

Reforming Social Security in the U.S.: An International Perspective

LESSONS FROM ABROAD CAN HELP THE U.S. GET IT RIGHT.

By Estelle James



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Social security reform (or its absence) will have important impacts throughout the U.S. economy, including business. This paper describes the multi-pillar social security reform strategy that many countries have adopted in recent years. This strategy includes a public pillar that provides a social safety net; a privately managed, funded pillar that handles peoples' mandatory retirement savings; and a voluntary pillar for people who want more consumption in old age. The basic rationale is that relying to some extent on pre-funding and defined contribution plans enhances system sustainability and has a positive impact on the broader economy by increasing long term national saving and labor market incentives.

The paper contrasts three variations on the multi-pillar model—the Latin American model pioneered by Chile, in which individual workers choose the investment manager for their retirement funds; the OECD model, in which employers are required to provide a retirement plan and (sometimes together with union trustees) choose

the investment manager; and the institutional model in which small individual accounts are aggregated into large blocs in order to keep administrative costs low and negotiate better fees.

The paper explores the relevance of these experiments in other countries for the social security debate in the U.S. If a small proportion of the current contribution rate to social security were “carved out” and placed in individual accounts that earn a market return, this would help to keep over-all benefits at their present level without a tax increase. It would increase the sustainability of the system and, under conditions specified in the paper, would also enhance economic growth. This transition could be financed in many different ways, but use of the budgetary surplus might have the most beneficial impact on growth, while partial reliance on borrowing, with scheduled repayment, would provide the greatest inter-generational equity.

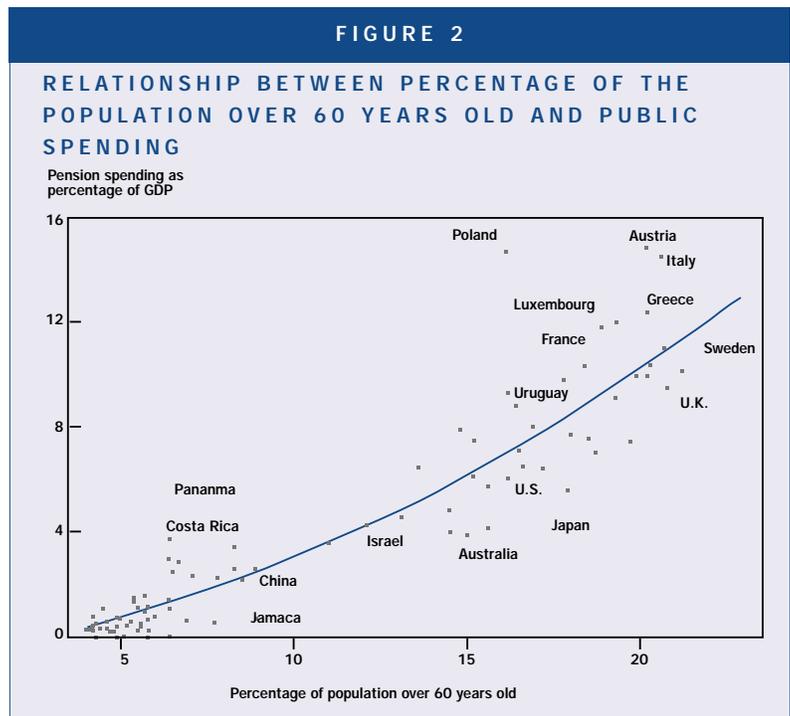
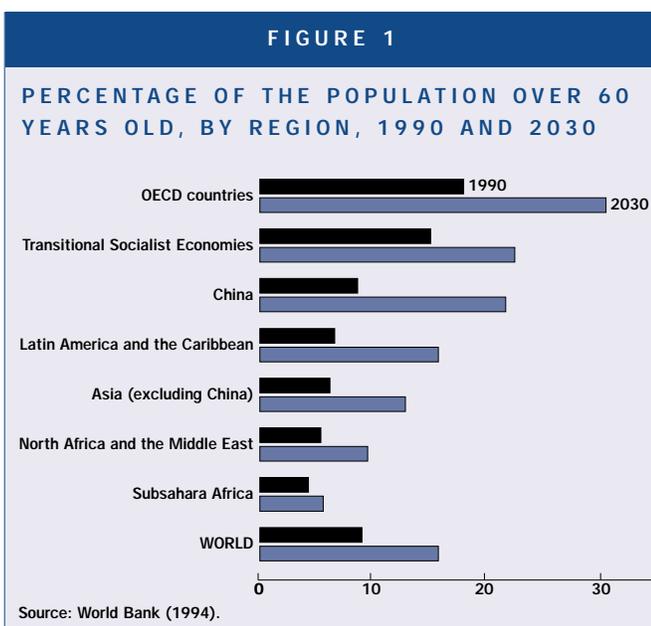
The U.S. presidential election of 2000 put social security reform on the political agenda. Rather than treating social security as the third rail, to be avoided at any cost, both major candidates took strong and contrasting positions as major parts of their campaigns. It is likely that the debate will accelerate over the coming year, possibly resulting in significant changes in our current system. The outcome will have widespread ramifications for business as well as for the rest of society. Changes in social security will affect aggregate economic growth, the health and

composition of financial markets, and incentives to work and save.

The U.S. is not unique in its willingness to pay attention to this issue. Over the past decade, many countries around the world have confronted serious problems with their current systems and have instituted major structural reforms. This article aims to place the U.S. debate in international perspective. It explains the problems with old systems that have led countries to reform, outlines the commonalities and differences in reforms around the world, and considers the applicability to the U.S. The most important commonality is the shift toward greater pre-funding, in accounts that are privately managed, as an important part of the mandatory social security system. This shift is designed to make the system more sustainable, more equitable, and more favorable toward economic growth—objectives that are widely shared in the U.S. These shared objectives suggest that such a shift may be appropriate in the United States, also.

It may come as a surprise to many to note that, compared with many other countries that have not yet reformed, the U.S. social security system is relatively healthy. Yet, it is clearly not sustainable with its current contribution and benefit rates, since cash outflows will exceed inflows in just a few years. How can we cover this gap in a way that minimizes the cost, is fiscally balanced, contains mechanisms that will keep it that way in the long run, and increases national income that will be available both for old and young? The experience of other countries may help us find an answer.

Over the next thirty years, the proportion of the world's population that is over age sixty will nearly double, from nine percent to sixteen percent. Population aging is due to a sharp drop in the birth rate, hence relatively fewer young people, together with an increase in life expectancy, particularly at the older end in recent years. In industrialized OECD countries almost thirty percent of the population will be over age sixty by 2030. (Figure 1). The population of the U.S. is still young compared with most European countries and Japan, but the proportion of

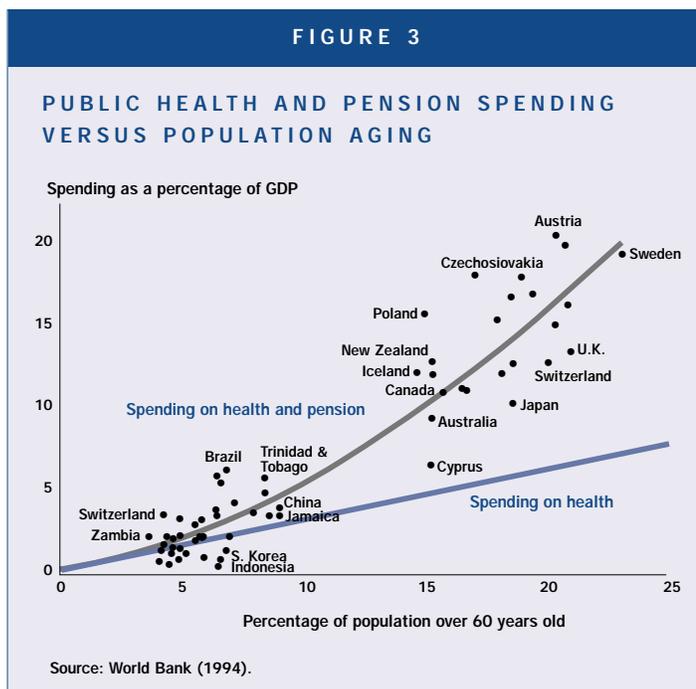


people over sixty will increase from seventeen percent to twenty-eight percent in this period.

Cross-sectional analysis shows that public spending on formal pension plans increases exponentially as populations age. In developing countries today, only two to three percent of GDP is spent on old age security, but in many industrialized countries this figure now exceeds ten percent, and it will grow still higher in the years ahead (Figure 2). Because of its young demography, U.S. expenditures on old age security are now only six percent of GDP but this number will escalate when the baby boomers start to retire; and public spending on pensions and health (primarily Medicare) combined is already almost twice as high (Figure 3). Programs for the old are by far our largest civilian public programs and they are destined to grow further.

With such large sums involved, how this money is generated and spent can affect the entire economy, by influencing the quantity and productivity of labor and

FIGURE 3



capital and therefore the level of national income. For example, high payroll taxes for old age pensions can discourage employment or work effort among the young, and subsidized early retirement can reduce the supply of experienced labor, which will be especially harmful as populations age—so these policies have a negative impact on economic growth. In contrast, pension plans that accumulate retirement funds in advance can help to increase long term national saving—which many economists feel would be desirable in the U.S. If a fund is accumulated, it is important to invest it in the most productive way—a rationale for private rather than public management of the funds.

Also, with such large sums involved and so many people dependent on old age programs, it is important to structure them so that they remain fiscally sustainable, even as external conditions such as life expectancy change in unexpected ways. This places a premium on systems that are self-equilibrating, whose parameters adjust automatically, to avoid a difficult political decision process at every turn.

Increasingly aware of these broad effects, countries have been reforming their systems to:

- protect the old by remaining sustainable
- provide an equitable distribution of benefits and costs
- promote (or at least not hinder) economic growth

While the demographic transition has brought pension reform to the forefront of the policy agenda, the impact on growth and the political economy of sustainability is important, both for the old and young. These have constituted the basic reasons for structural rather

than piecemeal reform of social security systems. The most common type of structural reform involves implementing a “multi-pillar system” that includes:

- a publicly-managed social safety net as one part or “pillar” of old age security
- a privately managed retirement savings account as a second mandatory pillar
- a third pillar for those who want additional retirement income on a voluntary basis

The second pillar is the newest and most controversial one. The rationale for it is that growing old is a predictable life experience that most of us will have with a high probability, so a significant part of old age security can be provided by personal saving. Moreover, greater reliance on saving can reduce many of the incentive problems associated with tax and transfer systems, thereby having a positive impact on the over-all economy. The establishment of personal accounts with part of the social security tax, which has been proposed in the United States, is a typical form that such a structural reform might take.

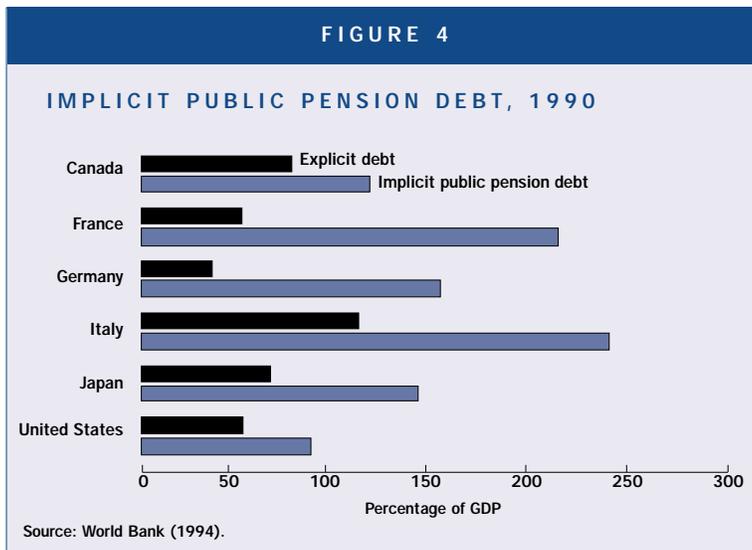
Over the past few years, many countries have adopted multi-pillar old age security systems. Although structural change is always difficult, the experience of these countries shows that it is possible, that it takes somewhat different forms in different places, and that it usually involves transition costs that are spread over several generations. This is accomplished by some borrowing initially, but with a well-thought out repayment plan so the transition debt remains small and temporary. Preliminary empirical evidence suggests a positive impact on efficiency and growth.

The next section of this paper briefly describes the almost universal problems in traditional systems and sets forth the generic multi-pillar model that was designed to correct these problems. The third section contrasts three versions of this model that are now being implemented—the Latin American model in which workers decide how their savings will be invested, the OECD model in which employers and/or union representatives control the investment strategy for an entire enterprise or occupation, and the institutional model in which worker choice is constrained in order to economize on administrative costs. Methods used to cover transition costs are discussed in the fourth section. The concluding section raises questions about implications for the U.S.

Problems in Traditional Social Security Systems and the Multi-Pillar Response

New systems are a response to the problems of old systems. Therefore, it is important to start by summarizing these problems. Most old age security systems established by governments in the past were financed by payroll taxes

on a pay-as-you-go (PAYG) basis—meaning that the contributions made by today’s workers are used to pay the pensions of those who have already retired. The pensions were defined benefit (DB), according to a formula based on the worker’s earnings and years of service. These systems, including the U.S. social security system, have helped many old people live out their senior years with



dignity and security.

However, it is now widely recognized that these systems generate many problems. The problems were small when the systems were immature and small, but they can no longer be overlooked as the systems mature and grow. These problems concern sustainability, growth and equity.

Sustainability. Most public attention has focused on the sustainability problems. When populations are young and eligible retirees are few, it is popular and tempting for policymakers to promise generous benefits to workers. Promises are cheap, but when these workers retire the promises come due. Thus, a large implicit pension debt accumulates in every PAYG system—the present value of the benefit promises that have been made to current workers and pensioners. It is an implicit debt because it is not written down or legally binding, but it is a debt in the sense that most of it must be paid. In every industrialized country where this implicit pension debt exceeds the explicit debt (bonds), it usually exceeds 100 percent of GDP and in some cases it exceeds 200 percent (Figure 4). The U.S. is fortunately at the low end on this score because our benefits are quite modest and our population is still quite young. But as the baby-boomer bulge moves through the system, our pension debt will also increase. Most countries would be horrified by an explicit debt that exceeds 100 percent of GDP, but are hardly aware that they are building a much larger implicit debt.

Under a PAYG system, the contribution rate required to balance the books in a given year can be expressed as: $C = B/S = B \times D$,

where C is the required contribution rate as a percentage of wages, B is the average benefit as a percentage of average wage, S is the support ratio (the number of workers per retiree), and D is the dependency ratio (the number of retirees per worker). As the PAYG system matures and the population ages, which is currently happening almost everywhere, the dependency ratio (D) grows (and S declines). Thus, either B must go down or C must go up.

Parametric changes in the system—raising the contribution rate or the retirement age, reducing the pension, modifying the indexation formula—could make these systems solvent. However, it is very difficult for politicians to inflict short-run pain in order to gain long-run sustainability. Moreover, they would have to inflict the pain not once, but repeatedly, as changes continue to occur—hardly a self-equilibrating system. For example, every time the trustees of the U.S. social security system have assessed its fiscal soundness, they have found that people are living longer than expected the previous time, and therefore some adjustment to the benefit formula or contribution rate is needed to keep the system solvent.

Growth. In addition to these sustainability problems, PAYG systems have negative effects on economic growth:

- high and rising payroll taxes for pensions (exceeding twenty-five percent of wages in many countries) may increase unemployment or evasion and decrease revenues available for other public goods
- early retirement on actuarially unfair terms (often below the age of sixty) reduces the supply of experienced labor
- private saving may be discouraged by the gift of benefits to the first generation of retirees and the continued provision of public annuities to future generations

In the U.S. the payroll tax is relatively low, the retirement age is relatively high, and early retirement is penalized. However, even though our national savings rate is considered too low by many economists, we have not used our old age security program as a way to raise it: quite the contrary.¹

Equity. Finally, empirical evidence has cast doubt on the equity of many traditional systems. In many countries, rich people gain at the expense of the poor, since rich people live longer, and therefore collect benefits for more

¹For examples of the extensive literature on the impact of social security on retirement age and savings see Gruber and Wise (1997), Kotlikoff, Gokhale and Sabelhaus (1996), and a summary of this literature in World Bank (1994).

years. Although the U.S. has a relatively progressive benefit formula, this tends to be offset by the greater life expectancy of the rich, a disparity in life span that has been increasing. Under the defined benefit formula in effect in most countries, workers whose wages increase toward the end of their careers receive a larger future pension that, in effect, is financed by others. Moreover, workers who retire before the age of sixty receive benefits that are subsidized by a tax on the labor of those who work longer. These are not big problems in the U.S., but the U.S. has other surprising and questionable winners and losers. For example, single career married families fare better than unmarried households, while dual career families fare worst of all in terms of the benefit/tax ratio.

However, the biggest inequity in PAYG systems of virtually all countries stems from the payment of generous benefits to the first generations of workers who retired under social security. These were the biggest gainers. They contributed small amounts for only part of their working lives and received relatively generous benefits for their entire retirement. They took out of the system much more than they put in. The money paid to them prevented the build-up of funds in the accounts of younger workers and left us with a large unfunded debt to these workers. While most of us might be glad to pay these redistributions to low earners who suffered through the depression and war, high earners benefited as well—in fact, more. This debt is being paid by future generations, young and middle-aged workers today, including many low earners who will get a low return on their social security contributions (lower than the interest rate on government bonds)—but who were not even alive to participate in the political decision to tax them—hardly an equitable procedure. While this start-up money has long since been spent, these nontransparent redistributions across generations will continue under a PAYG system.²

To avoid these dangers, many countries have been adopting structural changes in their social security systems. They have been switching from defined benefit (DB) to defined contribution (DC) plans for the beneficial labor market effects, from PAYG to funding for the long term savings and financial market effects, and have adopted a social safety net that is clearly targeted toward low earners. Specifically, these new systems contain three pillars (Figure 5):

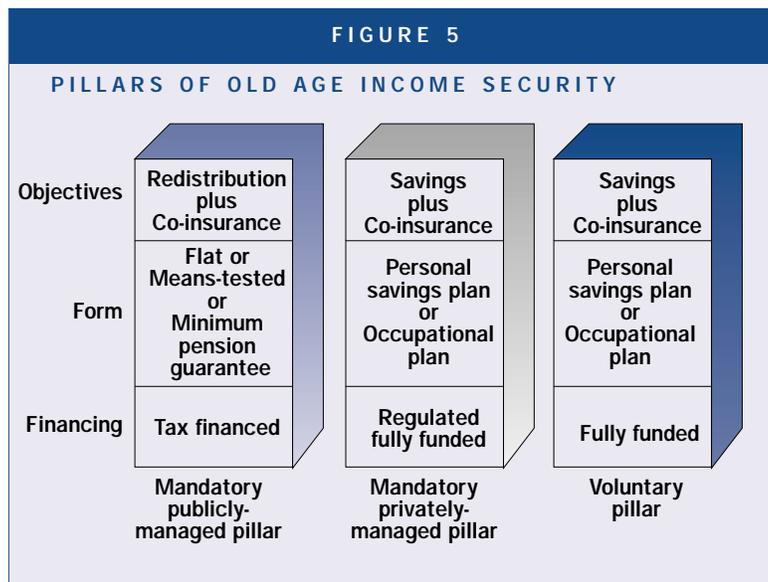
- a mandatory publicly-managed tax-financed pillar for

²For a summary of the large literature on intra- and inter-generational redistributions under PAYG see World Bank (1994). For applicability to the U.S. see Kotlikoff (2001) and Feldstein (2000).

poverty prevention

- a privately-managed funded pillar (personal accounts) for retirement saving
- a voluntary pillar for people who want more protection for old age

Although Chile is given credit for being the first country to introduce a multi-pillar system in 1981, Switzerland actually adopted it earlier but delayed implementation until 1985.



How Have Countries Reformed? Commonalities and Differences

During the past two decades, especially in the 1990s, about twenty countries from Latin America, Europe, and the Asia-Pacific region have adopted variations of this multi-pillar theme (Figures 6 and 7).

This number is likely to increase substantially, as we see a domino effect spreading in Eastern and Central Europe and the former Soviet Union over the next few years. We have learned from this experience that pension reform is possible, even in democracies and even in welfare states. We have learned that structural social security reforms have certain commonalities, but also many differences—as a result of different initial conditions and political economies.

The most important commonalities are:

- a partial shift from defined benefit plans to defined contribution plans
- a partial shift from PAYG to pre-funding
- shared responsibility between the public and private sectors
- separate arrangements or “pillars” for the poverty-prevention part of the old age system (the public pil-

FIGURE 6

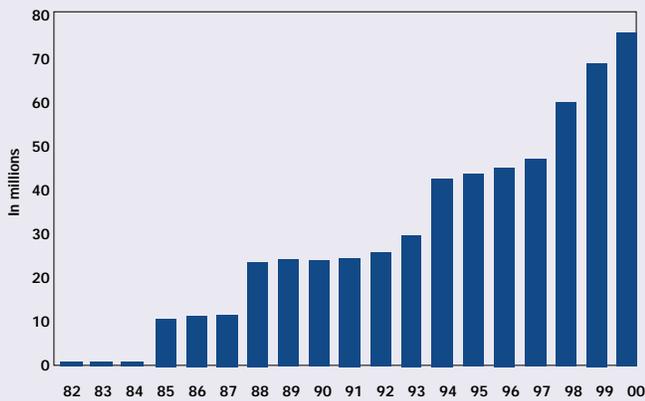
DIFFUSION OF STRUCTURAL REFORM AROUND THE WORLD, 1980-2000



Source: James and Brooks (2000).

FIGURE 7

NUMBER OF CONTRIBUTORS TO A MANDATORY PRIVATE PLAN, 1982-2000



Source: Palacios and Pallares-Miralles (2000).

lar) and the retirement savings part (the private pillar)

The term “privatization” of social security has been applied to these reforms because of the key role assigned private pension and investment companies. However, it would be more accurate to call them a public-private partnership, since each sector plays an important role.

The reforming countries also exhibit important differences, chief among them being the nature and size of the public pillar and the question of who chooses the investment managers in the private pillar.

While most of these reformed systems are still too new to evaluate, the experience of Chile is encouraging. Their new system has accumulated large assets to match its liabilities, average annual real returns have exceeded ten

percent, evasion appears low, the formal labor sector is growing relative to the informal, long term saving has increased, financial markets have developed, and the poor are protected. Consequently, the new pension system has been credited with making a major contribution to the high rate of growth in Chile over the last twenty years.³

The Public Pillar

The public pillar in most reforming countries is publicly managed, largely unfunded, but smaller and more focused on redistribution than traditional PAYG DB plans. Its primary responsibility is to provide a social safety net for the old, particularly the old whose lifetime income was low.

But important differences emerge when we look closer. In some countries (Chile, Mexico, El Salvador, and Kazakhstan) the first pillar simply provides a minimum pension guarantee (MPG), a promise that the government will top up the pension from the individual’s retirement savings account if it fails to provide an annuity that is at least twenty-five percent of the average wage. Australia and Hong Kong offer a public benefit that is means- and asset-tested, similar to the MPG but taking all income and assets into account for eligibility. This may be fairer but harder to administer. In the Netherlands, Denmark, Argentina, and the U.K. the benefit is flat (uniform for everyone or uniform per year of covered employment), while in Uruguay, Hungary and Poland the public benefit rises strongly with earnings, up to a limit. The first alternative is obviously the cheapest and most targeted toward low earners, while the last is more expensive but provides additional co-insurance to middle class workers. In Denmark, Australia, Hong Kong, Chile, and Mexico the public pillar is financed through current general tax revenues, while in Switzerland it is financed by a payroll tax with no ceiling on taxable earnings—arrangements that make the system more progressive than that in the U.S.

In the U.S., proposals abound for each variation; so this is one of the choices we have to make. In doing so, we should bear in mind that the public pillar is the instrument for shaping the distributional effects of the entire system. Some proposals would put greater emphasis on the new funded pillar of personal savings accounts and would simply rely on the public pillar to provide a MPG. Probably the most popular plans include a PAYG pillar that would be a downsized version of our current social

³For a summary of this literature, see James (1998a) and (1998b), and Schmidt-Hebbel (1999a).

security system—where benefits rise with earnings but more slowly, making it more progressive. This might be buttressed by measures such as a floor on benefits (not present in our current system) or possibly by raising the ceiling on taxable earnings. Other potential changes are discussed in the following section on transition costs.

The Private Funded Pillar: Commonalities

The second pillar differs dramatically from traditional systems. Its most important characteristics are: it is mandatory; it links benefits actuarially to contributions, often through a DC plan; it is fully funded; and it is privately, competitively managed. These are the personal retirement accounts that were discussed during the presidential campaign. Contribution rates to the second pillar vary widely, but range between seven and twelve percent of payroll in most countries. Since this is the newest and most controversial of the three pillars, it is worth examining the rationale for these common characteristics.

Why mandatory? The rationale here is myopia and moral hazard—a significant number of people may be shortsighted, may not save enough for their old age on a voluntary basis, and may become a burden on society at large when they grow old. In countries that have adopted structural reforms, retirement savings pillars have been adopted as part of the mandatory scheme in order to keep the PAYG tax and transfer system small. In countries where retirement saving plans are voluntary, coverage is invariably less than half of the population. The bottom half of the income distribution is unlikely to save for retirement in illiquid accounts on a voluntary basis. The PAYG part of the system—with all its problems—therefore continues to carry a large burden.

Why defined contribution? DC is actually another term for personal saving accounts with a fixed contribution schedule. The worker simply accumulates his or her defined contributions plus the investment returns earned and eventually turns this into retirement income. In a DC plan, benefits depend linearly on the contribution rate; there is no intervening DB formula that cuts this link. This close link between contributions and benefits is designed to discourage evasion and labor disincentives. Evasion and escape to the informal sector are big problems in many countries, especially developing countries. In DC plans, those who evade bear the cost in the form of lower accumulations and benefits rather than passing the costs on to others and undermining the financial viability of the scheme. Very importantly, the pension that is eventually acquired through the market is likely to be actuarially fair, meaning that workers have some choice over their own retirement age, but those who choose to retire early bear the cost themselves by getting a lower benefit. For this

reason, DC plans are likely to deter early retirement and to raise the normal retirement age automatically as longevity increases—without a collective decision that is often difficult for politicians to make.⁴

Why fully funded? First, for countries with relatively young systems, pre-funding makes costs clear up front so policymakers won't be tempted to make promises today that they will be unable to keep tomorrow. Second, it avoids steep payroll tax increases that are needed in a PAYG system as populations age, for the reasons just described. Third, it prevents large, inadvertent, intergenerational transfers from young people to older workers. Fourth, funding may be used to help build and mobilize national saving, particularly saving that is committed for the long term.⁵ If savings are sub-optimal to begin with, due to public or private myopia or a tax wedge between social and private returns, the increase in savings increases efficiency as well as growth. That is, the increase in saving can make everyone better off under these circumstances. These savings can be invested productively at home and abroad, they can enhance worker productivity and output, and they can later be redeemed by individuals to finance consumer goods. Thus, saving can be an important ingredient of a long run strategy for increasing productivity and providing additional domestic consumption when the ratio of retirees to workers increases.

However, pre-funding retirement accounts will increase national saving only if it does not crowd out other private savings or increase public dissaving. Regarding the first point: if workers believe that a pre-funded system is more credible than a PAYG system, they may save less on a voluntary basis for their own old age (or borrow more for current consumption), thereby offsetting some of the increased mandatory saving. In the U.S., since few people save voluntarily, this offset is likely to be small, except among high earners. The fact that the saving constraint will be more binding for low earners is a reason for targeting the public pillar more closely toward this group.

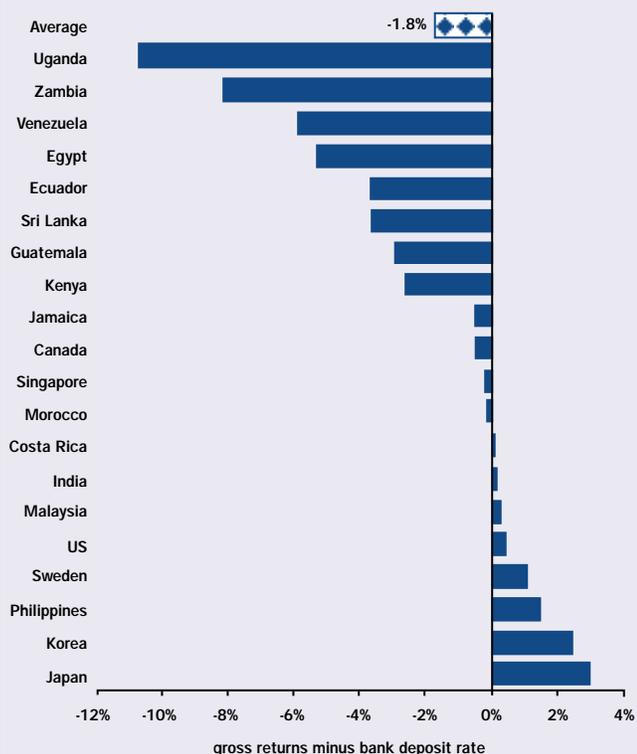
Regarding the second point: if the build-up of pension reserves relaxes fiscal discipline, or if the government finances the transition through issuing additional bonds, this will simply mean that increased public deficits have absorbed the increased personal saving. The choice of debt finance versus other means of financing the transition will be discussed further below. In Chile, where this issue has been actively researched, the current consensus

⁴See Gruber and Wise (1997) for evidence from many countries that actuarial adjustments, which reduce the implicit tax on labor, raise the labor force participation of older men.

⁵See Musalem and Catalan (1999) for evidence that long-term saving is particularly beneficial to financial-market development and growth-enhancing investment.

FIGURE 8

RETURNS TO PUBLICLY MANAGED PENSION FUNDS MINUS BANK DEPOSIT RATE



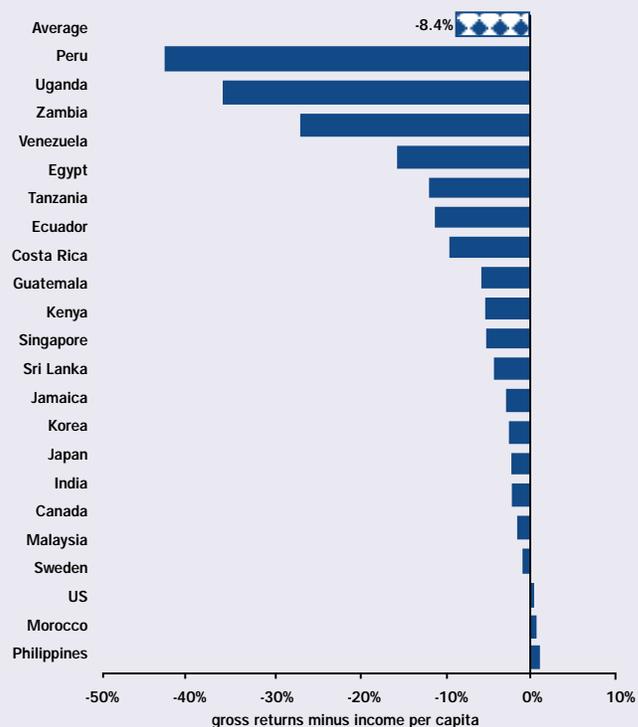
Source: Palacios and Pallares-Miralles (2000).

is that total national saving increased significantly as a result of the pension reform (Schmidt-Hebbel (1998), (1999a), and (1999b) and James (1998a) and (1999b)). In the U.S., the largest contribution to saving for financing the transition is likely to come from use of the budget surplus, which would reduce its availability for increased government spending or tax cuts.

Why privately managed? This maximizes the likelihood that economic rather than political objectives will determine the investment strategy, thereby producing the best allocation of capital and the highest return on savings. Empirical data show that publicly managed pension reserves around the world typically earn low returns, far below the bank deposit rate or the growth of per capita income (Figures 8 and 9)—largely because public managers have been required to invest in government securities or other politically motivated loans that pay low rates of return (Iglesias and Palacios 1999). Politicians are also subject to pressures to raise benefits if publicly managed funds are available (for example, this happened in the early years of the U.S. social security system). Moreover, the hidden and exclusive access to these funds makes it easier for governments to run large deficits or to spend more wastefully than they could if they had to rely on a

FIGURE 9

RETURNS TO PUBLICLY MANAGED PENSION FUNDS MINUS GROWTH RATE IN PER CAPITA INCOME



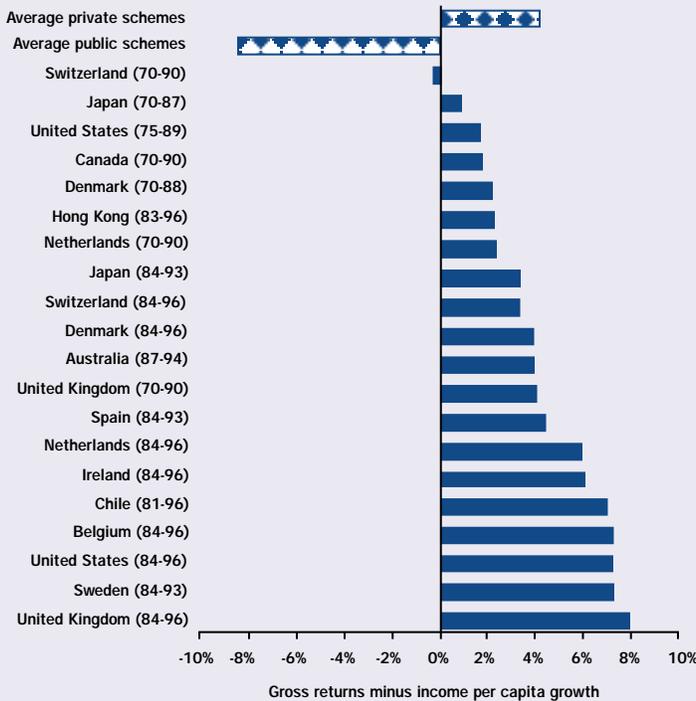
Source: Palacios and Pallares-Miralles (2000).

more accountable source of funds—a negative impact on the economy as well as the finances of the pension system. (Some economists believe this happened in the 1980s in the U.S., as the social security trust fund was used to finance the public deficit in a non-transparent way).

Competitively managed funded pension plans, in contrast, are more likely to be invested in a mixture of public and corporate bonds, equities, and real estate, thereby earning a higher rate of return (Figure 10). They enjoy the benefits of investment diversification, including international diversification, which enables them to increase their yield and reduce their risk. They build constituencies that help them resist political manipulation. They spur financial market development by creating a demand for new financial instruments and institutions, especially important in middle-income countries. In Chile, financial markets became more liquid as the number of traded shares on the stock market and their turnover increased; demand was created for the equities of newly privatized state enterprises; information disclosure and credit-rating institutions developed; the variety of financial instruments including indexed annuities, mortgage and corporate bonds grew; and asset pricing improved. These developments have played a particularly important role in

FIGURE 10

RETURNS TO PRIVATELY MANAGED PENSION FUNDS MINUS GROWTH RATE IN PER CAPITA INCOME



Source: Palacios and Pallares-Miralles (2000).

explaining Chile's rapid growth rate during the twenty years that have elapsed since it started its multi-pillar system. (Valdes-Prieto (1998) and Schmidt-Hebbel (1999a); also see Musalem and Catalan (1999) on OECD countries.)

How a Shift to Pre-funding Increases the Rate of Return on Social Security Contributions

The rate of return in a PAYG system is (approximately) the rate of wage growth plus the rate of population growth, both of which raise the payroll tax base. With a stable population and a wage growth rate of, say, two percent, this yields a two percent rate of return to contributions. In contrast, the rate of return in a funded system is the return on investments, which historically has been over five percent in real terms. This means the individual will get a larger pension from his contribution in a funded system. If the current situation in the U.S. were amended to include a carve-out to funded individual accounts, total benefits would not have to fall as far as they would under a pure PAYG structure, and might not have to fall at all.

A crucial question is, does this higher rate of return for social security beneficiaries imply income cuts elsewhere in the economy? The answer depends on whether

growth and efficiency have increased. If the size of the national income pie is constant, then more for one group necessarily means less for some other. For example, it may mean that some voluntary retirement saving has been crowded out, so consumption from that source has declined while consumption from the mandatory accounts increases. However, if the original savings rate was suboptimal because of myopia and if the pre-funding combined with appropriate transition finance increases national saving that is productively invested, then there will be a larger pie and more to go around for everyone. Similarly, if the original retirement age is suboptimal because people underestimate longevity, then inducing or requiring them to work longer can ultimately make them better off because of their higher personal income as well as raising national income: this is a positive sum game.

Moreover, the three pillars taken together reduce the totality of risk that old people face by diversifying across types of management (public and private), sources of finance (from labor and capital), and investment strategies (equities and bonds, domestic and international). Risk diversification is especially important given the long time periods and great uncertainty involved.⁶

The Key Difference among Private Pillars

The most important difference among countries regarding the private pillar is in the arrangements they make for choosing investment managers. Three different patterns have emerged: the Latin American model, where individual workers choose; the group model found in many OECD countries, where employer and/or union representatives choose the manager for an entire company or industry; and the institutional model, now being explored in Bolivia and Sweden, where small contributions are aggregated into large money blocs, and fees are negotiated centrally in an effort to keep administrative and marketing costs low. If we set up a system of mandatory retirement accounts in the U.S., key decisions would be who should choose the investment managers? how much should we constrain worker choice? and what are the criteria for firms to enter that market?

Latin American model. The Latin American model was pioneered by Chile in 1980 and, bolstered by its initial success, was closely followed by Argentina, Peru, Colombia, Mexico, Uruguay, Bolivia, and El Salvador in the 1990s. It has just been adopted by the first countries outside the region: Kazakhstan, Hungary, and Poland. In

⁶See World Bank (1994) for more details about the problems of old systems and the new multi-pillar system.

this model, each worker chooses the investment manager of his or her own individual retirement account—consistent with the object of individual choice and responsibility. Pension funds can freely enter the market and choose their own fee, subject to regulations.⁷

OECD model. The OECD model, by contrast, was built on the widespread existing employer-sponsored pension plans in industrial countries and made them the foundation for the second pillar. These plans simply became mandatory instead of voluntary, either through legislation or de facto through collective bargaining and governmental suasion. Although Switzerland was the first country to move in this direction, Australia, Denmark, and the Netherlands have done so as well, and in the U.K. this is an optional alternative to the state plan. In this model the employer or a combination of employer and union trustees choose the investment manager for each company or occupational group as a whole. This enables them to benefit from economies of scale and financial expertise. However, in DC plans it introduces the principal-agent problem—where employer or union representatives choose the investment manager but workers bear the risk. Thus, the choice may not be in the workers' best interest and may not maximize risk-adjusted returns. For this reason, workers may ultimately demand more individual choice in OECD countries and have already been given this choice in the U.K. and Australia.⁸

The Bolivian and Swedish "institutional" model. The biggest criticism of multi-pillar systems is the high administrative costs that have developed in some countries using the Latin American model. These can cut annual returns from workers' retirement accounts as much as one to one-and-one-half percent, making the pensions ultimately twenty to thirty percent lower than they would have been in the absence of these costs. While expenses related to investments and record-keeping are inevitable in any system of retirement savings, about half of these total costs are due to marketing expenses that may be avoidable. To put these numbers into perspective, similar fees and expenses are found in U.S. mutual funds and other retail financial institutions in which millions of individuals have invested on a voluntary basis. So the perceived benefits far exceed the costs for many people. Nevertheless, they are a source of concern in mandatory systems where everyone is forced to participate and pay.

In contrast to these costs and fees, large institutional

investors (company DB plans, foundations, endowments) face much lower rates—presumably because of scale economies, lower marketing expenses, better information, and greater bargaining power. The reformed systems in Bolivia and Sweden represent attempts to use or mimic the institutional market to achieve lower fees in their mandatory systems by aggregating numerous small accounts into large money blocs and negotiating a group rate.⁹

In Bolivia, an international competitive auction process was used to select two pension funds to run its mandatory private pillar. Although initially assigned, workers will soon be given the choice between them. This competitive bidding process has resulted in much lower costs relative to assets and affiliates in Bolivia than in other Latin American countries. In Sweden, after studying cost functions in the Swedish financial market, the pension authorities established a maximum fee schedule that asset managers could use for mandatory retirement accounts. Workers are permitted to choose among the large number of mutual funds that entered the market; but the money is moved in large blocs, records are kept centrally, and funds do not even know the names of their affiliates—an attempt to avoid sales commissions. The allowable fees, again, are much lower than those charged in Latin America or Eastern European pension funds, or in the voluntary mutual fund industry in Europe or the U.S.

A number of schemes, designed to keep costs low, have been proposed in the U.S. For example, to achieve institutional rates while maintaining individual worker control, the government could specify several investment portfolios with different risk-return trade-offs and auction off operating rights to a limited number of investment companies, among which workers can choose. Use of passive investing could be emphasized, the allowable tracking error could be specified, and the winners could be based on who charges the lowest administrative fees. The Thrift Saving Plan, a voluntary retirement plan for U.S. federal employees, uses a competitive bidding process to choose its money managers, at a total cost of eleven basis points (.11 percent). The downside of this process is that investment options are restricted, so some workers will not be able to get the manager and portfolio of choice, incentives for good performance are limited, and adaptability to unforeseen events is dampened. The advantages are that much lower costs can be achieved, allowing a substantial increase in net rates of return and benefit rates, if the process is handled well. This is particularly important

⁷For further details on the Latin American and Eastern European reforms, see Cerda and Grandolini (1997), Chlon, Gora and Rutkowski (1999), Palacios and Rocha (1997), Schmidt-Hebbel (1998) and (1999a), Valdes-Prieto (1998), and Feldstein (1998).

⁸For further details on the OECD reforms see Bateman and Piggott (1998), Hepp (1998), and Johnson (1998).

⁹For more details see James, Ferrier, Smalhout and Vittas (2000); James, Smalhout and Vittas (2000); Sunden (1998); von Gersdorff (1997); Mitchell (1998); and James and Palacios (1995).

during the early years of a new funded pillar, when average account size is small and high administrative costs could easily consume much of the investment return. Most current proposals in the U.S. visualize the use of a limited number of funds with diversified portfolios, a heavy use of passive investing, and negotiated fees that are less than what the individual could obtain in the retail market (Shoven (2000)).

Financing the Transition

If we decide that we can have a better system, the next problem is to figure out how to get there. One important obstacle to overcome is the need to cover transition costs. Unfortunately, this issue is often misunderstood. Indeed, it surfaced during the U.S. presidential campaign in a way that probably did not add much to public understanding.

If countries with a PAYG pension system switch to a multi-pillar system that includes a funded component, some of the contribution usually is shifted to the funded pillar. For example, several proposals for the U.S. would shift two percentage points out of the total payroll tax into the funded pillar, the individual accounts. This creates a financing gap between the remaining PAYG revenues and the revenues needed to cover the current obligations of the old system. Some other revenue source must be found to cover the short-run transition gap of two percentage points, in addition to the long-run pre-existing financing gap of the old system, which in the U.S. is also about two percentage points.

Countries that finance their funded pillar by adding an extra contribution rather than diverting money that was originally slated for the PAYG arrangement do not face this problem. For example, most OECD countries with multi-pillar systems started with modest PAYG pillars and financed their funded pillars by mandating additional contributions, thereby avoiding the transition financing gap. If the U.S. chose a small add-on instead of a carve-out, we too would avoid the transition-financing problem. The downside to this strategy is that payroll taxes go up.

All Latin American and Eastern European countries have used the carve-out approach and therefore have faced the transition cost problem. How did they finance the transition? Which of these methods would be most applicable to the U.S.? Because of the fungibility of money, it is difficult to answer this question precisely. That is, if government debt and taxes rise, it is difficult to know the amount of the increased debt versus taxes used to finance the pension transition. To find out would require knowing the counterfactual—exactly how large each source would have been otherwise; and unfortunately we do not know that. Compounding this problem is the fact that, even without a diversion of contributions to the

funded pillar, all of these systems were or would soon be in financial distress because the present value of their future obligations exceeded the present value of their incoming revenues under the old system. The term “transition costs” properly applies only to the additional gap created by the carve-out.

While we cannot give precise numbers we can describe more generally the strategies that countries have used. Basically, we observe five strategies:

1. making the carve-out relatively small, so most of the contribution continues flowing into the PAYG pillar to pay its obligations
2. downsizing the benefit obligations of the PAYG pillar, particularly for young workers, expecting that part of this would be compensated by growth of the funded pillar
3. applying other assets, such as a budgetary surplus, to offset the pension debt
4. borrowing temporarily, to spread the burden of transition costs across generations
5. using the general taxing powers of government to repay this loan over time

Each of these methods and its applicability to the U.S. is discussed below. Each has different effects, which must be evaluated, on income distribution and national saving. The important thing to remember is that transition costs arise from the need to meet obligations that already exist, and they diminish as these old obligations are paid off. Some of the financing methods involve critical trade-offs between reducing the cash flow deficit in the short run versus keeping the implicit pension debt low in the long run.

Making the carve-out small

The transition-financing gap will be reduced if some part of the multi-pillar system remains PAYG, so contributions continue flowing into the PAYG pillar. This has been accomplished in several ways:

Keeping a sizeable public pillar and instituting a smaller private pillar. My research shows that countries with a large implicit pension, such as Sweden, Hungary, and Uruguay, tended to keep a large public pillar, because they felt that otherwise they could not cover their transition costs. In contrast, countries like Mexico, Chile, and Kazakhstan, which started with a relatively small pension debt, resorted to a small public pillar—a minimum pension guarantee, received only by lifetime low earners (James and Brooks (2000)). The continued inflow of funds to a large PAYG pillar reduces the transition-financing gap in the short run; but if it offers benefits that are too generous (actuarially unsound), the reform will not be sustainable in the long run. In any event, it will continue to maintain a sizeable implicit debt whose tax burden is very

sensitive to demography, and it will not offer the other economic benefits discussed above.

Excluding some workers. Some countries exclude workers such as the military, the police, or older workers from the new system (as in Chile), or make the second pillar mandatory only for certain groups, such as high earners (as in Uruguay).

Making the switch voluntary for current workers. Most reforming countries have followed this approach, making the multi-pillar system mandatory for new workers but allowing current workers to stay in the old system if desired. Usually workers over the age of forty-five choose to stay in the old system while most younger workers switch. The former group continues contributing to the PAYG pillar, thereby reducing the financing gap, while the latter group partially withdraws with the expectation that the individual accounts will build up by the time they retire. One advantage of a voluntary switch is that it mitigates opposition to reform from groups most anxious to stay in the old system and permits a lower value to be placed on past service credits for those who switch. By choosing the minimum terms that are needed to convince the desired number of workers to switch, a government can substantially downsize its recognized debt and transition costs (as was done in Hungary). Obviously, the higher the expected rate of return on the individual accounts, the lower the compensation needed to induce workers to switch. In effect, the transition can be partially self-financed by building a strong second pillar.

Which of these methods would work in the U.S.? Since the U.S. has a relatively small implicit pension debt and financing gap, we could finance a largely funded privatized system if we chose to do so. That is, we could carve out half or more of the contribution (as in the Scheiber-Weaver proposal or recent proposals by Feldstein and by Kotlikoff) for the new funded pillar. However, most proposals visualize keeping a substantial PAYG pillar, diverting only two percentage points, less than twenty percent of the total, to the funded pillar. In following this course we would be maintaining part of the disadvantage of the PAYG system, but gaining the advantage of keeping the transition financing gap small.¹⁰

We could reduce this gap still further by making the switch voluntary. However, a voluntary switch would be difficult to implement given the progressive benefit formula in the U.S. system. Unless careful measures were taken, high earners might opt out, thereby withdrawing part of their contributions that were used to finance the benefits of low earners. Low earners would be left in the

PAYG system, exacerbating its financing problem. The switching terms would have to be carefully devised and income-specific, to avoid this outcome.

Downsizing benefit obligations

Before or in the course of making the transition, most countries have reformed their old systems by downsizing benefits, raising retirement age and penalties for early retirement, tightening eligibility for disability benefits, and changing the indexation method to price rather than wage indexation, so the outstanding debt becomes smaller. Chile, Argentina, Uruguay, Hungary, and Poland followed this strategy, which may be virtually indispensable to a good pension reform—especially in countries that start out with bloated benefits. This cuts the benefits that must be paid for past service under the old system, as well as the new obligations that accrue in the remaining PAYG pillar; hence it cuts the transition cost problem. Some, but not all, of these benefit cuts are typically made up through the growth of the funded pillar. That is, typically in Latin America and Eastern Europe, total benefits from the combination of both pillars in the new system are somewhat reduced; but benefits stemming from the PAYG pillar in the new system are cut still further.

The specter of benefit cuts was one of the sensitive issues that arose during the recent presidential election campaign. In the U.S. our current benefits are not bloated, by world standards. Our average replacement rate is modest—about forty percent, compared to sixty to eighty percent found in other countries before they reformed. Our retirement age is sixty-five, slated to rise to sixty-seven, and penalties exist for early retirement at age sixty-two, in contrast to other countries where retirement without such penalties often occurs before age sixty. We have always used price indexation, and even that method has been adjusted downward in recent years. Given this, it is unlikely that benefit targets from pillars one and two combined would be lower, although it is likely that benefits from the PAYG part alone would fall in order to match the cut in contributions to that pillar. In fact, if this did not happen the carve-out would not be consistent with system solvency.

Three interrelated principles have been followed by most countries and would likely be followed here:

- pensioners and workers near retirement are protected—it would be politically impractical and morally indefensible to cut their benefits just at the point when they are most dependent on them
- the cuts primarily affect new rather than old obligation
- changes in benefit arrangements are introduced gradually, so workers have ample time to adjust

¹⁰See Gramlich (1996); Feldstein and Samwick (1996 and 2000); and Kotlikoff, Smetters, and Walliser (1999).

As examples of what might be done in the U.S., the “bend points” in the DB formula might be reduced, thereby lowering the average benefit rate from the PAYG pillar, especially for high earners, as individual accounts build up to fill in the gap. Another possibility is that the number of years required for full benefits might be raised gradually from thirty-five to forty or more as longevity increases. A third possibility is that the normal and early retirement ages might be increased beyond the point already planned, possibly indexed to longevity. These measures would have the advantage of increasing work incentives, and therefore, national output as well as pension system revenues.

Using existing assets to pay off the pension debt and cover transition costs

In some reforming countries, such as Peru and Poland, where public enterprises are being privatized, part of the proceeds have been used to pay off the pension debt—a cancellation of long-term assets against long-term liabilities. This is not a potential revenue source in the U.S. More relevant for our purposes is the use of treasury surpluses or temporary surpluses in the existing social security system.

While the Latin systems generally did not have a surplus in their old social security systems, the U.S. currently does—the Social Security Trust Fund. The trust fund is not large and it will not last long (as was pointed out during the presidential campaign), but it is one of several revenue sources that could and would be drawn upon to continue paying off old obligations and to finance the transition.

The Latin countries (aside from Chile) also did not have surpluses in their general treasuries. Chile, in contrast, is said to have built up a surplus in its public treasury before undertaking its pension reform. The U.S. fortuitously has a budgetary surplus, one that is projected to grow in the years ahead, that could be used to pay transition costs. If the surplus would otherwise have increased government spending or cut taxes, then its use to allow the build-up of retirement accounts enhances national saving and labor productivity. (Of course, the opportunity cost is the government spending or tax cuts that we would otherwise have had).

Issuing general treasury debt to cover the remaining cash gap in the short run

Because of the fungibility of money we do not know to what extent the transition has been financed from benefit cuts plus asset reallocations, but thirty to thirty-five percent might be a good estimate in many cases. The remainder is usually financed by government debt, with the

intent to gradually repay this out of taxes and system savings that continue after the old obligations have passed. The relevant proportion for the U.S. could only be determined by crunching the numbers of many alternative financing options.

Government borrowing has increased in the early years of the reform in almost every Latin American and Eastern European country. Indeed, some use of temporary debt finance is almost inevitable so that a heavy double burden is not imposed on the transition generation of workers. Temporary borrowing with gradual repayment allows policymakers to determine how the burden of the debt should be distributed among cohorts. Since young and future workers will benefit most from the reform, by receiving larger pensions or paying lower contributions than they would have otherwise, it is appropriate that they should also pay part of the cost. This is accomplished by borrowing to cover part of the transition cost and repaying later on.

However, if one object of the reform is to increase national saving, then the painful fact is that someone's consumption must be cut relative to what it would have been otherwise; and pure debt finance will not accomplish this. The slower the pay-off of the debt, the lower the required tax rate per year and the more politically acceptable may be the reforms, but this also delays the timing of increased national saving for productive investment. Indeed, if the transition is largely debt financed and if the debt is not paid off in a timely way, then the “pension reform” will not have accomplished very much.

The issue of debt finance of the transition was loudly raised during the presidential campaign. It is crucial to realize that total public debt is not increased by this financing arrangement. The pension debt exists right now, in every PAYG system. Rather, borrowing temporarily as part of a transition to a funded system is simply an exchange of hidden implicit debt for more observable explicit debt. In fact, in the course of the reform the total pension obligation of the government has been reduced in almost every country. The fact that the remaining debt becomes more explicit increases the likelihood that pressures will be brought to bear to pay it off. Using special issue transition bonds with scheduled retirement dates could enhance such pressures.

Where can the government find buyers for these bonds? In countries that have already reformed, some of the new bonds were sold to the pension funds in the new second pillar; government debt and bank deposits have been the largest initial investments of practically all new pension funds in Latin America and Eastern Europe. Further, these countries all limit international diversifica-

tion of pension fund investments, which virtually ensures large investments in domestic government bonds. In the U.S., substantial international diversification would be expected, as well as investments in equities and other assets with higher returns than government debt. Nevertheless, finding buyers for the bonds should pose no problem as we switch from an era of government deficits to surpluses, leaving potential buyers bidding for the reduced supply.

Using the general taxing power of government

What kind of tax has been and could be used to pay off the debt? That is a hard question to answer empirically, because in most cases the bonds are simply part of general government finance and we don't know how taxes have been augmented (or government spending cut) to retire them. As a first shot, one might think of using a payroll tax, since that finances the rest of the social security systems in most countries. In Argentina the payroll tax paid to the public pillar was used to finance the transition, initially. (But Argentina has now shifted, in part, to a value-added tax.) As a variation on this theme, the ceiling on taxable earnings might be raised. This would have beneficial effects on financing the transition if incremental revenues go up more than incremental benefits, as would be the case under the current U.S. formula.

However, a consumption or value-added tax would have several advantages. Having a broader tax base, it would require a lower rate. It would cause less distortion in labor markets and would be more growth-enhancing and probably more progressive, which many people would interpret as more equitable. But, as a completely new tax, it may also be the most difficult to implement politically.

It has been estimated that if half the current U.S. PAYG system were converted to a funded DC system, the financing gap would be paid off by a payroll tax rate of about one and one-half percent or a consumption tax of one percent for seventy years. (Gramlich (1996)). A smaller conversion of the magnitude now under discussion (less than twenty percent of the total) could be paid off with a smaller tax, and in far fewer years.

Implications of Social Security Reform for the United States

Approximately twenty countries in Latin America, Europe and the Asian-Pacific region have made major structural reforms to their social security systems over the past twenty years and at least another ten are moving in that direction to make their systems more sustainable, equitable, and growth-enhancing. These countries have tried to achieve beneficial labor market effects by tying

benefits closely to contributions—except for the redistribution that is explicit in the public pillar. They have tried to achieve beneficial financial market effects by increased pre-funding, with the investment managers chosen on a competitive basis by workers, unions, and/or employers. They have built in self-equilibrating devices such as actuarially fair annuities that help keep the system in financial balance as conditions change. They have tried to insulate the system from political pressures that might emphasize short-run gains over long-run stability. We have called such systems “multi-pillar systems” because they include two separate but equally important parts or pillars—one is the social safety net while the other handles peoples' mandatory retirement savings—as well as a third pillar for additional voluntary savings. While the new systems in most of these countries are still too new to evaluate, the pension reform in Chile, in existence for twenty years, has been credited with making a major contribution to Chile's high growth rate.

What does all of this imply for the forthcoming social security debate in the United States? Despite the very real problems in our system, it is healthier than those in many other countries that have not yet reformed their systems. Our benefit rate is modest, our retirement age is realistic and rising, and actuarial penalties are applied, discouraging early retirement. Yet, we will have to do something to maintain the solvency of the system.

Under the current structure, benefits will have to be cut and/or contributions raised. The longer we wait, the deeper the cuts and the steeper the tax hike will have to be. So we are better off starting now. Moreover, since we have to change the system in some way, we should give a lot of thought as to what is the best way. We should choose a fix that lasts, instead of one that will prove insufficient ten years later.

Those concerned with the economic health of American business should be thinking carefully about how the various proposals would affect the aggregate economy, their industries, and their own firms. For example,

- keeping the payroll tax low or viewing it as a contribution that generates equivalent benefits instead of a tax payment that disappears can help to contain the cost of labor
- penalties for early retirement as in a DC plan can increase the supply of older workers
- the shift toward individual savings accounts can generate a stock of investable resources and a reduced price of capital
- private management of these funds can increase demand for the services of investment managers and

insurance companies that produce annuities

Most analysts on all sides of the political spectrum now believe that some pre-funding is desirable—to make the financial balance of social security less sensitive to demographic change, to reduce the pension debt we are passing on to our children and grandchildren, and to build up a stock of national saving that is committed for the long term. But once we agree to pre-fund the question immediately arises: who should manage the funds? And here there is greater disagreement. The experience of many countries suggests that it is difficult to insulate publicly managed funds from political manipulation, and this manipulation leads to low rates of return for the economy and the pension funds. This is the basic rationale for private competitive management. While many European countries with multi-pillar systems allow employer and/or union representatives to select the investment managers, it would probably be more consonant with the American political culture to give the worker this right. This would be accomplished through a system of individual retirement accounts. Despite much controversy about the administrative costs and fees in such a scheme, analyses of retirement savings plans in the U.S. and abroad suggest that it is possible to carefully design the system to keep these low. Funded accounts that are converted into actuarially fair annuities upon retirement also put the system on automatic pilot with respect to future changes in longevity and thereby help to keep it sustainable.

As discussed above, the financing for these accounts can come from a carve-out of the existing contribution rate—so long as policymakers are willing to cut benefits from the PAYG pillar that would remain in this two-pillar system. Based on the experience of other countries, this cut would be gradual and would not affect current pensioners. Most of the cut would be recouped through the buildup in the personal accounts of contributing workers. The fact that the individual accounts are likely to earn a rate of return that is higher than the return in a PAYG scheme helps to restore these benefits without the increase in contribution rate that would otherwise be necessary. One important potential benefit cut that probably would not be recouped is a further increase in retirement age, which would also benefit the economy by preventing the experienced labor supply from falling as the baby boomers approach retirement. Under the conditions spelled out above—suboptimal savings and labor force participation of older individuals *ex ante*—the higher real return for pensioners need not imply a fall in welfare for others; this becomes a positive sum game.

A shift to pre-funding implies transition costs, as part of the contribution is diverted to the individual accounts

so other sources must be drawn upon to pay off the implicit pension debt left over from the past. The U.S. is fortunate to have both a temporary social security and general budgetary surplus that can be used to help finance the transition. This use will increase national saving relative to a case where the surplus was used to increase government spending or cut taxes. Some short-run borrowing to cover transition costs would probably also be desirable to spread out this burden across generations, but a credible plan for repaying this borrowing should be included to avoid simply turning an implicit debt into an explicit one. Finally, policymakers would need to make an important collective decision about the degree of redistribution to achieve through the public pillar; our current system is not as equitable as many would like to believe.

While an increasing number of countries have chosen this generic three-pillar policy, no two countries have carried it out in exactly the same way; and the U.S. is likely to find its own way as well. ■

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g. Total Distribution	3322	2969
h. Copies Not Distributed	378	531
i. Total	3700	3500
j. Percent Paid and/or Requested Circulation	99.55%	99.33%

16. Publication of Statement of Ownership. This Statement of Ownership will be printed in the January 2001 issue of this publication. 17. Signature and title of Editor, Publisher, Business Manager, or Owner: Susan Doolittle, Executive Director. Date: 10/1/00.