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Good practices on information provision for DC schemes

*Enabling occupational DC scheme members to
plan for retirement*

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Summary

1. With this report, as EIOPA, we wish to support European and national policymakers when they draft information requirements for occupational Defined Contribution (DC) schemes where members bear the investment risk and in particular the format of annual statements and pre-enrolment information. It enables policymakers to take into account established and recent insights about the way people process information and make financial decisions.
2. Substantial improvements can still be made to information provision that is meant to support members in their retirement planning. It is important to note however, that information provision is not a panacea by itself: rather, it should be used in combination with other instruments, including default options and financial education. Also the importance of mandatory pension saving should not be underestimated.
3. We argue that where not yet applied a new approach to information disclosure is necessary, given the changes in the pension systems throughout the EU. There is a need to inform people to support them to make the appropriate financial decisions in their retirement planning (chapter 1). Just providing 'sufficient' legally and technically relevant information has proven not to be effective, and can even be counter-productive.
4. We explain that people are no homo economicus, they have limited time and motivation to be involved in retirement planning, and they often use heuristics, which are rules of thumb, to quickly process information (chapter 2).
5. We developed a checklist that is based on the insights from behavioural economics and communication science about how people process information and make financial decisions (see next page), but also we collected good practices in the information provision to DC schemes from various member states (chapter 3).
6. The first and crucial issue on the checklist is that policymakers should only start drafting information requirements if they have thought through the behavioural purposes: what should people be able to 'do' with the information? If information directly serves certain actions and financial decisions in the financial planning it is more effective.

7. In a first layer of information members should be able to find answers to their 'key' questions. For members of occupational DC schemes the most essential questions are:

I. Do I need to take action and adjust my current retirement strategy?

This can only be assessed after having answers to the following two questions

II. Will I receive sufficient pension income?

III. Will I be able to cope with the level of financial risks?

If the answer to these questions is insufficient pension income, or "I cannot cope with the risks", the next key question is:

IV. What can I do to adjust my retirement planning?

8. In subsequent layers of information members should be able to retrieve answers to further questions. The content can be more complex for engaged members. Additionally, legal information should be retrievable and be written in comprehensible language.

9. Such information, for instance pre-enrolment information, should take into account national contexts that may influence the behavioural aspects that information requirements seek to address. Where members have a choice of pension's schemes or choices within the scheme, information requirements should also address the need for reference points or benchmarks for such schemes or choices. Providing hypothetical pension projections based on the main characteristics of the scheme could be a solution to enable comparisons to be drawn by members.

10. The personal annual statement should provide at least the answers to the key questions which are posed above. Pension projections should be provided in euros (or the currency of the country) and in terms of purchase power. Research suggests that – for information which is provided on paper – showing three scenarios (positive, neutral, negative) may be effective. The scenario's need to take into account the various relevant risks (e.g. longevity, the level of inflation, the volatility of interest rates, and performance of the investments). Whether the pension projections are best given in either net or gross and either per week or per month depends on members' context. For information provided through the internet, interactive risk tools seem most promising.

11. Although disclosure of the accrued balances, and inflows and outflows are important for accountability, it is important to note that an accrued balance, the total amount of

pension savings, is not easy interpretable for DC scheme members. It does not give an answer to whether it will provide sufficient income. Inflows and outflows do not help people assess whether the IORP (Institution for Occupational Retirement Provision) dealt well with their pension saving and whether the end result will be sufficient income. Members need support to understand the value of these figures.

12. In the next table we summarize the main concepts underlying this approach that we have set out in this report as a checklist for policymakers.

Checklist for drafting information requirements

<i>Preparation</i>	1	Have a behavioural purpose
	2	Provide a first layer of information that answers key questions of members
	3	Ensure that information is retrievable
	4	Ensure that the information provided is comprehensible
<i>Actual drafting</i>	5	Optimise attention
	6	Reduce complexity
	7	Provide figures that enable personal assessment and understanding
	8	Show potential implications of risks and ways to deal with them
	9	Support readers as much as possible towards financial decisions
<i>Testing</i>	10	Ensure thorough testing among members

1 Introduction

As EIOPA, we undertake this project on our own initiative in the context of the planned review of the IORP Directive, which started in April 2011.

In its advice to Call for Advice 23.2 EIOPA states as follows: Article 20.7 and host country competence should be maintained, as information requirements are contiguous to SLL and maximum harmonisation would likely result in lower disclosure standards in many countries; however, certain aspects of information requirements for DC schemes, consistently with the discussion made above, can be harmonised, still leaving the option to host member states to introduce additional information requirements. Therefore, EIOPA recommends for the time being minimum harmonisation of content but no required common format as EU level for the pre-enrolment document and the annual statement. For DC schemes EIOPA will explore good practices in respect of the format of these documents with a view to possible future minimum harmonisation.

This report is written for European and national policymakers and experts in the field (experts) who draft pension information for occupational DC schemes where members bear the investment risk¹. The aim of the project is to explore good practices in respect of the format of the pre-enrolment document and the annual statement with a view to possible future, at least minimum harmonisation of the practice. But while considering the format, where appropriate also the content of these documents is taken into account in this report.

1.1 What can be read in this report?

The exploration of good practices is carried out by 1) translating insights from behavioural economics and communication science into main concepts that are relevant for information requirements, and by 2) exploring existing good practices in different member states. The purpose is to increase the likelihood that members of occupational DC schemes take the information into account to plan for retirement.

- In chapter 2 we set out the most important insights from behavioural science, which are relevant as background information and which have implications for information requirements for members of occupational DC pension schemes;
- In chapter 3 we set good practice learned from behavioural economics and communication science. EIOPA provides a checklist, which is complemented with existing practices from the various member states. This third chapter can be

¹ In the report, the phrase "occupational DC schemes where members bear the investment risk" is also referred to as "occupational DC pension schemes", "occupational DC schemes", "DC pension schemes" or "DC schemes".

considered as a practical checklist that can be used to develop pre-enrolment information and annual statements suitable for occupational DC scheme members;

- In chapter 4 we summarize the main implications for pre-enrolment information and annual statement for DC scheme members specifically in the context of the IORP Directive.

When discussing information provision to members of IORPs we first wish to point out the increasingly important role of information in people's financial planning for the old age.

1.2 Why policymakers and regulators need a new approach to information provision

Governments, employers and IORPs increasingly shift risks and responsibility for individual retirement planning towards members of pension schemes in a lot of member states. Pension systems in European member states change. First pillar pensions tend to become less generous. Second pillar pensions tend to become more risky. DB pension schemes used to be common, whereas recently DC schemes are becoming more dominant in a lot of countries. Also there are member states where occupational pension arrangements have always only been DC. Studies have shown however that people have great difficulty planning for retirement and tend to not cope rationally with risks.

Although transparency has an overall positive effect on the functioning of financial institutions (Nobel Prize in 2001 for George Akerlof, Michael Spence and Joseph Stiglitz), information is not in itself useful for members. Providing 'sufficient' information does not per se affect the behaviour of members of pension schemes. Instead, information overload, too complex and too abstract information appears to put people off from reading (Sunstein, 2011; Thaler & Sunstein, 2008). DC scheme members have only scarce processing resources and most of them cannot be considered financially literate (Van Rooij, Lusardi, & Alessie, 2009). This implies that providing all relevant legal and technical information is not sufficient by itself.

Information provision has always had foremost a legal purpose: pension members needed to have information that precisely documented their rights and duties. Any legal claims could follow if one of the contracting parties was not compliant with the rules. Slowly we have shifted towards the insight that a legal purpose of information provision is not sufficient and people need first and foremost 'key' information (Rinaldi & Giacomel,

2008; EIOPA Report on Pre-enrolment information, 2011; Call for Advice Information, 2012; European Commission PRIPS proposal).

Substantial improvements can still be made to information provision that is meant to support members in their retirement planning. It is important to note however, that information provision is not a panacea by itself: rather, it is only one aspect of the broader regulatory setting and should be used in combination with other policy instruments, including default options and financial education (Thaler & Sunstein, 2003; Rinaldi & Giacomel, 2008; EIOPA Default funds project;). Also the importance of mandatory pension saving should not be underestimated.

1.3 How behavioural economics can help

In various fields of policymaking, scientists together with policymakers seek ways to make use of insights from behavioural economics (Cabinet Office Mindspace, 2010; Chater, Huck & Inderst, 2010; Sunstein, 2011; Thaler & Sunstein, 2008; Thaler & Benartzi, 2001). One of their aims is to improve the functioning of the markets and the outcomes of people's financial decisions. In the field of pensions a lot of research has been carried out that can be taken into account to improve pension information (Cox, 2011; Ritchie et al. 2012).

In this report we introduce 'Max' (see figure 1). He is an average European DC scheme member and will help to understand the new approach. It is known that Max behaves differently than the often assumed 'homo economicus' (Tiemeijer et al., 2009). By definition people have limited time and motivation to read and understand pension information (Sunstein, 2011). Whereas it is assumed that information leads to understanding, to the willingness to act and subsequently to appropriate actions, this appears most often not the case. Max has scarce processing resources and cannot consciously read and analyse all the information that he encounters (Kahneman, 2012). Nevertheless, he is more likely to process and use information if it is offered in a way that fits his ways of thinking, and making financial decisions. Hence, by taking human cognition into account policymakers can improve the format of pension information and make the information more effective.



Figure 1, Max, an average European DC scheme member

1.4 What is 'new' about this approach to information?

Policymakers and experts should anticipate on the financial decisions members need to make. Therefore, they have to 1) think through their behavioural purposes; 2) provide layers of information, where, in the first layer, members' key questions are answered, and 3) in further layers legal or more complex information is retrievable; 4) information is comprehensible; and finally, 5) support members as much as possible towards financial decisions.

1.4.1 Have a behavioural purpose to activate members

One essential purpose of information requirements should be to support members making sensible financial decisions with respect to their retirement plans. Therefore, information provision should have clear and simple behavioural purposes. Before starting to draft a proposal for information provision, policymakers should have a clear idea about what a DC scheme member should be able to 'do' with the information.

This approach to information provision and requirements is new, because currently policymakers and experts tend to think from the perspective of the market and the scheme.

First, information requirements often primarily have legal purposes. Everything that could be relevant for members, for a variety of reasons, is often included in information documents. The implicit purpose is to prevent legal claims. Although legal information is necessary, and should always be disclosed in an appropriate way, the new approach argues for a primary level of information that is developed especially to support people in making financial decisions.

Second, often policymakers wish to require the provision of too much information that they believe is relevant for members and that members 'should know' about a pension scheme. Much less attention is being paid to the format, the way to structure and provide the information in such a way that it is clear to members how they should 'use' this information. The assumption is that members will nevertheless read, and use this information to make informed decisions. This assumption is however false. People will turn away from information if they do not quickly understand how it is relevant to them and how they should translate the information into financial decisions.

1.4.2 Answer members' key questions in a first layer of information

Members have key questions about their DC pension schemes, which should be answered in a first layer of information. In all member states where DC schemes are permitted, DC scheme members will tend to procrastinate, do nothing in their retirement planning. When it is immediately clear to them whether there is reason to take action the probability is higher that members will do something with the information. Key questions are whether members will receive sufficient pension income in retirement, and are able to cope with the risks. The better information can provide answers to key questions and the better it can give support towards the financial planning, the more it will be used.

Having this first layer of information is 'new', as often one piece of information serves too many different purposes without stating them explicitly. For instance, a mix of information is offered that includes the main features of the product manufacturer, the product, the risks, the responsible regulator, the contact details of the complaint handling and it includes information that is relevant for the moment of purchase and for later moments after the purchase of the product. Although the main aim of this sort of information is also to help people make sensible financial decisions, it does not take into account that people have limited time and motivation to deal with the information. The result of the information overload is that members turn away from the information.

1.4.3 Legal and more complex information is retrievable in subsequent layers of information

This new approach does not prevent the provision of full information, but proposes to ensure retrievability of further information in subsequent layers. This can be more complex information, abstract information, and legal information. The structuring of information can help members retrieve the answers to further questions easily, and substantially improve the effectiveness of information (Hartley & Trueman, 1983). This layering of information can be done within one information document. But it can also be applied to a set of information documents, or by using different mediums of information. If the internet coverage is adequate, websites are a very effective medium to provide layered information and to promote action, as it is interactive. In various countries websites exist where members of DC schemes can easily obtain insight in their pension planning.

1.4.4 Information is comprehensible

The new approach emphasizes the importance of comprehensible information in all layers. More complex or legal information can be written fully at a further layer so that it can be read and understood by members (Davidson & Kantor, 1982). Jargon can often be avoided or be explained in plain language and by using consistent vocabulary.

1.4.5 Support as much as possible financial decision making

Finally, the new approach argues that pension information should guide members as much as possible towards financial decisions. If members need to make choices, or financial decisions, the information needs to steer them towards next appropriate steps in the retirement planning. The barrier that people experience in taking action should be taken away as much as is appropriate.

1.5 Important considerations

There are a few issues that need consideration and reflection while searching for consensus about the necessity of this new approach to information disclosure. First, there needs to be agreement that members should be given more support in the retirement planning; second, the new approach implies that policymakers and experts face a technical challenge; third, this new approach towards information disclosure is complementary to financial education.

1.5.1 Policymakers do not know what good financial decisions are; but know in collaboration with experts more than individual members

A topic for discussion is that policymakers do not know what good financial decisions for members are. Often it is stated that people themselves know best what the appropriate financial decisions for them are. Yet, research has shown over and over again that people are naturally poor pension planners. Financial skills are in general not well developed, and especially retirement is a difficult topic as it is so very far away in the future. As time and motivation are scarce resources, individual DC scheme members are unlikely to all actively plan for retirement. This is even more the case when information remains difficult to read and understand.

We believe policymakers in cooperation with experts should support people in getting to grips with their retirement planning. Policymakers and experts can help people to estimate what pension income will follow from members' current pension saving, they can support people to estimate the impact of the risks and how to take into account these risks. If considered necessary policymakers can steer people on the importance of saving, or in the direction of personal advice or help. Policymakers do have the responsibility to regularly monitor the quality of their steering and to ensure the availability of appropriate products and advice.

1.5.2 Technical challenge

If policymakers choose this new approach to information provision, they accept greater technical challenges. To provide members of DC schemes the necessary support, information needs to be translated into answers to members' key questions. For instance, information about an accrued balance is not meaningful for members. It does not answer their key questions. Therefore this figure needs to be translated into a hypothetical projection of pension income. For policymakers and experts it will be difficult to reach agreement about the assumptions for the projections. However, as members are so little involved in pension planning we believe that these technical challenges need to be overcome to support people in making a retirement planning. It is important to note that these projections and assumptions are not made for people to understand their rights and duties, but are given as a support to plan for retirement.

If policy makers choose not to deal with the technical challenges, they leave these technical challenges to members to overcome. The majority of people, not being homo economicus and thus having a lack of self-control and a short time horizon, will decide to not do anything, as retirement age is still far away. This will lead and is leading to unsatisfactory personal and societal outcomes. Policymakers and experts have more technical knowledge and should use it as much as possible to support people with their retirement planning. At the same time it should be made clear to members that the figures provided are not representing what they will actually receive, rather suggesting what they could receive under specific circumstances.

1.5.3 Good information complementary to financial education

Sometimes it is stated that the use of defaults and this new approach to information provision is an alternative to financial education. This is not the right conclusion to draw, both are necessary. Policymakers and experts are, however, currently systematically

overestimating the skills and willpower of individual DC scheme members. Policymakers and experts are deeply involved in issues surrounding saving through IORPs and have a much higher level of understanding than an average IORP member. This makes them poor in understanding how most people are capable of understanding retirement planning. This new approach recognizes that people need to receive information that serves their needs and that increases their feeling of control and therefore motivation to act. This feeling of control and people's ability to recognize information and do something with it in the retirement strategy will for many people be improved further through financial education. Hence, both information and financial education should jointly be improved.

2 How people process information and make financial decisions

In this chapter, as EIOPA, we introduce Max to you as a policymaker and set out the key insights from behavioural economics and communication science which are crucial for understanding the way pension scheme members process information and make financial decisions. It shows that people process information systematically different than normally assumed. If this is recognized, and information requirements are adjusted accordingly, this can lead to better outcomes for pension scheme members and for the 'market'. The following text provides the necessary theoretical background for the practical checklist of Good Practices that we will present in chapter 3.

2.1 Meet Max, he is not a homo economicus

Before discussing the key insights from behavioural economics and communication science, we want you to meet Max. Max is meant to help you understand how pension scheme members generally process information and make financial decisions. Below, we introduce Max to you.

Meet Max!

Max is an average European DC pension scheme member. He has limited time to process all the information he comes across to make financial decisions. Max does not like to hear about uncertainties. Furthermore, he is mostly focused on the short term, which makes it difficult for him to think about events far away in the future such as his pension.

However, at the same time Max is concerned about his future pension income. Will it be enough? If not, how much will he come short? And what can he do to improve his pension situation?

Max is struggling with these questions and this makes him a bit worried as you can see.



Regulation with respect to information disclosure still tends to be based on the notion that people process information and make decisions according to the Rational Choice Theory (RCT). The RCT uses assumptions about how people process information, these assumptions created the *homo economicus*. One of the key assumptions is that if people are provided with sufficient information they will thoroughly process the information, understand what it means for them personally and subsequently choose the option that best fits their personal circumstances and preferences.

Insights from behavioural economics and other scientific disciplines showed in the past years that individuals behave systematically and hence predictably different than assumed by the assumptions of the RCT. Max holds all the characteristics described by the insights from behavioural economics and behaves differently than the *homo economicus*. Max is an actual human. Table 1 sets out several assumptions of the RCT and the opposing insights from behavioural economics. These assumptions and the opposing insights are further explained in the following paragraphs.

Table 1, RCT assumptions and opposing insights from behavioural economics

<i>Homo economicus</i>	Insights from behavioural economics a.k.a. Max
People use all available information to make decisions	Max tries to reduce complexity; he uses heuristics and is prone to biases if he tries to understand information and make a decision
People strive for the best result and make financial decisions accordingly	Max is often satisfied if decisions lead to a suboptimal but reasonable result
People perfectly take into account uncertainties	Max tries to avoid ambiguities, is unrealistically optimistic and has a preference for certainty
People are able to make a long term financial planning	Max lets short term interests prevail over long term and has limited self-control to save for later



Often pension products are accompanied by extensive documents that set out the terms and conditions in legal terms. It is assumed that if we provide sufficient information, full overview of the relevant information, members will extract the essential information and make financial decisions accordingly. However, research has indicated that most people cannot understand these documents, cannot extract the essential information, do not succeed to interpret and cannot make financial decisions accordingly (Van Dijk & Zeelenberg, 2009). From behavioural economics it is known that people use heuristics and are prone to biases when they deal with a choice context. Heuristics are rules of

thumb, simple decision rules, in order to reduce the time and effort that needs to be put in making financial decisions.

Another assumption is that people generally strive for the best result. They read through all the information documents, understand and find the best product accordingly. Unfortunately, this appears not to be the case (Simon, 1959; Schwartz et al., 2002). Most people appear to stop planning and taking further actions when they consider the outcome satisfactory. This means for instance, that if people need to decide for one or another pension product, and information is not making comparisons between products simple, a lot of people will not seek further to find out which one is the best. They will choose for a suboptimal product (Schwartz et al., 2002).

Risks are an essential part of the information about pension products. Often it is assumed that by providing people information about risks, they know how to incorporate them into their financial planning. However, people appear to have great difficulty incorporating risks in a long term financial planning (Bernartzi & Thaler, 2008). Moreover, many people do not like to read or receive information about risks, they will try to avoid it and instead seek for information that makes them feel secure. People are generally unrealistically optimistic, which might result in a passive approach to risk information and long term financial planning.

Financial planning for old age means that people need to be forward-looking. They need to make decisions early in life in order to ensure income in retirement. This has appeared typically not easy for people to do (Bernartzi & Thaler, 2008; Thaler & Shefrin, 1981; Baumeister et al., 2007). Short term interests appear to prevail over the long term naturally. It needs a lot of effort and time to overcome this tendency and plan for the long term. This is the reason why often defaults are introduced in a pension system and mandatory pension schemes work well for people (see EIOPA project on default funds). It helps people to overcome the lack of self-control.

2.2 Processing information through the conscious and subconscious route

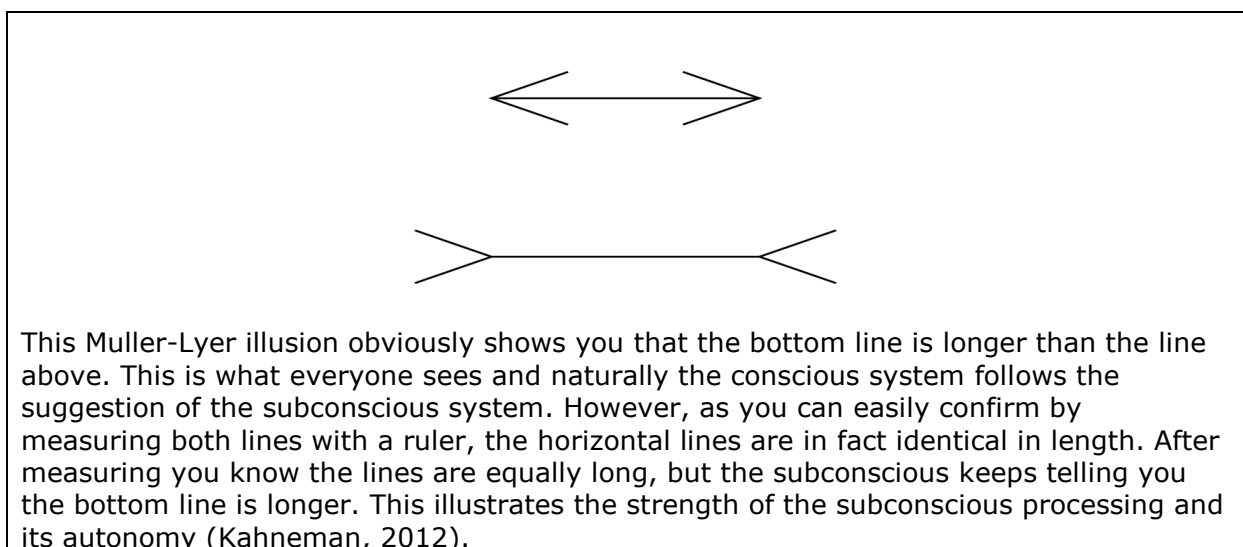
So Max does not process information and does not make decisions according the assumptions of the RCT, and this can be taken into account. In order to get a better understanding of what type of information provision would help him make better decisions, we explain an important theory from behavioural economics. Many well-known psychologists come to the conclusion that there are two ways of information processing,

dual processing models (Kahneman, 2012; Petty, Cacioppo, Strathman & Priester, 2005). Dual processing models describe two rather different ways in which persons come to hold a reasonable attitude or make decisions. In short, these models propose two routes of information processing; a conscious and a subconscious route.

Both routes of information processing and decision-making have different characteristics. The *subconscious route* operates automatically and quickly, with little or no effort and no sense of voluntary control. It involves little or no cognitive effort and occurs when a person relies on a relatively simple and low effort decision strategy. The *conscious route* allocates attention to mental activities that demand a lot of effort. This route involves careful thinking about and examining of information and takes a lot of effort compared to the subconscious route.

The two different routes do not operate totally independent of each other; in fact there is continuous interaction between them. Both systems are always 'on' and active. However, the activity of the subconscious system is automatic and therefore people do not experience it to be active. The conscious system normally operates in a comfortable low-effort mode, in which only a fraction of its capacity is being used. The subconscious system generates suggestions for the conscious system. Generally, the conscious system adopts the suggestions of the subconscious and therefore most of the time people believe and act on impressions, desires and intuition. Normally this works fine because most of the time people make good decisions and take the right actions (Kahneman, 2012).

To get to the core of the difference between the routes the difference can be best experienced and felt, therefore take a look at the next picture.



Current information provision on pensions mainly focuses on Max processing information through the conscious route; having full motivation and time. Behavioural economics suggests though that the conscious route of processing information is less often used than the subconscious route. In short, information disclosure rules therefore do not yet meet Max's needs. To find out how information disclosure can be used by Max to make decisions on his pension, we will explore in the following paragraphs how people process information subconsciously.

2.3 Limited time and motivation

The dual processing model holds one important assumption; people have neither the ability nor the motivation to evaluate everything carefully.

Imagine you are a busy person with many things to do. Add to that the fact that you live in a complex world. Even if you are the type of person who loves to evaluate and enjoys thinking about most things, you will probably agree that you simply cannot take the time, and do not have the mental energy, to analyse carefully every decision you make and every piece of information you encounter (Petty, Cacioppo, Strathman & Priester, 2005).

This is not different for members of occupational DC pension schemes in the EU (Max).

The RCT assumes that people spend a lot of time and are highly motivated to consciously process information (see figure 2). However, in most situations Max neither has that much time nor is he that highly motivated. When pension information looks complicated or time consuming Max will be put off to start or continue reading. When information is hard to understand or read this causes cognitive strain which decreases his motivation. Information that is easy to read and understand is processed with cognitive ease which takes up less time (Kahneman, 2012). Another factor that determines processing intensity is motivation. If information remains abstract or general, the motivation of DC scheme members to read the information is generally low. When personal relevance increases people are more motivated to process information. Max is especially motivated when the information has direct personal implications since it is most adaptive to devote the most time and energy to the information with the most personal consequences (Petty, Cacioppo, Strathman & Priester, 2005).

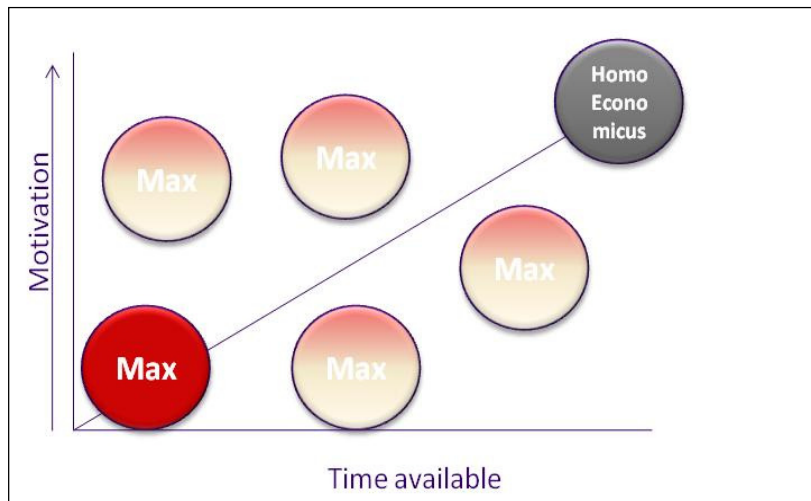


Figure 2, Max has limited time and motivation to process information and is no homo economicus

It is important to note that people differ in the way they process information (see figure 2). Some might have more time and or motivation than others. Therefore people also differ in their needs to receive details in information disclosure. For instance, someone working in the financial sector may wish to read more complex information than someone who works in a restaurant. Generally, having limited time and motivation and using the subconscious route means that Max uses heuristics and biases, which are simple rules of thumb, to process pension information and make financial decisions.

2.4 Max uses rules of thumb to reduce complexity

When Max is confronted with more information than he can or wants to process, he simplifies the processing by using simple decision rules or rules of thumb, in literature often referred to as heuristics. The use of heuristics reduces the cognitive load and shortens the decision process. When decisions are based more on the subconscious route of information processing, the use of heuristics increases. Especially since we have learned that Max most of the time processes information subconsciously and makes decisions accordingly, it is important to find out what heuristics Max uses.

The use of heuristics impacts the way information should be provided to Max. When no heuristics are at an individual's disposal, they create their own, which may not lead to a reasonable decision outcome. When policymakers want to help Max making financial decisions, they need to consider how the information should be provided. Therefore it is important to understand which heuristics are often used by Max.

In the following paragraphs we set out a few heuristics often used by Max and especially relevant in decision making about pensions:

- He compares himself to others (social comparison);
- He uses reference points (benchmarks);
- He looks for information he recognizes (the influence of his memory on decisions);
- He looks for certainty;
- He is short-term oriented and has a lack of willpower.

2.4.1 He compares himself to others

By far the most used heuristic which people use to determine what decision they should make (e.g. what financial decision to make) is looking at other people. In uncertain situations people are very prone to see what others are doing; people infer their own behaviour from those of others. Remember yourself during college comparing your answers with other students after taking a test; imagine yourself entering a new organization inferring the dress code from your new colleagues. The examples illustrate how easily and very often we use social comparison as a heuristic.

Social comparison has two different functions. First the understanding function; when people want to know how well they are doing they search for possibilities to compare themselves with others (Festinger, 1954). For example, if people find out that the investment returns of the fund of someone close to them are higher, they might decide to put their money in the same fund. People compare themselves for instance with friends, neighbours or family members. Notwithstanding any personal differences with the neighbour or family member that might make the concerning fund not suitable for them.

The second heuristic that can be taken out of what others are doing is in its numbers. When a lot of people are choosing a certain option, most of the time it is effective to follow them. This heuristic is called social proof; people assume the actions of others reflect correct behaviour for a given situation (Cialdini, 2001). The effect is prominent in ambiguous situations and is driven by the assumption that surrounding people possess more knowledge about the situation. This is useful for two possible reasons; first, in our perception most of the time the majority is right; and second, when the choice alternative takes a turn for the worse the loss is collective and less regretful.

2.4.2 He looks for reference points

When options are judged by Max in isolation some aspects are considered less important because they are, offered in isolation, not always easily evaluated. For example what

should Max think about his current pension projection of € 600 a month; is this a lot or not much? Max is therefore constantly searching for reference points in his surrounding to infer how meaningful particular information is.

To offer insights to the strength of reference points and how eager Max is to use them contemplate on the following experiment.

An experiment was performed with a manipulated wheel of fortune by Kahneman and Tversky, the manipulated wheel either stopped at 10 or at 65. Students were asked what percentage of the United Nations is an African country of course after spinning the wheel. When the wheel stopped at 10, the mean estimate of the students was 25%, when exposed to 65, the mean estimate of the students was 45%.

Of course basing the answer to this particular question on the outcome of the wheel of fortune is kind of ridiculous, since the wheel of fortune has no relevance with the answer to the posed question. However this experiment points out how high the need for context information or reference points is.

2.4.3 He looks for information he recognizes

Max also already has existing attitudes, beliefs and experiences stored in memory. Of course these can influence the decision to be made, but these can also influence the interpretation of information he encounters. Therefore it is relevant to know how the memory works. A full explanation would go beyond the purpose of this paper, however information or events that people have encountered recently or frequently is better stored in memory and therefore easily accessible (Tversky & Kahneman, 1979). Also the salience or vividness of the information of events people have encountered are better memorized and therefore more easily accessible (Bless et al., 2004).

When making estimations of probabilities people often are guided by the ease of which they can evoke a situation from their memory that holds similarities with the situation at hand on which they want to decide; this is called the availability heuristic. Again this is a cue from the subconscious processing system. Especially with limited time and motivation at people's disposal they are prone to use these rules of thumb.

Unfortunately, the risks involved in retirement planning are not available in the memory. People are able to understand their current financial situation (the income and the expenditure) and the extent to which they are currently able to bear financial risks. Therefore, to support people in retirement planning, pension information could translate the impact of risks in current euros.

2.4.4 He has a preference for certainty

Decisions often come with uncertainty, just as decisions on pension always hold the uncertain aspect of the remittance of the funds. Although scientific research can offer some clarity by quantifying these chances, they do not always correspond to the perceived chances of individual decision-makers. Max's estimations of probabilities are far from perfect. On the contrary estimations seem highly subjective (Tiemeijer et al., 2009). People appear to be unrealistic optimistic and tend to look for certainty.

In different contexts research has shown that people are overly optimistic making estimations of occurring events, even unrealistically optimistic (Weinstein, 1980). People estimate the probability that something favourable happens to them systematically higher, than the probability that something unfavourable happens to them.

Furthermore, people tend to have a preference for certainty. They disproportionately assign more weight to options with certain outcome in cost or gain. The following experiment shows this certainty effect.

The certainty effect was found by Kahneman and Tversky when they offered students two options a) and b) with a) getting € 3 and b) 80% chance of € 4. Most respondents choose option a), the certain option. When the chances are multiplied with 10 percent (Utility stays intact) and people choose between a) 10% chance at € 3 or b) 8% chance at € 4, the preference changes, because option a) loses part of its attractiveness.

Furthermore, Kahneman and Tversky found that people are loss averse. People have a tendency to strongly prefer avoiding losses as opposed to acquiring gains. Loss aversion means that an individual loses more satisfaction by a € 100 loss than he gains with a € 100 windfall. In short, the emotional impact of a loss is bigger than the impact of gains. Kahneman and Tversky also found that loss aversion is related to risk averse or risk seeking behaviour. If people experience gains, they become more risk averse. Whereas, when people experience losses they become more risk seeking; as taking a loss hurts, people then rather take the uncertain option instead of the certain option.

Finally, it was found that people try to avoid situations and choice options that hold ambiguity (Tversky & Shafir, 1995; Ellsberg, 1961). Accordingly, it cannot be assumed that people are able to thoroughly think through the consequences of different possible outcomes. Because most decisions have more than two options to consider this is relevant for how information which holds uncertain options, should be provided to Max.

2.4.5 He is short term oriented and has a lack of willpower

Max cannot take the uncertainty into account, and it becomes even harder if this needs to be incorporated in a 'long term' planning. The subconscious is short-term oriented and is constantly suggesting short-term gratification options to the conscious processing system. For some time the conscious system can use different ways to control the lack of willpower and repress the suggestions made by the subconscious. However this is effortful and people's willpower to repress the tempting suggestions is limited (Kahneman, 2012).

For example, people would rather have € 100 now than in a month. Although this seems quite a rational choice, when people are offered € 100 today and € 110 in a week (which is an absurd interest rate) they also choose for the € 100 today. This change in preference shows that people prefer immediate rewards above postponed.

This is especially relevant for pensions. Most people prefer a well-cared-for provision for old age, but at the same time people have problems investing in their pension at this moment. This is called a lack of self-control (Thaler & Shefrin, 1981), which leads to various problems such as obesity, unfinished studies and insufficient pension savings. Controlling ourselves demands willpower, which is limited (Baumeister, 2007) and brilliantly illustrated in the legendary marshmallow experiments (Mischel, 1972).

In this experiment little children are led into a room, empty of distractions where a marshmallow was placed on a table. The children could eat the marshmallow, but if they waited without giving in to the temptation they would be rewarded with a second marshmallow. The observation of the children showed how hard it was to withstand the temptation and only one-third of the children who attempted to defer gratification could do so long enough to receive the second marshmallow. This is no different for adults who would rather spend money now than save it for later.

Available on the internet:

<http://www.youtube.com/watch?v=6EjJsPyIEOY>

Research has found that behavioural intentions or attitudes do not always lead to the corresponding behaviour. This seems especially true if people rely on certain 'habits'. Also if people find it difficult to assess what could be the appropriate response in terms of behaviour, they might decide not to do anything (inertia) (Tiemeijer et al, 2009). The latter might especially apply to retirement planning. In other words, people say they will do one thing yet do something else (Ajzen & Fishbein, 2005).

Since information is provided to influence attitudes and behaviour it is important to realize that processed persuasive information will not automatically lead to the corresponding behaviour. Special attention in information should be devoted to the behaviour, the appropriate next steps in retirement planning, that is expected from members. Research suggests that supporting people to make actual 'plans' to alter behaviour, or to become active, are helpful (WRR, 2009).

2.5 Information that works for Max

Research in communication science shows how information should be offered in such a way that people start to read, read through and understand information. The 'human processing limitations' are an important starting point, and information overload should be prevented. Important principles are to ensure that people have attention for the information, that information is retrievable, and comprehensible. These are basic conditions of text, so called hygiene factors. Information architecture should take into account the user, the content, and the system through which the information is provided (Toms, 2002).

2.5.1 Ensuring attention

First step in getting Max to read is getting his attention. The information itself should be designed to attract his attention and curiosity. In other words, already before starting reading it, readers should perceive the information as important and/or interesting enough to even start reading. Research shows that it costs more resources to keep attention when readers perceive the information as not interesting (MacDaniel et al., 2000). It may not be easy to get the attention of Max for pre-enrolment information or an annual statement concerning his occupational DC scheme.

The text itself is not the only factor to achieve this, but the design of it can influence the attention of the reader. For instance providing the information in an envelope with a curiosity-inspiring invitation might increase Max's motivation to read. The use of non-text graphics, including animation and short movies, can help many readers to become more interested and willing to find out more (Glenberg & Langston, 1992).

Max will be more attracted to start reading if he immediately understands the relevance of the information. In other words, it needs to be immediately clear how he can act on it and how it should be interpreted if the information is complex. The more the information is tailored to the individual circumstances and information needs of Max, the better. Additionally, the information will get more attention when it is timed properly. Timing is

good when Max is able to make decisions and the relevance is immediately clear to him. Moreover, the format of the information is dependent on the timing, because the highlighted information should fit the needs and questions of Max at the specific moment he receives the information (Tiemeijer et al., 2009).

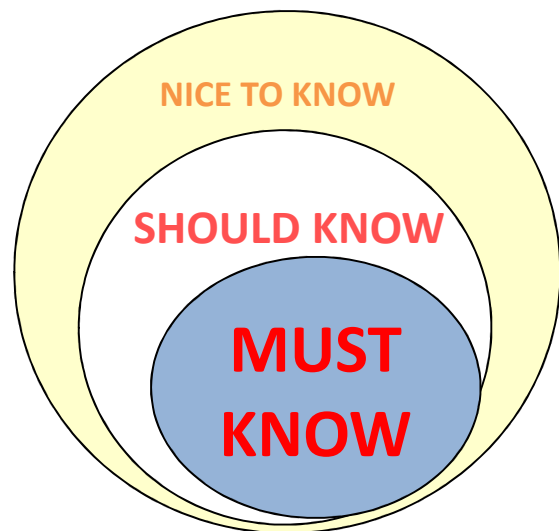
2.5.2 Retrievable information

Information should be available, but to be effective, it is crucial that Max can find his way within an information document, or throughout different sources of information provision.

Therefore, for an extensive document a table of contents, containing headings (and page numbers) which can help Max through the information, is crucial. Within the text, headings and non-text can also help Max.

Every piece of information, from must-know to nice-to-know, should be easy for Max to retrieve. References to other sources of

information, that will answer further questions or provide more complex information, should be available. It should be made as easy as possible for Max to find the information he is looking for (Toms, 2002).



Traditional legal communication tends not to be very readable in terms of structure. Pages contain more than 500 words and there is no division of the text into paragraphs, headings and subheadings, which results in a complicated document structure. Structuring information with the reader's objectives in mind will make it more likely that Max will find his way through the information (Hartley & Trueman, 1983).

Unfortunately, headings in traditional legal communication are often based on the way the sender of the information thinks. For instance, headings like 'general information' or 'other information' are not helpful for readers. Max doesn't know what to expect when he reads these headings. Assuming that he is quickly scanning (subconsciously processing) the information to find answers to the questions he has, these headings will not support him. We know from research that low-ability readers are helped with headings in questions (Hartley & Trueman, 1983).

2.5.3 Comprehensible information

Communication science shows that information is best understood when text and non-text are combined (Glenberg & Langston, 1992). Some people belong to the visual type, and some to the textual type. This means that some DC scheme members will be mostly supported by looking at the non-text elements in the information, whereas others might more rely on the text in order to comprehend the information.

Generally, Max cannot understand long sentences. Furthermore, difficult and infrequent words, such as pension jargon, are generally not suitable for Max. For example, 50-word sentences are not uncommon in pension communication, where 15 words are better to understand for Max. Unfortunately, this doesn't mean that using shorter sentences automatically results in easier understanding of the text; sometimes it does, sometimes it doesn't (Davidson & Kantor, 1982).

Plain language should be used to provide comprehensible information. For instance, in the case of English, plain English is clear, straightforward expression, using only as many words as are necessary. It is language that avoids obscurity, inflated vocabulary and convoluted sentence construction. It is not baby talk, nor is it a simplified version of the English language. Writers of plain English let their audience concentrate on the message instead of being distracted by complicated language. They make sure that their audience understands the message easily (Prof. Robert Eagleson, Australia, via www.plainlanguage.gov).

Research shows that avoiding jargon is the best option to improve understanding through text. But in some cases it is not possible to avoid jargon, and maybe even better to do use it, especially when other organisations (e.g. the tax collectors office) use the same technical language. In that case, the professional terms should be explained to Max in plain language, in such a way that he can understand.

Pension information often consists of multiple documents. Some documents have a more legal nature than others, which can lead to the use of different terms for the same concept, which will confuse Max while reading. Therefore it is important to make sure that language is consistent throughout the information. Both within the pension information but preferably also through information from different organisations.

3 New approach to information requirements

In this chapter, as EIOPA, we set out a checklist that follows from behavioural economics and communication science. The ten items on the checklist are complemented with existing good practices from the various member states. Where necessary, we specify the good practice by putting it in a green box which is complemented with a smiley. We attempt to follow the policymaking cycle: starting with an overall preparation, then the actual drafting, and finally the testing of the information. For each phase, we explain what policymakers and experts in the field (experts) should consider if they draft information, why they should consider this (referring to the needs of Max), and how this can be done. We explore ways to improve pre-enrolment information and annual statements for members of DC schemes. The purpose is to increase the likelihood that Max will read, understand what it means for him personally, and make appropriate financial decisions. Table 2 summarizes the ten items in the checklist.

Table 2 Checklist for policymakers

<i>Preparation</i>	1	Have a behavioural purpose
	2	Provide a first layer of information that answers key questions of members
	3	Ensure that information is retrievable
	4	Ensure that the information provided is comprehensible
<i>Actual drafting</i>	5	Optimise attention
	6	Reduce complexity
	7	Provide figures that enable personal assessment and understanding
	8	Show potential implications of risks and ways to deal with

		them
	9	Support readers as much as possible towards financial decisions
Testing	10	Ensure thorough testing among members

3.1 Prepare: Have a behavioural purpose

<i>Preparation</i>	1	<p>Have a behavioural purpose:</p> <ul style="list-style-type: none"> • Before drafting information provision as a policymaker, think through what Max should 'do' with this information. What sort of financial decisions or choices should he make after reading the information?
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What to do?

Before starting to develop information provision, policymakers should define simple and straightforward behavioural purposes. Hence, instead of thinking about the relevant information that should be 'send', it is necessary to think of what Max should 'do' after having read the information. What financial decisions should he be able to make after having read the information?

Why?

Policymakers and experts tend to 'send' a lot of information. To make it more likely that the information will be effective, or in other words: will be read and taken into account by Max, it should be framed in such a way that it immediately supports Max's decisions in his retirement planning. The behavioural purpose is an important starting point of information provision (Cox, 2011; Ritchie et al., 2012; Sunstein, 2011; Dutch Ministry of Social Affairs and Employment, 2012). If the information does not have a clear behavioural purpose, this will be reflected in the way the information is provided. The information will not be framed in such a way that it immediately clear for the reader how it is relevant. Generally, if people do not easily recognize how the information is relevant to them, they are likely to stop reading (see 2.3 and 2.5.1).

How? Good practices

Define the behavioural purpose(s)

What are the behavioural purposes of pre-enrolment information and annual statements for occupational DC scheme members throughout the European Union? Pre-enrolment information for occupational DC schemes usually has different behavioural purposes than pre-contractual information for financial products (see also EIOPA response to Call for Advice²). In many member states the pension scheme is provided by the employer, it is possibly mandatory and without any choices involved. However, many decisions can be made outside the scheme.

Following the Call for Advice, an annual statement is primarily offered for purposes of accountability. The IORP would need to give an overview of the accrued balance, and the inflows and outflows. However, the information could be more effective if a behavioural purpose is defined. What could Max decide based on his annual statement? In a first layer of information his key questions could be answered, whereas in subsequent layers the accrued balance, inflows and outflows should be provided.

In table 3 we set out the various behavioural purposes of pre-enrolment information and annual statements that are relevant for DC scheme members throughout the EU, or for only part of them. The behavioural purpose 'to enable Max to make decisions in the broader retirement planning' is relevant for DC scheme members in all EU member states. Therefore, in the remainder of this chapter we focus on this common behavioural purpose.

² <https://eiopa.europa.eu/consultations/consultation-papers/2011-closed-consultations/october-2011/response-to-call-for-advice-on-the-review-of-iorp-directive-200341ec-second-consultation/index.html>

Table 3, Examples of behavioural purposes

<i>Where</i>	Behavioural purposes	Explanation
<i>Is relevant for DC scheme members throughout the EU</i>	Max makes decisions in his personal broader retirement planning	Max can decide to adjust his retirement planning. He can anticipate on a certain level of pension income and can decide to save more or less outside the occupational DC scheme.
<i>Is relevant for only part of the DC scheme members</i>	Max decides to opt-out or not	Max may have a certain period within which he can decide to not save within the scheme that is offered to him.
	Max decides to enrol one or another pension scheme	Max can make choices between pension schemes ³ .
	Max chooses for one or another investment option	Max can make choices between investment options within the scheme.
	Max makes decisions in the financial planning for his spouse	Max can decide to adjust his financial planning with respect to the financial circumstances of his spouse in case he passes away. Max can anticipate on a certain level of income for his spouse and can decide to save more or less.
	Max makes decisions in the financial planning for the event of illness and being unable to work	Max can decide to adjust his financial planning with respect to his financial circumstances in case of illness and being unable to work. He can anticipate on a certain level of income and decide to save more or less.
	Other	

3.2 Prepare: Define a first layer of information that answers Max’s key questions

<i>Preparation</i>	2	<p>Provide a first layer of information that answers Max’s key questions:</p> <ul style="list-style-type: none"> • Before starting to draft, think through what are his key questions. To enable Max to make decisions the information should begin with the most relevant information that gives answers to his key questions
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³ In this choice-context, pre-enrolment information for DC scheme members is most comparable to pre-contractual information for financial products.

What to do?

Provided the behavioural purposes, Max needs to get answers to his 'key' questions in a first layer of information. Before drafting information requirements, it needs to be considered and to be clear what sort of information readers need in order to make financial decisions (Cox, 2011; Sunstein, 2011; Dutch Ministry of Social Affairs and Employment, 2012; Ritchie, 2012). This seems to be a good practice as it narrows the gap between the information and what people need to 'do' with the information as much as possible.

Why?

If Max receives answers to his key questions in the first layer of information, it is more likely that Max will use the information. If it is not immediately clear to Max how information is relevant, the chance that he will read the information and understand what it means for him personally is very small. To prevent cognitive strain it needs to be made cognitively easy for Max to find the key message that is relevant to him (2.3)

How? Good practices

Consider Max's key questions

What are 'key' questions for the pre-enrolment information and the annual statement? This depends on the choices Max can make, in other words the behavioural purposes. In table 4 we illustrate what Max's key questions are when it comes to his broader retirement planning.

Table 4, Examples of members' 'key' questions

Behavioural purpose	'Key' questions	Explanation
Max makes decisions in his personal broader retirement planning	What pension income can I expect from this scheme? - Am I able to bear the risks?	The ultimate answer that Max needs is whether he will receive sufficient pension income if he does not change his current retirement strategy. Max wants to get at grips with the different risks he faces, as he wishes to know whether he can bear them.
	If necessary, how can I adjust my retirement planning?	If the expected pension income is not sufficient, or the risks cannot be borne, Max would need to know what the next appropriate steps are in order to reach the desired level of pension income.

3.3 Prepare: Further complementary information is retrievable in subsequent layers

<i>Preparation</i>	3	<p>Ensure that information is retrievable:</p> <ul style="list-style-type: none"> • In preparation, the structure of the information provision should be developed, in order to help Max retrieve the answers to his questions • Further information, legal or more complex information should be retrievable in subsequent layers
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What to do?

Policymakers and experts need to thoroughly consider the structure of the information provision, ensuring that the information Max wishes to find is retrievable. Max will have further questions, and it should be easy for him to find the answers within a paper-printed document, or search further throughout different sources of information provision. Also if he is not searching for specific answers, well-structured information can help him read and stay motivated. The concept of layering can be supportive (Layne & Lee, 2001). Layering of information also enables members who wish to know more in legal terms or who are more financially literate to easily continue to legal or more complex information. Layering can be done in paper-printed documents, and even more extensively and easily through the use of internet.

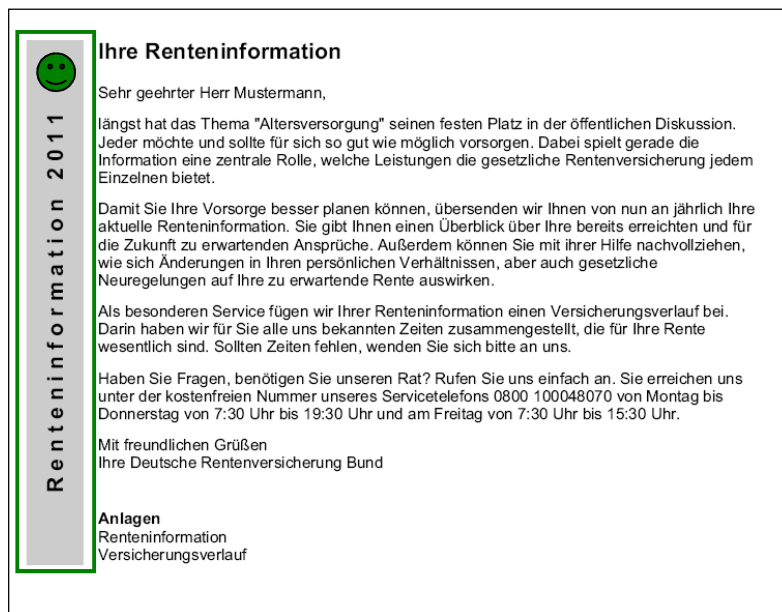
Why?

Max is discouraged when he is overloaded with information, and is facilitated if layers of information are readily available. On the other hand, if Max has some more time and motivation, but cannot easily find further information, this might put him off (2.5.2). From paragraph 2.1 and 2.3 it appeared that people differ in their orientation to strive for an optimal result or a satisfactory result, and their different approach to information processing (Schwartz et al., 2002). Providing different layers in information would account for these different preferences for complexity.

How? Good practices

Retrievability of information

Figure 3 presents the cover letter German members receive for their first pillar pension. It is the introduction to the overview of their accrued pension so far. If Max in Germany puts his letter in his personal files, he will easily retrieve it as his pension information of the year 2011. This is due to the grey box on the left of the cover letter.



Deutsche Rentenversicherung Bund,

http://www.deutsche-rentenversicherung.de/cae/servlet/contentblob/120460/publicationFile/20218/erstinfo_renteninformation_musterbeispiel.pdf

Figure 3, Example of retrievability of information in personal printed-paper files

Retrievability within a document

Figure 4 shows the table of content of the NEST pension scheme. It shows that the makers of this information leaflet have thought out what are the relevant topics and how the text should be structured. The structure helps Max finding information within the document. Questions are being used as headings and page numbers are provided where Max can find the information.

4

What's inside

- 01 About us
page 5 »
- 02 Why have a pension?
page 6 »
- 03 Being a member of NEST
page 8 »
- 04 Contributing to NEST
page 11 »
- 05 What happens to your money in NEST?
page 20 »
- 06 Taking your money out of NEST
page 25 »
- 07 Dying before taking your money out
page 31 »
- 08 If you choose to opt out
page 33 »
- 09 Further information
page 36 »

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Figure 4, Example of retrievability of information within a document

Retrievability throughout information provision and via the internet

The internet provides many opportunities to offer information in layers. The system works in interaction with the user, which allows Max to follow his curiosity or to have a certain goal to find certain information. For instance in Sweden, Denmark and the Netherlands there are websites where information of the first and second pillar pensions is combined. Users of the website can scroll for information and search for answers to further questions. Figure 5 shows the reference to the Dutch website (www.mijnpensioenoverzicht.nl) on the annual statement.

Any questions?

For more information contact <name pensionprovider> <your employer> <the insurance advisor>, accessible on <phone number> <and through <email>. <On our website www.mijnpensioenoverzicht.nl you can find answers to frequently asked questions.>

On www.mijnpensioenoverzicht.nl you can find an overview of your occupational pension and state pension entitlements. This is useful if you, in your previous employment(s), participated in (an)other pension scheme(s). 

This pension overview has been carefully established. We have made use of the data known to us and your pensionregulation. The pensionregulation is ultimately decisive. <You can <download><ask us to send you> the pensionregulation <from our website www.mijnpensioenoverzicht.nl>.>

Figure 5, Example of retrievability throughout information provision – The Netherlands

On this website Max is able to find his accrued balance of all his occupational pensions and his pension rights in the first pillar. Also he can see a projected pension income based on this information, and the consequences of different life events on future pension income (see figure 6).



Home → Start → Gegevens → **Bij pensioenering** → Bij overlijden → Samenvatting

Pensioen bij pensioenering Naar Pensioen per pensioenuitvoerder

Hieronder ziet u uw AOW en/of te bereiken pensioen op twee manieren: in een grafiek en in een tabel. In de grafiek staat het totaal. In de tabel zijn de bedragen uitgesplitst als u zowel AOW als pensioen gaat ontvangen.

Niet alle pensioenuitkeringen gaan altijd op hetzelfde moment in. Als die situatie voor u van toepassing is, geven de grafiek en de tabel dat aan.

Alle bedragen zijn bruto bedragen in euro per jaar.

Leeftijd	€ per jaar
62 jaar	775
65 jaar	49.436

Vanaf 62 jaar tot 65 jaar

Pensioen	775
----------	-----

Vanaf 65 jaar zolang u leeft

AOW	9.426
Indicatief pensioen	23.523
Pensioen	16.487

Te bereiken pensioen
Dit is het pensioen dat u ontvangt als u tot pensioenering blijft werken en pensioen blijft opbouwen in de pensioenregeling waar u nu aan deelneemt. Het te bereiken pensioen kan hoger worden door bijvoorbeeld salarisstijgingen of lager als u minder gaat werken.

Indicatief pensioen
Bij indicatief pensioen bouwt u een pensioenkapitaal op, waarmee u bij pensioenering pensioen aankoopt voor uzelf en voor uw partner bij overlijden. De hoogte van dit pensioen is nog niet zeker. Het getoonde bedrag is een voorbeeld dat uw pensioenuitvoerder voor u heeft berekend.

← Terug naar Gegevens → Verder naar Pensioen bij overlijden

Figure 6, Example of retrievability via the internet – The Netherlands

3.4 Prepare: Ensure that information is comprehensible

<i>Preparation</i>	4	<p>Ensure that information is comprehensible:</p> <ul style="list-style-type: none"> • As a starting point: information should be written in plain language that Max can understand and prevent too long sentences • Jargon should be avoided or explained • Vocabulary should be consistent throughout information provision
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What to do?

In order to make the information comprehensible plain language should be used, too long sentences should be avoided (Antolín & Severinson, 2010). The skills and financial knowledge of members should not be overrated. Jargon should be avoided as well or if unavoidable it should be explained. The vocabulary used in one source of information should be consistent with information in another source (Ritchie et al, 2012). This is important to enable Max to recognize information and to improve his ability to read and understand this information.

Why?

Max feels in control when he starts to read and he understands; it is more likely that he will continue to read and to understand. Comprehensible language is important because research indicated that Max is easily discouraged if he encounters difficult texts, encounters ambiguities and concepts he does not understand. If information is not comprehensible, it also asks a greater time investment which Max tends not to be willing to invest (2.3, 2.4.4 and 2.5.3).

How? Good practices

Information in plain language and choose an adequate length of the sentences

In the United Kingdom, the pension provider NEST is thoughtful in providing comprehensible information. They use plain language to explain difficult concepts to members, jargon is avoided, and sentences are relatively short (see figure 7).

<p>How to make the most of your pot</p> <p>> Keep at it</p> <p>The most straightforward and reliable way to build your retirement pot is to keep making contributions.</p> <p>That way you won't lose out on any money from your employer or any tax relief you may get from the government.</p> <p>> Put more in</p> <p>You can contribute more than the minimum amount that your employer has asked you to pay, so long as no more than £4,400 is paid into your retirement pot in any one year.</p>	<p>To see the difference even small extra contributions could make to the value of your pot and what you could get when you come to take your money out of NEST you can use our Pension Calculator at nestpensions.org.uk/pension-calculator</p> <p>> Leave it in longer</p> <p>You can leave your money in NEST until just before you reach your 75th birthday. Leaving your money in longer means you'll have more time to make contributions and we'll have more time to grow your retirement pot.</p>
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Figure 7, Example of information in plain language

Avoid or explain jargon

From research of the pension provider NEST it appears that, for example contributions, are better referred to as 'building your retirement pot' and annuity better described as 'retirement income'. Technical terms should also be clarified, with equities becoming 'shares in companies', asset classes becoming 'different types of investments' and trust based schemes becoming 'we run the scheme in the interest of our members'.

Using consistent vocabulary

In Sweden, since several years there has been an agreement on pension terminology between authorities, organisations and insurance undertakings. The word list was produced jointly by a Swedish Pension Agency⁴ and the industry organisation Insurance Sweden⁵ (see figure 8).

⁴ www.pensionsmyndigheten.se

⁵ www.svenskforsakring.se

term:	avtalspension
definition:	tjänstepension som grundas på kollektivavtal mellan arbetsgivare eller arbetsgivarorganisation och facklig organisation
jämför:	avgångspension, tjänstepension
kommentar:	Exempel på avtalspensioner är ITP för privatanställda tjänstemän, Avtalspension SAF-LO för privatanställda arbetare, PA 03 för statligt anställda och KAP-KL för anställda i kommuner och landsting. Termen <i>kollektivavtalad tjänstepension</i> förekommer som synonym till <i>avtalspension</i> .
term:	balansering
definition:	(i den allmänna pensionen:) avsteg från inkomstindex som initieras när balanstalet är mindre än ett
jämför:	balanstal, inkomstpension, tilläggspension
kommentar:	Balansering förekommer inom systemet för inkomstpension och tilläggspension och innebär att indexeringen inledningsvis minskas. I ett senare skede kan balanseringen återställa pensionsrätternas och pensionernas värde. Det justerade inkomstindexet kallas <i>balansindex</i> .

Figure 8, Fragment from standardised pension terminology – Sweden

3.5 Drafting: Optimise attention

<i>Actual drafting</i>	5	<p>Optimise attention:</p> <ul style="list-style-type: none"> • Indicate clearly the behavioural purpose, it needs to be clear to Max what he can do with the information • Present the information so that it is easy to process • Present in a vivid way • Time properly • Make the information personal, or consider segmentation
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What to do?

If policymakers and experts start drafting, one consideration is to optimise the attention of Max for the information. The behavioural purposes that are defined as a first step (3.1) in the process should be set out explicitly in the information. This should make it immediately clear to Max why the information is relevant to him.

Additionally, the information should be presented in such a way that it does not overwhelm. Short and high level messages can have a positive impact on Max's reading behaviour. The key to a high level message is the delivery of an easily digestible slogan rather than the reason behind the advice of the message gives (Cox, 2011). For instance, British DC scheme members that can opt-out might wonder whether contributing or not makes any difference, or whether they can afford at all to contribute. They might be helped with a slogan such as 'it is better to keep saving; even at a lower level, than to stop altogether' (Cox, 2011). Moreover, make sure the format is vivid, it attracts the attention of Max.

Finally, make sure the information fits with Max's information needs as it is timed properly, and is personally tailored. If personal information is impossible or not appropriate, segmentation of information can be considered to make the information fit as much as possible the needs of the reader (Ritchie et al., 2012). For example, research suggested that the younger segment is more likely to respond to aspiration images or language; low knowledge individuals may respond better to simple examples and narratives and high knowledge individuals may be best reached by visual illustrations and numerical data. Creating a format that meets members' individual needs is more difficult, but improves the effectiveness (Cox, 2011).

Why?

The more eye-catching the information is presented, the more likely that Max will read it (2.5.1). If Max understands immediately how the information is relevant, it is more likely he will read and understand. Further presenting the information in such a way that it does not overwhelm is important because cognitive strain needs to be prevented. Max should not be put off by the amount of information. Engaged with the information should be an easy process (2.3).

Increasing the eye-catchiness of the message can be improved by attuning the information to what Max recognizes (2.4.3). Salient and vivid messages are better remembered and recognized by Max. If information is provided at moments that Max is most likely to have questions and wishes to make decisions, the information is most likely to be effective. Finally, Max is more motivated to read and understand when information is personally relevant (2.4.5).

How? Good practices

Indicating the behavioural purpose

As mentioned above, when Max receives pension information, he should know why he receives it and what he is expected to do. One example of a defined purpose of pension information is shown in figure 9. When Max starts saving in the ITP pension scheme the title of this folder, which he receives right away, is clear in stating that he has a choice to make.

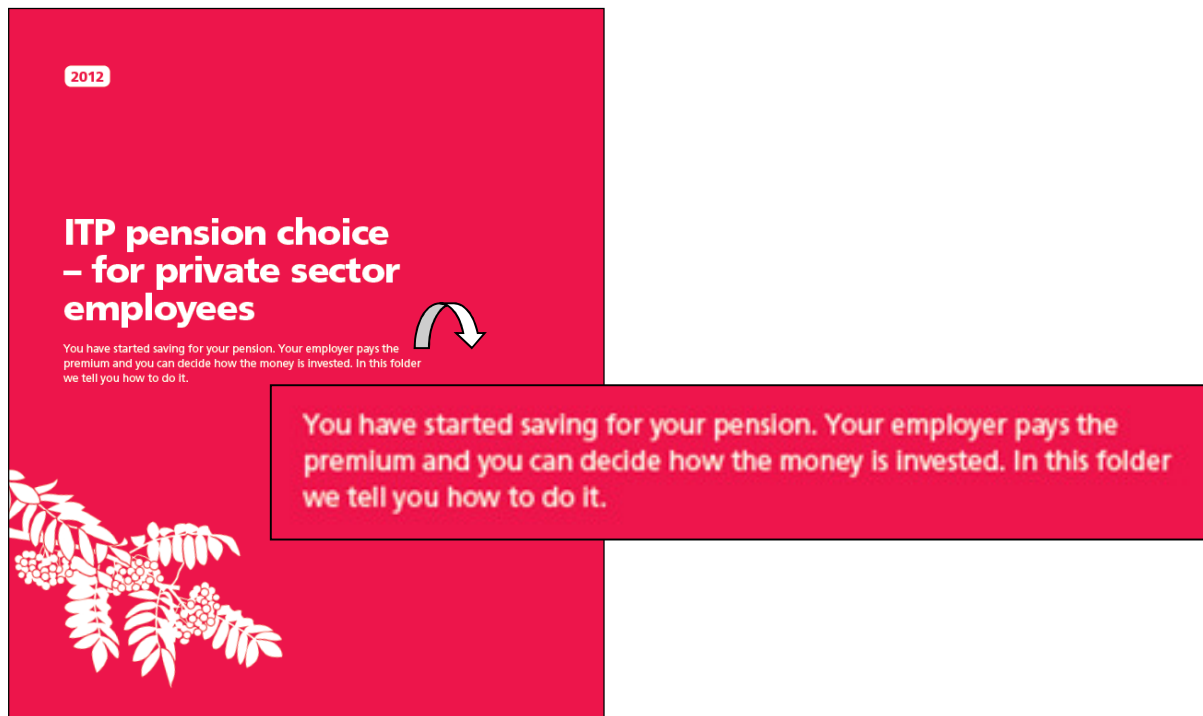


Figure 9, Example of an explicit indication of the behavioural purpose – Sweden

Present information so that it is easy to process

An example of how to prevent information overload is the pension scheme guide of the NEST pension fund (figure 10). This guide is sent to members at enrolment and gives new members useful information and links to allow them to prepare themselves for their membership. Its design and format is sorted into specific sections for different parts of the product cycle. Also the number of words on each page is very limited, and it consists of 12 pages in total. This way, it allows Max to rapidly access the section he needs, and does not overburden him with detail. Also, if Max wants to obtain further information, he can go to chapter 8, 'further information'.

What's inside?

- Understanding the basics
page 01 - 05 »
- 01 Being a member of NEST
page 06 »
- 02 Contributing to NEST
page 09 »
- 03 What happens to your money in NEST?
page 16 »
- 04 What are NEST's charges?
page 20 »
- 05 Taking your money out of NEST
page 22 »
- 06 Dying before taking your money out
page 27 »
- 07 Stopping contributions
page 28 »
- 08 Further information
page 30 »

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Figure 10, Example of a guide that helps Max to process information

Present vividly

In different countries, different ways of attracting the attention might be effective. For instance, when Max sees a question on an envelope, a little joke or a QR-code which leads to attractive information, he might be more tempted to start to read. Below in figure 11 two examples are given of how to present vivid. The examples (from the NEST website) are designed to attract Max's attention by appealing to Max's sentiment. This way they can feel more personally involved, and it may increase the likelihood of Max reading further.

©NEST Corporation 2012

**Treating yourself later?
How about 30 years later?**

Tell us what you think »»



Tomorrow is worth saving for.



Figure 11, Examples of vivid presentation on a website

Time properly

Information should ideally be provided at 'teachable moments'. This means that it is provided at moments that people are interested in the subject and that people are ready to imagine (Tiemeijer et al., 2009; Cox, 2011). In the literature we find that a 30th, 40th or 50th birthday might be such a moment that people consider their future selves and situation; when people start a new job; or when there is a shift in the work pattern. From full time to part time or from a contract to permanent (Cox, 2011). For instance, in the United Kingdom and the Netherlands there are IORPs that apply this.

Make information as personal as possible or consider segmentation

The closer information suits people's questions, preferences and experiences, the more effective. General product information is therefore by definition difficult for Max to read, understand and act upon; whereas personal information that is closely connected to the financial decisions Max needs to make is the most effective (Dutch Ministry of Social Affairs and Employment, 2012).

An in-between-solution is to choose for segmentation of messages. In the Netherlands, the pension fund for the care and welfare sector (PFZW) offers different formats of information depending on the extent to which members are receptive for pension information.

3.6 Drafting: Reduce complexity

<i>Actual drafting</i>	6	<p>Reduce complexity:</p> <ul style="list-style-type: none"> • Highlight the most important information • Offer separate narrow topics • Ensure readability through font size and number of words • Combine text and non-text • Avoid ambiguity • Ensure easy access to support and further information
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What to do?

Complexity needs to be reduced as much as possible. The most important information should be highlighted to support Max find the most crucial information, or to help him find his way throughout the information. Therefore information should be offered in separate narrow topics (Cox, 2011). Font size and a limited number of words per page should enable easy reading moreover the number of words on a page should be limited. A combination of text and non-text generally reduces complexity and can address the different information needs of members (Antolín & Severinson, 2010). Ambiguity should be avoided. Finally, if Max wants to know more, the information should provide him easy access to further information. For example by providing contact details of the sender for further information or providing links to relevant information websites or advisory services.

Why?

Highlighted information and offering separate narrow topics reduces the time necessary to extract the relevant information and facilitates readers to find their way through the information (2.3 and 2.5.2). Using a readable font size, limiting the number of words, and combining text and non-text are ways to prevent information overload (see 2.5.3). Next, in order to help Max to understand, ambiguity of information must be avoided. When text is ambiguous some people will maintain multiple interpretations (Just & Carpenter, 1992), which will cause uncertainty (2.4.4). Finally, providing easy access to support and further information makes it cognitively easy to take next steps in improving understanding (more consciously 2.2 and by providing easy access to next layers of information 2.5.2). Max can continue his search for information depending on his preferences, either by using his own skills and read further or by using the support of experts.

How? Good practices

Highlight information

To make it easier for Max to process information, the format can help him through highlighting of the most important information (see figure 12), but also by using a structure that is easy to go through or that he recognizes.

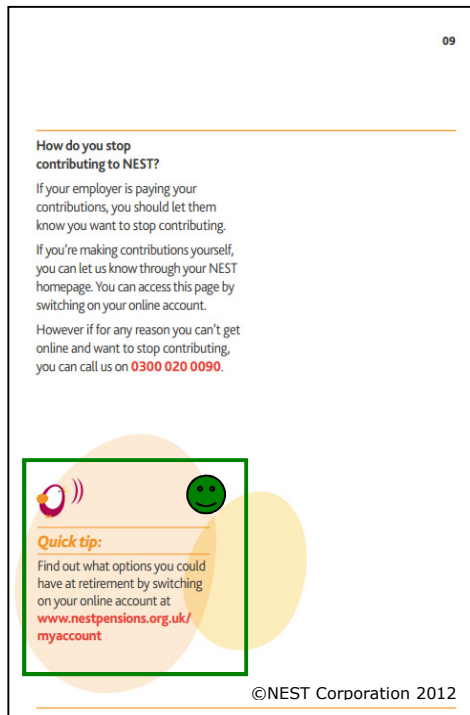


Figure 12, Example of highlighting information

Offer separate narrow topics

Figure 13 shows how information can be organised in narrow separate topics. In the Netherlands there are several IORPs that offer information through the website in separate narrow topics. This example has been made by the Dutch IORP for the care and welfare sector⁶.

On its homepage the website provides straightforward links to narrow topics that are indicated in such a way that members immediately recognize their relevance. For instance, one of the bold headings is 'If something changes' and people can click on certain life events such as 'Getting married or living together', and read more about the consequences for their pension.

⁶ <http://www.pfzw.nl/Particulieren/Paginas/particulieren.aspx>

The screenshot shows the website for PFIENFONDS ZORG & WELZIJN. At the top, there is a logo and navigation links for 'Particulieren', 'Werkgevers', and 'Over ons'. A search bar is located on the right. Below the navigation, there is a main banner with a group of diverse people and the text 'Dit vond u' (This you found). To the right of the banner is a 'MijnPFZW' section with an 'Inloggen' button and a link to 'Veelgestelde vragen over MijnPFZW'. Below the banner are four columns of topic-based navigation: 'Pensioen bij PFZW', 'Als er iets verandert', 'Stoppen met werken', and 'U bent met pensioen'. On the right side, there is a 'Uw situatie' section with radio buttons for 'Ik bouw pensioen op', 'Ik ben met pensioen', and 'Toon volledige website', along with a 'Sluit' button. At the bottom right, there is a 'Ga direct naar:' section.

Figure 13, Example of offering information in separate narrow topics – The Netherlands

Ensure readability through font and number of words

Below in figure 14, a good practice is shown from Sweden. In this document, the choice of font, font size and number of words enhances the readability of the text. Also the different colours used in the text offers layers of importance to read.

The document page features a large, bold heading: "You can change your choice in the future". Below the heading is a paragraph: "When you make your first choice you have a so-called choice period. You can, of course, change your choice even after the choice period has expired." This is followed by a sub-section titled "Make your choice within the choice period" in bold. The text under this section explains the choice period and mentions a "health declaration". A small blue box contains the text: "KEEP A LOOK OUT FOR THE RED ENVELOPE. Every year you will receive a red envelope from Collectum that contains an annual statement with a summary of your occupational pension. If you have any questions about the value appreciation of your occupational pension money, please contact the insurance company that manages your money." Below this is another sub-section titled "If you do not make a choice" in bold, followed by text explaining the default alternative. The final sub-section is titled "If you wish to change your choice" in bold, with text explaining how to change the choice or transfer ITP.

Figure 14, Example of font choice, font size and number of words – Sweden

Combine text with non-text

In figure 15 an example is given of a combination of text and non-text. In this example you can see there are three possible ways of taking money out of your NEST savings. These possibilities are explained in text as well as non-text. The use of colours and shapes helps to better understand the differences between income and lump sum.

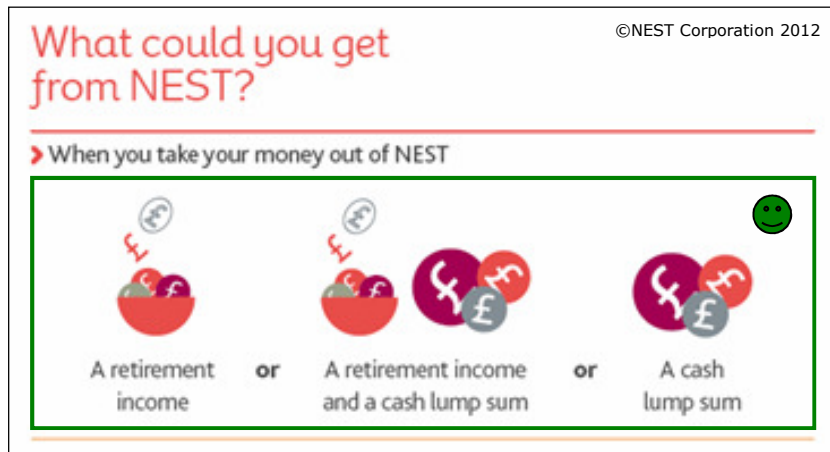


Figure 15, Example of combining text with non-text⁷

Although this example is a good start, unfortunately it can be misleading. The middle option, taking the money out as a retirement income and a cash lump sum, seems due to its size the best option. Below we further describe the implications.

Avoid ambiguity

Figure 15 can be interpreted in more than one way. Is it only illustrating the three possible options of taking the money out, or does it also communicate the most favourable option? This ambiguity can raise uncertainty among members.

Another issue that can raise ambiguity are disclaimers. Although disclaimers are necessary to make sure that members understand the status of information, they can potentially cause ambiguity. For instance, if pension projections are provided together with a strong disclaimer, which is telling that these are only estimations and not reliable indications for future developments, the ambiguity makes the odds that members use the information rather low. For the same reasons, the explanation of the methodology and assumptions should not be offered in the first layer of information. People tend to avoid making decisions when information is unknown or unclear. In short, formulation of

⁷ Figure 15 is a good start, but still some adjustments should be made. Due to its relative size, the middle option looks more attractive than the two other options.

disclaimers should be done carefully. It should make members understand the status of the figures, without raising ambiguity and therefore discouraging them to use them.

Ensure easy access to support and further information

Below in figure 16 a good practice is given of further contact details of an advisory service. The member that receives this information can choose to contact The Pensions Advisory Service (TPAS). Also, the information explains what TPAS does, and for whom it is relevant. Both the telephone number and the e-mail address are given.

The Pensions Advisory Service (TPAS) provides free independent advice and can help both members and beneficiaries of NEST if they are experiencing problems related to NEST or any other pension scheme:

The Pensions Advisory Service
 11 Belgrave Road
 London SW1V 1RB

0845 601 2923
www.pensionsadvisoryservice.org.uk

Figure 16, Example of clear further information – United Kingdom

3.7 Drafting: Provide figures that enable personal assessment and understanding

<i>Actual drafting</i>	7	<p>Provide figures that enable personal assessment and understanding:</p> <ul style="list-style-type: none"> • Provide figures that Max recognises easily • Use standardised methodologies to calculate figures • Support Max to understand long term financial planning • Enable Max to use reference points • Consider benchmarks that allow social comparison
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What to do?

Figures in a first layer of information need to be presented in formats that members recognize. Furthermore, with the figures Max should be able to straightforwardly assess whether features of the scheme or his current retirement strategy are well or not well for his future pension income. To provide Max recognizable figures, calculations and assumptions are necessary. Standardised and reliable methodologies are important, to ensure comparable figures.

Figures that need to support Max in his retirement planning should take into account the long time horizon. For instance, the performance level over the last year would not be the type of figure on which Max should base his decisions. Instead, it should be based on a performance level over a longer period.

When it comes to pension projections, a recognizable figure is in many countries the net pension income in euros per month (Antolín & Severinson, 2010). Max will compare this to his current net salary per month, this is his reference point. Therefore it is important to present the figure immediately in terms of purchasing power at that point of time. For a complete retirement planning Max needs similar figures from other sources of retirement income⁸.

If a figure should enable Max to compare schemes, he will seek for reference points. The research suggests that it would be best for Max to translate how certain features of a scheme would impact on Max's personal future pension income. This would again allow him to use his current salary as a reference point. However, due to various reasons still general scheme information is provided instead of personal information.

If there is only a possibility to provide information about the scheme and policymakers wish to make it more useful information for Max, other types of reference points should be provided. For instance, many DC scheme members will not know whether a certain performance or cost level is good or not. Max wants to know how others are doing. If an automated generator of the scheme information is being used, this would enable policymakers to provide for instance an average level of performance, as a benchmark. This would allow Max to know immediately whether the performance of his IORP is good or not. There are also other possibilities for benchmarks that can be used as reference points that help Max assess whether the information means 'good or bad'. It is important that Max does not encounter all different sorts of benchmarks throughout information, as

⁸ In this report EIOPA focuses on occupational DC schemes. However, having similar figures from other pension saving schemes and pension pillars would enable Max to accumulate and assess whether his retirement planning either or not needs adjustment.

this would be confusing (Sunstein, 2011; Antolín & Severinson, 2010). If certain characteristics of pension schemes (e.g. level of contribution) and future pension outcomes differ strongly between member states it is preferable to create benchmarks within member states. These would be more meaningful for Max.

Finally, Max is eager to know how he is doing compared to others. Therefore, if appropriate this could be shown to him, as this sort of information is most likely to have an effect on Max's thinking and financial decisions.

Why?

In 2.4.3 we have shown that Max looks for information that he recognizes and is personally relevant (in 2.3). So figures that are offered to Max need to remain close to the everyday life of Max. IORPs should use uniform methodologies. If every IORP has its own methodologies the figures cannot be added up, or compared by Max. Standardised methodologies enable Max to assess the value of the information and what the information means for him personally (see 2.4.2 and 2.4.1). Also, if information on future gains is provided based on standardised methodologies, it might be regarded as more reliable.

Max is primarily focussed on short term effects and therefore figures should help him understand the long term time horizon, pension saving is not about short term investment gains (2.4.5).

Then in order to make decisions, Max needs more context and reference points to understand the information (2.4.2). If possible information needs to be presented in such a way that it is recognized by Max as personally relevant (2.3). One of the most meaningful reference points for Max to use, is what other people are doing (Cialdini, 2009; Festinger, 1954). If appropriate, social comparison can be used to provide information, as Max is primarily and instinctively interested how his financial position compares to the position of others (2.4.1).

How? Good practices

Provide figures that Max recognizes easily

As mentioned above, in many countries the most recognisable pension projection is the net amount per month (Antolín & Fuentes Contreras, 2011). Charges communicated in percentages appear hard to understand (Chater, Huck & Inderst, 2010). Research suggests that preferably figures are expressed in an amount of euros per € 100. The

more the figures remain close to financial decisions and everyday life, the better they are processed and used. The illustrations in the remainder of 3.7 show recognizable figures.

Standardised methodologies to calculate figures

In many member states policymakers together with supervisors and experts in the field are searching for ways to standardise methodologies sensibly within their countries. Below we set out some examples from Italy, Hungary and Sweden.

In Italy, pension funds are asked to make pension projections available to members at joining and after the adhesion, on an annual basis. Pension projections are developed using a uniform methodology set by the Supervisory Authority on pension funds, COVIP. Pension projections that are delivered at joining make estimates with reference to a “representative” member⁹. The annual projection is personalized and based on individual-specific data (such as age, gender, current salary, actual contributory rates and asset allocation of the chosen investment line).

Assumptions related to macro-economic factors, which are mortality tables, inflation rate, real growth of wages, rates of return of assets (set at 2% for bonds and at 4% for equities), are defined by COVIP. The only elements that vary in the calculation are costs and rates of return implied by the asset allocation. The requirement of using costs specific to the pension fund allows members to identify the most competitive fund able to pay a higher pension and thus reinforce the cost competition. Further, using the rate of return depending on the asset allocation makes members aware that asset allocation is the crucial variable to control in order to influence both risk and expected returns. In fact, using projections of return that do not take asset allocation into account may generate a bias toward more conservative asset allocations, which would lead to a lower expected return.

In Italy, COVIP paid particular attention to the disclosure of costs. To increase the transparency to members and to facilitate the comparison of costs applied by different kinds of pension funds COVIP set a regulation asking for pension funds to calculate a synthetic cost indicator (SCI). This indicator displays easily and promptly all costs paid by a member (in the accumulation phase) and measures how much the rate of return of the chosen investment line is reduced by effect of cost paid by the member.

⁹In the projections for the ‘representative member’ assumptions are being made when it comes to gender, age, years of contribution and type of investment line (see the website of COVIP <http://www.covip.it/?cat=129>)

SCI's have to be computed according to a standardized methodology to facilitate the comparison of costs between pension funds as well as between investment options. The computation is referred to a 'representative' member who accumulates assets according several assumptions set by COVIP. It is performed for all different investment options offered by a pension fund. Finally, it is calculated for 4 different time horizons (2, 5, 10 and 35 years). This is done because a longer period of participation lowers the level of SCI's as consequence of the minor impact of 'hard' costs. SCI's have to be displayed on the 'Nota informativa' to be made available to members and on the COVIP website.

Every year, the Hungarian Financial Supervisory Authority publishes on its website the investment performance of each Hungarian Private and Voluntary Pension Funds for the preceding year and the average investment performance for the past ten-year period. This means that in March 2011 the HFSA published the data for the year 2010 and 2001-2010. The published data includes Net Rate of Return for the preceding year, and the Average Rate of Return for the past ten years. An important issue of relevance is that the source of information is a reliable one, namely, the supervisor.

The aim of providing the above mentioned information is that the members could compare the investment performance of the different pension funds. Although the format of the information is not yet adjusted to the needs of the Hungarian Max, the fact that information is provided on a standard calculation is an important starting point for useful and comparable information for the member.

In Sweden a working group with broad participation from the industry and the (general) pension authorities are preparing a set of standard assumptions (e.g. average yield, income development, some aspects of mortality) for use in pension forecasts for members of D schemes particularly. It is being finalised, but is expected to be brought into practice by the end of 2012.

Support understanding long term planning

Below in figure 17 the Swedish website, www.minpension.se, is shown. Inflation is assumed to follow the long-term forecast of the Swedish National Bank. Max can easily search and browse through the personalised information that is designed to make him understand long term financial planning. Also Max is able to play with different scenarios when it comes to salary development, and yield rates.

Det här kan du se på minpension.se

1. Se din totala pension och vad som kommer från de olika pensionsdelarna
2. Se hur mycket du sparar i olika försäkringar



3. Gör beräkningar på olika avkastningar och tidsperioder

4. Räkna på olika värdeökningar och tidsperioder

Figure 17, Example of providing long term information through the internet – Sweden

Provide reference points or benchmarks

In figure 18, the Irish Max is shown his projected monthly pension income in today's pricing. It is important that risks, such as the level of inflation, the performance of the investments, and volatility of interest rates are all taken into account, and costs are extracted. Max can compare the figure with his current monthly income.

Scenario 1 The value of your retirement fund together with future contributions, which it is assumed will continue to be paid and will increase by 3.00%, could be expected under current circumstances to produce benefits commencing at normal retirement date of the following amount:


Projected Fund Value	€622,765.00
Projected monthly income for life	€2,330.17
Projected monthly income in today's pricing (assuming inflation of 3.00%)	€798.08 
Pension as % of Salary	27.75%

Figure 18, Example of enabling Max to use his own reference point – Ireland

Information about pension incomes and risks in terms of purchase power in euros are more likely to be taken into account as they are much easier to recognize (see 2.4.3). Expressing future pension income as percentages of the salary and probabilities that certain risks are occurring are less easy to recognize and will be used less often.

Using social comparison

A non pension related example of social comparison is a web tool from the ING Bank in the Netherlands. Users of the tool can upload characteristics like age group, income, education and living situation. This is done anonymously. Per expense category a user can see how much is spent compared to others (i.e. all users or a specific group), for example, with users of the same age, with the same income or living in the same province. In figure 19 the user's expenses ('Uw uitgaven') are shown in orange and the expenses of the chosen reference group ('Uitgaven van anderen') are shown in grey.



Figure 19, Example of the use of social comparison – The Netherlands

3.8 Drafting: Show potential implications of risks and ways to deal with them

<i>Actual drafting</i>	8	Show potential implications of risks and ways to deal with them: <ul style="list-style-type: none">• Make the potential implications of risks explicit through scenarios• Combine information about uncertainty with support towards certainty (how can Max manage these risks?)• If necessary, allow Max to know his risk preferences
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What to do?

Risks are incredibly difficult to understand and therefore need to be communicated carefully. If appropriate, the impact of risk should be made explicit. Most meaningful is to show scenarios of what is the impact of risks can be on the future pension income.

Research suggests that on printed-paper, it works well if three scenarios are shown (Cox, 2011). If the internet is used to provide information, risk tools with which Max can play, might be effective.

Then, to communicate uncertainty in an effective way, it is important to offer people information about uncertainty together with information how people can deal with the uncertainty (Tiemeijer et al., 2009).

Finally, sometimes risk indicators are necessary to show the riskiness of a product. However, Max does not recognize the scores of risk indicators and needs to know his risk attitude. He would be supported with a risk-attitude test on the internet.

Why?

Why is it necessary to show scenarios to make risks explicit? From behavioural economics it appears that Max has a great number of difficulties assessing risks in his retirement planning. One reason is that he will not be able to improve estimations of risk based on experiences. The impact of risk will only be experienced at the moment he retires (2.4.3).

If in the information it is solely described that future pension income depends on future investment performance, this remains too vague and impersonal for Max to be able to draw conclusions about the magnitude of the risks. Such a description might even cause a feeling of uncertainty that Max tends to avoid. Max is inclined to be unrealistically optimistic (2.4.4). These characteristics of Max make it necessary to make the impact of

risks as clear and explicit as possible. It is important that in a first layer of information the impact of risks is shown in scenarios that are expressed in euros for instance per month. Percentages remain still too abstract for many readers. In subsequent layers probabilities and more exact and detailed information about risks can be provided.

Finally, sometimes risk indicators remain abstract. For instance the risk-reward profile (UCITS) remains abstract. Max needs to assess the scores 1 to 7 and draw conclusions about what these scores mean to him. However, Max does not recognize these scores, and what they mean, and neither has a reference point that can help him (2.4.2; 2.4.3). Max would need to know his appropriate risk attitude for this product and the role it plays in his financial planning. Max should be helped to know his risk preferences. This can for instance be done by offering a risk-attitude test on the internet.

How? Good practices

Provide risk scenarios

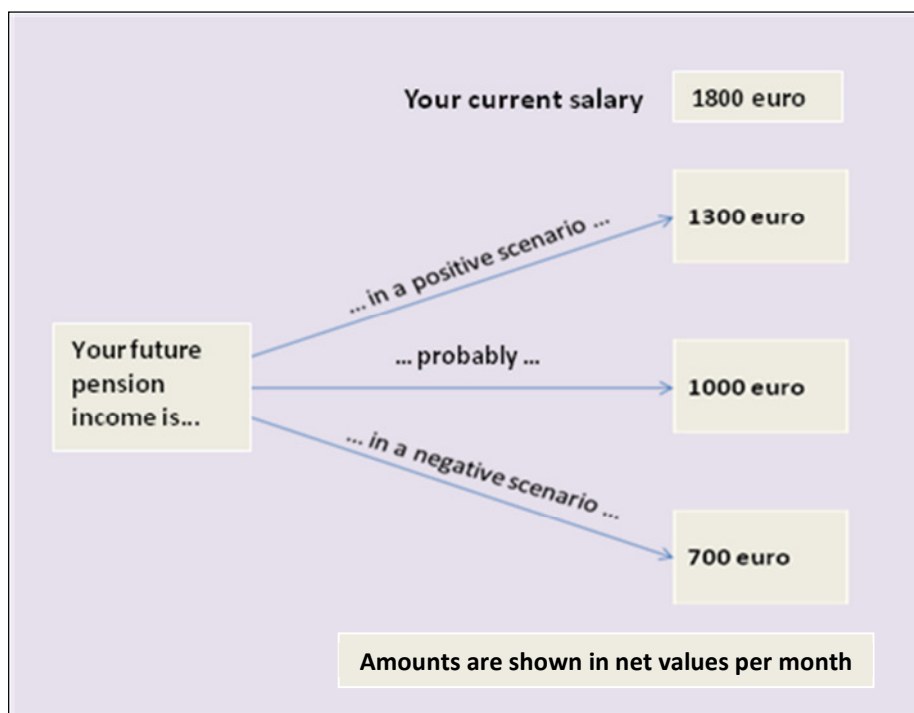


Figure 20, Example of presenting different scenarios – EIOPA OPC subgroup on information provision

If information is provided on paper, research suggests that an effective way to communicate risks to Max is by providing three scenarios (see figure 20). These figures are represented in net euros per month (instead of gross yearly), which is in many countries a recognisable figure for Max. Also his current salary is shown as a reference point. This helps him to immediately understand what the information means for him personally. This example refers to a first layer of information, whereas in a next layer the

probability distribution of the three scenarios can be provided. Although a single assumption does not convey accurately the probability distribution range nor does it sufficiently quantify risk, the use of more sophisticated probability ranges can confuse Max and undermine the fundamental objective of the statement that it should be brief, clear and simple. A midway between the two might be to provide a range of scenarios illustrating the impact of different rates of returns on investment (high, medium and low).

In figure 21, the projections give Max an idea of what pension and/or lump sum payment he might receive given a number of assumptions. By presenting a low, mid and high rate of growth it is made clear that the outcome of his pension projections is uncertain.

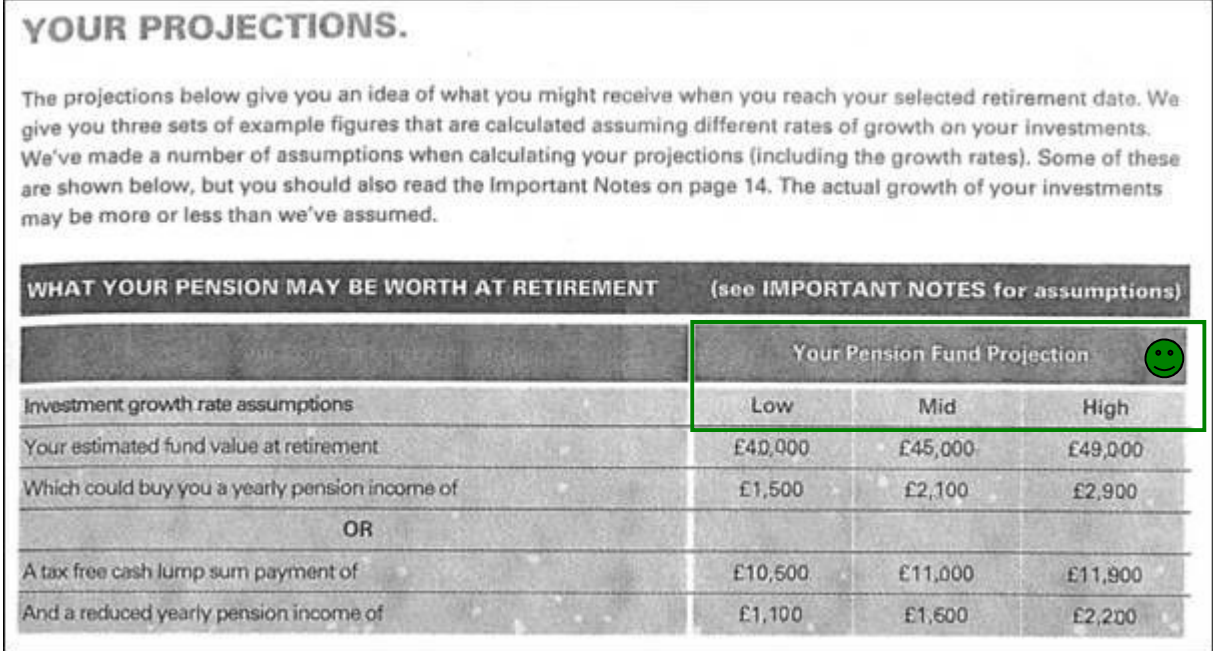


Figure 21, Example of making risks explicit – United Kingdom

Combine information about uncertainty with support towards certainty
 Unfortunately, we were not able to find any examples.

Providing risk scenarios through the internet

In order to improve people’s insight in pension risks, several countries make use of online pension risk tools. In both Denmark and Sweden, online tools are developed which allow members to produce pension projections based on assumptions the user can choose¹⁰.

¹⁰ <http://www.forsikringogpension.dk/pension/pensionsmaaler/Sider/pensionsmaaler.aspx> and www.minpension.se (see figure 17)

In line with this, we took one practice from an OECD publication (Antolin & Fuentes Contreras, 2011). The Chilean Superintendence of Pension has developed a web-based pension simulator with information on both expected pension income and on pension risks. The difference between the two is that the Chilean tool also gives information on the likelihood of the different scenarios. The model feeds on a representative affiliates' characteristics: age, gender, level and density of contributions, age of retirement and investment strategy. With information on current balances in mandatory and voluntary pension savings, the model constructs a consolidated balance.

The output of the model offers a series of results: expected pension at the age of retirement, pension payment for the 5th percentile (called 'pessimistic scenario'), pension payment at the 95th percentile (called 'optimistic scenario') and the probability of having a pension payment that is equal or greater than the desired pension (see figure 22).

Also, users are shown the same set of results that would be obtained if they postponed the retirement's age by three years. Moreover, users are invited to experiment how changes in key variables, can improve the expected pensions and help them to improve the probability of reaching their desired pension.

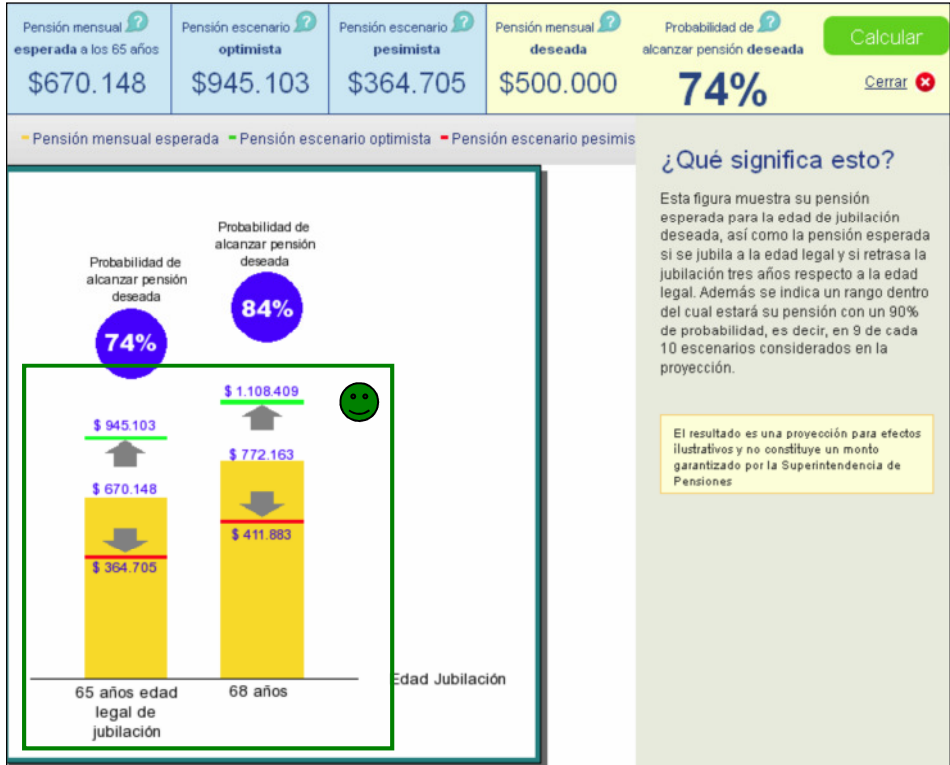


Figure 22, Example of providing risk scenarios through the internet – Chile

Allow members to know there risk preferences

Unfortunately, we are not aware of any examples.

3.9 Drafting: Support readers as much as possible towards financial decisions

<i>Actual drafting</i>	9	Support readers as much as possible towards financial decisions: <ul style="list-style-type: none">• Make appropriate financial decisions as explicit as possible• Describe potential decisions or inertia in terms of losses
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What to do?

To support Max in his retirement planning it is effective to make clear what steps he needs to undertake, how he can undertake these actions and where he can get advice.

If it would be to Max's advantage if, for instance, he did not opt-out of a scheme because of the losses in the last year. The framing of the information can prevent him from acting. Using affective tags (positive or negative) to impact on potential decisions or procrastination (no decisions) is effective because this affects the interpretation of the information and Max's motivation to take certain financial decisions.

Finally, as research suggests that people tend to be loss averse, it seems recommendable to describe the consequences of undesired decisions or inertia in terms of losses.

Why?

A behavioural intention or attitude does not always lead to the corresponding behaviour. Max has limited willpower (2.4.5). Recent research suggests however that the relation between intentions and behaviour can be increased when the way the new behaviour should be executed is specified (Gollwitzer & Sheeran, 2006).

People have a tendency to strongly prefer avoiding losses to acquiring gains; they are loss-averse (2.4.4). Therefore it would increase the likelihood of Max engaging into a certain action by describing his decision or inertia in terms of losses, e.g. making clear to him that doing nothing costs him and not only describing his possible gains by taking action.

By describing Max's inertia in terms of losses the information addresses the endowment effect which describes the fact that people place a higher value on a good that they own than on an identical good that they do not own (Kahneman, Knetsch & Thaler, 1990). When Max's inertia is described in terms of possible losses from not acting (i.e. not contributing to a scheme) the likelihood of him acting, increases. This is especially the case when the document shows him how to act.

How? Good practices

Make appropriate financial decisions as explicit as possible

Communication to members could be designed to encourage Max to save at an affordable rate. For instance, in the UK the minimum savings rate is 4 percent in case of automatic enrolment. It would make sense to state that if people can afford more, they should save more. A good example from Ireland raises the attention to the benefits of making the decision to raise the contributions (see figure 23). In addition to his pension projection (already shown in figure 18), Max also gets to see the effect of raising his monthly pension income by increasing his monthly contributions. This scenario 2 makes the consequences of an increase of his monthly payments explicit for Max, which helps him to understand the consequences of his action more easily. Even more, it supports him towards a financial decision, namely increasing his monthly payments.


* Scenario 2 If you increased your monthly payments now by €200.00 per month (in addition to the assumptions made in Scenario 1) this could be expected under current circumstances to produce benefits commencing at normal retirement date of the following amount:	
Projected Fund Value	€989,098.00
Projected monthly income for life	€3,700.83
Projected monthly income in today's pricing (assuming inflation of 3.00%)	€1,267.50 
Pension as % of Salary	44.08%
For Notes and Assumptions of the figures above, please see next page.	

Figure 23, Example of scenario-analysis on increasing monthly payments – Ireland

Describe Max's decisions or inertia in terms of losses

In figure 24 is shown how Max's decision – or inertia – can be framed in terms of losses. Should Max decide to not save for his pension the result will be that he receives nothing. Together with the information on taking out money out of NEST when he does save for his pension (see 3.8.1) it becomes clear to him that not saving will result in loss (of income on retirement).



Figure 24, Example of describing Max’s decision in terms of losses

3.10 Testing: Ensure thorough testing among members

<i>Testing</i>	10	<p>Ensure thorough testing among members:</p> <ul style="list-style-type: none"> • Test whether members find information attractive, if they understand the behavioural purpose, what the information means for them personally, and how they would act after having read the information
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In this report we have set out many good practices for effective information provision that make it more likely that occupational DC scheme members will use information. However, still it is necessary to intensively test information provision. We would recommend to not limit the testing to responses to the material based on focus groups with members and experts, but to also test whether the information has an impact on people’s understanding and actual financial decisions. Different optional formats of information provision should be developed and it should be investigated what are the most effective options (Antolín & Severinson, 2010). Also we imagine there could be a cost-benefit-analysis to decide whether the costs to introduce new information provision are worthwhile (Sunstein, 2011).

For instance, in Denmark Penge- og Pensionspanelet (the Money and Pension Panel) conducted a study on pension coverage overviews. The study’s aim was to uncover Danish use of and needs in relation to pension companies cover statements, including how coverage listings can be designed to better meet these needs.

4 Implications for the review of the IORP Directive

In this report, as EIOPA, we attempt to give insight to European and national policymakers on how the format of pre-enrolment information and annual statements can be improved and drafted, taking into account the way people process information and make financial decisions. We have provided a checklist that aims to support policymakers and experts in the field in increasing the likelihood that members of occupational DC schemes use the information and make financial decisions to plan for retirement. In this chapter we explore the implications for pre-enrolment information and annual statements in the context of the review of the IORP Directive.

We build further on the Call for Advice, in which EIOPA stated that a KID-like document (Key Information Document) could be appropriate pre-enrolment information for members of occupational DC schemes where members bear the investment risk and have choices to make. In the Call for Advice we explored which elements of the Key Investor Information Document from the UCITs Directive could be used for a KID in a revised IORP Directive. Further, we recommended that the annual statement for DC scheme members should include an accrued balance. This means that it should indicate the total amount of pension savings that individual members have accumulated thus far. Additionally there should be a summary of the inflows and outflows. Based on this report, we argue that the format of the pre-enrolment information and annual statement, in particular the first layers of information, should support (potential) members to make decisions.

From the checklist follows that the starting point of information provision is to decide what financial decisions members should be able to make with the information. A policymaker should decide what the 'behavioural purposes' of the information are. We find that some behavioural purposes are relevant for all members throughout the EU, whereas others might be specific for some member states, IORPs or schemes. Below first, we reflect on the common behavioral purposes, and the common key questions of members that we believe should be at the centre of attention for European and national policymakers (4.1). Second, we reflect on more specific behavioural purposes that are relevant for only part of the members, and where a KID is important as a first layer of information (4.2). Third, there are other behavioural purposes specific for some member states, IORPs or schemes, which need to be addressed in a first layer of pre-enrolment

information and in annual statements. This implies that member states should keep flexibility in the format of their pre-enrolment information and annual statements (4.3).

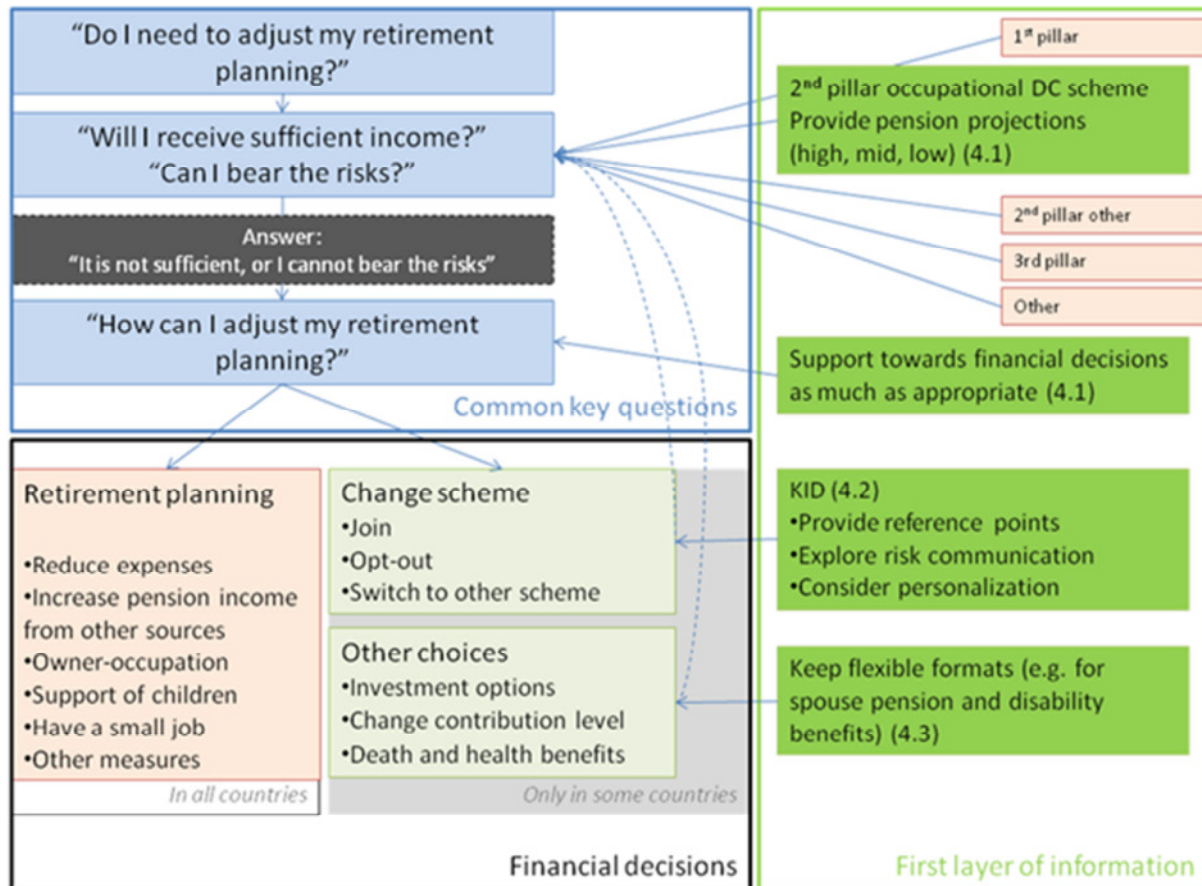


Figure 25, a visual guide to the structure of this chapter

4.1 Enable all members to make a broader retirement planning

Members of occupational DC schemes should be able to make financial decisions in their broader financial planning. Members need to be able to anticipate on a certain level of pension income. This pension income consists of different elements, one of which is their occupational DC scheme.

Depending on the scheme or practices within member states, these financial decisions can concern only decisions outside the context of the IORP Directive. For instance, members can decide to reduce their expenses in retirement or increase the pension income by saving more in other pension pillars. All members can make these kind of financial decisions. If occupational pension saving is mandatory and the employer just

offers one scheme without any choices to make, these are the only decisions members can make.

Other members will be able to change some aspects of the saving in the occupational DC scheme. For instance, members are able to increase the contributions, some might have the possibility to save in another occupational DC scheme. These financial decisions fall within the scope of the IORP Directive.

4.1.1 Ensure answers to their common key questions

Before drafting information requirements, it needs to be clear what information readers need in order to make financial decisions. What are the 'key' questions of DC scheme members in order to make these financial decisions? The psychology of Max (set out in chapter 2, the average DC scheme member) is taken as a starting point. He has limited time and motivation, searches for a satisfactory outcome, uses heuristics to process information, and has a lack of willpower to take actions in his retirement planning.

Therefore, information should support members as much and straightforward as possible to answer the basic question whether any changes need to be made in the retirement planning:

'Do I need to adjust my current retirement strategy, do I need to make any financial decisions?'

To assess whether any adjustment of the broader financial planning is necessary, people will pose themselves the following question:

'How much pension income can I expect from this scheme - will it be sufficient and can I bear the risks?'

In all countries people need to make decisions with respect to their retirement planning. They need to know whether their current pension saving will provide them sufficient pension income at retirement age. To assess whether it will be sufficient, projections for first pillar pensions, second pillar and third pillar should all be provided in a similar way. This would enable the occupational DC scheme members to add up the projections of their occupational DC scheme with the various other ways of pension saving. 'Sufficient' might have different meanings in different countries. Often people wish to maintain a certain living standard in comparison to the living standard they have during their working life.

In all countries, DC scheme members need to be able to know whether they can bear the risks that are connected to an occupational DC pension scheme.

To understand the risks, only one figure of a pension projection would suggest certainty, which is not there. Recent research suggests that three scenarios (positive, neutral, negative) could support people best to understand risks on printed paper. This means a technical challenge for the policymakers, yet an increase in the likelihood that DC scheme members will use the information about risks, and understand the impact of the risks. The projections are standardized calculations based on the best knowledge available among policymakers and experts in the field. The indication of the pension income should fit the customs of financial planning in a member state¹¹.

If the conclusion is that people need to adjust their retirement strategy, or need to make financial decisions with regard to the occupational DC scheme, it needs to be clear to them 'how' they can do this. The information needs to answer the following key question:

'How can I adjust my retirement strategy?'

Where appropriate and as much as appropriate, members should be supported towards financial decisions. These decisions can fall within the scope of the IORP Directive or outside. If it is outside, member states should be allowed to provide the type of support that is appropriate within the context of their country. Perhaps references can be made to consumer protection organisations, or governmental agencies that provide support in retirement planning.

Although disclosure of the accrued balances, and inflows and outflows are important for accountability, it is important to note that an accrued balance, the total amount of pension savings, is not meaningful or easy interpretable for DC scheme members. It does not give an answer to whether it will provide sufficient income. Members need support to understand the value of these figures. The annual statement should provide at least the answers to the key questions which are posed above. Pension projections should be provided in the currency of the country and in terms of purchase power. Research suggests that – for information which is provided on paper – showing three scenarios (positive, neutral, negative) may be very effective.

¹¹ In some countries this is the net amount of income, in other the gross; and in some people think of income per month, in others the most meaningful presentation might be the yearly income.

4.2 Enable, members who can change scheme, to assess the quality of the scheme

Some members can make choices to either or not save through a particular occupational DC scheme. Often employers offer one particular occupational DC scheme, and the member can choose to join, to opt-out or to switch to a different scheme. Hence, the behavioural purpose is to help members decide whether they join, opt-out or change scheme. Here, pre-enrolment information such as a KID-like document could be important as a first layer of information.

Before we set out the considerations that arise from this report, we briefly recall what the answer to the Call for Advice was:

In the Call for Advice the following items were regarded as appropriate for members of occupational DC schemes in a KID: 1) Identification of the IORP; 2) Objectives and investment policies; 3) Performance scenarios; 4) Costs and charges; 5) Risk/ reward profile; 6) Contributions; 7) Practical information; 8) Cross-references.

The KID could be further improved by helping members to understand and assess these different and some rather abstract items, to understand what these mean for them personally, and to facilitate comparison with other KID's to find the best option available.

4.2.1 Provide reference points

Before we set out what is necessary to further improve a KID, we recall what seem to be considered the behavioural purpose of the KID:

The main behavioural purpose of the current Key Information Document in UCITs is indicated explicitly in the start of the document. It says it is meant to enable potential investors to understand the nature and risks of the product, and to make an informed decision whether to invest.

However, with only one KID available there are no reference points available for potential members to assess the quality of the scheme and the fit with one's preferences (3.7). For instance, a certain level of costs and charges has no meaning unless people know how other schemes compare in terms of costs and charges. To be able to interpret the information about costs and charges in this KID, members should either have a benchmark (for instance the average performance of all schemes), or they should search for additional KIDs to compare different schemes, to then be able to make an informed decision whether to invest.

Providing a benchmark would be best, as it does not demand more time and motivation of members to continue to search for information. Otherwise, the member should be encouraged to find other KIDs to be able to compare and find the necessary reference points. This should be made explicit at the start of the KID. We used costs and charges as an example where reference points are necessary, but this also applies to the items performance, and contributions.

4.2.2 Explore ways to improve risk information

In the Call for Advice we already raised attention for the technical issues coming up to make an appropriate assessment of the risk while taking into account the longer time horizon (EIOPA, 2012). Another issue is that the information in a KID remains impersonal and difficult information for the average member to recognize. Most complex is the risk-reward profile. One of the complexities of the risk-reward profile is that this indicator is not easy to interpret in itself. It is not information people recognise, and they miss reference points. They need to find out what risk-profile fits their circumstances and preferences. This requires complementary information, and perhaps even a questionnaire for people to find out which score on the indicator (1 to 7) fits with them. However, searching for a questionnaire asks more time and motivation of members, which they often do not have. Research has shown that without any support people often do not have the skills to pick options that fit their preferences.

4.2.3 Consider more personal information

From the perspective of Max, the information would improve substantially if his common key questions were answered as well in a KID. Average members want to know if the future outcomes of the scheme are 'satisfactory'. They want to know what is the impact of the different indicators described in a KID on the future pension income, and want to know what is the potential impact of the risks. Hence, personal projections would improve a KID substantially. Digital interactive information could enable this. An in-between solution would be to show outcomes in terms of pension income for 'reference members' (see 3.7 the Italian projections).

4.3 For other relevant financial decisions: minimum harmonisation to keep flexible format

Still other financial decisions need to be made by members that also might need attention in a first layer of pre-enrolment information or annual statements. Members might be able to choose for a certain investment option or to adjust their contribution level. In some countries this might follow the decision to join a certain scheme; in other countries this might be the only (pre-enrolment) choice. Hence, depending on countries' context this behavioural purpose might be central in the pre-enrolment information and, if still relevant, in the annual statement.

In some member states other elements of information might be crucial for members to make financial decisions, or to adjust the broader retirement planning. For instance, the spouse pension is considered as an important part of a DC pension scheme in the Netherlands and should be part of the first layer of information. In Sweden death and health benefits that are part of a DC scheme (but usually fixed amounts linked to a price index) would also be considered as first layer information.

To increase the likelihood that occupational DC scheme members use the information provided, the different behavioural purposes in the member states need to be taken into account. For DC scheme members it is important that the format of the pre-enrolment information and annual statements is adjusted to these purposes.

4.4 Next steps in information provision

We invite European and national policymakers, but also all other stakeholders (actuaries, researchers, IORPs) to discuss how formats of information can be adjusted. The main purpose should be to enable members to plan for retirement and make appropriate financial decisions.

The discussion should concern how the information should be put in the appropriate layers (must know, should know, nice to know; 3.3). And how can the information be organised in such a way that members can easily find the information they search. Additionally, effort should be put in providing the information in plain language, making sure the vocabulary is used consistently and is suitable for members.

Policymakers should search for expertise to develop appropriate methodology to provide figures that enable members to assess the information; and search for experts on effective communication. We encourage researchers and actuaries to investigate what are appropriate benchmarks. And what are good and effective ways to communicate risk, both from the technical point of view, and from the point of view of the members.

The checklist can be applied more broadly than only to the format of pre-enrolment information and annual statements for DC scheme members who bear the investment risk and could be developed further. One topic of interest is the information about the decumulation phase. An inventory of existing practices could be made. Members who approach retirement age need to have access to clear information about the options of payment in lump sums or monthly benefits.

Another issue of concern and interest is the transparency of costs. In various countries stakeholders and policymakers search for an appropriate approach. For instance, the Italian good practice in this report has been set out only generally, but sharing the details of the calculations between member states would be worthwhile.

Finally, EIOPA could elaborate on good practices in testing of information. In this report it is still an unexplored topic, but it is crucial for effective information provision.

5. References

Ajzen, I., & Fishbein, M. (2005). The influence of attitudes on behavior. In D. Albarracín, B. T. Johnson, & M. P. Zanna (Eds.), *The handbook of attitudes* (pp. 173-221). Mahwah, NJ: Erlbaum.

Antolín, P. and C. Severinson (2010). Communicating projected pension benefits and risks in defined contribution pension plans. OECD Working party on private pensions.

Antolín, P. and O.M. Fuentes Contreras (2011). Communicating pension risk to DC scheme members: The Chilean case of a pension risk simulator. OECD Working party on Private Pensions.

Antolín, P. and D. Harrison (2012). Annual DC Pension Statements and the Communications Challenge, OECD Working Papers on Finance, Insurance and Private Pensions, No. 19, OECD Publishing.

Available on the internet: <http://dx.doi.org/10.1787/5k97gkd06kth-en>

Baumeister, R.F., Schmeichel, B.J. en Vohs, K.D. (2007) The self as controlling agent, pp. 516-539 in A.W. Kruglanski en E.T. Higgins (Eds.) *Social psychology: Handbook of basic principles*, New York: Guilford.

Benartzi, S. and Thaler, R.H. (2008). Heuristics and Biases in Retirement Savings Behavior, *Journal of Economic Perspectives*.

Bless, H., Fiedler, K. and Strack, F. (2004). *Social Cognition: How Individuals Construct Social Reality*. Psychology Press

Cabinet Office. *Mindspace* (2010). Influencing behaviour through public policy. Discussion Paper: Institute for Government.

Available on the internet: <http://www.instituteforgovernment.org.uk/our-work/better-policy-making/mindspace-behavioural-economics>

Cabinet Office, Behavioral Insights Team (2012). Applying behavioral insights to reduce fraud, error and debt.

Available on the internet: <https://update.cabinetoffice.gov.uk/resource-library/behavioural-insights-team-paper-fraud-error-and-debt>

Capacent (2009) Penge- og Pensionspanelet, Fokusgrupper om pensionsdækningsoversigter

Available on the internet:
http://www.pengeogpensionspanelet.dk/~media/PPP/Files/Daekningsoversigter/Capacent_rapport_daekningsoversigter_2009.ashx

Chater, N., S. Huck and R. Inderst (2010). Consumer Decision-Making in retail investment services: A behavioural economics perspectives. Available on the internet:
http://ec.europa.eu/consumers/strategy/docs/final_report_en.pdf

Cialdini, R.B. (2009). Influence: Science and practice (5th ed.). New York: Pearson Education Inc.

Coleman, E. (1962). Improving Comprehensibility by Shortening Sentences. Journal of Applied Psychology 46 (1962): 131-134.

Collins, R.L. (1996). For better or worse: The impact of upward social comparison on self-evaluations. Psychological Bulletin, 119, 51-69.

Cox, Paul (2011). The provision of information to members of DC schemes – A review of existing research. Conference paper for 2011 JP Morgan Gleneagles Investment Conference.

Davidson, A. & Kantor, R.N. (1982). On the failure of readability formulas to define readable texts: a case study from adaptations. Reading Research Quarterly, 17, 187-209.

Dutch Ministry of Social Affairs and Employment (2012). Rapport 'Pensioen in duidelijke taal' [Report 'Pension in a clear language']. Available on the internet:
<http://www.rijksoverheid.nl/documenten-en-publicaties/rapporten/2012/06/26/rapport-pensioen-in-duidelijke-taal.html>.

EIOPA (2011). Report on pre-enrolment information to pension plan members.

EIOPA (2012). EIOPA's Advice to the European Commission on the review of the IORP Directive 2003/41/EC. 15 February 2012.

Ellsberg, Daniel (1961). Risk, Ambiguity, and the Savage Axioms. *Quarterly Journal of Economics* 75, 643-669.

Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7, 117-140.

Glenberg, A. M., and Langston, W. E. (1992). Comprehension of illustrated text: Pictures help to build mental models. *J. Mem. Lang.* 31: 129-151.

Goffman, E. (1974). *Frame analysis: An essay on the organization of experience*. Cambridge, MA: Harvard University Press

Gollwitzer, P.M. and P. Sheeran (2006). Implementation intentions and goal achievement: A meta-analysis of effects and processes. *Advances in experimental social psychology*, 38: 69-119.

Hartley, J, & M. Trueman (1983). The effects of headings in text on recall, search and retrieval. *British Journal of Educational Psychology* Volume 53, Issue 2, pages 205-214, June 1983

Hsee, C.K. (1996) 'The evaluability hypothesis: An explanation for preference reversals between joint and separate evaluations of alternatives', *Organizational behavior and Human Decision processes*, 67, 247-257.

Hyöna, J. & Lorch, R. F. 2004 Effects of topic headings on text processing: Evidence from adult readers' eye fixation patterns. *Learning and Instruction* , 14:131-152.

Just, M.A. and P.A. Carpenter (1992). A Capacity Theory of Comprehension: Individual Differences in Working Memory. *Psychological Review* 1992, Vol. 99, No. 1,122-149.

Kahneman, Daniel (2011). *Thinking fast, thinking slow*. Farrar, Straus and Giroux.

Kahneman, D. en Tversky, A. (1979). Prospect theory: An analysis of decision under risk', *Econometrica*, 47, 263-291.

Kahneman, D. and Tversky, A. (1984). Choices, values and frames. *American Psychologist* 39 (4), 341-350.

Kahneman, D., Knetsch, J., & Thaler, R. (1990). Experimental Test of the endowment effect and the Coase Theorem. *Journal of Political Economy* 98(6), 1325-1348.

Kahneman, D. (2012). *Thinking fast and slow*.

Layne, Karen and Jungwoo Lee (2001) Developing fully functional E-government: a four stage model. *Government Information Quarterly*, 18, 122-136.

Lott, B.E., & Lott, A.J. (1985). Learning theory in contemporary social psychology. N G. Lindzey & Aronson, E. (Eds.), *Handbook of social psychology* (3rd ed.), Vol. 1, pp. 109-135). New York: Random House.

Mischel, W., Ebbesen, E.B. & Zeiss, A.R. (1972). Cognitive and attention mechanisms in delay of gratification, *Journal of Personality and Social Psychology*, 21(2), 204-218.

Petty, R. E., Cacioppo, J. T., & Strathman, A., & Priester, I. R. (2005). To think or not to think? Exploring two routes to persuasion. In T. C. Brock & M. C. Green (Eds.), *Persuasion: Psychological insights and perspectives* (2nd ed., pp. 81-116). Thousand Oaks, CA: Sage Publications.

Potters, J. & Prast, H. (2009). Behavioural Economics in practice. In W.L. Tiemeijer, C.A. Thomas & H.M. Prast (Eds.), *De menselijke beslisser; over de psychologie van keuze en gedrag* (pp. 47-58). Amsterdam University Press.

Rinaldi, Ambrogio I., Elisabetta Giacomel (2008). Information to members of DC pension plans: conceptual framework and international trends. IOPS: Working paper No. 5.

Available on the internet: <http://www.oecd.org/site/iops/41269701.pdf>

Ritchie, A., J. Corrigan, S. Graham, A. Hague, A. Higham, J. Holt, P. Mowbray and H. Robinson (2012). *Transforming consumer information. A discussion paper*. London: The actuarial profession.

Rooij, Maarten van, Clemens Kool, Henriëtte Prast (2007). Risk-return preferences in the pension domain: are people able to choose? *Journal of public economics* 91(3-4), p. 701-722.

Available on the internet:
<http://www.sciencedirect.com/science/article/pii/S0047272706000995>

Rooij, Maarten van, Annemaria Lusardi, Rob Alessie (2009). Financial literacy and retirement planning in the Netherlands. DNB Working paper, No. 231.

Available on the internet:
http://www.dnb.nl/binaries/231%2520Financial%2520Literacy%2520and%2520Retirement%2520Planning%2520in%2520the%2520Netherlands_tcm46-225547.pdf

Schwartz, B., Ward, A., Monterosso, J., Lyubomirsky, S., White, K. en Lehman D.R. (2002) Maximizing versus satisficing: Happiness is a matter of choice', *Journal of Personality and Social Psychology*, 83, 1178-1197.

Simon, (1959). Theories of decision-making in economics and behavioural science. *The American Economic Review*. Vol. 49, 3, 253-283.

Shafir, E. And Tversky, A. (1995) Decision Making. In Smith, E. And Osherson, D. (Eds.), *An invitation to cognitive science* (2nd ed., pp. 77-100). The MIT Press.

Sunstein, C.R. (2011). Memorandum for the heads of executive departments and agencies; Informing consumers through smart disclosure.

Available on the internet:
<http://www.whitehouse.gov/sites/default/files/omb/inforeg/for-agencies/informing-consumers-through-smart-disclosure.pdf>

Sunstein, C.R. (2011). Empirically informed regulation. *The university of Chicago Law Review*. Vol (78), p. 1349-1429.

Available on the internet:
http://lawreview.uchicago.edu/sites/lawreview.uchicago.edu/files/uploads/78_4/Sunstein_Essay.pdf

Thaler, R.H., Shefrin, H.M. (1981) An economic theory of self-control, *Journal of Political Economy*, 89, 392-406.

Thaler, Richard and Shlomo Benartzi (2001). Saving more tomorrow: using behavioural economics to increase employee saving.

Available on the internet:
<http://www.anderson.ucla.edu/faculty/shlomo.benartzi/savemore.htm>

Thaler, Richard H. and Cass R. Sunstein (2003). Behavioural economics, public policy and paternalism. *The American Economic Review*, 93(2), p. 175-179.

Tiemeijer, W.L. (2011). Hoe mensen keuzes maken. De psychologie van het beslissen. WRR: Amsterdam University Press.

Tiemeijer W.L., Thomas, C.A. and Prast, H.M. (Eds.) (2009). De menselijke beslisser. Over de psychologie van keuze en gedrag. WRR: Amsterdam University Press.

Toms, E.G. (2002) Information Interaction: Providing a framework for information architecture. *Journal of American society for information science and technology*, 53(10): 855-862.

Tversky, Amos and Daniel Kahneman (1974) Judgment under uncertainty: heuristics and biases. *Science* (185), p. 1124-1131.

Tversky, Amos and Daniel Kahneman (1981) The framing of decisions and the psychology of choice. *Science* (211), p. 453-458.

Van Dijk, E. & Zeelenberg, M. (2009). De (ir)rationaliteit van de beslisser. In W.L. Tiemeijer, C.A. Thomas & H.M. Prast (Eds.), *De menselijke beslisser; over de psychologie van keuze en gedrag* (pp. 25-41). Amsterdam University Press.

Weinstein, N. (1980). Unrealistic optimism about future life events. *Journal of Personality and Social Psychology*, 39, 806-820.




6. Drafting information requirements checklist

What is this?

This is a checklist for policymakers that is based on the most recent insights from behavioural finance and communication science about how people process information and make financial decisions. People are no homo economicus, they have limited time and motivation to be involved in retirement planning, and they often use heuristics, rules of thumb, to quickly process information.

What does it do?

This checklist helps policy makers when drafting information requirements. It is divided in three phases. In each phase it tells the policymaker what to do in order to increase the likelihood that members (of occupational DC schemes) take the information into account to plan for retirement.

<i>Preparation</i> 	1	Have a behavioural purpose
	2	Provide a first layer of information that answers key questions of members
	3	Ensure that information is retrievable
	4	Ensure that information is comprehensible
<i>Actual drafting</i> 	5	Optimise attention
	6	Reduce complexity
	7	Provide figures that enable personal assessment and understanding
	8	Show potential implications of risks and ways to deal with them
	9	Support readers as much as possible towards financial decisions
<i>Testing</i> 	10	Ensure thorough testing among members

Want to comment?

Do you have questions or ideas about this checklist? Please contact pensions@eiopa.europa.eu