The Role, Limits of, and Alternatives to Financial Education in Support of Retirement Saving in the OECD, Eastern Europe and beyond

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Abstract

The paper investigates the role, limits of, and alternatives to financial education in the support of retirement saving, with a focus on the experience of transition economies in Central and Eastern Europe. It starts out with a review of the role of and experience with financial education in OECD countries and concludes that financial literacy is low and financial education of limited effectiveness. Against this background, the paper explores the impact of other constraints on individual retirement saving behavior drawing on recent results from "behavioral finance" and investigates the role and limits of "default options", one increasingly cherished approach to overcome information constraints and decision inertia. This information is used to assess the role of and experience with financial education in the new market economies in Central and Eastern Europe. Preliminary information based on a survey of key policy institutions suggests that financial and retirement education still needs major improvements. But these institutions share the view of an important role of default options for pension design and the role of government regulation and supervision in their determination.

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1. Introduction

There is broad recognition that financial education is crucial for individuals and society in a modern market-based economy. There is also tacit acceptance that the importance of financial education continues due to changes in the supply and demand sides of financial markets. The demand side changes are most visible in the ongoing reforms of pension systems world-wide. At a minimum the generosity of public pension programs is reduced, and there is an understanding (often only implicit) that individuals will at least partially compensate their reduction in pension benefits through lengthening of labor force participation or increases in voluntary retirement savings, or both. In a growing number of countries, increased retirement savings via financial sector instruments is part and parcel of pension reform: In the radical form of full replacement of prior unfunded DB (Defined Benefit) systems through fully funded DC (Defined Contribution) systems (such as in Chile, Mexico and Kazakhstan); in the more moderate form of replacing part of the unfunded and reformed public DB system (first pillar) by a mandated but funded and privately-managed DC system (second pillar such as in Peru, Colombia, and Costa Rica, or Hungary, Poland and Latvia); or in the form of linking the reduced generosity of the public unfunded DB system with the introduction of a voluntary but heavily regulated and subsidized managed privately and funded system (third pillar, such as in Germany).

Whatever the reform approach adopted in these countries, individuals are requested to make important financial decisions having long-term welfare consequences. Such decisions range from adequately saving for retirement to choosing the appropriate instruments and risk diversification to selecting the optimal form of disbursement. But are individuals sufficiently equipped to make such decisions? If not yet, can they be adequately educated to acquire such knowledge and skills? If this is not the case, what can we learn from recent results of behavioral finance of how to reframe savings options? Do "default options" provide a solution in low-level literacy environments? Have the more radical reform countries in Central and Eastern Europe been able to provide adequate financial literacy to their population, consistent with the needs arising from pension reforms?

This paper attempts to answer these questions and outline proposals for a way forward. To this end, the paper is organized as follows: Chapter 2 provides a short review of the need for effectiveness of financial education based on a literature review. The conclusions are quite sobering -- financial literacy remains low and financial education, although of limited effectiveness is important and useful. Against this background Chapter 3 reviews the recent results of behavioral finance and their implications for pension benefit design, explores the role of "default options" in the establishment of retirement savings, and the role of government in the regulation of these defaults options. Default options constitute the design-imposed choice for those participants who decide not to choose among other alternatives, i.e. make an explicit decision to opt-out. A recently proposed nation-wide default saving plan for New Zealand serves as a useful case study. Chapter 4 presents evidence of financial literacy, financial education, and the use of default options in reform countries in Central and Eastern Europe based on a make-shift questionnaire. Preliminary conclusions are proposed in Section 5.

2. The status of financial literacy and education: What does the OECD experience tell us?

This section sketches the status of financial literacy in OECD economies, experience with financial education and its potential impact.[1] Supply and demand events which make financial literacy important are reviewed, followed by the status of financial literacy based on national literacy surveys. In order to improve financial literacy, countries have initiated a variety of financial education programs and we report on the effectiveness of different providers and communication means applied. Lastly we review if these financial education programs had the expected impact on retirement savings related outcomes.

2.1 The changing needs of financial education

Financial literacy can be defined as the capacity to sufficiently understand financial market products in order to make informed decisions about investments and credits, consumption smoothing and risk management with the goal of improving one's well-being. As such, the notion of financial literacy is a relative concept as supply and demand for financial products is changing, and individual preferences may also change.

[1] The OECD is currently finalizing the first major publication of financial education at an international level. It is part of a collaborative effort of the OECD Secretariat, the Committee on Financial Markets, and experts from many countries. The publication is scheduled for autumn 2005.

This suggests that an individual who was financially literate 50 years ago might very well be considered financially illiterate today. Moreover the assessment of financial literacy is likely to differ between countries at a given point in time. This makes it difficult to make a straight forward comparison between countries.

Figure 1 illustrates the main supply and demand factors that are conjectured to have increased the importance of financial literacy in recent decades. On the supply side, this includes the increased availability, complexity and providers of financial products. On the demand side, this includes increased income, life expectancy and, possibly individual desire for more choice. Changes in pension provisions have both supply and demand side effects.

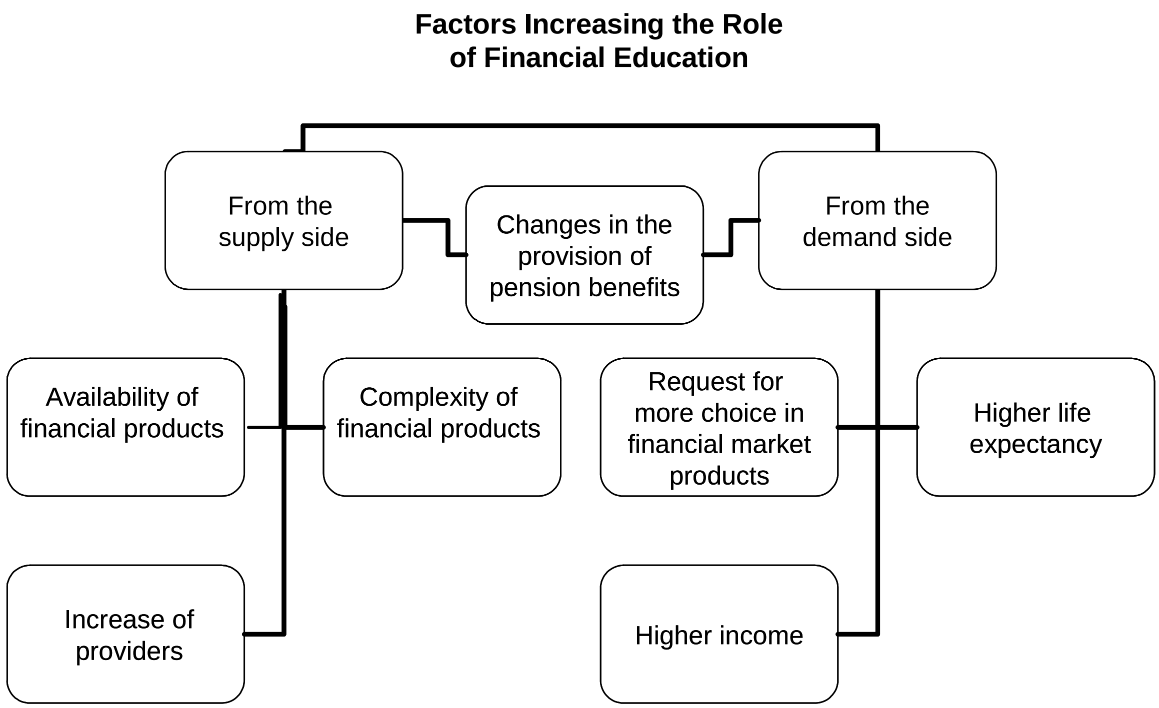
Supply side factors:

- Availability: The purchase of goods has expanded from the simple use of cash to include checks, credit cards, debit cards, consumer credits, and other options. Saving options have expanded from simple bank saving accounts to diverse savings products (performance-based savings accounts) or security-based options (such as mutual funds) for the broad population. Similar innovations apply also on the credit side.

- Complexity: Not only has the number of financial products increased, so too has their complexity in design and fee structure. Although the over 200 year old annuity product has remained unchanged in its basic structure, the possible choice for individuals has increased (real/nominal, fixed or participatory, with/without guaranteed minimum years of disbursement, etc). Many financial instruments are also available as bundled products offered by an increasing variety of providers.

- Providers: The number of providers of financial instruments has also increased in recent decades. Mutual fund providers have become as normal as banks, including providers of specialized mutual funds for retirement income purposes – i.e. pension funds. Hedge fund managers have been added as providers of high-risk financial instruments. And banks have varied substantially between specialized deposit-taking institutions to all-purpose vendors of financial products in many countries.

Figure 1. Main Factors making Financial Education Increasingly Important



Demand side factors:

- Income: An important factor behind the increased demand for financial products and their diversity is the growing income levels in middle and high-income countries. Those with higher incomes desire financial products to smooth consumption from now to the future. Higher income levels also increase individual need and capacity for risk management instruments. Financial products are a luxury good for which the demand increases more than proportionately with income level.

- Life expectancy: Life expectancy has dramatically increased in middle- and high-income countries in recent decades particularly above age 60. This has increased the demand for financial products to save resources from periods of greater income to less active period in life, as well as the demand for financial products to manage health risks.

- Choice: Individuals want perhaps because of higher incomes but also possibly a feature modern life, to have more choices among financial market products. This desire may be linked with an increased stratification of society to which financial service providers are more than willing to cater to.

The change in the provision of pension benefits is an important **demand as well as supply factor** for the increased need to be financially literate. Moving away from government or employer-provided DB schemes (whether unfunded or funded) and the increasing importance of funded DC schemes has increased the need for appropriate finance products during accumulation and decummulation phase in one's life cycle. Making the right decisions in this area has raised the bar in the meaning and importance of financial literacy.

2.2 How well educated is the population in financial matters

Assessing the financial literacy of a population is not an easy undertaking. First, one has to make the proposed definition operational including instruments and providers one expects individuals to be knowledgeable about. Second one has to develop an appropriate metric to assess how individuals measure up in each of the selected areas and then aggregate across these areas for each individual. Are they all equally important or should weights be applied? Finally one has to aggregate data across individuals. Again should an equally weighted approach be applied? Our understanding is that none of the existing country' surveys has developed such an approach nor are data comparable between countries.

As away forward, it is proposed to distinguish between *general financial literacy* and *special pension literacy*. The first would, for example, evaluate the knowledge of real versus nominal interest rates while the second would assess the knowledge of trade-off between risk and return, or the knowledge on how public and private pension systems are financed.

So far, most of the country and a few cross-country surveys have focused on **general financial literacy** and the conclusions of these surveys suggest very limited general financial literacy.[2] The overall conclusion is pretty sobering and the diversity of results

[2] The list of country and cross-country assessments include the following references: AdFLAG (2000); ANZ Banking Group (2003); ASIC (2003); Boeri, et al.(2001); CCFSI (2002); Consumer Bankers Association (2005); Cutler (1999); Deloitte Touche (2002); Engen, et al (2001); Ferguson, R. (2002); German Embassy Online (2003); Guiso, L., et al. (2000); Greenspan, A. (2003a and b); Helman R.

according to socio-economic characteristics not surprising. Key results from available surveys are the following:

Overall: Most people are not well prepared to make basic decisions about their finances. Indeed, financial surveys repeatedly show that there is extended apathy and lack of knowledge about financial planning.[3] Surveys indicate that many individuals do not have an adequate financial background or understanding of financial concepts.

Other main findings:

(i) Financial literacy is correlated with education, income, and, to a lesser extent, with age. In general, surveys have shown that individuals in lower socioeconomic levels and the lowest income levels, as well as young people, are likely to be the least interested, confident, and active with respect to financial issues. By contrast, those in higher socioeconomic levels, those with higher incomes, young couples and older individuals with no family are more likely to be sophisticated financial consumers, knowing how to get the information they need and understanding the advice they receive.

(ii) Respondents often feel they know more about financial matters than is actually the case. Indeed, surveys have also shown that individuals often overestimate their knowledge of financial issues. When asked for their perceptions, most respondents state that they are financially literate. However, when asked to apply their financial knowledge to solve a particular problem, they demonstrate a lack of financial understanding[4].

(iii) Consumers feel financial information is difficult to find and understand. In fact, people do not actively seek out financial information. The information they do receive is usually acquired by luck or chance or hazard. For example, by picking up a pamphlet at a bank, talking with friends or family, etc. Surveys also find that the complexity of

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(2004); Hewitt Associates (2005); Mandell L. (2001and 2004); NCEE (1999); OECD (2005); Principal Financial Group (2002); Sunden, A. (2003); Van Ark, B. (2002); and Whitehouse (2000).

[3] In the United Kingdom, the Financial Services Agency ranks as one of its main concerns the fact that consumers are making financial decisions based on inadequate understanding (Wheatcroft, 2004). In Japan only 1% of consumer education professionals said consumers have adequate level of financial knowledge (OECD,2005), in Australia 37% of those with investments did not understand that investments can fluctuate in value (OECD, 2005).

[4] According to a survey in Australia ANZ (2003), although 67 per cent of respondents indicate that they understand the concept of compound interest, only 28 per cent correctly answered a problem using this concept.

financial products and the overload of instruments and providers is one reason given for not going ahead with purchase[5].

Some examples from surveys:

- Fewer than 40% of respondents in U.K. are confident about making financial decisions. *(Whitehouse 2000)*
- In Japan only 1% of consumer education professionals said consumers have adequate level of financial knowledge. *(Central Council for Financial Services Information, 2002)*
- In Australia, 37% of those with investments did not understand that investments can fluctuate in value. *(ANZ 2003)*

The **financial literacy with regard to retirement saving decisions** has been found to be surveyed to a lesser extend. The areas for which knowledge appear important include:

(i) The saving/contribution rate needed to achieve targeted living standard in retirement. Few workers appear to have an idea of how much it takes to live comfortably in retirement. Workers tend to expect their financial standard of living in retirement to be at least as good as before retirement and to remain at least at that level throughout the length of their retirement. However, there not seem to be sufficient knowledge about how much savings/contribution rates are needed in order to achieve such goal. Increasing medical costs, declining savings, and inflation are some of the factors that often are not taken into consideration by individuals.

(ii) Knowledge about the choice of savings products and providers taking into account service quality, fees and investment performance. The variety of financial products and providers can appear quite complex to the average individual, as they often require an understanding of terms to maturity, durations, payout options, and various other features. In addition, it is often difficult to assess the quality of financial products at the time of purchase. Consequently, financial products can be difficult to understand and many consumers purchase inappropriate ones or decide not to purchase any at all.

[5] A Japanese Consumer Survey on Finance finds that respondents feel frustrated about the difficulty of finding easy-to-understand information on financial products. When asked about the financial information provided by various organisations and companies, 39 per cent of respondents say they have not seen much information and 29 per cent find the content of the information difficult and hard to follow (Smith, 2005).

(iii) Knowledge about the choice of investment portfolio taking into account return-risk trade-off and risk diversification. Surveys suggest that a large proportion of workers with savings do not diversify enough. Most of them are not investing in the stock market. Nearly all workers with savings say they own bank or thrift accounts (93 %), but only 50% of workers who have savings and investments report having stock or bond mutual funds, and only 41% hold individual stocks (Helman, Greenwald & Associates, and Paladino, 2004).

(iv) Knowledge about the form of disbursement: annuity (and how), or gradual drawdown of accumulated balance. Given the fact that so many countries are experiencing a trend away from defined benefit towards defined contribution pension plans, knowledge on annuities is increasingly important. Individuals need to be informed on the regulatory and supervisory framework, the choices they have at the moment of withdrawal, the adverse selections, the existence of minimum worth ratios and other technical tools to estimate the value for money of annuities, the administrative fees, investment risks, and other characteristics.

Overall: The more limited number of surveys on pension financial literacy suggests that attitudes and knowledge towards planning for retirement are generally worse than planning for other life events[6].

Other findings:

Although people worldwide say they are concerned about their financial future and recognize that putting money aside for retirement is increasingly important, a surprisingly small number have done anything about it[7].

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[6] According to a survey by ABI (2004), expenditure on property remains a top priority for 39%; debt repayment (34%), and investment (11%) are still greater priorities than saving for retirement (7%). According to a recent survey by the Employee Benefit Research Institute, four out of ten American workers state that they are not putting any money aside for retirement (Helman and Paladino, 2004). A survey by the Royal Bank of Canada finds that respondents consider choosing the right investments for a retirement savings plan to be more stressful than going to the dentist (Canadian Press, 2005).

[7] According to a recent survey (Principal Financial Group 2004), in six countries, France, India, the United States, Mexico, Chile, and Brazil, at least three-fourths of participants say they are very concerned about their future financial well-being. On the other hand, the same survey shows that almost half of survey participants in twelve different countries completely or somewhat agree they have not yet planned for their retirement savings and only one-fourth have tried to figure out how much they need to save for retirement.

Some examples from surveys:

- In the U.S. participants in private pension plans do not adequately diversify. A significant share holds more than 20% of pension assets in their own company. The Enron case, where some lost their entire retirement savings is an extreme example. *(Helman, Greenwald&Associates, and Paladino, 2004).*
- In Sweden, only 14% of new entrants to the new system elected privately administered pension plans; 86% invested in the publicly administered default fund. Few could remember in which of the 625 available funds they had invested. *(Sunden 2003).*
- In Argentina, in 1999, 75% of the new participants did not choose a fund manager and were randomly assigned *(SAFJP, 2000).*
- In the U.K., many workers have been persuaded to move from occupational pensions to personal pensions that offered inferior benefits in what came to be known as the 'mis-selling' scandal *(Whitehouse 2000).*

2.3 Who are the providers of financial education, what instruments do they have and what outcomes have been achieved?

The increasing importance of financial literacy and the actual or perceived low level in large parts of the population has raised the demand to introduce or strengthen financial education – the general and the retirement specific one. Financial education can be defined as ”the process by which financial consumers/investors improve their understanding of financial products, concepts, and risks and, through information, instruction and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being" (OECD 2005).

Financial education, as other education, is conjectured to create main externalities beside individual benefits. Such externalities typically call for a role of the government through provision, regulation and supervision, or subsidies of supply. In the specific case of pensions there is also a well defined interest group on the supply side to help organize the relevant education and its financing. Similarly, on the demand side there is interest by employee's representatives/trade unions but also employers to provide such education. Hence, a first dimension to look at is the different providers of financial education, and the issues and lessons involved. A second dimension concerns the communication instruments applied. And last but not least, a third dimension refers to the assessment of the effectiveness of the financial education both at output and outcome level.

The **main providers of financial education** are (i) schools, (ii) workplace, (iii) governments, (iv) financial institutions, and (v) others, such as NGOs, foundations, etc.

Schools are considered as an important starting point of general financial education which is a life-long learning process. Knowledge about personal finance is considered as a key life-skill and schools are considered as an excellent delivery mechanism to do so. Key issues seem to be the following (and for brevity in bullet form):

- Should it be a discrete and unique subject, or an essential life skill taught in a variety of subjects and context? At what level should one start? The debate and hence standards are still in an early stage. (visit Jumpstart.org)
- Research seems to indicate the not surprising result that financial literacy will only be successfully taken-up if it is accompanied by structured professional program for teachers.
- So far only very few countries have fully integrated financial education into the school curriculum. Indeed, few schools currently require students to complete a course that covers personal finance before graduating from high school.

The workplace can reach most adults and hence is potentially a powerful place to get information to employees about their retirement income, and what they can and should do about it. There are employee's representatives which may have an interest in making their members better equipped in financial knowledge, and also employers may have an interest, at least as far as own retirement income provisions are concerned. As a result many large employers and/or trade unions provide such information through seminars or leaflets, but it is unclear how efficient they are. Also, talking about retirement income only a few years before scheduled retirement may be too late.

Financial institutions may be considered as natural providers of general as well as retirement-specific financial education – they should have the knowledge and they definitely have an interest. However, the key issues seem to be the conflict of interest between providing of objective information about awareness and products, and the selling of their own products to their clients. As a result, some surveys seem to indicate that consumers mistrust the information and advice provided by these institutions.

Indeed studies have shown that there is a low public confidence in financial institutions, perhaps also due to funded reasons of reckless and lawless activities, such as fraud, insider abuse, self-dealing and excessive risk-taking by some of such institutions. People must be under the impression that information is only written in the interest of the financial institutions. Public trust in financial institutions seems to have been eroded during the last years.

Companies and institutions everywhere are aware of the need to improve the ways in which they are managed and in how they communicate, inform or educate their clients, shareholders, or other stakeholders. But the importance of public trust is particularly acute for financial institutions[8]. (PricewaterHouseCoopers, 2002).

Governments can and do provide information about financial products and issues, and this is typically done around the reform of the pension system and the introduction of a funded pillar. Recent examples include Germany (Rister reform), Sweden (NDC cum funded pillar reform), and the reforms in Central and Eastern Europe, discussed in Section 4. While such information campaigns undoubtedly confronts individuals with financial market issues, it is unclear to what extend the specific reform-support objective of such campaigns equips individuals to make independent and well informed choices.

As regards the **communication instruments of financial education**, one can also distinguish between 5 different groups: (i) Presentations, lectures, conferences, symposia, training courses and seminars; (ii) The most frequently used so far in most countries has been the provision of financial education through publications. These publications take a variety of forms including books, brochures, magazines, booklets, guidance papers, newsletters, annual reports, direct mail documents, letters and disclosure documents; (iii) TV spots, and other types of channel, such as CD ROMs and videos; (iv) Another often increasingly used method is the Internet, in the form of websites, web portals, and other online services; (v) Other methods used include advisory services from institutions, including telephone help lines.

[8] An e-briefing, written by the Economist Intelligent Unit in co-operation with PricewaterhouseCoopers, examines how the financial world is reacting to the crisis in public confidence. Senior representatives of 43 financial institutions around the world were surveyed electronically to find out what steps they are taking to restore investor confidence in their own disclosure and governance practices.

We are no aware of any systematically assessment of these instruments with regard to their effectiveness and efficiency, and distinctions between general and retirement-specific education. However, the available evidence suggests some issues and lessons:

- Some surveys of employers found that workers who participated in retirement planning seminars had higher participation rates and that the largest gains were among non highly-compensated employees. According to a few studies (Clark et. al 2003), financial education seminars have an effect on individuals' retirement goals and savings behavior. However, these studies have several limitations. The surveys look at the responses of those who chose to attend the seminar and, hence, may have a selection bias. The sample is not representative of the "average worker". More important, in these studies, there was no follow-up to see if respondents actually carried out the actions they said they intended to do.
- The evidence on the effectiveness of brochures and other written material is more mixed. It has been hardly possible to detect some effects of written materials, such as newsletters and summary plan descriptions, regardless of frequency. Bayer, et al., finds that written materials, such as newsletters and summary plan descriptions, have no effect on participation and contribution rates. However, Clark and Schieber (1998), using employment records gathered by Watson Wyatt Worldwide from 19 firms covering 40,000 employees, find that certain types of written material do have an effect.(OECD, 2005).
- TV spots and related mass-oriented instruments seem to work well for reform campaigns but seemingly need support through other media, such as news paper articles.
- Internet and similar devises are smilingly useful for those already interested and knowledgeable in topic but may not reach out to those who need it most.

Against this background, **how successful has financial education been?** The answer to this question has an output and an outcome dimension: Did financial education increase the financial literacy of individuals? And, even if so, did it change their behavior?

A first thing to mention is that financial education efforts have been uneven across countries. They seem to be more advanced in Anglo-Saxon countries (such as Australia, Canada, New Zealand, USA and UK), or in countries that have recently reformed their pension system (such as in Latin America and Central and Eastern Europe).

As regards the output question of improvement in financial literacy, we actually do not know. There have been few evaluations of financial education programs to determine what has worked well and what has not. This is in part due to the fact that program evaluation is expensive and government budgets are limited. Equally important, however, is the difficulty of devising feasible measures to assess whether the main goals of financial education programs -- increasing consumer awareness and changing individual financial behavior – have been fulfilled. The very subjective assessment suggests that the impact, on average, has been very modest.

As regards the outcome questions – has it changed the behavior of individual and brought benefits for individuals and society at large? - the answer is quite likely conditional on effective financial education received and on the outcome expected. The potential benefits for retirement income purposes include more awareness of retirement income needs and hence an increase in individual saving efforts, more successful saving programs because of informed consumers, and reduced costs for employers and governments (OECD, 2005, PriceWaterhouseCoopers, 2002) [9]. The few available studies suggest that, indeed, good financial (retirement) education can create tangible outcome. These are a few examples that contribute to the evidence that education may be a powerful tool for stimulating personal savings:

- According to Clark, et al. (2003), the provision of financial information has an important effect on saving for retirement. Such study looked at responses to questionnaires distributed at 60 TIAA-CREF financial education seminars held at educational institutions and non-profit organizations between March 2001 and May 2002. In analyzing the results, the authors found that 34 per cent of the participants changed either their retirement income goal or their retirement age goal in response to the seminar. Ninety-one per cent of respondents reported that they anticipated making changes to their retirement savings plans.
- Using employer survey data, Bernheim et al. (1996b) suggests that education in the workplace can exert a strong influence on personal financial decisions. The authors examined the effects of employer-based retirement education on 401(k) activity using firm-level data. The results indicate that retirement seminars are generally associated with significantly higher rates of participation and contributions, at least when the frequency of these offerings is high.
- Bernheim et al. (1997) is perhaps the only or one of the few studies that provides the first systematic evidence on the long-term behavioral effects of high school financial curriculum mandates. The authors find that such mandates significantly increase exposure to financial education, and ultimately elevate the rates at which individuals save and accumulate wealth during their adult lives.

[9] Financially educated consumers are in a better position to protect themselves on their own and to report possible misconducts by financial intermediaries to the authorities. Thus, they would facilitate supervisory activity and might in principle allow for lower levels of regulatory intervention. As a result, there would be reduced regulatory burden on firms.

- Findings by Saliterman (CIGNA, 2003) indicate that participants to seminars or other type of trainings do plan well when: (i) information is targeted to their specific problems; (ii) information has an integrated focus; (iii) activities engage them in a process of thinking through how information relates to their individual retirement situation. Such researchers argue that, despite the belief that measures of intelligence decline with age, when intelligence and learning is considered in terms of practical, everyday events, the pattern reverses.

3. Financial Education or Framing the Question: Lessons from Behavioral Finance

The experience of OECD countries with financial literacy and education which was summarized in Section 2 is quite sobering and taken at face value may encourage a very drastic rethinking of funded retirement provisions in its current form. The experience suggests that the level of financial literacy is generally modest at general level, and, perhaps, even more modest with regard to retirement saving. Furthermore, financial literacy seems to be quite unequal distributed among the population, with a clear positive correlation with income and education level, and somewhat with age. Financial education seems to matter, also for retirement saving, if it is appropriately done, albeit we are not aware of any study which has relied on experimental design. Hence a severe selection bias which leads to the positive results cannot be excluded. But altogether we have quite limited guidance form current studies about how to do financial education well, with what providers and what instruments.

Does this mean we need to make financial education more effective and also push more aggressively for more comprehensive implementation to achieve higher literacy? If this fails do we need to reconsider the pension reform approach which includes funded pillars with defined contribution plans and individual choice? Or while financial literacy is useful or even important for retirement savings and beyond, is it less crucial than one may think because there are many more other constraints which render the simple view of funded DC plans and choice less optimal, at least in their current form?

There is a growing literature titled “behavioral finance” which makes the credible claim that financial decisions, in particular with regard to retirement, need to take account of the many constraints under which individuals make these decisions, and inadequate knowledge is only one. There are many others which include psychological and behavioral factors. In the context of the conventional (life-cycle optimization) theory, these behavioral effects are puzzling as these features should have no effect on the financial fundamentals and hence should be irrelevant (Venti, 2004). Yet, their importance in actual savings decisions suggest that policies designed with psychological and behavioral factors in mind may help individuals in their retirement saving decisions. This section provides in a first subsection a very brief summary of the often very recent literature. The second subsection then discusses one main instrument to potentially improve savings outcomes – the default option. While it has already been used in a number of countries both in mandated and voluntary systems we think that a policy discussion about this instrument is only starting. The last sub-section illustrates the use of the default option at national level with the example of New Zealand which is scheduled to introduce the Kiwi savings plan next year.

3.1 Why system design matters for retirement savings

Conventional economic theory predicts that consumers should be forward looking and smooth consumption over their lifetimes. In this framework saving is purely a function of the economic and financial fundamentals of the planning problem. The theory is silent about the difficulties agents may face planning for the future or executing their savings plans. Adding real-life constraints such as uncertainty, many other risks, and incomplete risk markets will alter some of the predictions but does not shake the basic design of retirement saving plans. However, this changes when taking account of psychological and behavioral factors at the two stages of saving decisions: Planning and implementation. This sub-section first presents very briefly the potential causes of inadequate planning and execution, and the possible reasons by individuals to behave differently, before highlighting some of the potential consequences for the design of pension plans.

There are many reasons **why individuals fail to plan saving adequately and/or make problematic investment decisions,** and there is ample empirical evidence that many individuals left on their own do not save enough.

The reasons for inadequate saving planning go beyond lacking economic knowledge and financial literacy in order to do the planning properly and include (i) uncertainty about many elements of an optimal saving plan such as future earnings, rates of return and health status; (ii) the prevalence of many other and more short-term risks such as unemployment and sickness, or in lower income countries the various risks from nature (flooding or draught) or politics (inflation or financial collapse); (iii) the lack of information needed to do life-cycle planning such as future benefits provided by nondiscretionary saving resources such as public pensions and corporate pensions, and perhaps most importantly from a behavioral perspective (iv) too many choices and hence “choice overload” with regard to savings products, risk-return trade-off, diversification possibilities, providers, etc.

Conventional economic theory suggests that, in the absence of decision making costs, expanding the choice set cannot make a consumer worse off. It is clear that this does not hold anymore as the number of investment option increases and the administrative and other transaction costs increase. More importantly, however, behavioral finance suggests that choice overload leads to sub-optimal investment decisions and more bad (or no) decisions as the choice set increases (Benartzi and Thaler, 2001).

The impact of excessive choice or choice overload is documented in the often-cited experiment documented by Iyengar and Lepper (2000). In this experiment two different booths are set-up in a grocery store with one selling six different flavors of jam and the other 24 different flavors. While 60 percent stopped at the both with 24 jam flavors, only 3 percent purchased at the high-choice booth. In contrast, at the 6 jam flavor booth only 40 percent stopped, but 30 percent bought at the low-choice booth. There is evidence to the finding that consumer prefer less choice for actual consumer decisions translates also to retirement savings decisions. A study by Iyengar, Jiang and Huberman (2003) found that participation rates in U.S. 4001 (j) pension plans decline as the number of fund open increases.

However, even if **individuals** have an intention to save more as they recognize that their current saving effort is not sufficient, they often **fail to execute their savings plan accordingly.** A number of explanations have been put forward by psychologists and economists. Psychologists have long advanced that many people lack discipline, willpower, or self-control to implement saving plan (much the same as the inability to follow through on plans to diet, exercise, or quit smoking). The experimental evidence also established that for some people near-discount rate is much higher than longer-term discount rate, that is, people do not discount exponentially. This finding links it with predictions of the conventional economic model as many predictions of the standard life-cycle model fail to hold if the discount rate is not constant over time. Strotz (1956) was the first to show that if discounting is not exponential, the consumers will exhibit time-inconsistent preferences.

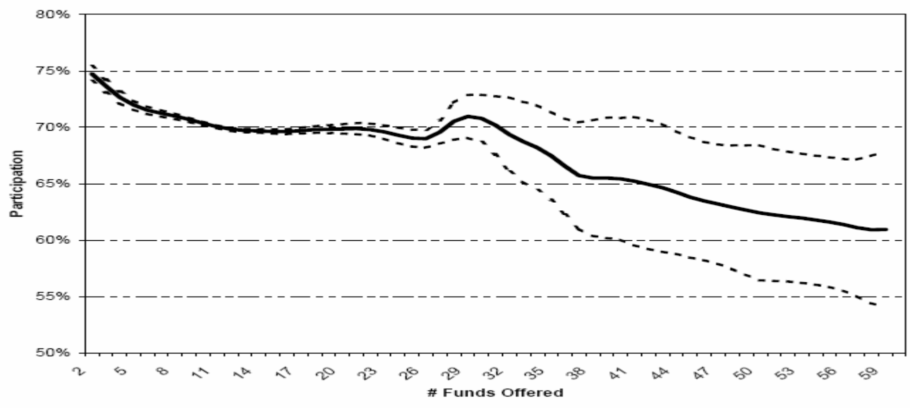


Figure 2. The Relationship between Participation and the Number of Funds Offered[10]

Time-inconsistent preferences have two main implications for savings behavior: First, the lead to a divergence between plan and actions as individuals may formulate the same saving plan as conventional life-time planers but engage in short-term behavior that

[10] The graph plots the relation between the plan participation rate. Explanatory variables except the number of funds offered are set at their respective mean values and the number of funds offered using a two-stage parametric estimation method. The dotted lines represent the 95% confidence intervals. (Iyengar, Jiang, and Huberman, 2003.

violates the plan: This is the self-control problem. Second, time-inconsistent preferences may lead also to procrastination or inertia in saving choices. Experimental evidence suggests that individuals tend to defer action if there are immediate costs even if long-term gains are substantial. Translated into savings decision and execution, the information and decision costs can be high and hence individuals may not always make the best long-term decisions if the short term costs appear high. This leads also to inertia to savings decisions once they are made.

What are the reported **consequences** of these economic and psychological obstacles **to savings planning and savings behavior?** Three main avenues are suggested.

(i) Individuals choose not to choose. For some households, in particular at the low end of the income distribution non-planning may, indeed, be a rational decision but may also result as reaction to a too-high (short-term) information costs or the complexity of choices. The decrease in participation in employers sponsored pensions as the number of funds offered increase, mentioned above, is a prime example. The result is likely to lead to too low income in old age.

(ii) Individuals take a mental short-cut to reduce costs and complexity but may end-up with another suboptimal investment decision. Two mental short-cuts seem to be very popular: Use rule of thump or take the familiar safe option.

An example of such simple rule of thump is the 1/n rule as individuals tend to allocate equal amounts across the portfolio choices regardless of the asset type that dominates the plan (see the empirical evidence by Benartzi and Thaler 2001, Liang and Weisbrenner 2002, Elton, Gruber and Blake 2004).

An example of the "safe option" may be the choice of the shares of the employing company (where it is allowed, such as the US) as individuals are familiar with this firm. More important, perhaps, is the choice of the "default option", i.e. the options offered if no decision was made (discussed in more detail below).

(iii) Some individuals may attempt to overcome the problem of self-control by commitments mechanisms that restrict future actions. This includes the choice of saving products with high transaction costs to undo the contract.

Taken at face value, the results of the very recent behavioral finance which, so far, was mostly undertaken in the US suggest a number of **policy conclusions how to design (mandated and voluntary) pension plans** to overcome the impediments for improved savings outcomes for individuals. At the core there seems to be a challenge that individuals want more choices and self-determination but they appear not to be able to cope with it when they get it. Here are first broad considerations for discussion,

First, full freedom of choice in saving decision and portfolio choice seems to be a useful proposal for only a small number of individuals and actual only a small number of individuals make use of the choice once they have it. This suggests giving room for such choice through opting-out options at the higher income end, also as they are more likely to make informed choices.

Second, for the large population in the middle income spectrum it seems to be important to improve information and communication, but also financial literacy as a basis for informed choice. Thereby improved information seemingly does not mean more information but, perhaps, more customize and context-specific information. Furthermore, to facilitate the informed choice it seems important to reduce choice set to a limited number of comparable products. Say, in an US 401 (k) environment to limit the choice to a small number of funds, say, to not more five.

Last, but not least, for all income groups, but in particular individuals at the low-income strata it seems important to give more thought to the design of default options. As the use of default options increases it is important to better understand the longer-term implications, including the role of government.

3.2 What is the role and what are the limits of default options?

Default options can be considered as a mere residual instrument if individuals decide to make no a decision. However, given the documented inertia in individual savings decision they are a powerful instrument to steer outcomes. This renders their design features and the role of government in their regulation an important public policy issues – seemingly a highly neglected area in all countries. The most important feature concerns the questions if individuals need to opt-out or to opt-in into a plan. This subsection very briefly addresses some of the emerging key issues: (i) Where are default options offered?

(ii) How important are default options for savings outcomes? (iii) What are key policy issues? And (iv) What is the role for government.

(i) Default options can be used at different levels of retirement savings decision, and in both publicly mandated and voluntary savings plans (i.e. second or third pillar in World Bank terminology, see Holzmann et al. 2005). Here are the most important examples.

At the level of saving decision and the introduction of a funded (mandated or voluntary) pillar: Is the default option for example staying into the old (and unfunded system, albeit, perhaps, reformed) or their automatic moving to the new funded system unless they explicitly decide against? Or are the individuals automatically enrolled in a newly introduced funded but voluntary system unless the explicitly opt-out such as in the planed KiwiSaver plan in New Zealand (see sub-section below)?

Default options in corporate pensions may happen at each of the key levels of investment decision: the participation in the program (yes or no), the level of the contribution rate (low or high), and the choice of the portfolio (conservative or growth-oriented), rules on investment in company stocks (allowed and level of limits), or whether portfolios are automatically rebalanced as participants age. While each of the elements can be separated into individual decisions they are often bundled together.

Some provident funds (such as in Singapore and Malaysia) allow the opting-out of individuals for their marginal saving above a minimum saving balance. Here the default option is that individuals stay in the central fund unless explicitly decided otherwise.

(ii) Empirical evidence suggests that default options are crucial for outcome at all levels. Automatic enrollment has a dramatic impact on retirement savings behavior. Using several years of administrative data from three large firms, Choi et al (2001a) analyzed the impact of automatic enrollment on 401(k) participation rates, saving behavior, and asset accumulation. They found that indeed, although employees can opt out of the 401(k) plan, few chose to do so. Under automatic enrollment, 401(k) participation rates exceed 85% in all three companies regardless of the tenure of the employee. Prior to automatic enrollment, 401(k) participation rates ranges from only 26-43% after six months of tenure at these three firms, and from 57%-69% after three years of tenure. The same study (Choi et al, 2001a) also found that automatic enrollment has a large impact on contribution rates and asset allocation choices. Under automatic enrollment, 65-87% of new plan participants save at the default contribution rate and vest exclusively in the default fund. This percentage declines slowly over time, falling to 40-54% after two years of tenure, and to about 45% after three years of tenure.

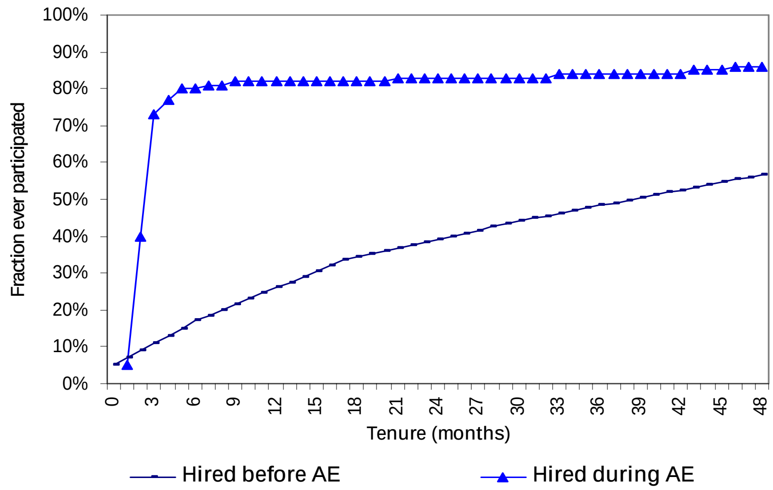
Another example of empirical evidence is the study by Madrian and Shea (2001). They analyze the 401(k) savings behavior of employees in a large U.S. corporation before and after an interesting change in the company 401(k) plan. Before the plan change, employees were required to affirmatively elect participation in the 401(k) plan. After the plan change, employees were automatically and immediately enrolled in the 401(k) plan unless they made a negative election to opt out of the plan. Although none of the economic features of the plan changed, this switch to automatic enrollment dramatically changed the savings behavior of employees. This study has two key findings. First, 401(k) participation is significantly higher under automatic enrollment. Second, the default contribution rate and investment allocation chosen by the company under automatic enrollment had a strong influence on the savings behavior of 401(k) participants. A substantial fraction of 401(k) participants hired under automatic enrollment exhibit what they call "default" behavior - sticking to both the default contribution rate and the default fund allocation even though very few employees hired before automatic enrollment picked this particular outcome. This "default" behavior appears to result both from participant inertia and from many employees taking the default as investment advice on the part of the company.

Overall, these results are consistent with the notion that large changes in savings behavior can be motivated simply by the "power of suggestion". These findings have important implications for the optimal design of 401(k) savings plans as well as for any type of Social Security reform that includes personal accounts over which individuals have some amount of control. They also shed light more generally on the importance of both economic and non-economic factors in the determination of individual savings behavior. (Madrian, Shea, 2001).

Other statistics on participation rates increases can be found in the *Automatic Enrollment 2001* study by PSCA (profit sharing and 401(k) advocate, 2001), a comprehensive investigation into the practice of automatic enrollment in 401(k) plans. This study explores automatic enrollment policies among 25 companies.

All respondents who provided participation data experienced an increase in plan participation after adding automatic enrollment. Among companies that provided both a current plan participation rate and a plan participation rate from one year ago, participation rose from an average of 75.7% to 81.3%. Similarly, among companies that provided both a current plan participation rate and a rate from three months prior to instituting automatic enrollment, participation rose from 68.1% to 77.1%.

Figure 3. 401(k) Participation Rates by Tenure and System Default



Choi et al. (2001b) investigate the effect of automatic enrollment on 401(k) participation in several companies. They found that indeed automatic enrollment dramatically increases participation. Figure 3 illustrates what happens when the automatic enrollment mechanism is implemented in the company, affecting the new hires. The participation rate of employees hired before automatic enrollment starts out low and increases steadily until it reaches around 50% at 36 months of tenure. In contrast, for employees hired under automatic enrollment, the participation rate starts out high (after the enrollment delay period), at about 85% and remains high, increasingly only slightly, up to about 88% after two years.

In summary, data for the US strongly suggests that the default option has main economic effects: (i) Automatic enrollment dramatically increases the participation in corporate (401(k)) pension schemes; (ii) Participants hired under automatic enrollment tend to stay at the automatic enrollment defaults; and (iii) Default options may create an important retirement savings effects (Vanguard Center for Retirement Research, 2001).

(iii) While default options can be a powerful instrument to support the saving objectives of individuals, they may have also undesirable effects which we only incompletely understand.

- The default options may lead to low savings outcomes even if individuals are automatically enrolled. If the default option is a low contribution rate and applies to a very conservative portfolio, this will lead to a very low financial balance at retirement. A result the individual may not expect as he or she relied on the default option as, perhaps expected, "best" choice.

- What is the contingent liability of employers and government with regard to the default option? If such a liability (if only politically and notionally) for low outcomes is created which may also result from high-risk choice, it will impact the choice by the employer, and requests closer involvement of government.
- How to handle (socially, economically and politically) the inequality of outcomes between individuals across different pension plans which have all selected the default options in their individual plans?
- Will well designed default options undo the move toward the informed consumer and saver as individuals will see little possibility or usefulness to outdo the choice made by the employer (and regulated and hence agreed by the government?).

(iv) The role of government in the regulation and supervision of default options has found little attestation so far. Is there a role, and for what reasons, and is government able and willing to do so?

- There is a strong economic and political rationale for government interference in design and implementation of default options in private pension plans through regulation and supervision. The outsourcing of part of retirement income provisions to the private sector via second or third pillar is based on the assumption that it will lead to an overall improvement in old age income support. The empirical findings suggest a strong (positive but also negative) impact of default options on retirement saving behavior. Hence government has to make sure that it policy objectives are achieved.
- But does the government have the appropriate information to regulate and supervise default options by the private sector? Quite likely not since this is an emerging area of empirical research which, furthermore, has been largely limited to the US, and perhaps Australia, Canada and the UK. And this knowledge may not be easily transferable to other countries as the saving behavior of individuals is determined by many more factors which differ between countries. What seems to be universal is the limited use of choice by individuals in their portfolio selection – they essentially select plain vanilla as favored flavor if they have the choice. The challenge for government regulation will be to offer freedom of investment choice that pension scheme members want "while providing a clear path to the sanctuary of a high-quality vanilla" (Vale, 2004).
- Yet regulating defaults can also be seen as a double-edged sword (Gallery, Gallery and Brown 2005). While laws on regulation and supervision can facilitate socially optimum defaults, they may also create avenues for the misuse of government power (Choi et al. 2002) or the perception of unnecessary government interference. Whatever they position on these issues, the discussion has been opened and needs to be led.

3.3 The New Zeeland National Default Savings Program: KiwiSaver[11]

The New Zealand government has proposed KiwiSaver, a new voluntary savings plan designed to help workers save for retirement and assist first-time home buyers. According to the Minister of Finance, legislation to establish KiwiSaver will probably be introduced later this year, with a program start date tentatively set for April 1, 2007. The government will sponsor a national campaign to promote KiwiSaver and to increase the public's financial literacy.

KiwiSaver accumulations are intended primarily for retirement, although the program will allow a one-time withdrawal toward the purchase of a first home. Employers will be required to offer employees the option to join the KiwiSaver program; convert their work-place savings plan to a KiwiSaver plan by meeting all criteria; or apply for an exemption for their existing company savings plan provided that it satisfies standards regarding minimum contribution rate, availability, portability, and vesting. Employers will be permitted to contribute to employees' KiwiSaver accounts.

New employees will automatically be enrolled in KiwiSaver at a contribution rate of 4 percent of gross salary but will be allowed to opt out. Once enrolled, participants may increase their contribution rate to 8 percent. Although current workers or the self-employed will not be automatically enrolled, they will be permitted to open a KiwiSaver account by selecting a registered provider.

KiwiSaver plans will be administered by the government through Inland Revenue and available through approved fund providers. The KiwiSaver products will be regulated by the Ministry of Economic Development but will not have a government guarantee.

The government will make an initial contribution of NZ$1,000 (US$686) into each KiwiSaver account and will subsidize management fees for approved KiwiSaver products.

Through KiwiSaver, first-time home buyers with at least 3 years of program participation will be eligible for a deposit subsidy of NZ$1,000 (US$686) per year up to a maximum of NZ$5,000 (US$3,427) per individual or NZ$10,000 (US$6,853) per couple. Workers

[11] McCulloch and Frances (2003); Social Security Administration US (2005) New Zealand Treasury (2005); ASFONZ (2005).

covered by a non-KiwiSaver employer savings plan will also be eligible for this first-time home buyer's subsidy but not for the NZ$1,000 up-front government contribution or fee subsidy.[12]

Participation in New Zealand's work-based savings plans declined from 22.6 percent in 1990 to 14.1 percent in 2003, and the government expects that the combination of KiwiSaver and a savings program established in 2004 for public-sector workers will reverse that trend. Over time, the government expects the KiwiSaver program to bolster its citizens' retirement security by encouraging personal savings to complement the government-sponsored social security system, called the New Zealand Superannuation.

The state pension is financed by general revenues and currently costs less than 4 percent of gross domestic product (GDP) annually. It provides a universal flat-rate monthly benefit—approximately one-third of the average net wage—to all people over age 65 who satisfy the residency requirements, that is, have at least 10 years' residency after age 20, including 5 years' residency after age 50.

By 2051, the percentage of New Zealand's population older than 65 will more than double, from 12 percent in 2001 to 26 percent. At the same time, the working-age population will fall from 65 percent to 58 percent.

To address the anticipated growth in pension outlays, the government established the New Zealand Superannuation Fund in 2002 to help prefund future pension expenditures, which are projected to reach nearly 9 percent by 2065. The fund is financed by putting aside budget surpluses of about 1.8 percent of GDP each year until 2010. From then until 2025, smaller deposits will be set aside, and beginning in 2026 the fund will be drawn down to help finance state pension costs. Fund assets are increasing at an annual rate of nearly NZ$3 billion (US$2 billion), and later this year they will total about NZ$6.3 billion (US$4.2 billion), or 4.2 percent of GDP. They are projected to exceed 10.6 percent of GDP by 2009.

[12] Over the first 4 years of operation, KiwiSaver costs are estimated to be NZ$384 million (US$263 million) for the up-front NZ$1,000 payment to be given to each participant and for the ongoing management fee subsidy and NZ$109 million (US$75 million) for operational costs, including the financial literacy program. There will also be start-up costs of NZ$25.7 million (US$17.6 million) for Inland Revenue to implement the program plus additional capital expenditures of NZ$12.8 million (US$8.8 million) in 2005–2006 and NZ$14.8 million (US$10.1 million) in 2006–2007.

4. Pension Reform, Financial Literacy, and the Use of Default Options in Transition Economies of Europe and Central Asia

Some 14 countries in Central and Eastern Europe and Central Asia have reformed the prior single pillar pension system toward a multi-pillar structure. The latter includes a mandated and funded second pillar and voluntary and funded third pillar. Beside the countries in Latin America and the Caribbean, this region has decisively put a systemic reform of their pension systems on the reform agenda. But was it successful and do this end has it been accompanied by the appropriate education in financial literacy? How much has it relied on default options to move and support the reform?

This section sketches in a first part the main characteristics of the reforms which have been legislated, and in 10 of the 14 countries also implemented. A second part reviews the financial education the citizens of these countries have received as part of the retirement system change. A final third part presents the results of a small survey among policy makers and regulators about their view on financial literacy, education and default options.

4.1 Main characteristics of pension reforms in countries moving to a multipillar system

The pension reforms in the transition economies in Europe and Central Asia (ECA) have been inspired by the reforms in Latin America but both design and implementation of these reforms exhibit in essentially all cases marked differences. The motivation for the reform was in all cases the need to adjust pension system to the new realities of a market-based economy and to cope with the high level of retirees while participation in the formal economy and hence contribution payment and coverage was crumbling. Simple parametric reforms of the inherited systems were in most cases not sufficient to deal with the diverse reform needs and were, perhaps more importantly, also politically not palatable. The reform needs went beyond mere fiscal sustainability and included the introduction of enhanced incentives in benefit formula and changes in administrative operations. Furthermore, the move toward a multi-pillar system with funded (mandated and voluntary pillars) promised also positive externalities through an accelerated financial market development. In view of the large inherited implicit pension debt, large even after the partial default which occurred during the initial output collapse, but also given the only emerging financial markets in these countries, most transition economies kept a reformed and downsized public and unfunded (first) pillar and added a second and funded pillar. All countries undertook efforts to introduce a regulated third pillar to handle voluntary individual savings.

Table 1 highlights the main characteristics of the 14 countries which have legislated a multipillar reform so far.[13] The main features of the reform are the following:

First, only two countries follow-up a Chilean type reform, or actually going beyond – Kazakhstan and Kosovo. In both countries the prior system was immediately closed and every worker was moved to the fully funded system (which did not exist in Kosovo). Hence, workers did not have an option to stay in the old system. The contribution rate is 10 percent in both cases (including fees) but the investment decisions is different. In Kazakhstan progress has been made with establishment of a local pension fund industry with choice for participants (see Hinz et al. 2005). In Kosovo the contributions are invested internationally and coverage is for the time being only for civil servants.

All other 12 countries kept an unfunded and earnings-related first pillar which was reformed and downsized to make room for an earnings-related funded, second pillar invariably of Defined-Contribution design. The reform approach for the first pillar and the scope of downsizing differed substantially between the countries. In some countries the reform was largely parametric (such as in Hungary), some countries move to a new pension formula e.g. inspired by the French or German point system (Rumania and Croatia, repectively). Three countries moved towards new design approach – the Notional or Non-Financial Defined Contribution (NDC) System which is fully implemented in Latvia and Poland. As a result of the different reform approaches to the unfunded first pillar, the scope of the newly introduced funded second pillar differs importantly between the countries. Slovakia just introduced on January 1, 2005 a main second pillar claiming a contribution rate of 9 percent which is mandatory for new entrants only. This contrasts with Bulgaria which started with a second pillar on January 2006, requesting a contribution rate of 2 percent (to be increased to 6 percent) and being

[13] For reviews and assessments of the reforms see, for example, Schmaehl and Horstmann (2002), OECD (2004a), von Gersdorff and Rutkowski (2004) and Chapter 7 in Holzmann et al. (2005) which draws on these and other publications quoted there.

mandatory for everybody younger then 42 years of age. In Lithuania, the participation in the funded pillar remains voluntary for the time being.

While the pension reforms in the transition economies have been inspired by the developments in Latin America, the eligible providers of retirement savings products, and their regulations differs in most instances between the regions and among the countries. While pension funds are, in general, the saving vehicle for the new retirement saving, their design, regulation and supervision differ between the countries, including the profitability of choice. While Poland follows more or less the Latin American pension fund design, the Hungarian design is innovative but highly obscure (Gál, et al, 2001, Fultz, 2002; Kritzer, B. 2002; Lasagabaster et al, 2003; Lindeman et al, 2002; Holzmann et al, 2003; Mueller, 2003, Anusic et. al, 2003, OECD 2004a, 2004b). These differences in structure of providers and their retirement savings products between the countries create a special challenge to assess the functional financial literacy, and to compare it.

Table 1. Main Characteristics of Pension Reforms Moving to a Multipillar System in Transition Economies in Europe and Central Asia, as of January 1, 2005

Country and status of system	Starting date	First pillar	Size of second pillar as a percent of payroll	Projected pension fund assets in 2020 as a percent of GDP	Share of workforce in funded pillar in 2003	Switching strategy to new system
Bulgaria, operating	January 2002	Pay-as-you-go defined benefit	2, growing to 5	—	—	Mandatory for < 42
Croatia, operating	January 2002	Pay-as-you-go defined benefit	5	25–30	60–70	Mandatory for < 40; voluntary for 40–50
Estonia, operating	July 2002	Pay-as-you-go defined benefit	6	20	60	Voluntary (opt-out + 2 percent)
Hungary, operating	January 1998	Pay-as-you-go defined benefit	6	31	45	Mandatory for new entrants; voluntary for others
Kazakhstan, operating	January 1998	Guaranteed minimum	10	30	100	Mandatory
Kosovo, partially legislated and Operating	January 2002	Minimum	10	—	—	Mandatory
Latvia, operating	July 2001 (notional defined contribution, January 1996)	Notional defined contribution	2, growing to 9	20	72	Mandatory for < 30; voluntary for 30–50
Lithuania, operating	January 2004	Pay-as-you-go defined benefit	2.5	—	—	Voluntary
Macedonia, legislated	—	Pay-as-you-go defined benefit	7	26	—	Mandatory for new entrants
Poland, operating	January 1999	Notional defined contribution	7.2	33	70	Mandatory for < 30; voluntary for 30–50
Romania, partially legislated then questioned	January 2003	Pay-as-you-go defined benefit	8	30	—	Mandatory for > 20 years from retirement
Russia, partially legislated and operating	January 2002	Notional defined contribution	2 (< 35) to 6 (36–50)	—	—	Mandatory for < 50
Slovakia, operating	January 2005	Pay-as-you-go defined benefit	9	20	—	Mandatory for new entrants
Ukraine, partially legislated	January 2003	Pay-as-you-go defined benefit	2, growing to 7	—	—	Mandatory for new entrants

Source: Holzman et al. (2005), with updates from World Bank Pension Data Bank.

Table 2: "Default Options" in the Pension Systems of the ECA Region (incomplete))

Country	Default option for participation in the program(a)	Percentage of workers switching to the new system	Defaults on contribution rates	Number of pension funds (beginning systems- currently)	Choices, or Defaults on funds and/ or portfolio investments
Bulgaria	42+ to old system	n.a.	No	9-8	Individuals who have not chosen an occupational pension fund within 3 months, are assigned one of the registered occupational funds
Croatia	Ages 40–50 to old system	34	No	7-n.a.	Individuals who have not chosen a pension fund within 3 months, are assigned one of compulsory funds by Central Registry
Estonia	18+ to old system	48	No	15-n.a.	Individuals can chose among three different risk levels type of funds
Hungary	Current workers to reformed old system	46	No	38-21-n.a.	Workers who do not choose a fund are automatically placed in one located near where they live
Kazakhstan	None	n.a.	No	16-14	State-run pension fund for those who do not chose private-sector fund
Kosovo	None	n.a.	No	1 joint fund	All managed by an independent governing body
Latvia	Ages 30–50 to old system	51	No	5-4	Treasury manages the funds for those who have not chosen a company
Lithuania	None	34	No	9	Each company is allowed to offer three type of funds
Macedonia	Current workers to old system	n.a.	No	2	Individuals who have not chosen a pension fund within 3 months, contributions will be held in a "special account" of Pension Fund
Poland	Ages 30–50 to old system	55	No	23-15	Each company is allowed to offer 2 funds starting in 2005. An individual may chose only one fund.
Romania	Those with less than 20 years for retirement, to old system	-	No	-	-
Russia	50+ to old system	n.a.	No	1 joint fund	
Slovakia	Current workers to old system	46	No	8	Each company has to offer three type of funds
Ukraine	Current workers to old system	n.a.	No	9	n.a.

Notes: (a) The pay-as-you-go is the de facto default option. If the individual does not opt for the funded individual account, by default stays in the old system

Most reforms in the region have adopted some version of a "centralized" administrative mode for the second pillar (except for Hungary, where employers must sort out contributions by workers' choices and send them to the chosen pension fund administrators).

Bulgaria.- A pension insurance company may establish only one universal pension fund and one occupation pension fund

Croatia.- A pension fund may only establish and manage one fund. The insured person who does not chose, should be allocated in the funds in such way that a proportional number of persons, depending on number of fund members, is allocated in each fund.

Estonia. – As of mid-May 2002, the Estonian Financial Inspectorate Board had licensed 15 pension fund management companies to begin operation. Each company is allowed to offer three types of funds, with varying degrees of investment risks: one fund that invests up to 50 percent of assets in stocks; another that invests up to 25 percent in stocks; and one that invests only in bonds. Statistics concerning the first 3,500 workers who enrolled in a fund include:

@ about two-thirds chose the fund with the highest risk/ about 16 percent chose the fund with the medium risk/ about 16 percent chose the fund with the lowest risk

@ (about 30 percent of the investors were born between 1963 and 1973, and 80 percent of them chose the fund with the highest risk , according to *"Baltic Business Daily,* May 2002)

Hungary .- After 6 months in one fund, a worker may switch to another; the old fund has the right to charge up to 0.2 percent of the total amount being transferred.

Latvia. –The state Treasury managed the private pension funds until January 1, 2003, and invested them in state securities and bank deposits. Currently individuals can choose a pension fund management company supervised by the Finance and Capital Market Commission. The treasury manages only the funds of workers who have not chosen a company for themselves.

Lithuania - Once an individual opts for a funded account, they cannot go back to a pure pay-as-you-go option. People started "opting out" into funded accounts in 2004 at a contribution rate of 2.5 percent, rising by one percent a year to an eventual amount of 5.5 percent in 2007 and thereafter.

Macedonia.- Individuals that have not opted for a pension fund, will be held in "special accounts" in the pension fund, until the moment that voluntarily the individual chose a fund. From the moment of entering the mandatory pension and disability insurance the Agency temporarily allocates these contributors to a pension fund. In order to do this, the Agency takes into account the number of contributors to be proportional with the total value of the assets of each separate pension fund. The contributor may only be a member of one pension fund at a time and can only have one account in that fund.

Poland.- The pension system requires people to make two kinds of choices: a choice to participate in the funded component of the new system (ages 30-50); and a choice of a specific pension fund. Until 2005, each pension society could manage one pension fund that has conservative investments. Beginning in 2005, each pension society is allowed to set up a second pension fund with other, riskier investments. An individual may chose only one fund.

Financial education in transition economies in Europe and Central Asia

The transition economies have, for obvious reasons a very low starting base on financial literacy. Until the early 1990s in essentially all of these countries the financial instruments were restricted to the saving booklet which provided the basic and only (financial) savings form beside foreign currency, checking accounts for somewhat broader parts of the population were used in a few countries only, and consumer credits including credit cards were unheard off or accessible to a small part of the population only. Interest rates were low and fixed, as well as official inflation until the beginning of reforms (except Poland). Against this background the understanding about basic financial issues was extremely limited, and non-public pensions did not exist.

The economic reform programs in these countries included major banking reforms with privatization of state banks and the creation of many small private banks of which many have disappeared by now. The opening of the banking sector to foreign direct investment has contributed to quick modernization and introduction of all the instruments on saving and lending side. The security market capitalizations is still small but is benefited from the privatization of state enterprises, less from the entry of start-up firms which often prefer to list in neighboring (Western) countries. A major contributor to the retirement savings effort has been the pension reform since the second half of the 1990s in many of these countries.

The governments became early aware that a successful market economy and introduction of a funded pillar requires major enhancement in financial literacy of the broad population. As a result all of these countries have initiated programs of financial education – for general purpose and a support of pension reform efforts. The available information on the financial education efforts for 8 transition economies is summarized in Table 2. It signals a lot of communality with regard to the key plays – government and financial market institutions -, the instruments applied, the use of websites and the assessment by the population. But the available information does not allow drawing conclusions about the effectiveness with a countries and the comparison across countries. Such surveys are still outstanding. The next sub-section reports about a first attempt in this direction.

Table 3: Financial Education in Transition Economies in Europe and Central Asia

	Key Players	Main Type of Instruments	Website or other Information	Comments
Bulgaria	Financial Supervision Commission Ministry of Education and Science	Seminars and conferences Target groups with access to general public, e.g. journalists and teachers New educational program for students "Non-banking financial sector in Bulgaria"	http://www.fsc.bg/e_start.asp	The educational programs prove to be useful and successful, however people are still very passive on financial decisions
Czech Republic	Czech Securities Commission (State organ) Professional Associations such as Association for Capital Markets (AKAT) and The Union of Investment Companies (UNIS CR)	"Investor's Mentor" project, including help desk, green line, regular seminars, publications, web-site, and TV series Fit for Investment, a program targeting private investors and initiated in 2002	http://www.sec.cz/export/ OECD (2005)	No surveys on financial literacy have been conducted Individuals are not able to distinguish financial instruments, or assess the investment risk
Hungary	Hungarian Financial Supervisory Authority (HFSA) Budapest Stock Exchange	Help line, video and compendium, web-site, leaflets, public consultations for professionals, TV programs in different financial topics of public interest Lectures, small projects targeting students at high-schools, secondary schools, and universities, in form of presentations Junior achievement program (for children in the primary and secondary school)	http://www.elogondoskodas.hu http://www.penzportal.hu http://www.ongondoskodas.hu OECD (2005)	Pension fund members do not understand structure and operation of the system as a whole, and especially do not have appropriate information about the risks incorporated in pension funds Majority of the pension fund members do not understand how capital markets work, and suffer from a short-term approach Majority of the pension fund members do not understand how capital markets work, and suffer from a short-term approach

Lithuania	Government, Ministry of Social Security and Labor The Securities Commission Insurance Supervisory Commission	Seminars Website including the explanation of the new pension system, most frequent questions, pension calculator, comments and suggestions, discussions, and seminars announcements	http://www.pensijusistema.lt/ http://www.lsc.lt/en/	According to the Social Report 2003 of the Ministry of SS and Labor, more than 30% of the inquiries received were about pensions and social insurance matters (against other labor issues)
Macedonia	Agency of Supervision of Fully Funded Pension Insurance	Website with laws and regulations, detailed explanation of the pension reform, pension calculator, and FAQ (frequent asked questions)	http://www.mapas.gov.mk/./en	Many frequent questions are about basic financial knowledge
Poland	Insurance and Pension Funds Supervisory Commission (KNUiFE) Public institutions, businesses, non-governmental and educational organizations	Since academic year 2002/2003 mandated high school curriculum on "basics of entrepreneurship", incl. banking, service, and capital markets. The Insurance Ombudsman publishes "Insurance Magazine", incl. many up-to-date insurance articles The Economic Education Program of the National Bank of Poland (NBP), in co-operation with civic organizations and media, with programs on savings, banking, capital market.	http://www.money.pl, http://www.elfin.pl, http://www.expander.pl, http://www.europieniądze, http://www.bankier.pl http://www.nbportal.pl http://www.gpw.pl http://www.knuife.gov.pl OECD (2005)	The Insurance Ombudsman is receiving a growing number of complaints Insurance agents reportedly mislead customers by not supporting comprehensive information about offered policies
Slovakia	Ministry of Finance Pension companies, supplementary pension insurance companies, and other private sector groups	In 2004 the government of the Slovak Republic initiated a ten-month media campaign—consisting of television ads, radio interviews and print advertising—to educate the public about the pension reforms that were scheduled to take place in January of 2005	OECD (2005)	A survey at the end of 2004 indicated that 80 per cent of respondents were aware of the information campaign and almost 60 per cent approved of the reform
Ukraine	Financial sector/bilaterals	PADCO/USAID conducted a sociological survey under Ukraine Pension Reform Implementation Project	http://www.pension.kiev.ua/ http://www.padco.kiev.ua/	Survey results not yet available

4.2 Financial Education – Preliminary Results of a Selective Survey

Surveys on financial literacy and education exist in a few transition economies only and, further more, are not comparable across countries. Hence, in order to get some understanding, at least on a self-assessed basis, we launched a little survey amongst key policy institutions dealing with financial and retirement saving issues in transition economies. In the design of the survey we thereby relied on questions which can be translated into a metric and hence made comparable between countries. While the survey is selective and subjective, and while hopefully representative for the assessment of the key policy makers, it is likely to be somewhat biased through the very selection of agencies surveyed (financial supervisory institutions dealing with retirement saving products, private sector financial market associations, central banks, and ministry of finance or ministry of labor departments handling financial market/retirement saving affairs). Not all countries or all institutions have yet responded and hence the results are highly tentative for the time being.[14]

The questionnaire includes 18 questions (see Table 4), and the subject covered goes beyond general financial literacy and financial education in two ways: First, it included questions about the assessment of the financial and pension education (Table 4a), second questions with regard to pension finance literacy and the changes around reform implementation, and third it also included questions with regard to default options in pension reform implantation and retirement income choices (Table 4b).

Taken at face value, the results in Tables 4a and 4b suggest the following.

First, the average level of financial and retirement literacy is considered low, hovering, on average between marginal unsatisfactory (with value of -1) and neither satisfactory nor unsatisfactory (with value 0). Extreme negative assessments in countries include highly unsatisfactory (-3); the highest positive assessment is between satisfactory (+2) and highly satisfactory (+3). What the result suggests is that the level of pension knowledge is, on

[14] The sample included a total of 22 responders from 7 different countries: Croatia (2): Mandatory Pension Fund, Arhivanalitika Consulting Ltd; Hungary (3): Watson Wyatt office in Budapest, Private Pensions Guarantee Fund, Financial Supervisory Authority; 4 Lithuania (3) Insurance Supervisory Commission, Securities Commission, Ministry of Social Security and Labor; Macedonia (3): Ministry of Labor and Social Policy, from the Ministry of Finance, and from the Agency of Supervision of Pension Fully Funded, Poland (3): Office of the Insurance of Pension Funds Supervisory Commission, Ministry of Social Policy, Polish Bank Association; Serbia (1): National Bank of Serbia; Slovakia (5): Ministry of Finance (2), Financial Market Authority, ING Bank, Credit Suisse Life and Pensions COO.

average, considered somewhat better that general financial knowledge. This may, however, simply reflect differences in the questions or a bias by those responding. The change in both general and pension-related financial knowledge is in most countries considered slightly positive, with a marginal edge for pension knowledge.

Second, the quality of financial education receives, on average, moderately negative marks (again between marginal unsatisfactory and neither satisfactory nor unsatisfactory), and with a slight edge of pension education over general financial education. The change in education over the last 5-10 years, however, is view marginally negative for general financial education and marginally positive, ob average, for pension education. The same marginally positive assessment applies to the contribution of pension reform and its impact on views re retirement, financial retirement instruments, and their change over last 5-10 years.

Third, there is a strong consistency across countries where general financial education is taking place, while there is more diversity re pension education. Most of the general financial education takes place through financial institutions (over 50 percent), followed by the work place (almost 20 percent) while schools and government (except Hungary) play little role. For pension education the average suggest a roughly equal role of government and financial institutions (together 76 percent), follow by the work place (16 percent). But in some countries the work place matched the importance of the financial institutions. The methods applied to deliver the financial education are, on average, distributed across the main instruments, with some edge to printed publications and TV spots. The use of seminar, identified above as, perhaps, the most effective instrument seems to be limited.

Forth, there is almost unanimity across countries that pension education differs across social-economic groups, with most responses choosing either "it differs highly" (2) and "it somewhat differs" (1). Essential the same result emerges with regard to differences in the attitudes and behavior among socio-economic groups.

Fifth, and last – the responses with regard default options. These results must be taken with a lot of caution. While, on average, these options are given moderate importance for making savings decisions in the countries, they are considered important with regard to the design, and even highly important in most countries with regard government regulation. Most answers assess the importance of government regulation and supervision in the determination of default options as very important.

Table 4a. Results of the Assessment of General Financial vs Retirement Knowledge and Education

Questions	Results:	COUNTRY AVERAGE	CROATIA	HUNGARY	LITHUANIA	MACEDONIA	POLAND	SERBIA	SLOVAKIA
How would you assess general financial knowledge in your country?									
A. Do people know the interest rate on their credit card or bank account?		-0.28	0.00	-0.33	-0.50	0.67	0.00	-3.00	1.20
B. Do people know the difference between bonds and stocks?		-0.45	0.00	-0.67	0.00	-0.33	-0.33	-2.00	0.20
C. Do people know the difference between real and nominal interest rates?		-1.38	-1.00	-0.67	-2.00	-1.67	-2.33	-1.00	-1.00
	Average of financial knowledge	-0.70	-0.33	-0.56	-0.83	-0.44	-0.89	-2.00	0.13
How would you assess pension knowledge in your country?									
A. Do people understand how much income they would need to continue their way of life in retiremer		-0.52	0.50	0.00	-1.25	0.67	-1.33	-3.00	0.80
B. Do people understand the way public and private pensions are financed?		-0.08	1.00	0.00	-1.25	0.33	-0.67	1.00	-1.00
C. Do people understand the trade-off between risk and return?		-0.46	1.50	-1.33	-2.00	0.00	-1.00	0.00	-0.40
	Average of pensions knowledge	-0.35	1.00	-0.44	-1.50	0.33	-1.00	-0.67	-0.20
Difference - General and retirement literacy		-0.35	-1.33	-0.11	0.67	-0.78	0.11	-1.33	0.33
How do you see the change on financial knowledge during the next 5 or 10 years?									
General Finances knowledge		0.92	0.50	0.00	-0.25	1.67	1.33	2.00	1.20
Pension Knowledge		1.06	1.50	0.00	-1.00	2.00	1.33	2.00	1.60
Difference - Change General and retirement literacy		-0.14	-1.00	0.00	0.75	-0.33	0.00	0.00	-0.40
How do you assess the scope and quality of financial education in your country? (Such as the efforts made and the outcome achieved)									
General Finances knowledge		-0.77	0.00	-2.50	-1.50	0.33	-0.33	0.00	-1.40
Pension Knowledge		-0.25	1.00	-2.00	-1.75	1.00	1.00	0.00	-1.00
Difference - General and retirement knowledge		-0.52	-1.00	-0.50	0.25	-0.67	-1.33	0.00	-0.40
How do you assess the change in scope and quality of financial education over the last 5 to 10 years in your country?									
General Finances knowledge		-0.45	0.00	-2.00	-0.25	0.67	1.00	-3.00	0.40
Pension Knowledge		0.21	2.00	-0.50	-0.50	1.00	1.67	-3.00	0.80
Difference - General and retirement knowledge		-0.66	-2.00	-1.50	0.25	-0.33	-0.67	0.00	-0.40

Note: All questions presented in table 4.a were multi-choice with the possibility of one response among the following seven categories: highly satisfactory, satisfactory, marginally satisfactory, neither satisfactory nor unsatisfactory, marginally unsatisfactory, unsatisfactory, and highly unsatisfactory. The results in the table are presented according to a metric using the scale 3,2,1,0,-1,-2,-3 for the mentioned seven categories.

Table 4b. Results of the Assessment of Financial Education related to Pension Reform, Providers and Instruments and Default Options

Questions	Results: AVERAGE	CROATIA	HUNGARY	LITHUANIA	MACEDONIA	POLAND	SERBIA	SLOVAKIA
How do you assess financial education related to pension reform?	0.18	2.00	-0.33	0.25	1.00	0.33	-2.00	0.00
Has the pension education been successful in changing the views about retirement?	0.31	1.50	0.33	0.00	0.33	1.00	-2.00	1.00
How would you assess the financial instruments available for retirement saving ?	0.50	1.50	-0.67	1.50	0.67	1.33	-2.00	1.20
How would you assess the change in financial instruments available for retirement saving over the last 5 to 10 years?	1.39	2.00	-2.00	2.50	1.67	1.33	2.00	2.20
Through which institutions does general financial education take place in your country ? (% of total)								
a) School	12.08	20.00	38.33	6.25	8.33	6.67	0.00	5.00
b) Work-place	18.35	20.00	1.67	18.75	48.33	6.67	0.00	33.00
c) Government	8.70	5.00	23.33	6.25	8.33	10.00	0.00	8.00
d) Financial institutions	54.26	47.50	20.00	65.00	33.33	70.00	100.00	44.00
e) Others (e.g. trade unions, NGOs, etc)	6.61	7.50	16.67	3.75	1.67	6.67	0.00	10.00
Where does pension education take palce in your country ? (% of total)								
a) School	2.65	2.50	1.67	3.75	1.67	5.00	0.00	4.00
b) Work-place	16.46	27.50	8.33	18.75	41.67	10.00	0.00	9.00
c) Government	40.39	30.00	43.33	18.75	13.33	38.33	100.00	39.00
d) Financial institutions	35.40	32.50	40.00	55.00	43.33	40.00	0.00	37.00
e) Others (e.g. trade unions, NGOs, etc)	5.08	7.50	6.67	3.75	0.00	6.67	0.00	11.00
Which methods are used to deliver pension education (financial eduucation for retirement? (% of total)								
a) Seminars, training, conferences, lectures	9.76	2.50	1.67	11.25	46.67	5.00	0.00	1.25
b) Publications	31.88	22.50	23.33	21.25	13.33	27.78	100.00	15.00
c) TV spots	17.26	35.00	11.67	18.75	20.00	16.67	0.00	18.75
d) Web-Sites	18.97	22.50	38.33	20.00	10.00	24.44	0.00	17.50
e) Advisory services	18.55	15.00	20.00	26.25	3.33	22.78	0.00	42.50
f) Others	3.57	2.50	5.00	2.50	6.67	3.33	0.00	5.00
Does pension education differ among the socio-economics or other groups?	1.75	1.00	2.00	1.75	1.67	2.00	2.00	1.80
Does the attitudes and behaviors toward private sector pension and retirement saving different among the socio-economic and other groups in your country?	1.67	1.00	1.67	1.75	1.67	2.00	2.00	1.60
Are default options for retirement saving decisions a possibility in your country?	0.74	0.00	0.00	0.75	1.33	0.67	2.00	0.40
How do you assess the importance of availability of default options for the design of financial retirement saving?	1.29	1.00	2.00	1.25	2.00	1.50	0.00	1.25
How do you assess the importance of government' regulation and supervision in the determination of default options?	1.56	1.50	2.00	1.67	2.00	2.00	0.00	1.75

Note: The first four questions presented in table 4.b were multi-choice with the possibility of one response among the seven categories: highly satisfactory, satisfactory, marginally satisfactory, neither satisfactory nor unsatisfactory, marginally unsatisfactory, unsatisfactory, and highly unsatisfactory. The results for such questions are presented according to a metric with the scale 3, 2, 1, 0, -1, -2, -3 for the mentioned seven categories. The following three questions are presented as percentages, and the last ones are presented according to the scale of 0, 1, 2. The questions about pension education and attitudes differing among socio-economic groups were multi-choice with one response possibility among three categories: it highly differs (2), it somewhat differs (1), or it does not differ (0). The question about default options had three possibilities: yes (0), no (1), don't know (2); the two last ones responded to three possibilities, very important (2), somewhat important (1), no important (0).

5. Concluding Remarks (tentative)

The conclusions of this paper are sobering, but allow also some optimistic outlook on retirement saving in a marked-based environment. The sobering part concerns the level of financial literacy among the population at large and the effectiveness of financial education to close the gap. The available international evidence from high-income OECD countries suggest a still very low level of general financial literacy, and in many cases an even lower level of literacy with regard to retirement savings. While a number of countries have substantially strengthened their efforts to improve financial education, it is impossible to say how effective this effort has been as advanced evaluations techniques have not been used in or between countries. Selective evidence for retirement education suggests that it can be effective if provided in a focused and context specific manner around the work place.

The "good" news from behavioral finance is that lacking financial education is only one of the various binding constraints for individuals to undertake their retirement saving planning and to execute the plans accordingly. While more education is likely to help – at least at the margin, other effects such as "choice overload" or time-inconsistent preferences create savings behavior far away from the conventional life-cycle predictions and lead to sub-optimal savings decisions. Because of these behavioral effects the instrument of "default option" has become increasingly popular to steer savings outcomes, relying on the inertia of individuals to opt out once they are in. While promising to achieve results, this very instrument can also be misused or may create implicit government commitments. But the regulation and supervision of such default options has not been addressed in the public policy discussion so far.

Preliminary results for the transition economies in Central and Eastern largely confirm the results for (older) OECD countries but suggest also that due to the recent, comprehensive pension reforms in these countries the knowledge gap compared to general financial knowledge may actually be relatively low. Perhaps more interestingly, the policy institutions questioned give high importance to default options, and the role government regulations and supervision should play in the determination of such options.

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