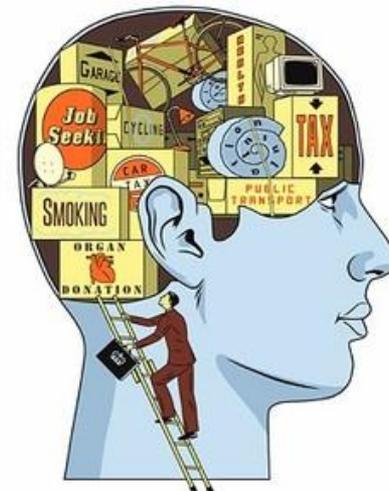


**ПРЕФ**

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РЕПУБЛИКЕ СРПСКЕ А.Д. БАЊА ЛУКА



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# **Irrational people and rational needs for optimal pension plans**

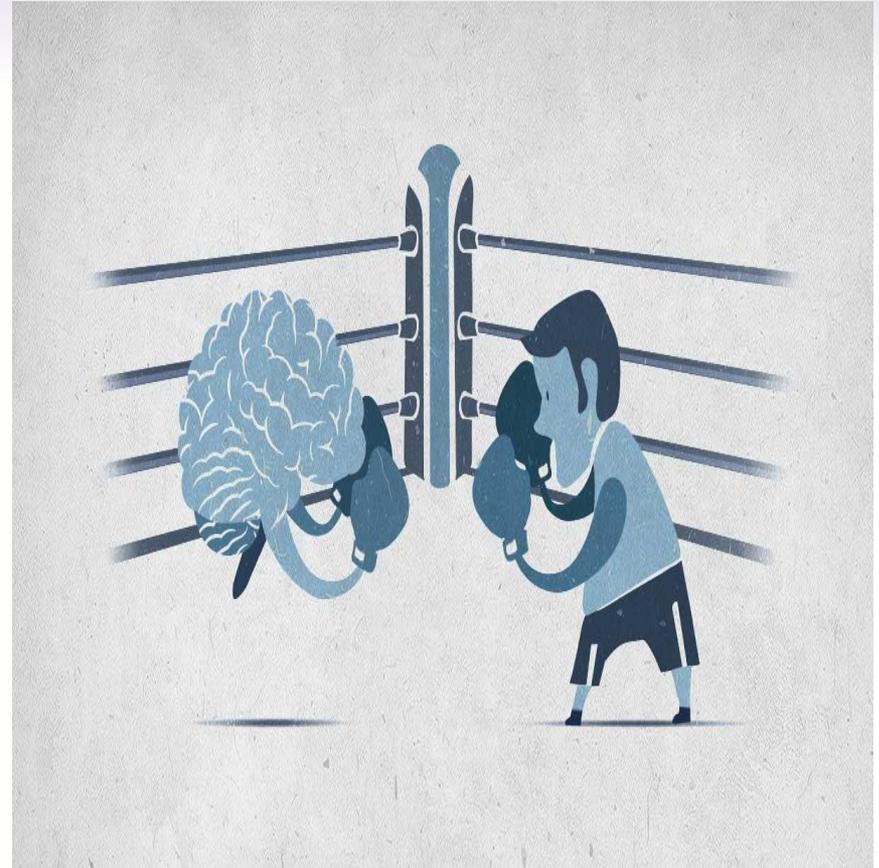
*CEE Pension Funds Conference & Awards*

*Prague*

*March 2016 .*

# Agenda

- Rational vs „real“ investor in theory and practice
- Usual biases and effects on pension savings/pension investment behaviour
- Effect of biases on pension systems
- Management of biases by pension systems



# Rational vs „real“ investor in theory and practice

- Economic analysis uses simplifying assumptions about human nature: individuals are rational decision makers and to have purely self-regarding preferences;
- The rationality assumption consists of two components:
  - individuals are assumed to form, on average, correct beliefs about events in their environment and about other peoples behavior,
  - given their beliefs, individuals choose those actions that best satisfy their preferences.
- Bounded rationality- individuals exhibit, systematically biased beliefs about external events or other peoples behavior or deviate from the action that best satisfies their preferences

# Rational Vs „real“ investor (pension plan member) in theory

- Conventional economic theory
  - informed economic agents act rationally to maximize their self interest;
  - optimal investment selection-plan members participate actively in the allocation;
  - different preferences related to aversion to risk, reflected in a different composition of portfolio;
  - members would invest and hold a portfolio of financial assets with a risk-return combination consistent with investment horizon, degree of risk aversion and the portfolio of other assets they hold, including their human capital and, where relevant, their home;
  - implementation of investment choice assumes that individuals are good decision makers and are able to carry out investment decisions;
  - members have the knowledge, willpower and self-control to exercise choices.

# Rational vs „real“ investor (pension plan member) in practice

- Behavioral economic theory
  - Members do not follow the traditional assumptions -in reality behavioral challenges compromise good investment decision making;
  - People consistently deviate from the rational: nonstandard preferences, nonstandard beliefs, systematic and predictable biases in decision making;
  - Members lack the necessary cognitive ability to solve the optimization problem, because they have insufficient will power to execute it, or even sometimes because they are overconfident;
  - Recognizes that people can and do try to maximize their self-interest but such decisions are often sub-optimal, given available information;
  - Outcomes attributed to various behavioral factors including choice and information overload, unstable or undefined preferences, heuristic decision-making, framing effect and investment menu design, procrastination and inertia, and overconfidence.

## Rational vs „real“ investor (pension plan member) in practice

- Many members make cognitive mistakes that are systematic and predictable that can have damaging consequences for them and pension system as a whole;
- Pension systems are becoming unsustainable in their current form;
- Wishful thinking by the members directly concerned-the tendency to pretend that the problem does not exist or that somebody (government, the union, the employer) will take care of pensions at little or no cost to them personally;
- Wishful thinking must be replaced with pragmatism and people must understand and accept the need to save more, postpone retirement, or both-shifting the responsibility to individuals;
- Saving for retirement implies sacrificing current consumption-people find it difficult to stick to their plans.

## Usual biases and effects on pension savings/pension investment behavior

- circumstances that make real preferences do not correspond to normative preferences
  - nonstandard time preferences and unstable and undefined preferences
  - choices are complex;
  - passive choice ( “silent consent” option);
  - limited experience/little opportunity to learn from mistakes
  - third parties take advantage of psychological biases of their client



## Nonstandard time preferences and unstable and undefined preferences

- Self-control problems (bias) suggest that the discount factor in intertemporal choice is time-inconsistent: the utility of A as compared to B does differ according to the time between the period of evaluation and the period of “consumption”;
- Members may perceive a need to maximize retirement income;
- Problem of incoherent preferences for making investment decisions complicates optimal retirement plan design-individuals often do not arrive at the decision with firm preferences they vary depending on the time frame when decision is made



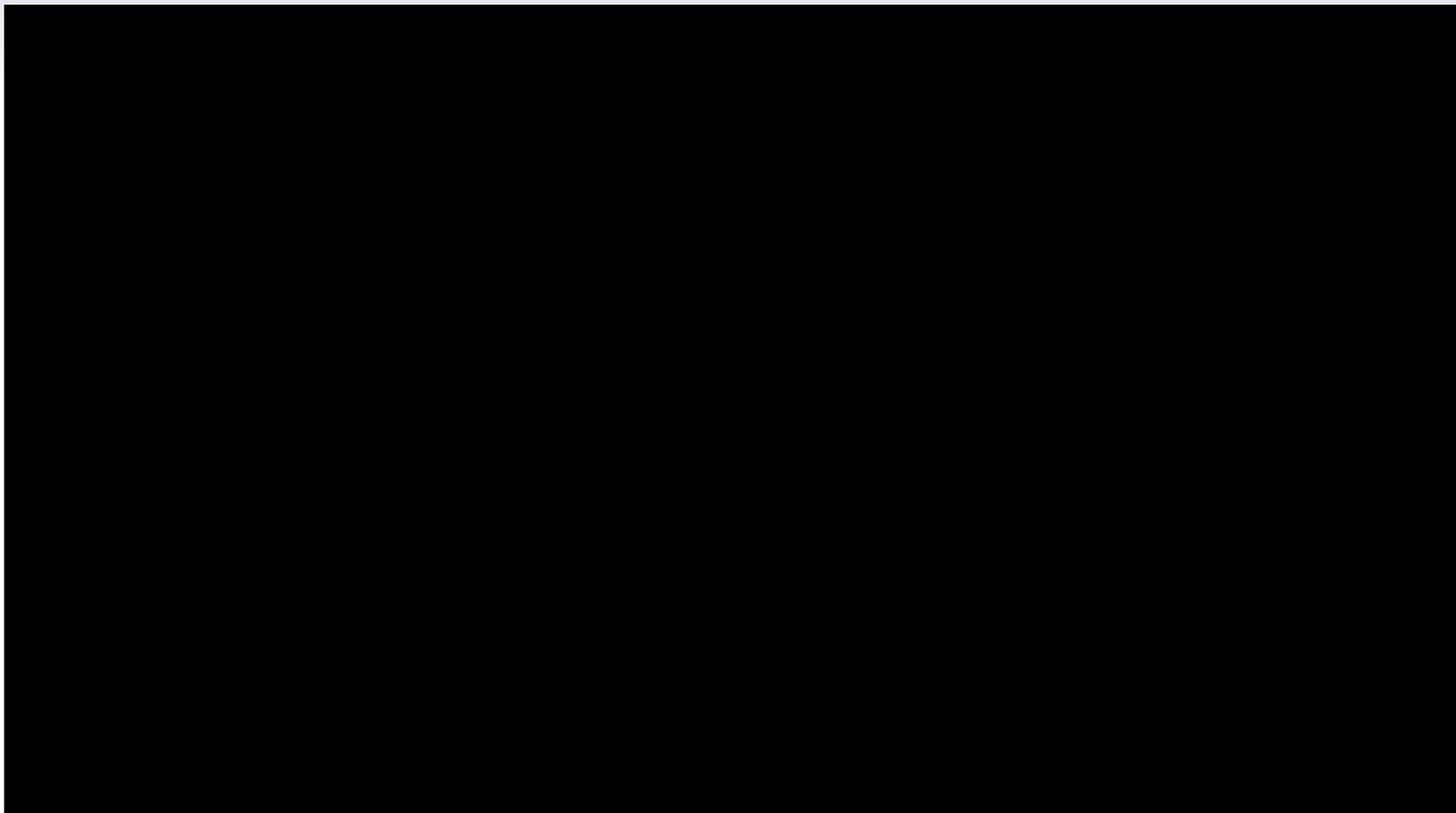
## Choice is complex /Choice and information overload

- More choice is not always better- choice overload, members simply fail to act discouraged from choosing anything, or, if they are forced simply pick something (for example allocate evenly creating “1/n heuristic”);
- Complexity delays choice, increasing percentage that adopts default options (both high-knowledge and low-knowledge members) and even declines in participation rates. On the contrary, allowing to easily evaluate choices and limiting the number of options can raise participation rates;
- Members avoid choices that are complex because anticipated regret and the omission bias: the more options to choose from, the more people anticipate regret if they make the wrong choice;
- This question more relevant in recent years-increasing number of investment option and too many can cause information overload and members may be distracted instead of helped by information.

# Heuristic decision-making

- Heuristics are simple rules of thumb which have been proposed to explain how people make decisions, come to judgments and solve problems, when facing complex problems or incomplete information;
- Members appear to be influenced by factors that are not necessarily relevant to the outcome, and consequently their choices may not correspond to their underlying risk attitudes;
- The decision making process, however, is not a strictly rational one where all relevant information is collected and objectively evaluated. Rather, the decision maker takes mental „short cuts“;
- There may be good practical reasons for adopting a heuristic decision making process, particularly when there is time pressure, or when other factors make fully evaluating all choices difficult.

# Heuristic decision-making



# Procrastination and inertia/Passive choice

- People often choose not to choose- so defaults (what you choose if you do not take action, silent consent) affect behavior;
- When members face complex decisions, inertia (keep the things as they are) or procrastination (put the decision off until tomorrow) affects their decisions, leading to sub-optimal choices;
- Procrastination occurs because members will not always make decisions when short-run costs are involved even if the long-term gains are substantial specially when faced with substantial planning or informational costs;
- While people intellectually understand the benefits of a specific behavior, and they may even have idea to get started, they have difficulty implementing intentions- majority of people needs and welcomes mechanisms that help them overcome their lack of will power;
- Of the possible commitment mechanisms, a mandatory arrangement is the most “distortional” compared to alternatives that take account of self control issues and procrastination, like automatic enrollment and/or a SMaRT contract, or an even softer alternative, mandatory active choice: requiring employees to actively decide whether or not they wish to become a plan member.

# Procrastination and inertia/Passive choice

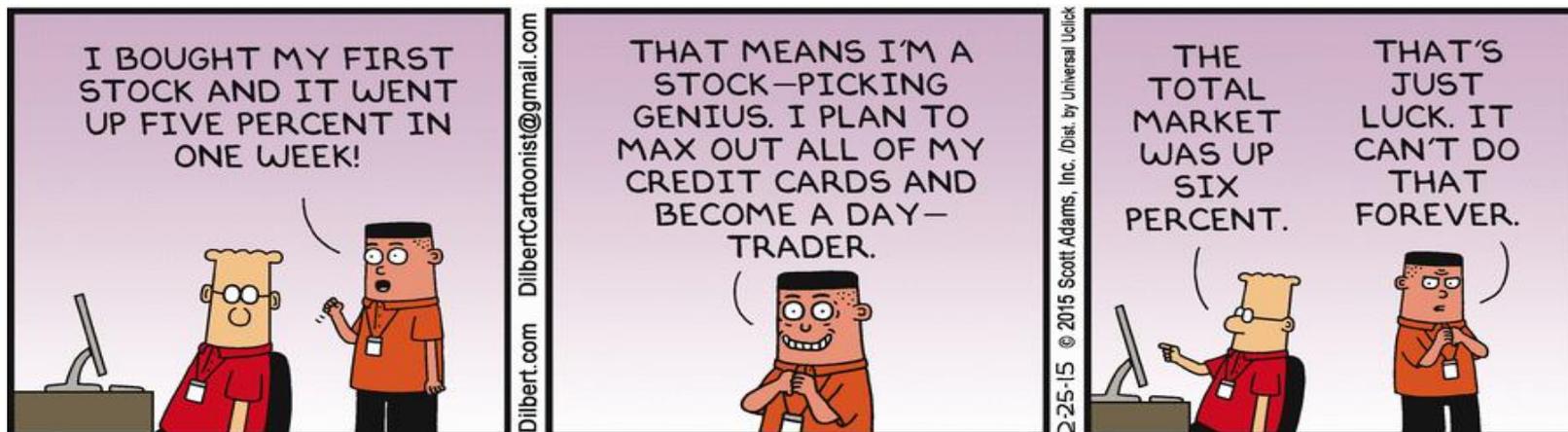


# Procrastination and inertia/Passive choice

- Human tendency toward procrastination about unpleasant activities often leads to inertia or status quo bias;
- Inertia often results in a failure to rebalance or reallocate portfolios;
- Inertia is explained by the decision of plan members to avoid retirement related decisions, which inherently involve contemplating unpleasant factors including the negative aspects of aging and ultimate death;
- Failure to rebalance portfolios (or inertia in the asset allocation) may arise from potential regret of reallocation their portfolio and observed the new investment choices underperforms the original ones.

# Overconfidence

- Tendency for people to overestimate their knowledge, abilities and the precision of their information-for that reason investment decisions become based on conjecture rather than fundamental value.
- Two factors that can contribute to overconfidence-the illusion of knowledge and the illusion of control:
  - The illusion of knowledge occurs when one has a large amount of information, but automatically assumes that the information has been interpreted correctly so that it can be used wisely;
  - The illusion of control refers to the belief that one has control over uncontrollable events.



# The regulation of investment choice in pension systems

- Institutional design of pension schemes matters much for the pension choices people make, while information and education have a much smaller role -to assist people in making better decisions in their life-cycle;
- The key aspects of pension plan design are:
  - the range of investment options,
  - the design of the default strategy option and
  - the extent of freedom of choice;
- A review of the international experience shows different approaches to these regulatory issues;
- Optimal arrangement should help people deal with their present bias while at the same time give them some choice. This could be either by mandatory participation combined with some choice as to the level of risk, by automatic enrollment with a carefully designed default, or by a mandatory active decision with limited choice;
- Disclosure of information being essential to gain trust-more pension information are not so much driven by the desire to have people make better choices but rather by to retain the trust and confidence

# Investment options

- A basic policy question is how much choice members should have over key decisions, such as the choice of provider, choice of investment portfolio, and choice of income stream at retirement;
- In countries where mandatory individual account systems are large, these financial decisions can determine their standard of living in old age;
- These decisions are all the more relevant when systems is mandatory and contribution rate is set by law. If workers need to be obliged to participate in the system and to contribute can they be expected to make informed choices?
- A central decision concerns the appropriate balance between individual choice with a high degree of flexibility on the one hand, and the simplicity of a restricted menu of choices on the other;
  - relatively unlimited investment choices or,
  - more limited range of choices ( CEE countries -the typical approach is to allow fewer than five lifestyle funds, offering varying allocations to bonds and equities, which attempt to provide some age-related profiling. First, they choose provider and only then they choose a specific lifestyle fund)

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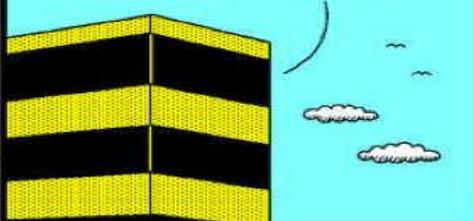


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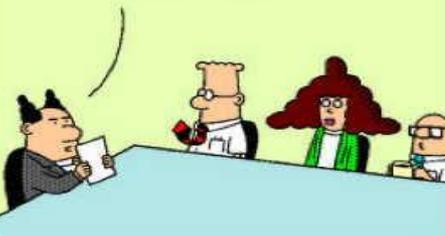
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# Design of the default option

- Design of the default investment option is extremely important in mandatory individual systems, since a significant percentage of participants will likely fail to make an active choice;
- Default option is addressed mainly to two different groups:
  - members that feel that they have neither the knowledge nor the commitment to design and manage their own portfolio,
  - members that feel that have the commitment to design and manage their own fund portfolio but insufficient knowledge to do so,
- Those unable to make choice - most risk averse so selecting a conservative default fund to give members time to make up their minds;
- Drawback is based on inertia and procrastination-members are passive decision makers;
- Default option selected by policy makers become de facto the member's choice;
- Selecting a conservative strategy as a default option could be inconsistent with two financial principles: the existence of an equity risk premium, and the principle that younger individuals are able to assume greater equity market risk than older ones.

# Freedom of Choice

- Restrictions according to the age of the participants. The aim is to prevent members close to retirement from taking high risks. This regulation limits the exposure of older members to the volatility of variable income instruments;
- The lack of a specific regulation on portfolio choice could have an important impact on the retirement savings of older members;
- Unexpected fluctuations in the equity market just before retirement can harm permanently the benefits of those older members who have placed their contributions in the more aggressive funds. On the other hand there is long-livety risk;
- However, the level of participation and the efforts to encourage active choosing drops over time. After the initial enrollment period, advertisement expenditure reduces as well as the proportion of member choosing their own portfolio.

# Freedom of Choice

- Young workers entering the labor market are less likely to make decision because retirement is far away and they may have more immediate financial concerns, account balances are small and they may view that the gains from choosing a portfolio is small;
- Decline in the fraction of member making active decision suggests that procrastination and inertia are important determinants of savings behavior, at least in the short term;
- The low levels of active choice could also be a result of choice overload.

# Concluding Remarks

- The challenge facing policymakers is how to exploit the lessons of behavioral research to design investment choices that encourage individuals to make decisions that are in their own long-term interest;
- Although a basic assumption of economic theory is that consumers are better off with a wider array of choices, too many can cause information overload, resulting in confusion and complexity, and, consequently, in greater use of the default option;
- The international experience is quite varied. More developed countries offer wide range of choice, whereas CEE countries offer a very limited number of choices;
- Another key policy issue is the design of the default option, since even when choice is limited;
- The countries regulate the default option radically different . The international evidence reveals a preference among members towards equity funds. While the age structure of participants in CEE countries may justify high equity allocations, there is also evidence of heuristic biases;
- Participants tend to change their asset allocation on the basis of recent performance trends and engage on naive diversification strategies, such as equal weights across funds irrespective of their asset allocation.

# Concluding Remarks

- Core findings in psychology and economics are that people deviate from the rational choice model in all of the following respects: they have nonstandard time, risk and social preferences; they are systematically biased in the gathering and processing of information; and they exhibit systematic and predictable biases in decision making;
- In addition to behavioral biases that would complicate decision making even among simple products, the area of life cycle saving and investing is too complex to provide financial consumers with information, and then leave it to them to make good decisions;
- Mandatory occupational system can deal with self control problems and procrastination. However, within this mandatory (at the firm or industry level) system can propose limited, meaningful choice for the employee to be able to choose retirement age, minimum target income, ambition income combined with his tolerance for not realizing this ambition;
- This way, the institutional design of the system would take account of behavioral evidence regarding systematic and predictable decision errors and of the preferences of employees for a mandatory system: “good” decisions are made easy;
- At the same time, it allows for some choice in terms of minimum target income level as well as an ambition level combined with the risk that this ambition will not be realized.

# THANK YOU FOR THE ATTENTION !!!

