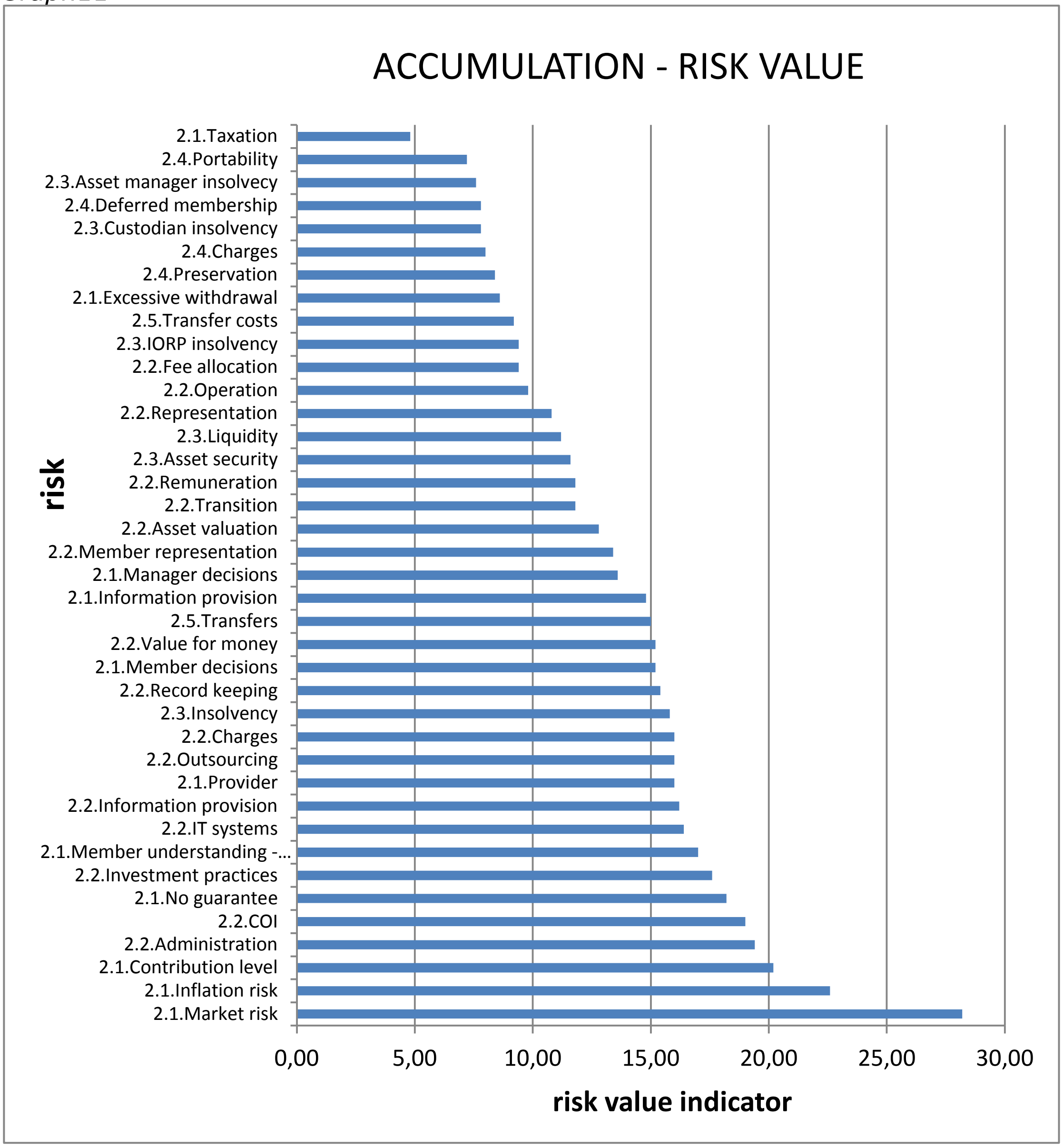
Graph10



Accumulation phase risk indicators show that market risk has both the highest impact and frequency. Also inflation risk and the risk of insufficient contribution level for accumulation of sufficient level of pension have high risk indicators, while differences in taxation policy for different products, insolvency of the asset manager and deferred membership in several pension schemes have very low risk indicators.

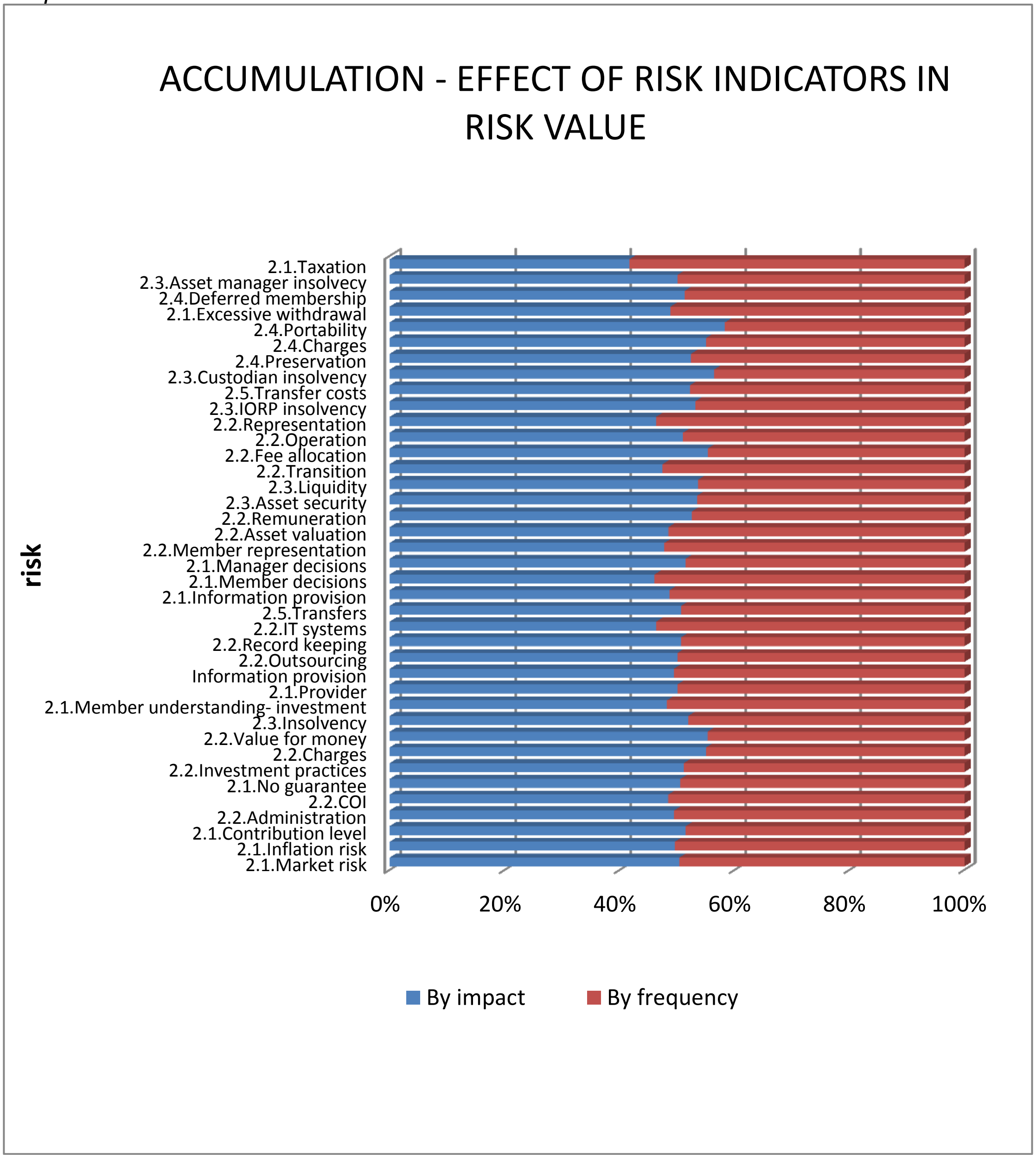
The risk value graph pictures that the accumulation phase risks with the highest value are market risk, inflation risk and risk of stopping or reducing payment of contributions.

Graph11



Graph 12 shows the weights of risk indicators addressing the risk value for each risk identified at accumulation phase.

Graph12

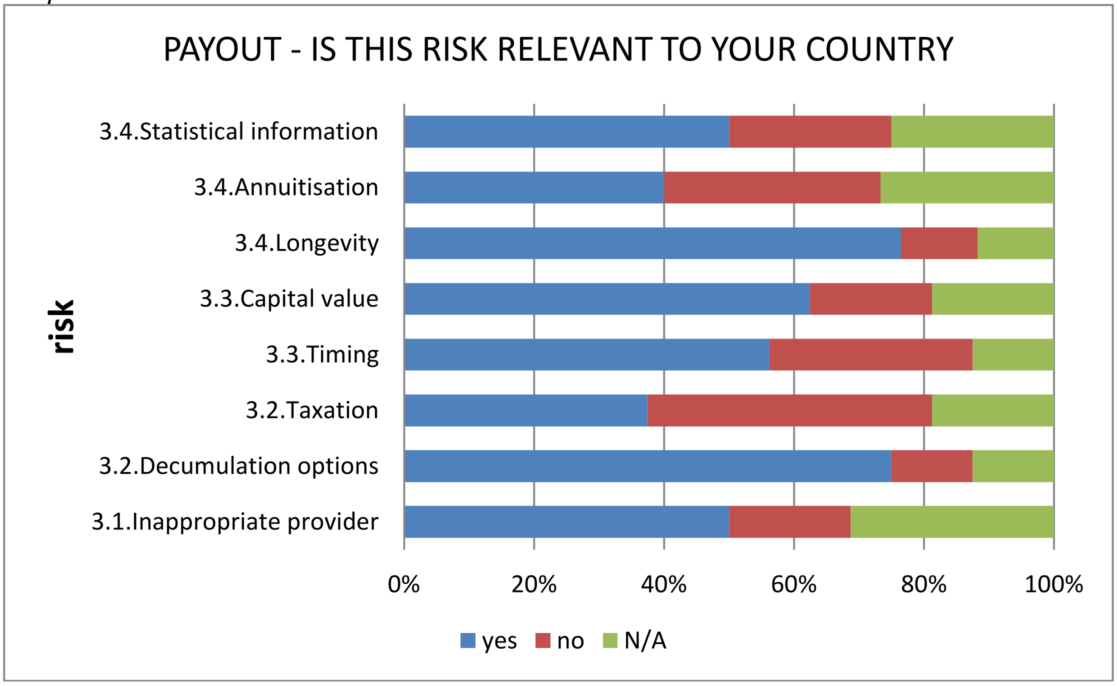


IV.4. Payout phase

Likewise joining and accumulation also payout phase decisions are important to ensure adequate retirement benefits for pure DC pension schemes participants. Equally risks related to decisions made are shown in Table 3 (Appendix 1).

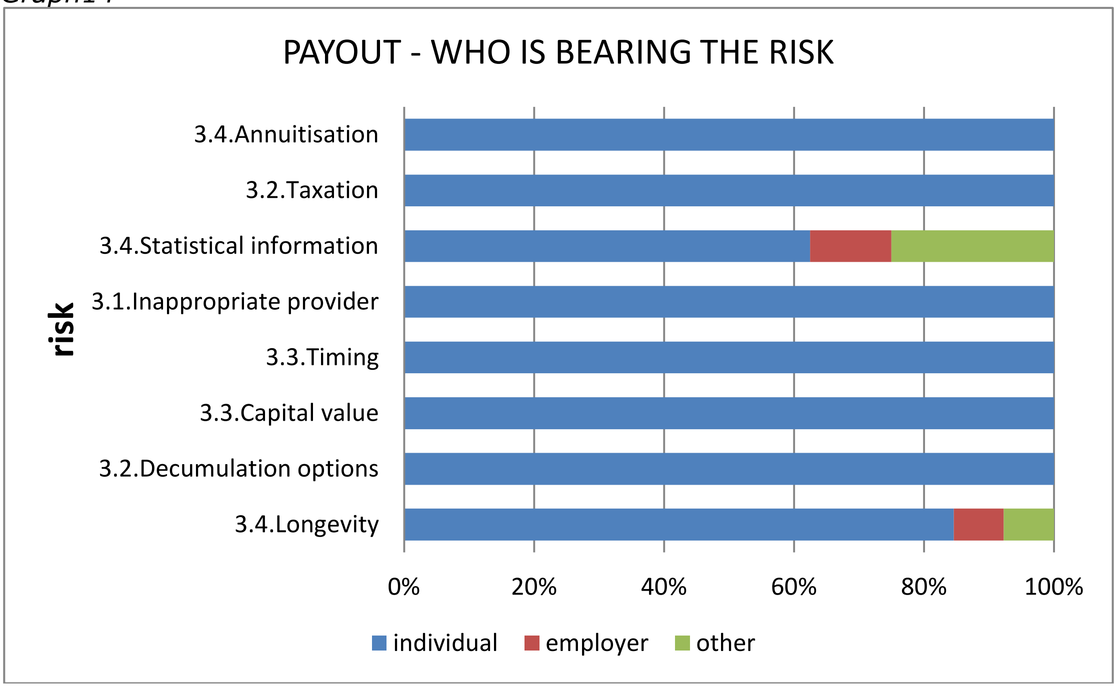
The graph below pictures the risk relevance in payout phase according to the answers given. Most of the respondents indicated longevity risk and inadequate decumulation options chosen by individuals to be most relevant issues while differing taxation policies is not seen as a significant risk. Equally, risks of inappropriate provider, annuitisation and poor statistical information have been shown as not applicable to the systems of material number of responding countries.

Graph13



Similarly to the joining and accumulation risks, payout phase risks are mostly borne by individual members while decisions in the payout phase are more delegated to individuals that in other phases of the life-cycle (see also graph 1).

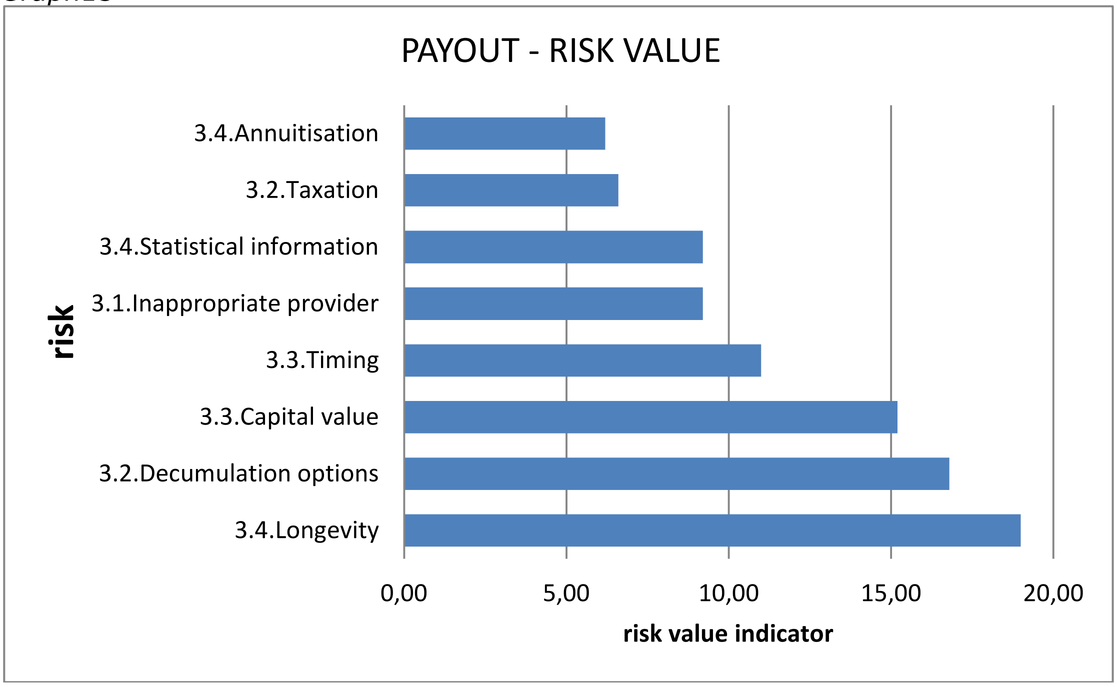
Graph14



The risk indicators for the payout phase point to longevity risk as having both highest level of importance and highest number of members affected. Also the risk that type of decumulation option chosen is not adequate to meet the individuals needs as well as risk that capital accumulated is not enough to purchase an annuity are showing high indicators by both impact and frequency. At the same time, annuitisation risk and taxation risk are indicated as having low level of importance and number of members affected.

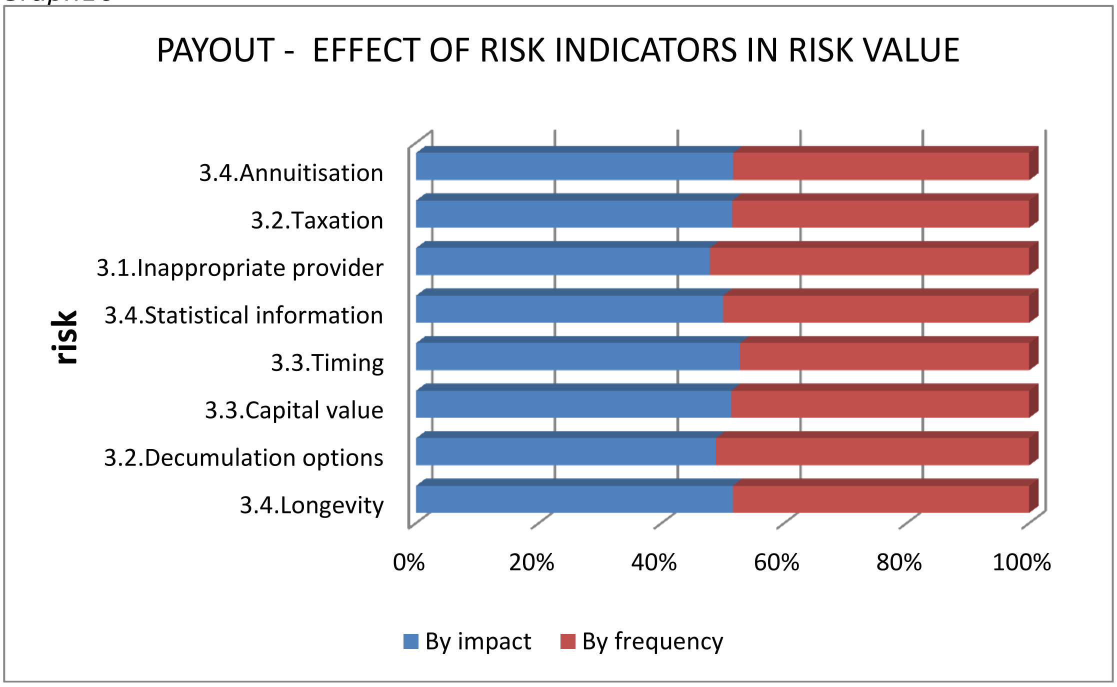
The risk value graph shows that the payout phase risks with the highest value are longevity risk, type of decumulation option chosen and the risk that capital accumulated is not enough to purchase an annuity.

Graph15



Graph 16 shows the weights of risk indicators addressing the risk value for each risk identified at payout phase.

Graph16



V Conclusions

Pure DC schemes are more demanding for the scheme participants in comparison with DB schemes. Pure DC pension schemes require participants to be responsible for their future benefits and to understand that choices made during their journey have direct impact on their retirement benefits. Reallocation of the risks and responsibilities requires individuals to take more responsibility to ensure that they avoid a retirement income shortfall in the future. When individuals are motivated to be themselves responsible for adequate future pension benefits, the main question is how to ensure that participants are able to manage their risks and set up cost effective and optimal asset allocations.

The results of the exercise indicate that in pure DC schemes, risks are mostly assigned to the participants while in many cases individuals themselves have limited involvement with the decision making process. The second stage of this project will look at selected risks to analyse the risk mitigation mechanisms countries have put on place to ensure adequate protection of the rights of the participants.

The purpose of 1st stage exercise was to map out the risks for pure DC occupational pension plans and to select the risks being the most relevant for MS and having the biggest impact and frequency. The risk value indicator has been used to choose the risks for second stage of this project. Those with highest risk value indicator for each of the phases have been identified. The selected risks have been grouped into the major risk categories and 10 major risks from all of three life-cycle phases have been selected for further analysis. The workstream has summarised the answers given and prepared the table of the selected risks (Appendix 2) which are indicated to be most relevant by majority of respondents.:. Selected risks introduced in Appendix 2 will be considered at stage 2 of the project.

Appendix 1

Table 1. Joining phase decisions and related risks

Phase	No. of decision	Decision to be made	Risk arising from decision made / issues to evaluate before choice/decision is made	Shortened risk
joining	1.1	decision regarding joining	inadequate product development to meet individual needs	Product development
joining	1.1	decision regarding joining	inappropriate distribution of the product	Product distribution
joining	1.1	decision regarding joining	specific taxation policy for particular products	Taxation
joining	1.1	decision regarding joining	risk of being exposed to misselling (members opt out from a good occupational plan)	Misselling
joining	1.1	decision regarding joining	unduly high charges when joining;	Charges
joining	1.2	Choosing the provider	Poor provision of information	Information provision
joining	1.2	Choosing the provider	lack of member's understanding	Member Understanding
joining	1.3	Making appropriate contribution decisions	insufficient level of contributions for accumulating sufficient level of pension	Contribution level
joining	1.4	Making appropriate investment decisions	Inappropriate default fund	Default fund
joining	1.4	Making appropriate investment decisions	selection of an inappropriate (ex-ante) asset allocation for members personal circumstances;	Investment decision

Table 2. Accumulation phase decisions and related risks

Phase	No. of decision	Decision to be made	Risk arising from decision made / issues to evaluate before choice/decision is made	Shortened risk
accumulation	2.1	Making appropriate investment and ongoing contribution decisions	Member does not review choices on a regular basis	Member decisions
accumulation	2.1	Making appropriate investment and ongoing contribution decisions	Provider does not execute strategy effectively	Provider
accumulation	2.1	Making appropriate investment and ongoing contribution decisions	Trustee (scheme manager) does not review initial choice on a regular basis	Manager decisions
accumulation	2.1	Making appropriate investment and ongoing contribution decisions	poor understanding on what are the individual's responsibilities regarding monitoring investment performance	Member understanding investment
accumulation	2.1	Making appropriate investment and ongoing contribution decisions	poor information (frequency and quality)	Information provision
accumulation	2.1	Making appropriate investment and ongoing contribution decisions	Inflation risk	Inflation risk
accumulation	2.1	Making appropriate investment and ongoing contribution decisions	Market risk - decrease of asset price on regulated markets	Market risk
accumulation	2.1	Making appropriate investment and ongoing contribution decisions	Stopping / reducing payment of contributions	Contribution level
accumulation	2.1	Making appropriate investment and ongoing contribution decisions	No guarantees provided	No guarantee
accumulation	2.1	Making appropriate investment and ongoing contribution decisions	Differences in taxation policy for different products	Taxation
accumulation	2.1	Making appropriate investment and ongoing contribution decisions	To many/much withdrawals before retirement	Excessive withdrawal
accumulation	2.2	Efficient administration	Poor/inefficient administration:	Administration
accumulation	2.2	Efficient administration	Poor information provision	Information provision

Phase	No. of decision	Decision to be made	Risk arising from decision made / issues to evaluate before choice/decision is made	Shortened risk
accumulation	2.2	Efficient administration	record keeping – unsatisfactory elimination of errors	Record keeping
accumulation	2.2	Efficient administration	inadequate valuation of assets	Asset valuation
accumulation	2.2	Efficient administration	inappropriate IT systems	IT systems
accumulation	2.2	Efficient administration	operational risk:	Operation
accumulation	2.2	Efficient administration	i) outsourcing of investment activity - adequate supervision capabilities;	Outsourcing
accumulation	2.2	Efficient administration	ii) fees in Individual Account Pension Systems – allocation of fees deducted to individual accounts ;	Fee allocation
accumulation	2.2	Efficient administration	iii) fund managers fail to protect the interest of participants	COI
accumulation	2.2	Efficient administration	v) poor representation of the interest of fund members in front of trustees / fund managers (especially in cases where the fund is not a legal entity and is represented by the fund manager);	Member representation
accumulation	2.2	Efficient administration	vi) inadequate investment practices;	Investment practices
accumulation	2.2	Efficient administration	vii) managing transition from accumulation to decumulation;	Transition
accumulation	2.2	Efficient administration	governance – lack of representation	Representation
accumulation	2.2	Efficient administration	Provider does not represent value for money	Value for money

Phase	No. of decision	Decision to be made	Risk arising from decision made / issues to evaluate before choice/decision is made	Shortened risk
accumulation	2.2	Efficient administration	Adviser remuneration does not represent value for money	Remuneration
accumulation	2.2	Efficient administration	Investment decisions are too costly	Charges
accumulation	2.3	Security of assets	Loss and misappropriation of assets	Asset security
accumulation	2.3	Security of assets	Unpaid contributions cannot be recovered following employer insolvency	Insolvency
accumulation	2.3	Security of assets	insolvency of the IORP	IORP insolvency
accumulation	2.3	Security of assets	liquidity risk of the pension scheme (insufficient liquid funds for payouts)	Liquidity
accumulation	2.3	Security of assets	insolvency of the asset manager	Asset manager insolvency
accumulation	2.3	Security of assets	insolvency of the custodian	Custodian insolvency
accumulation	2.4	Need to make additional decisions if changing the employer (yes/no/NA)	deferred membership in several pension schemes	Deferred membership
accumulation	2.4	Need to make additional decisions if changing the employer (yes/no/NA)	too little accumulation when changing job often	Preservation
accumulation	2.4	Need to make additional decisions if changing the employer (yes/no/NA)	membership too costly	Charges

Phase	No. of decision	Decision to be made	Risk arising from decision made / issues to evaluate before choice/decision is made	Shortened risk
accumulation	2.4	Need to make additional decisions if changing the employer (yes/no/NA)	Inadequate portability	Portability
accumulation	2.5	Transfers / changing provider	Inappropriate timing for transfer	Transfers
accumulation	2.5	Transfers / changing provider	Excessive provider costs on transfer	Transfer costs

Table 3. Payout phase decisions and related risks

Phase	No. of decision	Decision to be made	Risk arising from decision made / issues to evaluate before choice/decision is made	Shortened risk
payout	3.1	Appropriate general decumulation choices	Inappropriate service provider	Inappropriate provider
payout	3.2	Appropriate choice of the type of the pension	Type of decumulation option chosen not adequate to solve pension needs	Decumulation options
payout	3.2	Appropriate choice of the type of the pension	Different taxation policies on different products	Taxation
payout	3.3	Appropriate timing to switch from accumulation to payout	Inappropriate timing for decumulation decisions	Timing
payout	3.3	Appropriate timing to switch from accumulation to payout	Capital accumulated is not enough to purchase an annuity	Capital value
payout	3.4	Decisions related to financial, economic and actuarial risks	Longevity risk	Longevity
payout	3.4	Decisions related to financial, economic and actuarial risks	Annuitisation risk	Annuitisation
payout	3.4	Decisions related to financial, economic and actuarial risks	Poor statistical information – inadequate actuarial calculations	Statistical information

Appendix 2

SELECTED RISK	Phase	Risk	Shortened risk	Decision to be made
1. INVESTMENT RISK				
	accumulation	Market risk - decrease of asset price on regulated markets	Market risk	Making appropriate investment and ongoing contribution decisions
	accumulation	Inflation risk	Inflation risk	Making appropriate investment and ongoing contribution decisions
	accumulation	No guarantees provided	No guarantee	Making appropriate investment and ongoing contribution decisions
	accumulation	Provider does not execute strategy effectively	Provider	Making appropriate investment and ongoing contribution decisions
2. INSUFFICIENT CONTRIBUTION LEVEL - JOINING				
	joining	insufficient level of contributions for accumulating sufficient level of pension	Contribution level	Making appropriate contribution decisions
3. INSUFFICIENT CONTRIBUTION LEVEL - ACCUMULATION				
	accumulation	Stopping / reducing payment of contributions	Contribution level	Making appropriate investment and ongoing contribution decisions
	accumulation	Unpaid contributions cannot be recovered following employer insolvency	Insolvency	Security of assets
4. LACK OF MEMBER'S UNDERSTANDING - JOINING				
	joining	Lack of member's understanding	Member Understanding	Choosing the provider
	joining	selection of an inappropriate (ex-ante) asset allocation for members personal circumstances;	Investment decision	Making appropriate investment decisions
5. LACK OF MEMBER'S UNDERSTANDING - ACCUMULATION				
	accumulation	Poor understanding on what are the individual's responsibilities regarding monitoring investment performance	Member understanding investment	Making appropriate investment and ongoing contribution decisions

6. POOR/INEFFICIENT ADMINISTRATION				
	accumulation	Poor/inefficient administration:	Administration	Efficient administration
	accumulation	Fund managers fail to protect the interest of participants	COI	Efficient administration
	accumulation	Inappropriate IT systems	IT systems	Efficient administration
	accumulation	Inadequate investment practices;	Investment practices	Efficient administration
	accumulation	Investment decisions are too costly	Charges	Efficient administration
7. POOR INFORMATION PROVISION				
	accumulation	Poor information provision	Information provision	Efficient administration
8. LONGEVITY RISK				
PAYOUT	accumulation	Longevity risk	Longevity	Decisions related to financial, economic and actuarial risks
9. INAPPROPRIATE DECUMULATION CHOICE (LACK OF MEMBER'S UNDERSTANDING - PAYOUT)				
	payout	Type of decumulation option chosen not adequate to solve pension needs	Decumulation options	Appropriate choice of the type of the pension
10. INAPPROPRIATE CAPITAL VALUE				
	payout	Capital accumulated is not enough to purchase an annuity	Capital value	Appropriate timing to switch from accumulation to payout