

Building Voluntary Pension Schemes in Emerging Economies

Heinz P. Rudolph



WORLD BANK GROUP

Finance and Markets Global Practice Group

August 2016

Abstract

After the financial crisis, some Central and Eastern Europe countries partially or totally reversed the pension reforms they had initiated in the previous two decades. In the presence of an aging population in the region, reductions in replacement rates will be the most likely adjustment mechanism for the social security systems to remain fiscally sustainable. In some other emerging economies, mandatory funded schemes are operating with low contribution rates, and policy makers have not been able to pass legislation to increase the contribution rate to ensure adequate pensions for future retirees. Voluntary pension schemes that take into consideration the behavioral aspects of individuals may provide a viable solution for countries that need to increase

retirement savings but face political resistance to mandatory increases in contribution rates. The proposed mechanism shifts the focus of voluntary pension plans from “opt-in” to “opt-out” schemes. The emphasis is in setting the default options in a way that employees have to make an explicit decision if they do not want to contribute to the pension system. The paper builds on the experiences of several countries, including Italy, New Zealand, the United Kingdom, and the United States, and proposes policy recommendations and good practices for building voluntary pension systems. These opt-out schemes should be able to provide high coverage among white and blue collar workers, and consequently improve the future pensions of individuals.

This paper is a product of the Finance and Markets Global Practice Group. It is part of a larger effort by the World Bank to provide open access to its research and make a contribution to development policy discussions around the world. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at hrudolph@worldbank.org.

The Policy Research Working Paper Series disseminates the findings of work in progress to encourage the exchange of ideas about development issues. An objective of the series is to get the findings out quickly, even if the presentations are less than fully polished. The papers carry the names of the authors and should be cited accordingly. The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors. They do not necessarily represent the views of the International Bank for Reconstruction and Development/World Bank and its affiliated organizations, or those of the Executive Directors of the World Bank or the governments they represent.

Building Voluntary Pension Schemes in Emerging Economies

By

Heinz P. Rudolph¹

JEL classification: G02, G23, G28, H31

Key words: Pension Funds, Multi-pillar Pension Systems, Contributory Pensions, Behavioral Defaults, Investment Behavioral Incentives

¹ Heinz p. Rudolph is a Lead Financial Economist at the World Bank Group. The author is very grateful to Tony Randle and Fiona Stewart for their valuable comments.

I. Introduction

Voluntary savings for retirement are expected to become a significant part of the retirement income of individuals. With the expected demographic changes around the world, pay as you go schemes will be unable to provide adequate replacement rates. In addition, to the extent that countries follow fiscal policies inconsistent with the implementation of mandatory funded schemes, political attacks on these schemes are likely to continue. In this context, voluntary pension schemes may help to complement future retirement income.

This study takes a close look at collective pension schemes implemented with automatic enrollment features and tries to extract lessons for the implementation of voluntary schemes in emerging economies.

The main finding of the study is that individual voluntary pension schemes are unlikely to have adequate coverage and consequently it is important to rethink the role of employers. Collective schemes are more likely to attract the participation of employees to the extent that soft compulsion or positive peer pressure schemes are introduced. The study compares the regulation and implementation of voluntary pension funds in the United Kingdom, New Zealand, Italy, the United States, and the Province of Quebec in Canada, and brings lessons for emerging economies.

This study is organized as follows. The next section provides a background from emerging economies to motivate the need to introduce voluntary pension schemes. The following section describes the main drivers encouraging participation by contributors in pension plans, including compulsion, the use of salesforces, soft compulsion, and peer pressure. Section 4 gives a general overview of the impact of behavioral economics on the design of voluntary funded schemes. Section 5 provides a comparison of collective pension plans with automatic enrollment schemes for the United Kingdom, New Zealand, Italy, the United States and the Province of Quebec in Canada. The last section summarizes some policy recommendations.

II. Background

Drastic attacks on the second pillar were one of the collateral effects of the financial crisis. As CEE governments were trying to balance the fiscal budget during the crisis, many saw the possibility of diverting part of the contributions from mandatory funded schemes to the social security scheme as a way of getting significant amounts of resources without increasing the current fiscal deficits. As argued by Price and Rudolph (2013), in the years after the reform and prior to the financial crisis, some countries, like Poland and Hungary, followed expansionary fiscal policies that were not consistent with the introduction of a second pillar.

However, as highlighted by Schwartz and others (2014) and OECD (2012), reversals and reductions of pension reform in CEE countries will come at a price for younger generations. Future retirees will see their pensions reduced to lower levels and they will become more vulnerable to the availability of government resources to pay pensions. Changes in the demographic factors will make it difficult for

governments to be able to maintain current replacement rates. For example, in the case of Poland, the adjustment will come through reductions in replacement rates.

In the case of Latin American countries, where the financial crisis was milder than in other regions, mandatory funded schemes will be unable to provide replacement rates at the expected levels of 60 to 70 percent, and consequently individuals will need additional savings to have adequate pensions in the future. Lower replacement rates are explained by future labor market conditions, including low density of contributions; lower interest rates and lack of proper diversification of pension funds, and more realistic expectations about future returns.

Overall, countries will need savings as a way of complementing future retirement income. In the presence of fiscal and political pressures on mandatory funded schemes, it is essential to put in place adequate regulations on voluntary pension schemes.

A precondition for participation in voluntary pension schemes is that individuals have reasonable expectations about the expected replacement rates that they will receive at retirement age from the public system. Unrealistic promises of future pensions to be provided by the social security system will not only result in unpleasant surprises for future retirees, but also will fail to alert individuals of the need to build savings for retirement within a timeframe that will allow them to accumulate sufficient to have a meaningful supplement to their social security pension or mandatory funded scheme, when available.

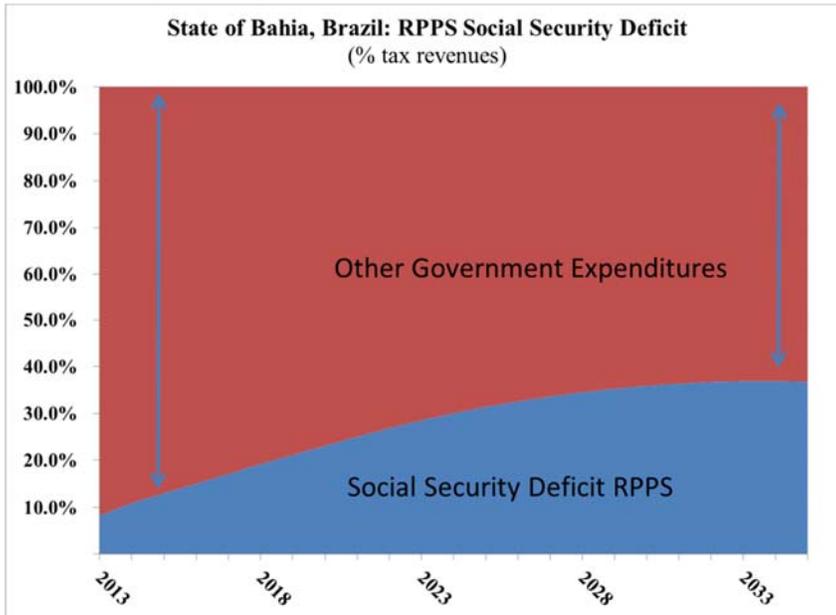
While some countries are in the process of making individual projections of future pensions available to current workers, others are promising pensions that the government will not be able to meet in the future.

In the case of Chile, a system dominated by a mandatory funded scheme, the Superintendence of Pensions provides personalized projections to contributors in their quarterly booklet, based on patterns of contributions, age and expected retirement age. The evidence suggests that so far these projections have been useful in encouraging a segment of workers into voluntary savings schemes.² These projections are essential for increasing the awareness about the need for future supplementary retirement savings.

Other countries, like Brazil, are lagging behind these efforts and will need to be honest about their capacity to pay future pensions under the current rules. For example, in the case of the State of Bahia in Brazil, the 2013 deficit of the social security system for public employees of the state was slightly lower than 10 percent of the tax revenues (Figure 1). According to World Bank calculations, these expenditures will increase to levels of 30 to 40 percent of the tax revenues by the mid-2030s. While the ability to pay future pensions under the current rules is still theoretically possible, it will come at a cost of significant reductions in other expenditures, including health and education. It is highly probable that the pension benefits of these civil servants will need to be revised. Unless these civil servants are aware of and take into account the probability of future changes in benefits, they will not be motivated to participate in voluntary funded schemes.

² Antolin and Fuentes (2012).

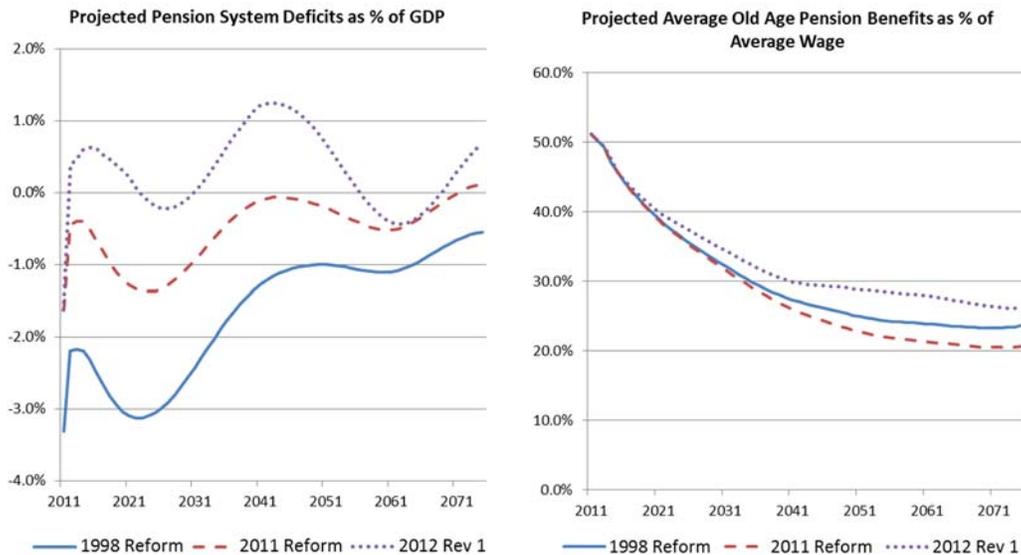
Figure 1. State of Bahia, Brazil: Social Security Deficit of State Civil Servants
(as a percentage of tax revenues)



Source: World Bank (2014)

In the case of Poland, with a sizable Notional Defined Contribution system (NDC) contributory scheme, it is possible to make projections about the evolution of replacement rates. As shown in World Bank (2012), replacement rates are going to move from current levels of approximately 50 percent to levels of approximately 30 percent by 2050 (Figure 2). While the mandatory funded scheme was a vehicle to provide additional retirement income, the 2013 reform reduced its relative size significantly. While there is ample room for development of voluntary funded schemes, the development will only occur when workers are aware of the expected replacement rates in the future.

Figure 2. Projected Pension Benefits in Poland, 2011-2071

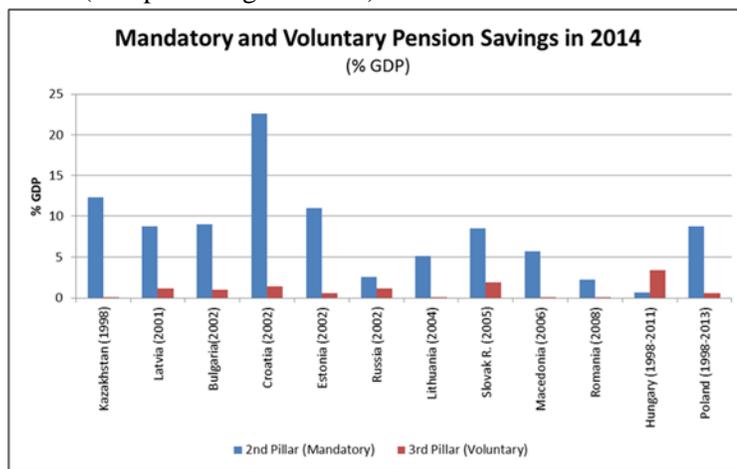


Source World Bank (2012)

Saving for retirement needs to start early in the working life of individuals in order to have sufficient funds for buying an annuity that provides an effective income stream at retirement age. Provision of timely information about replacement rates that can be reasonably expected will help to foster the development of voluntary funded schemes.

To date, the evidence suggests that individual voluntary pension schemes have not been successful in attracting workers or savings. As shown in Figure 3, voluntary pension savings in emerging economies have been able to accumulate only a relatively small amount of assets compared with mandatory schemes. While the lack of development of voluntary schemes in countries with mandatory funded schemes has been traditionally explained as a consequence of the cannibalization of the mandatory over the voluntary schemes, more recent evidence suggests that the size of the assets accumulated in voluntary schemes may also be a function of weaknesses in the regulatory and incentive structures present in the framework for voluntary funded schemes.

Figure 3. Mandatory and Voluntary Pension Assets in Selected Emerging Economies, 2014
(as a percentage of GDP)



Source: National Sources

Most of the countries that implemented mandatory funded schemes followed a similar approach to voluntary funded schemes. Voluntary pension funds are managed by pension fund management companies or insurance companies, and contributors are able to take advantage of tax breaks. Pension funds operate with individual accounts, and at the time of retirement individuals can add the balance available to any balances available in mandatory schemes in order to purchase an annuity or any other form of retirement income product.

The model of individual voluntary funded pension schemes implemented in many emerging markets that conducted pension reform will not be able to provide the necessary coverage and adequacy that is needed for ensuring consumption smoothing for a broader segment of the population. Unfortunately the current approach to individual voluntary pension schemes has resulted in relatively insignificant numbers of contributors who are mainly high income individuals. In addition, these programs have created doubtful increases in total savings, and they have charged relatively high administration fees.

III. Main driving forces of participation in voluntary funded schemes

Broad coverage of voluntary pension plans is not achieved simply with tax incentives. While tax incentives are important for motivating some individuals to save for retirement, the evidence suggests that additional policy drivers are needed in order to engage a broader segment of the population. The literature of behavioral economics suggests that individuals do not necessarily react to these incentives in a rational manner. For example, Choi, Liabson and Madrian (2011) present evidence of a significant number of individuals aged above 59½ who are enrolled in 401(k) plans that do not take advantage of a free arbitrage offered by the law that represents on average 1.6 percent of their salaries.³ Most of the individuals were not aware of these benefits, did not have the initiative to make an active decision to take advantage of this free arbitrage, or did not have the capacity to process this information properly.

Another example of the failure to increase coverage is given in the case of Chile. In 2008, Chile started providing sizable incentives for retirement savings for individuals who pay income tax at rates below 15 percent, but so far the rate of participation has been relatively low. The low participation rate can be explained by the lack of awareness of individuals about these regulations; lack of initiative to take a decision; procrastination; and most importantly lack of a salesforce committed to sell these products to lower income employees (who potentially are the main beneficiaries of these tax incentives).

In an environment of imperfect rationality, participation in funded pension schemes needs to have some drivers that can motivate workers to participate in these programs and put them on the track of long-term retirement savings. The main drivers of participation in funded schemes can be categorized into four groups:

a. Compulsion

Compulsion is the most frequently used driver of pension fund participation around the world. Typically, compulsion requires a law, a collective agreement with the employer, or an agreement with “social partners,”⁴ such as in the case of Northern European countries. Under compulsion, individuals are required to contribute to a pension scheme with a certain contribution rate. Mandatory schemes can operate as individual or collective schemes. The effectiveness of a compulsory system depends also on the enforcement capacity of the government or the industrial group. For example, regulations in some emerging countries require independent workers to contribute to the pension system, but governments do not have the capacity to enforce them, resulting in low rates of participation.

b. Supply driven factors

The use of a salesforce is an important driver of pension fund participation in purely voluntary schemes in emerging economies. Typically, pension fund management companies and the life

³ In the case of the United States, contributors over age 59½ are allowed to contribute to the pension system, receive a matching contribution from the employer and withdraw the money right after without any type of tax penalty.

⁴ Social partner organizations are typically industrywide organizations that represent the interests of workers and employers in many European countries.

insurance sector have salesforces available to stimulate demand. As is the case generally with insurance type products, voluntary participation in pension fund plans is more “sold” than “bought.” While tax incentives are an important element, enrollment of individuals is directly related to the selling capacity of the pension fund providers. However, salesforces are normally limited in size, expensive to maintain, and typically focus on the high income segments of the market where potential commissions are higher. Selling to this segment is easier because it represents earners who benefit most from tax incentives.

Individual voluntary pension schemes driven by sales force are unlikely to attain coverage among a broader set of participants. The combination of contributors’ high discount rates and limited rationality at the time of deciding on savings for retirement, together with the lack of financial interest of pension fund management companies in servicing a market other than the high end, leave the range of middle and low income individuals out of the voluntary schemes. Thus, a business model based on solely employing a salesforce is ineffective in reaching the coverage that would be needed in most of the emerging economies.

Individual voluntary pension schemes that are used by high-income earners may not have a net effect on savings. Chetty et al (2012) postulates that typically the group of active savers who participate in these schemes, is likely to offset these tax effective savings with reductions in other savings, leaving total savings relatively unchanged.

As a result, individual pension fund systems typically result in small coverage, are dominated by high-income individuals, are characterized by relatively high fees and have a very negligible effect on net savings.

c. Soft compulsion

The advantage of soft compulsion mechanisms is that the potential contributors retain the right not to participate but the mechanisms guide them in a direction that encourages participation. Automatic enrollment, where employers are required to enroll contributors into the pension system, but employees have the alternative to opt out from the system, is a good example of a soft compulsion mechanism. As discussed below, automatic enrollment may operate in schemes where all employers are required to offer pension plans to their employees (United Kingdom, New Zealand) or in systems where employers may voluntarily decide to do so (United States).

Contrary to old defined benefit schemes, characterized sometimes by burdensome organizational structures for creating pension funds, the collective schemes discussed in this note are occupational in the sense that pension plans are selected by the employers. They operate as defined contribution schemes, and the account and portfolio management is outsourced to specialized companies. These schemes should be able to operate with low costs in large and small companies. The concept of a collective voluntary scheme contrasts with the open individual voluntary scheme, where pension plans are purchased directly by the individuals, and employers assume limited responsibility in the process.

While these new collective schemes provide a good environment for the implementation of soft compulsion, automatic enrollment features can also operate in individual voluntary pension schemes.

Collective schemes may have a cost advantage and avoid the problem of wasteful competition.⁵ Box 1 describes the experience and lessons of automatic enrollment of Chile's self-employed in 2012-2014, which operates as an individual voluntary pension scheme.

d. Positive Peer Pressure Schemes

Positive Peer Pressure Schemes work in collective voluntary schemes where co-workers put pressure on colleagues to enroll into voluntary savings for retirement. They work only if the co-workers who put pressure receive a direct benefit from engaging their co-workers. The case of the 401(k) plans in the United States is one of the best examples to illustrate a Positive Peer Pressure Scheme. Success in getting broad coverage depends on two factors: (1) higher income individuals always being better off saving in collective schemes rather than individual ones; and (2) collective plans needing a minimum participation of lower income workers to qualify as such.

IV. The impact of behavioral economics on the design of pension products

Theoretical development in the areas of behavioral economics and empirical evidence on voluntary pension schemes in some advanced economies suggest some ways of building sustainable voluntary pension schemes. The literature on behavioral economics (Thaler and Benartzi 2004; Benartzi and Thaler 2007; Sunstein and Thaler 2008) brought important insights on how to create a structure of incentives for increasing coverage in voluntary pension schemes. This literature helped to question some of the assumptions used in building tax incentivized individual voluntary pension schemes, including full information and perfect rationality of individuals. Developments in behavioral economics have helped to provide more solid ground for building sustainable schemes.

Once behavioral features are introduced in voluntary pension schemes, the line between mandatory and voluntary schemes becomes less clear. Default options and procurement play a more important role in the designs of voluntary pension schemes, as the effectiveness of the schemes resides in the passivity of participants. When more than 90 percent of individuals remain passive to the alternatives presented, and consequently are allowing the default options to decide for them, it is not obvious that individuals are making a voluntary decision. While the question of the voluntary decision of individuals to participate in soft compulsion schemes is more philosophical question that goes beyond the scope of this study, it is important to keep it in mind the consequences at the time of implementing these pension schemes.

In a world of traditional economics, the use of an opt-in or opt-out system should be lead to similar outcomes, but due to behavioral features of individuals, the outcomes of these designs could be completely different. As a way of illustrating the behavioral differences, Thaler (2009) uses the rate of organ donor consent in Austria and Germany. While populations in Austria and Germany are relatively similar in many aspects, in Germany, which uses an opt-in system, only 12 percent gives consent to being an organ donor; in Austria, which uses opt-out, nearly everyone (99 percent) consents.

⁵ See Rudolph and de la Torre (2016).

Automatic Enrollment

The traditional literature suggests that high intertemporal discount rates of individuals is an important factor explaining the lack of participation of individuals in voluntary pension schemes. According to this view, due to high intertemporal discount rates, individuals start saving for retirement too late in their working lives, typically at a moment when they do not have enough time to accumulate resources for financing an adequate pension after retirement. Savings for retirement schemes are highly dependent on the length of the savings period. As a way of addressing the reluctance of workers to save voluntarily, most of the countries have implemented mandatory pension schemes to some degree.⁶ Some analysts argue that mandating savings for retirement is essentially paternalistic, and paternalism tends to be controversial in the political spectrum of some countries, including the United States.

Richard Thaler and Cass Sunstein in their best-selling book “Nudge” suggest a way to reduce the objections related to paternalism, by essentially disguising it. Using behavioral quirks, people can be nudged into making decisions that are good for them, while having complete freedom to change their mind. This current school of thought, called libertarian paternalism, eliminates one of the main objections to mandatory pension schemes, which is arguable constrains individual choice. The authors’ findings are based on behavior of individuals to different incentives.

The findings of behavioral economics suggest that individuals react differently to the way in which the alternatives are presented. In the case of voluntary pension plans, the individual decisions to participate in pension plans are influenced by:

- a. Lack of planning skills. Some employees are not active, motivated decision-makers when it comes to retirement planning. They have weak planning skills and find it difficult to defer gratification, which is associated with limiting short-term spending in favor of long-term savings.
- b. Default decisions. Faced with a complex choice and unsure what to do, many individuals often take the default or “no decision” choice. In the case of a voluntary savings plan, which requires that a participant take action in order to sign up, the “no decision” choice is a decision not to contribute to the plan.
- c. Inertia and procrastination. Many individuals deal with a difficult choice by deferring it to another moment. Eligible nonparticipants, unsure of what to do, decide to postpone their decision. While many employees know they are not saving enough and express an interest in saving more, they simply never get around to joining the plan or, if they do join, to increasing their contribution rates over time.

Automatic enrollment plan designs reframe the savings decision and the default option (to join a scheme) gives an indication of the expected decision. With automatic enrollment design, individuals are automatically enrolled into the pension plan, and the decision to save is framed as an opt-out

⁶Civilized societies are unlikely to accept elderly falling into poverty after retirement, especially for individuals who had good standard of living during their working lives.

decision. In such a design, “doing nothing” leads to participation in the plan and investment of assets in a long-term retirement portfolio.

Madrian (2013) suggests that automatic enrollment is by far the most effective method of increasing participation in defined contribution savings schemes. The research on participation in employer-sponsored savings plans in the United States shows that participation rates are substantially higher when the default is enrollment in the savings plan (i.e. individuals must opt out if they prefer not to save) than it is when individuals must take action to participate in the savings plan (that is must opt in). According to Vanguard (2014) the participation of individuals in Vanguard plans where the contributor must elect to join (opt-in) compared with plans where he or she is automatically enrolled (opt-out) is 65 and 82 percent respectively.⁷ As shown in Table 1, for individuals earning less than \$30,000 per year voluntary participation versus participation through automatic enrollment is 34 and 78 percent respectively. These figures are 29 and 68 percent for individuals under the age of 25. This data confirms that all groups benefit from auto-enrollment, but the most vulnerable groups of society (low income, less educated) are the groups that would benefit the most.

Table 1. Participation in opt out versus opt in pension funds in the United States,[‡] 2013

	Voluntary Enrollment	Automatic Enrollment
All	65%	82%
Income		
< 30,000	34%	78%
\$30,000- \$49,999	57%	86%
\$50,000- \$74,999	64%	91%
\$75,000- \$99,999	74%	94%
\$100,000 +	88%	96%
Age		
<25	29%	68%
25-34	56%	83%
35-44	65%	84%
45-54	71%	85%
55-64	73%	85%
65+	68%	77%
Gender		
Male	63%	83%
Females	70%	84%

⁷ These ratios vary significantly by income and age.

Job Tenure		
0-1	39%	77%
2-3	53%	88%
4-6	65%	91%
7-9	70%	88%
10+	77%	82%

Source: Vanguard (2013)

£ It includes only pension plans managed by Vanguard.

In the presence of “passive savers,” opt out schemes are effective in increasing individual savings. Analyzing the behavior of savers in Denmark, Chetty et al (2012) reinforce the importance of default provisions as a mechanism for increasing savings. The study divides employees between active and passive savers. Active savers—who account for approximately 15 percent of employees—make savings decisions by maximizing utility, taking into account the subsidies and automatic contributions. Active savers are typically wealthier and financially literate, and shift assets across accounts in response to changes in tax benefits. Passive savers make fixed pension contributions that take into account only the automatic contribution and subsidy.

Chetty et al (2012) conclude that private initiatives that rely on individuals taking action may have relatively little effect on saving behavior. The study finds that when employer contributions to retirement saving arrangements change, up to 85 percent of the affected individuals (passive savers) make no change in their personal saving plans. This implies that the group of passive savers does not target a total savings rate. In addition, financial subsidies and tax incentives influence only a small fraction of the employees, do not reach those who would not save on their own initiative, and generate crowding-out instead of increasing the total savings level.

The design of voluntary pension plans should take into consideration these behavioral features and focus on default options that guide participants into decisions that are optimal for them (i.e. contribute to the pension system). In the case of the United Kingdom, after a steady decrease in the rate of participation in voluntary private pension plans from 56 percent to 42 percent between 2003 and 2012, the introduction of automatic enrollment has helped to change this trend. In 2013, participation in private pension plans increased to 46 percent.⁸ In the case of the 401(k) plans in the United States, Fidelity plans with automatic enrollment have participation rates of 84 percent compared with 53 percent in plans that require active involvement.⁹

However, there is potentially a sting in the tail of automatic enrollment. Behavioral economics suggests that, under reasonable conditions, most employees will accept all aspects of the default provided by the employer (or the state). Consequently, it is essential to have in place a default investment strategy designed—to the extent possible—to optimize the future pensions of individuals with the set of information available at each moment of time. According to Rinaldi (2012), the suboptimal investment

⁸ Department of Work and Pensions. 2014. Official Statistics on workplace pension participation and saving trends of eligible employees. Broken down by sector and other characteristics. October 2014. United Kingdom.

⁹ Based on Fidelity analysis of 20,497 corporate DC plans and 11.9 million participants as at 12/31/2012.

portfolio of voluntary pensions offered to employees is one of the reasons that explain the lack of success of automatic enrollment in Italy.¹⁰

Default asset portfolios are an important component in the design of automatic enrollment schemes. Campbell and Viceira (2002) argue that life cycle strategies are the investment strategies that best address the long-term objectives of individuals that are saving for retirement. Life cycle strategies offer a long-term investment strategy based on holding a mix of stocks, bonds and other investments that automatically changes as the participant ages. Typically, asset allocation moves automatically from equity intensive portfolios to fixed income portfolios in predetermined stages determined by the length of working life remaining for an individual. In the case of the 401(k) plans in the United States, plan sponsors are increasingly using life cycle or target-date default options.¹¹ The provisions of the Pension Protection Act (PPA) of 2006 defined target date funds as one of three types of qualified default investment alternatives (QDIA) for use in retirement plans.

Default contribution rates are also critical in automatic enrollment schemes. In the absence of appropriate default contribution rates, individuals may end up saving too little or too much for retirement. Low rates of threshold contribution are a matter of debate in the United States. Threshold contribution rates defined in contracts are frequently low, often significantly lower than those of voluntarily enrolled employees. This may rise partly from regulation or from the drive not to “threaten” the newly enrolled savers by a too high deduction from wages. Contribution rates of a few percentage point of salary are better than nothing, but in most cases may not lead to adequate pension replacement rates, and give a false signal to workers that they will have adequate income in retirement.

Positive Peer Pressure Scheme

Automatic enrollment provisions in the United States are relatively recent and do not explain the relatively broad coverage of the voluntary pension system. Automatic enrollment is only offered by companies that represent between one-quarter and one-third of the plan sponsors of 401(k) plans in the United States.¹² The overall coverage of the 401(k) plans is approximately two-thirds of the labor force, which compares very favorably with the coverage in individual voluntary pension schemes, including Chile (9 percent), Brazil (5 percent) and Poland (4 percent).¹³

¹⁰ This note argues that other factors may also explain the relative lack of participation of employees in the pension plan, especially the fact that it was implemented de facto as an opt-in system.

¹¹ Previously many pension plans that auto-enrolled employees were invested in inefficient low risk, money-market funds. See Brigitte C. Madrian and Dennis F. Shea (2001); or Choi, Laibson, Madrian and Metrick (2002).

¹² This figure is an approximation based on Vanguard (2013). In 2013, 34 percent of the plans offered by Vanguard ha an automatic enrollment component. Anne Tergesen (2013), (401(k) auto-enrollment tapers off, MarketWatch, March 15, 2013) suggests that this figure is approximately 25 percent in the case of plans offered by Fidelity. Both companies are top providers of 401(k) plans in the USA.

¹³ Figures for Chile, Brazil and Poland represent estimates of the coverage rates in Chile’s APV, Brazil’s fundos abertos de previdencia complementar, and Poland’s IKE.

While the structure of incentives of the pension fund scheme in the USA is based on a Positive Peer Pressure Scheme, pension fund participation in Chile, Brazil, and Poland is based on the use of a sales force.¹⁴ Chile, Brazil, and Poland follow traditional tax incentives for individuals motivated by sales force. The large majority of beneficiaries in these countries are high income individuals. By way of contrast, according to the American Benefit Council, approximately 80 percent of the participants in 401(k) plan come from households making less than \$100,000.

Positive Peer Pressure Schemes require affecting the decisions of passive savers. For voluntary pension schemes to have a net effect on savings, the participation of passive savers in the pension plans is essential. According to Chetty et al (2012), this is mostly because passive savers do not fully substitute additional savings. Consequently, the introduction of these voluntary pension plans achieves a net positive effect on savings. The coverage attained through peer pressure in the United States relies in two factors:

- a. High income individuals are better off by saving in collective schemes versus saving in individual schemes,¹⁵ and
- b. Qualified collective plans need to demonstrate minimum participation of non-highly compensated employees in the pension plan.¹⁶ In other words, blue-collar workers need to participate in the pension system for the pension plans to qualify.

The interests of the highly compensated employees in participating in the collective schemes are essential to have coverage in the plan. Highly compensated workers include the executives of the company who are influential in making management decisions. As highly compensated employees need to bring non-highly compensated employees into the collective scheme for the plan to qualify, they are eager to support the provision of other incentives for increasing the attractiveness of the pension plans, such as matching fund contributions.¹⁷ The combination of tax incentives, matching fund contributions, and active persuasion from the management of the company results in greater participation of blue-collar workers in voluntary pension plans.

V. Comparative analysis of group personal plans

This section discusses different features in the implementation of group personal plans in the United Kingdom, New Zealand, the United States and the Quebec province in Canada. All these systems have in common the use of group personal plans and the use of soft compulsion to incentivize the

¹⁴ While some authors attribute this difference to the substitution effect of mandatory with voluntary schemes in the cases of Poland or Chile (with mandatory funded schemes) compared to USA (without mandatory funded scheme).

¹⁵ For example, in the case of the United States in 2014, the upper limit for the individual and collective contributions was \$5,500 and \$17,500 respectively. The contribution limit of individual plans is intentionally low in order to incentivize the highly compensated workers to participate in collective schemes.

¹⁶ This document follows the nomenclature of highly versus non-highly compensated employees used in the United States.

¹⁷ Companies need to be able to deduct the matching contributions from their corporate income tax in order to get support from the employers.

participation of employees in pension schemes. The case of Italy is also used to illustrate one of the most relevant “successful failures” in the implementation of automatic enrollment.

This comparative study can be useful to countries deciding on the different features of automatic enrollment. As these comparisons reveal, the outcomes of automatic enrollment can be substantially different depending on various policy decisions that are associated with the implementation.

Main Features of Automatic Enrollment

While the United Kingdom, New Zealand, Italy, the United States, and the Quebec province have adopted the principle of automatic enrollment in their voluntary funded schemes, their implementation has been very different (Table 2). In the case of the United States for example, employers may choose whether to offer an automatic enrollment facility or not, but providing one gives employers a “safe harbor” in complying with the non-discrimination test. Between one-quarter and one-third of the pension plans have automatic enrollment provisions. While Italy has a *de jure* automatic enrollment system, the plan has *de facto* been implemented as an opt-in system. As Rinaldi (2010) points out, employers are required to ask each employee if he/she is comfortable with the default option, and each employee needs to sign an agreement. In addition, automatic enrollment was created to substitute existing unemployment insurance (TFR) benefits, and the system is such that the benefits for the employees of substituting the existing TRF benefits by the pension accumulation with the automatic enrollment are not evident. Employers, especially from smaller companies, are not indifferent either as the automatic enrollment implies for them to fund contributions that otherwise can be used as working capital. In other words, the automatic enrollment scheme is not designed in a way that is attractive for employers and employees.

Table 2. Selected Features in Collective Voluntary Pension Plans

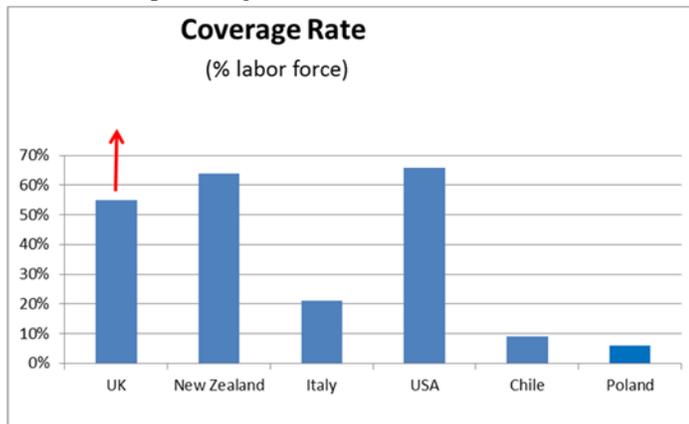
	United Kingdom (2012)	New Zealand (2006)	Italy (2007)	USA (2012)	Canada/Quebec (2014)
Automatic Enrollment	Mandatory	Mandatory	Mandatory, but implemented as "opt-in"	Optional, but considered a safe harbour (mandatory in Simple plans)	Mandatory
Requirement on the minimum number of employees for opting for a plan	250+ 2012; 50+ 2014; 30+ 2016; 30- 2017	No	No	No, but 100- can opt for SIMPLE plans	5+
Period for opting out	30 days	Between 14 and 56 days	180 days	90 days	60 days

Source: national sources

As shown in Figure 4, coverage of funded schemes in Italy is inferior to the rest of the countries with automatic enrollment. In fact, only a small percentage of participants in voluntary pension schemes in

Italy are derived from the automatic enrollment process; the rest of the coverage is associated with pension fund products sold by insurance companies using the most traditional supply driven methods.

Figure 4. Coverage of Selected Voluntary Pension Plans
(as a percentage of labor force)



Source: national sources

Not all the systems have implemented automatic enrollment gradually. While the United Kingdom introduced the automatic enrollment gradually with large companies having to comply in 2012 and smaller companies in 2017, the other countries, including the Quebec province in Canada, have not adopted the same approach. The approach in the United Kingdom has more to do with the creation of a government-sponsored provider (NEST) that by law cannot refuse to accept contributors and its capacity to cope with the likely influx of contributors. Decentralized systems, such as those in New Zealand and the Quebec province do not face that challenge because the default providers are decentralized.

Automatic enrollment is accompanied by opt out, a process to give individuals who have been automatically enrolled a defined window during which they can opt out from the system. Different countries have created different windows, from 30 days in the case of the United Kingdom to six months in the case of Italy. There is no consensus about the optimal period for opting out; however, the practice in New Zealand—of a period between 15 and 56 days—of giving time to the individual to reflect on the options and get some basic education about the benefits of participating in the pension scheme before having the right to opt out, appears good practice. In the case of the United Kingdom, the opt-out window opens from the moment that the employee receives the welcome pack.¹⁸ Regulations should allow time for individuals to reflect on the consequences of participating or not.

Default Options

Default options are an essential component of automatic enrollment schemes, but several of these options have been implemented differently in the sample of countries (Table 3).

¹⁸ The welcome pack should be received in the first five days after being enrolled.

Table 3. Default options in selected collective pension schemes

	United Kingdom	New Zealand	Italy	USA	Canada/Quebec
Default Option: Manager	NEST [£]	Selected by the government every 7 years (multiple)	No	No	Yes, but still needs to be regulated
Default Option: Investments	Life Cycle	Conservative	Conservative	Life Cycle is a safe harbor provision	Life Cycle
Employee option for opting for an individual plan	No	Yes	No	No	No
Withdrawals	55+	65+	Retirement age+	59 1/2	55+
Liquidity options	Disability and major health issues	Severe financial hardship, major health issues, and purchase of a first house	Not Available	Loans and withdrawals in exceptional cases, including financial hardship, disability and termination of employment	Employer contributions can be withdrawn only in cases of financial hardship and disability. More flexibility is
Lump sums	Yes	Yes	Not Available	Yes	No

[£] NEST is required to accept all participants at a given fee.

Source: national sources

Default pension fund manager

Most of the systems in the sample have followed decentralized default options. In the case of the United Kingdom, the government created a quasi-government provider of pension plans (NEST), and it has to accept all companies at a standard fee. NEST manages a passive portfolio, mainly based on market indices. In New Zealand, the government selects default providers from a list of private providers that apply for that position every seven years. Criteria for selecting the default providers in New Zealand include investment capability, corporate strength, administrative capability, track record, stability, and capacity to offer financial education. The government selected nine default providers in July 2014. According to the New Zealand regulation, new default members are allocated evenly across the appointed default providers. Quebec province still needs to enact regulation about the default providers.

Since automatic enrollment in the case of the 401(k) plans in the United States is voluntary, there is no default provider. However, plan sponsors have the fiduciary responsibility of prudently selecting plan providers and closely monitoring the investments of the pension funds.

Default Investment Portfolio

In the cases of the United Kingdom and the Quebec Province in Canada, the default options are life cycle strategies. As discussed above, life cycle strategies are efficient in managing risk along the lifecycle, with the objective of optimizing the pension at retirement age. The default portfolio options in the Province of Quebec still need to be regulated, as the program started to operate only in mid-2014. In the United Kingdom, the default portfolio is low cost mostly run by index funds. Low cost funds are a favorable feature in long-term funds, as most of the long term capital accumulation is not a consequence of the trading that take place during the period of accumulation, but comes from proper strategic asset allocation.¹⁹ The work of Brinson, Hood, and Beebower (1986) finds that 93.6 percent of the returns of a long term portfolio are explained by the strategic asset allocation and only 6.4 percent by the tactical asset allocation, including asset selection and market timing. This literature has been influential in emphasizing the role of low cost and passive investment strategies.²⁰

In the case of the 401(k) plans in the United States, lifecycle portfolios are one of the three types of qualified default investment alternatives (QDIA) for use in retirement plans as default options when automatic enrollment provisions are used. By using lifecycle pension funds as default options, employers are free from the fiduciary liability they could face by investing contributions from employees who have not selected an investment option in a poor-performing vehicle. The legislation in the United States provides an elegant way of addressing the issue of the benchmark portfolio without making it explicit.

In the case of Italy, the default portfolio was set as a conservative option, which is suboptimal from the perspective of the future retirement income of individuals.

Opting out of the group personal plans in favor of personal plans

One of the main attractions of group personal plans is that the plan sponsors may attain price effective packages for their employees that are superior to those that individuals can access directly. This feature reflects the group logic that operates in defined benefit pension plans. Once the employer selects the provider of the collective plan, employees can select among the options offered by the collective plan. Compared with a mechanism where each employee contracts his or her own pension plan, this feature allows operations at low cost: there is no direct relationship between the sales force and the employees for hiring the plans.²¹ In the cases of the United Kingdom, Italy, the United States, and the Province of Quebec, employees are required to operate within the framework of alternatives offered in the collective plans.

In the case of New Zealand, employees are free to contribute to the group personal pension plan or to contribute to personal pension plans. The same feature exists in the superannuation system in Australia. While individual freedom to choose a pension fund provider is a feature that increases opportunities for individuals, it has important implications in terms of the costs of the system. In countries like Denmark or the Netherlands, characterized by their desire to find collective solutions that benefit the

¹⁹ See Campbell and Viceira (2002), and Brinson, Hood, and Beebower (1986).

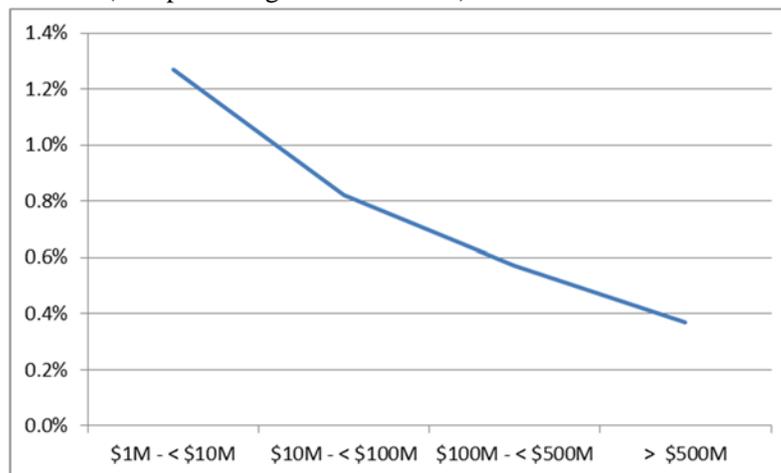
²⁰ See Randle and Rudolph (2014).

²¹ De la Torre and Rudolph (2014) refers to the competition among pension fund managers for getting individual contributors as wasteful competition.

whole society, such a feature would be almost unthinkable. In a sense, allowing the opt out from the collective scheme transforms the collective scheme into an individual one, with negative consequences on fees and consumer protection, which are some of the most criticized elements of individual funded pension schemes.

The option for employees to select providers and portfolios freely, without the intermediation of the employer as in the United States, is arguably a less attractive feature of the Kiwisaver program, as this feature has led to high fees and short duration portfolios.²² In fact, the fees of the Kiwisaver pension plans are in the range of 150 to 200 basis points of the assets under management.²³ These figures compare unfavorably with the 50 basis points charged by NEST in the United Kingdom and fees charged in the United States that decrease as the volume of assets under management increases (in the range of 37 basis points in the case of large funds and 127 basis points for funds with assets between 1 million and 10 million dollars, as shown in Figure 5).

Figure 5. ‘All-In’ Fee by Plan Asset Size Segment in 401(k) plans,[&] 2013
(as a percentage of total assets)



[&] Participant weighted.

Source: Deloitte and ICI (2014)

It is also interesting to note that scale economies on the investment side have limits. There are important cost differences in managing a portfolio of USD 1 million versus one of \$300 million, but once a scale in the range of USD 500 million is reached, the savings in costs are smaller.²⁴ The justification for a single provider is not evident from the perspective of costs. The presence of a single default provider increases the risk of political interference in the management of the fund. Schwarz and others (2014)

²² The lower emphasis on default portfolios to make alternatives comparable adds dispersion to the fees being charged by the asset managers.

²³ Kiwisaver fees are similar to the fees charged by mandatory funded schemes in some Central European and Latin American countries, which have prompted much criticism of funded pension schemes.

²⁴ See Deloitte and Investment Company Institute (2014).

provide evidence of the diversion of assets of pension reserve funds in the European Union during the financial crisis that was not necessarily consistent with optimizing future pensions.

Early Withdrawals

The pension plans for the five cases analyzed in Table 3 are designed to provide retirement income after retirement, and consequently individuals are only allowed to withdraw money at retirement age. While this argument seems trivial, for many countries it is not. Some emerging economies, including Brazil, have in place voluntary pension plans that do not require keeping the money in the pension fund until retirement age.

As a way of compensating individuals for the locking money into pension plans for long periods, all these pension plans provide some liquidity options during the working life to allow individuals to access their savings in specific circumstances, including disability, major health issues, and financial hardship. The Kiwisaver program in New Zealand offers the possibility of withdrawals for the purchase of a first home, and the 401(k) plans offer the option of taking loans out of the pension assets. While the facility to take loans makes the plans more attractive for participants, it increases the administration costs of the program.

Individuals would more willing to participate in these pension plans if they see that they can make use of their funds in cases of emergency. One interesting feature of the early withdrawals in the 401(k) plans in the United States is that they are subject to a punitive tax rate of 10 percent over the individual's personal income tax rate. This is a way of discouraging the practice of early withdrawals.

Payout phase

The payout phase is one of the major weaknesses in the voluntary pension schemes of this sample of programs. Recent regulation in the United Kingdom allows more freedom to select the payout option, and individuals are free to take their accumulated balance at retirement in the form of a lump sum. The same provisions apply to the 401(k) plans, as the menu of options includes a lump sum withdrawal option, and a large proportion of retirees use this option. In the New Zealand Kiwisaver program, individuals can take their savings as a lump sum, free of taxes.²⁵ Unfortunately lump sum withdrawals are not optimal for retirement income, as they do not protect individuals against investment risk, longevity risk or inflation risk.²⁶ In the case of Quebec, at age 55 employees can transfer their assets to a pension plan determined by regulation and chosen by the member, which in principle is a deterrence against lump sums.

While voluntary, these schemes are still tax incentivized and they are expected to be a significant part of the retirement income of individuals. As Rocha, Vittas and Rudolph (2012) point out, the menu of options for the payout phase should be flexible depending on the availability of other sources of retirement income. However, excessive lump sum withdrawals should be avoided in order to ensure that the asset accumulation is used for retirement income and not for one-time expenditures, as may happen. While some pension programs promote the use of pension fund for purposes other than

²⁵ As discussed below, the Kiwisaver scheme is a TTE scheme.

²⁶ See Rocha, Vittas and Rudolph (2012).

payment of pensions, the authors have the view that the other shorter-term products can cannibalize the pension product. These alternatives should be considered once the programs are mature.

Following the logic of soft compulsion, the regulation could establish a default option in the payout phase that aligns with the objective of minimizing the amounts retirees can withdraw as a lump sum, and give retirees the option of opting out and selecting something different. Given the potential balance of some retirees' accounts at retirement, the ability to access the entire balance may be very attractive. The regulation, with the use of default options, should encourage mechanisms that promote a wise withdrawal of the assets during retirement. In addition, tax incentives could be used as a way of discouraging retirees from withdrawing lump sum amounts and effectively acting against their own long-term self-interest, in other words applying the principles of libertarian paternalism.

Addressing the needs of Small and Medium Enterprises (SMEs)

Participation by small companies in voluntary pension plans is still an important challenge in voluntary collective pension funds.²⁷ While the percentage of companies with more than 1,000 employees that offer 401(k) plans in the United States is above 90 percent, this figure falls to below 25 percent for companies with less than 50 workers. However, the trend is that an increasing proportion of the population is working in smaller enterprises. In the United States, for example, approximately one-third of the labor force works in enterprises with fewer than 100 employees.

Policy makers should make incentives available to SMEs to encourage them to participate in pension plans. Simplification of procedures is an important element to favor participation in pension plans. The provision of low cost, highly standardized plans, and with limited fiduciary responsibilities for the employers of smaller companies may facilitate their participation in voluntary pension plans. The so-called Simple 401(k) plans in the United States, designed for enterprises with fewer than 100 employees, standardize most of the features and consequently limit the fiduciary responsibilities of the employer. For example, these Simple 401(k) plans require, on the one hand, automatic enrollment; specific requirements in terms of matching funds; and immediate vesting of all the contributions; but on the other hand employers do not have to pass the nondiscrimination test. In addition, employers can receive a tax credit that offsets 50 percent of the costs of establishing a 401(k), up to USD 500 annually for each of the plan's first three years.

Australia has addressed the issue of SME participation mostly through the search of a cost effective alternative for the enterprises. Australia is one of the OECD countries that maintain a private pension system with mandatory participation, but allows additional voluntary contributions from employees.²⁸ However, SMEs have difficulties in complying with their obligations, given the costs associated with the payment of contributions and the administration of employee accounts. To help SMEs, the Australian government created the Small Business Superannuation Clearing House – a free online service for SMEs with less than 20 employees, operated by the Tax Authority. SMEs make one single

²⁷ This problem is not present in the case of automatic enrollment mechanisms where employers are required to offer pension plans to the participants.

²⁸ In a sense, there is no clear distinction between second and third pillar pension systems.

electronic transfer to the clearing-house, which transfers the contributions and manages the accounts on their behalf.

For matching fund contributions to work, it is essential that employers be allowed to deduct the matching contributions from their corporate income tax. While this may seem trivial, the use of simplified taxation in some countries might be an important restriction on the use of this mechanism. For example, in the case of Brazil, more than 80 percent of the companies pay taxes according to a simplified taxation (*lucro presumido*) that assumes a certain rate of return over the company revenues. In such context, there is no room for deduction of matching contributions from the income tax.

Default Contribution Rates

Default contribution rates are an important feature of voluntary pension plans. The pension plans in the United Kingdom are rigid in terms of the contribution rates, as the amounts to be contributed are only those specified in the regulation. Contribution rates in the United Kingdom are relatively modest for the time being, but they are expected to increase gradually between now and 2019. The changes in contribution rates of employers and employees in the United Kingdom appear to have been established to soften any criticism of the introduction of the automatic enrollment into workplace pensions. The United Kingdom is planning to lift the contribution limit starting 2017.²⁹

Table 4. Default Contribution Rates in Selected Collective Pension Programs
(as a percentage of the wage)

	United Kingdom	New Zealand	Italy	USA	Canada/Quebec
Contribution Rate Employer	1%	3%	6.91%	Safe harbor provisions: non elective 3%, or matching contributions	0%
Automatic Escalation Employer	2% 2017-18; 3% 2018/10+	No	No	No	No
Contribution Rate Employee	1%	3%	-	Safe harbor provisions: 3%+	2%
Automatic Escalation Employee	3% 2017-18; 5% 2019	No	No	Safe harbor provisions: 1% increase per year upto 6%	2% 2014-2015; 3% 2016-2017; 4% 2018+

Source: national sources

In the case of New Zealand, employers contribute at a rate of 3 percent of wages, and employees can choose between three contribution rates- 3 percent, 4 percent, or 8 percent. An employee can contribute

²⁹ Department for Work and Pensions (2013).

at another rate, but the rate needs to be agreed directly with the provider. The default rate for the employee is 3 percent.

Automatic enrollment and automatic escalation in the United States are implemented through safe harbor provisions. In the case of the 401(k) plans, there are no default contribution rates in the voluntary automatic enrollment plans, but safe harbor provisions apply. Plan sponsors may opt for a qualified automatic contribution arrangement (QACA), which allows the plan to automatically pass certain kinds of annual required testing. With a QACA, the initial automatic employee contribution must be at least 3 percent of the salary, and has to increase automatically at 1 percent each subsequent year to reach a minimum of 6 percent and a maximum of 10 percent. The employer may offer a non-elective contribution of 3 percent of compensation to all participants, or a matching contribution of 100 percent for salary deferrals up to 3 percent of compensation and a 50 percent match for salary deferrals for the next 2 percent of compensation.

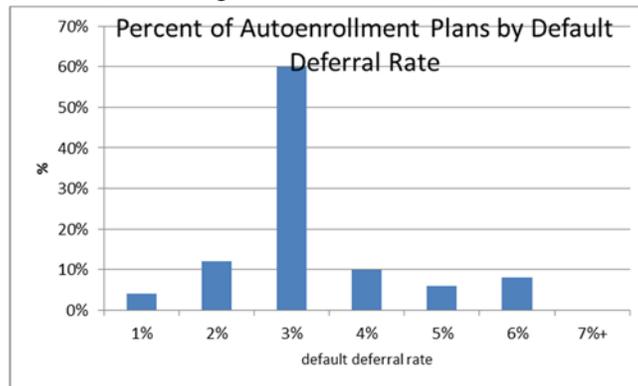
Safe Harbor rules in the United States are designed for 401(k) (and 403b) plans to give a “free pass” to companies on the non-discrimination test when the rules are followed. These rules call for a company to make a specific contribution on behalf of each participant in the plan. Companies may decide on a non-elective contribution on behalf of all eligible participants of a minimum of 3 percent of wages, which must include wages for the entire plan year regardless of the employee’s entry date in the plan. Alternatively, a matching contribution under one of the formulas listed below (a match is allocated only to employees who make contributions to the plan from their own wages).

- a. Basic Match: 4 percent of pay for participants who defer at least 5 percent of their pay, with 100 percent of the first 3 percent of pay that is contributed; and 50 percent of the next 2 percent of pay that is contributed
- b. The Enhanced Match: 100% of the first 4 percent of pay that is contributed to the plan (this is the minimum required under this option). The maximum allowed to get a free pass on the non-discrimination test is 100 percent of the first 6 percent of pay.

Safe Harbor rules play an important role in the adoption of contribution rates in the United States. As shown in Figure 6, in the case of Fidelity funds in 2012,³⁰ approximately 60 percent of the funds offer a 3 percent pay (associated to the non-elective contribution default rates), and the proportion of plan sponsors offering default rates above 6 percent is not significant. Consequently, default contribution rates do matter, even if they are simply suggested through safe harbor provisions.

³⁰ Fidelity investment records of 20,500 corporate DC plans and 11.5 million participants as at December 2012.

Figure 6. Percent of Auto-enrollment Plans by Default Deferral Rate, 2012
(Percentage of auto-enrolled)



Source: Fidelity

In order to avoid the danger of adhering to low levels of contribution in the long-term, in recent years the automatic escalation principle is being integrated with automatic enrollment. This feature may also contribute to a “set it and forget it” behavior, and if the default rate is relatively low, Benartzi and Thaler (2013) show that employees tend to stick with it.

In automatic escalation schemes, employees not only start automatically saving but also automatically (unless explicitly declining) agree that future increase in contributions will be linked to pay rises. Employees do not see their wages nominally decreasing, and at the same time save more with the year.³¹ A survey of 347 large companies conducted by the American Benefit Council in November 2014 found out that approximately a quarter of the companies were offering automatic enrollment with automatic escalation features, and in almost all the cases the escalation rate was between 1.0 and 1.99 percent per annum. As a word of caution, these schemes that are based on “money illusion” may work more in countries with low levels of inflation or where individuals are less familiar with inflation problems: in economies like Chile, with high degree of historical indexation, the introduction of automatic escalation schemes could be less effective.

The case of the Province of Quebec is quite interesting as the default contribution rate from the employer is 0 percent, which means that in the default option all the savings efforts are expected to come from the employees, who are required to contribute at least 2 percent of the wages until 2015. Rates will continue increasing to reach a rate of 4 percent in 2019.

Tax Incentives

Tax incentives are a distinctive part of voluntary pension schemes. Tax incentives might operate at three points in the pension cycle- the contribution point, on earnings or at retirement. As shown in Table 5, in the case of the United States a pension system is compatible with both of them (EET and TEE).³²

³¹ The automatic escalation approach has also been popularized by the Save More Tomorrow (SMarT) slogan. See Benartzi and Thaler (2004).

³² EET comes from Contribution **E**xempted, Interest earned **E**xempted, and Withdrawals **T**axed. TEE comes from Contributions **T**axed, Interest earned **E**xempted, and Withdrawals **E**xempted.

The pension schemes in the United Kingdom and the Province of Quebec in Canada operate with traditional EET schemes.

Table 5a. Tax incentives in back loaded voluntary pension schemes.

	United Kingdom	USA	Canada/Quebec
	Workplace pensions	401k	VRSP
Type of Tax system	EET	EET	EET
Maximum Employee deduction allowed (USD)	7,000 (2013-2014)	17,500	21,300

Source: national sources

Table 5b. Tax incentives in front loaded voluntary pension schemes

	New Zealand	USA
Name of the plan	Kiwisaver	Roth 401k
Type of Tax system	TTE	TEE
Employees can deduct upto	NA	17,500
Tax credit Employee	410	0

Source: national sources

Neutrality between consumption now and consumption in retirement is one of the most relevant concepts for taxing savings, and neutrality is achieved by the use of an expenditure tax. Tax neutrality is broken once the taxes are imposed on interest earned, as they impose inefficiencies in the savings decisions of contributors.

By taxing the portion of income that is consumed, but exempting the portion that is saved for retirement, there are no distortions on the savings/consumption decision. This scheme is similar to imposing a consumption tax.³³ A consumption-type tax treatment can, in principle, be achieved by front-loading and back-loading taxation, while being neutral for the intertemporal budget constraint of government. Examples of this tax neutrality are found in the cases of the private pension funds in the United Kingdom, the 401(k) plans in the United States and the VRSP in the Province of Quebec. On the other hand, Kiwisaver program in New Zealand (TTE) and the IKZE program in Poland (ETT) depart from this neutrality.

In the absence of automatic enrollment, which is the main driver of any voluntary pension fund scheme, tax incentives need to be attractive enough to motivate the participation of active savers. Active savers may play an important role in pulling passive savers, especially if the peer pressure mechanism occurs. The attractiveness of the tax incentives of voluntary savings needs to be measured against the benefits of other tax incentives.

The same tax cannot be used for promoting simultaneously consumption and savings. For example in the case of Hungary, companies receive the same tax benefit if they make contributions to employees in their voluntary accounts, or whether they pass those resources to employees in the form of vouchers

³³ These taxes are also called expenditure taxes.

for consumption. In the presence of a strong demand for consumption, individuals are likely to prefer current consumption to savings.

**Box 1. Automatic enrollment in an individual voluntary pension system:
The experience of Chile, 2012-2014**

In 2012 Chile implemented a temporary automatic enrollment system with opt out option for self-employed persons. The opt-out process was put in place between 2012 and 2014 as a precursor to the implementation of mandatory contributions for self-employed persons in 2015.³⁴ The automatic enrollment system is framed within the traditional open pension fund system that is mandatory for workers who are not self-employed since 1981.

The automatic enrollment is based on an individual voluntary pension system and it is implemented with the support of the Internal Revenue Service (SII).³⁵ The idea was to incentivize self-employed workers to contribute to the pension system by auto-enrolling them into the pension scheme, and giving them the opportunity to opt out. Individuals had the option to make contributions to their pension funds on a monthly basis, or as part of their tax declaration. The process of selecting a pension fund management company and the risk of the asset portfolio follows the mandatory funded schemes, and it has been well documented.³⁶

The program was implemented through a gradual increase in the default rate between 2012 and 2014. Default options established 10 percent contributions over a rate of 40, 70, and 100 percent of the earnings of individuals for the years 2012, 2013 and 2014. In April of each year, at the time of the annual tax income declaration and payment, the Internal Revenue Service prepares a tax declaration for individuals that includes the default options contributions to the pension system.

While the opt out scheme was able to increase contributions from approximately 10 percent of the self-employed in 2011 (before the implementation of automatic enrollment) to one third and one quarter of the self-employed in 2012 and 2013, it fell below the higher expectations that the government had at the time of implementing the plan.

The findings of these experiences also help to validate the importance of default options. Of a universe of approximately 1 million self-employed persons, only approximately 30,000 started contributing voluntarily in 2012. The bulk of the contributors was reactive to the default option.

Three elements explain the mixed results of this program: time frame for opting out; recurring decisions about participation in the system; and payment of the insurance of disability and survivorship with the default option. First, the system was designed in a way that individuals were allowed to opt out until the moment of the tax declaration of the following year. In June 2012, a Chilean local newspaper was highlighting the low rate of opt outs in the system (less than 1 percent of

³⁴ According to the law, contributions for self-employed persons were expected to become mandatory in 2015, but the Minister of Labor and Social Security announced in August 2014 the intention of postponing the year for making the program mandatory.

³⁵ Servicio de Impuestos Internos, SII.

³⁶ See Superintendence of Pensions (2010).

the number of self-employed persons),³⁷ but opt-out rates increased dramatically at the moment of the tax declaration. Combining the moment for opting out from a voluntary pension system with the moment of making the income tax payment may lead to mixed outcomes because individuals have incentives to offset the higher tax expenditures with lower voluntary savings. The second element is the recurrent decisions for making these payments. Individuals are being asked every year whether they want to make voluntary contributions. Since these are savings for retirement, it is redundant even counterproductive to ask every year if the individuals are willing to make these contributions.

The third element is related to the payment of the disability and survivorship. One of the main attractions of making monthly contributions to the pension system is the possibility of being insured against disability and having the benefits of survivorship, by paying a low cost premium, which is common for all the contributors. While insurance is an ex ante concept, the opt-out option requires the payment of this insurance on an ex-post basis (April of the following year), which is an unnecessary expenditure that does not bring any benefits to the contributors.

Overall, the experience of the automatic enrollment for self-employees in Chile brings important lessons on how to design an automatic enrollment scheme in the context of an individual pension fund system. First, the Chilean system is well prepared in terms of default options in the areas of pension fund management companies and investment portfolios. Second, the time frame for the opt-out scheme needs to have a well-defined period for individuals to reflect (or not) on the options available. This period should not coincide with a major event like the tax declarations.³⁸ Third, it is important to give enough time to reflect on the options, but once the opt-out period has passed individuals should not be able to opt-out. Finally, the contributions and charges should be fair and reflect a service that is being received in exchange.

VI. Policy Recommendations

Since the financial crisis, mandatory funded pension schemes have been under attack. To the extent that governments continue following fiscal policies that are inconsistent with a tax financing mechanism for financing the transitional deficits associated with the introduction of mandatory funded schemes, these attacks are likely to continue.

At the same time, pay-as-you-go schemes in most of the countries will be unable to provide adequate replacement rates in the future. In the case of Europe, given the predicted demographic changes and the existing large implicit pension liabilities, many countries will need to revise their pension commitments to future generations.

Voluntary pension schemes may help to fill the gap between lower expected replacement rates and an adequate income in retirement. To the extent that they do not create a transitional deficit, voluntary funded pension schemes could be more resilient to political risk. Since they represent additional

³⁷ <http://www.economiaynegocios.cl/noticias/noticias.asp?id=98463>. The low rate of opt outs in the first few months may also be explained by the lack of knowledge of individuals on the available options.

³⁸ The author would not recommend setting up the end of the opt-out period at Christmas time either!

savings, voluntary pension schemes do not face the political problem of the financing of the structural deficits of the social security systems in most of the countries.³⁹

However, voluntary pension schemes need some fiscal space to operate. While fiscal costs in voluntary pension schemes might be lower than mandatory schemes, governments need to be aware of the fiscal implications of the tax breaks, which can be significant. Governments that are planning to introduce voluntary pension schemes need to design mechanisms for financing the expected reductions in tax revenues during the accumulation phase. The introduction of tax schemes that include a combination of TEE and EET systems may help to alleviate this tension.

Participation of smaller enterprises and SMEs requires having in place simple and well standardized plans (Simple plans) that can reach a proper balance between limiting the fiduciary liabilities of the employers and ensuring that the default options presented to employees are effectively designed to optimize the future pensions of individuals. Employers of SMEs should be able to purchase low cost standardized packages from any pension fund providers.

In addition, within the concept of group pension plans the process for offering a pension plan needs to be made as simple as possible for SMEs. Both employers and employees should be given incentives to participate in the plan via tax deductions on their contributions. Group pension plans provides important benefits over personal voluntary ones, to the extent that it helps to keep the costs low; it avoids the unproductive competition,⁴⁰ it alleviates the regulatory burden as employers share responsibility on the investment options to be presented to the employees; and opens the possibility of matching contributions to enhance the future pensions of employees.

Individuals will be more eager to participate in voluntary schemes if they can estimate the expected replacement rate from other sources of retirement income. It is important for countries to disclose their projections on future replacement rates from other retirement sources, including social security system and mandatory funded schemes. Individuals would be more eager to start voluntarily saving for retirement if they see that the expected replacement rates in the future would be insufficient to ensure consumption smoothing after retirement.

In addition, and in order to get enough coverage, voluntary pension schemes need some drivers that can promote the participation of a broad mass of contributors. While tax incentives are necessary, they are insufficient to ensure broad coverage. Voluntary pension systems based on the power of the sales force typically end up with small coverage, of typically high income people, and have relatively high fees, and negligible impact on total savings.

Soft compulsion mechanisms are the most effective way of expanding coverage among dependent workers.

Peer pressure incentives can work effectively under two conditions: (1) that high income individuals are better off in collective schemes rather than individual ones, and (2) that collective schemes require

³⁹ While the introduction of mandatory funded schemes have been accused of creating transitional deficits, many of the governments that introduced these schemes attempted to finance the deficits with debt. See Schwarz and others (2014).

⁴⁰ Switching contributors from one pension fund manager to another.

some participation of lower compensated employees in the pension plans. Voluntary pension schemes based on peer pressure incentives can be considered in places where soft compulsion mechanisms are not allowed or are subject to some legal restrictions. The coverage reached by the peer pressure system in the 401(k) plans in the United States is not significantly different than the coverage reached by an automatic enrollment scheme in the Kiwisaver plan in New Zealand.⁴¹ Since they involve the approval of a non-discrimination test to ensure the participation of non-highly compensated employees, systems based on peer pressure can be relatively burdensome, especially for smaller enterprises.

The experience of automatic enrollment for self-employed persons in Chile provides encouraging features for designing individual voluntary pension plans. The capacity of the Internal Revenue Service to have the information on the contributors is a *sine-qua-non* condition for the success of these plans. One of the main lessons of this case is the importance of limiting the time frame for opting out of the pension system.

While automatic enrollment or Positive Peer Pressure Schemes can be effective in providing coverage, the design of the pension systems needs to have in place the proper infrastructure for adequate operations of the default options. These default options should include:

- a. Pension plan provider. While the United Kingdom adopted a single provider and this can work very well in a well-developed financial market, this practice should be discouraged in emerging economies due to the political risk.
- b. Investment portfolios. Default portfolios should follow lifecycle strategies. The regulation may take different approaches toward this objective. A more liberal approach may define general principles for designing lifecycle strategies, and a more paternalistic approach may define optimal default portfolios and require pension funds to measure performance against it.
- c. Contribution rate of the employer. This rate could be fixed or associated to a matching fund contribution with a cap.
- d. Contribution rate of the employee. They should start at low levels and rely mostly on automatic escalation.
- e. Automatic escalation provisions. These provisions should leave room for annual real increases in wages, and to minimize the impact on the payroll of employees.
- f. Vesting of contributions. While vesting of employer's contributions is an important element in retaining personnel, automatic enrollment schemes tend to operate with immediate vesting.

Tax incentives have the purpose of motivating individuals to save for retirement. Consequently, funds are not expected to be withdrawn before retirement age. However, the design of the pension system should be prepared to offer some liquidity options under strict circumstances, including disability and financial hardship. Tax incentives should be attractive enough to motivate the participation of active savers,⁴² and should avoid imposing taxes that can distort the

⁴¹ It is important to highlight that currently a figure between one-quarter and one-third of the 401(k) plans have automatic enrollment elements.

⁴² Active savers as defined by Chetty and others (2012).

consumption/savings ratio, such as those that tax pension fund earnings. Linking pension savings to other goals (such as housing) can also be attractive and encourage enrollment.

A pension system that only delivers lump sum payments at the end of the working life should not be called a pension fund system. Voluntary pension schemes should be able to offer a stream of retirement income for individuals and should help to mitigate investments, longevity and inflation risks. A combination of incentives, including default options for annuity type of instruments; with disincentives, including taxes on lump sum payments; and adequacy tests that may allow some lump sum payments depending on the overall replacement rates can help to guide the decisions of individuals toward retirement income profiles that can avoid drastic falls in consumption patterns after retirement. The cases analyzed in this study still need to do further work in respect to the payout phase.

References

- Antolín Pablo, and Olga Fuentes. 2012. Communicating pension risk to DC plan members: The Chilean Case of a Pension Risk Simulator. OECD Working Papers on Finance, Insurance and Private Pensions No 28. OECD: Paris.
- Benartzi, Shlomo and Richard Thaler. 2013. Behavioral Economics and the Retirement Savings Crisis. *Science* vol. 339. AAAS.
- Benartzi, Shlomo and Richard Thaler. 2007. "Heuristics and Biases in Retirement Savings Behavior." *Journal of Economic Perspectives*. Vol. 21 No. 3 81-104. Summer.
- Benartzi, Shlomo and Richard H. Thaler. 2004. "Save More Tomorrow:™ Using Behavioral Economics to Increase Employee Savings", *Journal of Political Economy*, 2004 vol. 112
- Berstein, Solange, and Carolina Cabrita. 2007. "Los determinantes de la elección de AFP en Chile: Nueva evidencia a partir de datos individuales." *Estudios de Economía* 34 (1): 53–72.
- Brinson, Gary P., L. Randolph Hood, and Gilbert L. Beebower. 1986. "Determinants of Portfolio Performance." *Financial Analysts Journal*, vol. 42, no. 4 (July/August):39–44
- Campbell, John Y, and Luis M. Viceira. 2002. *Strategic Asset Allocation: Portfolio Choice for Long-Term Investors*. Oxford. Oxford University Press.
- Chetty, Raj, John N. Friedman, Soren Leth-Petersen, Torben Nielsen, Tore Olsen. 2012. Active vs. Passive Decisions and Crowdout in Retirement Savings Accounts: Evidence from Denmark. NBER Working Paper Series No 18.565. Cambridge, MA.
- Choi James J, David Laibson, and Brigitte C. Madrian. 2011. "\$100 Bills on the Sidewalk: Violations of No-Arbitrage in 401(k) Accounts", *The Review of Economics and Statistics* 113(3):748-63
- Choi, James J., David Laibson, Brigitte C. Madrian, and Andrew Metrick. 2002. "Defined Contribution Pensions: Plan Rules, Participant Decisions, and the Path of Least Resistance." In *Tax Policy and the Economy*, vol. 16, ed. James M. Poterba, 67–113. Cambridge, MA: MIT Press
- Deloitte and Investment Company Institute. 2014. Inside the Structure of Defined Contribution/401(k) Plan Fees, 2013: A study assessing the mechanics of the 'all-in' fee. August.
- Department for Work and Pensions. 2013. Supporting Automatic Enrolment. The Government response to the call for evidence on the impact of the annual contribution limit and the transfer restrictions on NEST. Presented to Parliament by the Secretary of State for Work and Pensions by Command of Her Majesty. July. United Kingdom.
- Madrian, Brigitte C. 2013. "Matching Contributions and Savings Outcomes: A Behavioral Economics Perspective," in *Matching Contributions for Pensions: A Review of International Experience* by Richard Hinz, Robert Holzmann, David Tuesta, and Noriyuki Takayama, (eds). The World Bank.
- Madrian Brigitte C. and Dennis F. Shea (2001), "The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior", *The Quarterly Journal of Economics*, November 2001;

Price, Will and Heinz P. Rudolph. 2013. Reversal and Reduction, Resolution and Reform: Lessons from the Financial Crisis in Europe and Central Asia to Improve Outcomes from Second Pillar Pensions. Working Paper 77779. The World Bank. Washington DC.

Rinaldi, Ambrogio. 2010. Pension Awareness and Nation-Wide Auto-Enrolment: The Italian Experience. Paper prepared for the proceedings of the OECD-Banca d'Italia Symposium on Financial Literacy Roma, 9 June 2010.

Schwartz, Anita and Omar Arias, Asta Zvinienne, Heinz Rudolph, Sebastian Eckardt, Johannes Koettl, Hewig Immerovoll, Migliena Abels. 2014. The Inverted Pyramid: Pension Systems Facing Demographic Challenges in Europe and Central Asia. The World Bank. Washington DC.

OECD (Organisation for Economic Co-operation and Development). 2012. OECD Pensions Outlook. Paris: OECD.

Randle Tony, and Heinz P. Rudolph. 2014. Pension Risk and Risk-Based Supervision in Defined Contribution Pension Funds. World Bank Policy Research Working Paper Series No. 6813. March. The World Bank. Washington, DC.

Rocha, Roberto, Dimitri Vittas, and Heinz P. Rudolph. 2014. *Annuities and Other Retirement Products: Designing the Payout Phase*. Directions in Development Series: Finance. The World Bank.

Rudolph, Heinz and Augusto de la Torre. 2016. Building Efficient Mandatory Pension Fund Systems: Lessons from Chile. Draft. The World Bank.

Superintendence of Pensions (2010): "The Chilean Pension System", 7th Edition. Available at <http://www.spensiones.cl/portal/informes/581/w3-propertyvalue-5862.html>

Schwarz, Anita, Omar, Arias, Asta Zvinienne, Heinz Rudolph, Sebastian Eckard, Johannes Koettl, Herwig Immervoll, and Migliena Abels. 2014. *The Inverting Pyramid: Pension Systems Facing Demographic Challenges in Europe and Central Asia*, Washington DC: World Bank.

Thaler, Richard H. and Cass R. Sunstein. 2008. *Nudge: Improving Decisions about Health, Wealth and Happiness*, Yale University Press, New Haven.

Vanguard. 2014. How America Saves 2014: A report on Vanguard 2013 Defined Contribution Plan Data. March.

World Bank. 2014. Program Document for a Proposed Loan in the Amount of US\$400 million to the State of Bahia with the Guarantee of the Federative Republic of Brazil, for a strengthening fiscal management and promoting better and more inclusive service delivery , Development Policy Loan. International Bank for Reconstruction and Development. The World Bank. Washington. DC

World Bank. 2012. Program Document for a Proposed Loan in the Amount of EURO 750 Million to the Republic of Poland. Report 68697-PL. Washington, DC: World Bank.