Testimony by Estelle James, House Committee on Financial Services, May 5, 2005

Over the past 20 years more than 30 countries, spread across Latin America, Eastern and Western Europe, Australia and Hong Kong, have adopted social security systems that include funded privately managed plans, usually based on personal accounts. Contributions to the accounts range from 2.5% to 12.5% of wages and they are projected to supply between 30% and 80% of total benefits.

In Latin America and Eastern and Central Europe the accounts were created by a carve-out from existing payroll taxes. In industrialized countries, such as Australia, Switzerland, Netherlands and Denmark, employers have long provided plans that covered about half the labor force on a voluntary basis. Governments decided it was important to cover the remaining half so they made employer-sponsored plans mandatory, as an add-on for employers that didn't already provide them. Although this option hasn't been much-discussed, this suggests one way that we could go in the US.

I am going to discuss how these 30 countries handled three issues—how to keep administrative costs low, how to control risk and protect low earners, and how to make payouts. I would like to stress two things: First, workers do not have free rein over the funds in the accounts. Instead, the accounts are tightly regulated and ownership rights are attenuated. The UK ran into trouble when it gave too much choice and too little regulation. Second, details matter. Seemingly small changes in rules can have a large impact on final outcomes. So you really need to look at dry details very closely.

Administrative costs

If a worker contributes to an account each year and pays an annual administrative fee that is 1% of the assets in the account, when he retires his accumulation and pension

will be 20% less than it would be if there were no fee at all. Obviously, keeping costs and fees low is essential in order to get good value for money. Much criticism of personal account systems, such as that in Chile, has focused on its supposedly high administrative costs. Chile indeed had high costs in its first few years—start-up costs are always high—but currently they are 1.2% of assets per year and projected to be .7% of assets for full-career workers. This is lower than the average mutual fund IRA and 401k in the US.

However, I believe we should be able to do better still in a mandatory system, by exploiting economies of scale and eliminating marketing expenses. If we adopt measures such as competitive bidding for a limited number of asset managers, passive investment, and centralized record-keeping, I estimate that the expense ratio will be less than .3% or 30 basis points once the average account size exceeds $7000—that is, after 8-10 years of operations. This estimate is consistent with the Administration's plan.

However, if workers are given the right to opt out into a broader range of mutual funds once their accounts reach $5000, as some have suggested, the average account size in the basic system will never reach $7000 and costs will remain over .3% for everyone. This is a good example of how little details matter a lot.

Controlling risk and protection of low earners

We can never fully eliminate risk in financial markets but we can adopt measures that keep risk relatively low. Diversification across companies, sectors and even international diversification is a classic way to reduce volatility. Gradually reducing exposure to equities as retirement approaches, so workers are not hit with an unusually low stock market or interest rate on the date they convert to annuities is another important technique. In addition, every country that has a personal account system also has a

minimum pension, most commonly 20-30% of the average wage. This is designed to protect workers from both financial market and labor market risk. So far, we do not have a minimum pension in our current system or in the proposed new system.

Payouts

Practically every country with personal accounts restricts payouts. Most European countries require annuitization, to ensure that workers will have a life-long income. In Latin America payouts must take the form of annuities or gradual withdrawals. In Chile, 2/3 of all retirees have annuitized. Lump sum withdrawals are not permitted unless the pension meets a high threshold, such as 70% replacement of the worker's own wage and 200% of the poverty line. This is much higher than the threshold proposed by the Administration, which allows lump sum withdrawals at 100% of the poverty line.

Some countries also require that annuities be indexed (to provide inflation insurance) and joint (to cover surviving spouses)--which is very important for women. In Latin America women are allowed to keep their own pension in addition to the joint annuity, so that married women who work in the market and contribute for many years are not penalized, as they are in this country. As a result, women's expected lifetime benefits relative to men's have increased in the new system.

Conclusion

In sum, the devil is in the details. Personal accounts can give us good or bad outcomes, depending on how we design them. The experience of other countries shows that if we carefully structure the choice of asset managers, investments and payouts and provide a pension floor, including personal accounts in a reformed social security system will continue to provide lifelong income for the elderly in a cost-effective, low risk way.

Reforming Social Security: Lessons from Thirty Countries

by

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Executive Summary

Social Security reform in the United States has become a nationally debated topic, but privately managed, funded plans are already a component of the social security systems of more than 30 nations around the world. Chile, Switzerland, the Netherlands and the United Kingdom were the first countries to reform, in the 1980s. Most countries in Latin America, Eastern and Central Europe, as well as some in the Asian-Pacific region, created similar systems during the past 10 years. The Latin American and Eastern European countries funded their worker-based personal account systems by diverting money from a pre-existing payroll tax. By contrast, the industrial countries in Western Europe, along with Australia and Hong Kong, made employer-based retirement plans mandatory, in addition to their tax-financed systems.

Examining these reformed systems may offer useful insights for the United States as we consider our own social security reforms. The experience of other countries suggests problems to be avoided and solutions to be emulated. In particular, we can learn how to keep administrative costs low, how to reduce risk, how to handle payouts and how to ensure that the elderly are kept out of poverty.

Structural Differences and Similarities. Although most pension reforms have similar goals, we find dramatic structural differences and also some striking similarities among them. For example:

- Contributions to personal accounts range from a low of 2.5 percent of wages in Sweden to a high of 12.5 percent (including fees) in Chile.

- In most cases, contributions are made with funds that otherwise would have been paid as payroll taxes (called a “carve out”); however, in the mandatory employer-based plans the contributions are typically in addition to payroll taxes (an “add on”).

- Most countries that use a carve-out approach gave individuals already working a choice between the old and new systems; but practically every country (except Argentina, Colombia and the United Kingdom) requires new labor market entrants to enroll in the new systems.

- Most of the reformed systems use worker-based accounts and workers choose their own fund managers and investment portfolios, subject to regulations. In a smaller number of countries, mostly industrialized ones, employers, sometimes together with unions, choose investment strategies for the private pension plans.

- Administrative costs are generally much lower after several years experience, as the asset base grows. Currently they range from a low of 0.7 percent of assets or less in Sweden and larger, mature employer-based plans in Australia, Switzerland and the Netherlands — to 1.2 percent in Chile — to a high of 20 percent or more during the first year of operations in countries like El Salvador and Poland.

- The private benefit is projected to provide workers with more than 70 percent of their total mandatory retirement income in most of the Latin American countries and around half of the total in Western Europe and Australia. Eastern and Central Europe and the former Soviet Union have adopted a variety of systems — ranging from Kazakhstan, which adopted the Chilean model, to Bulgaria and Latvia, where the private benefit provides less than 30 percent of the total.

- Typically countries require workers to receive their retirement benefits in the form of an annuity or gradual withdrawals from their personal retirement accounts. However, most Latin American systems allow lump-sum withdrawals once retirees have passed

a stringent pension threshold, such as 70 percent of their preretirement wages or 200 per cent of the poverty line.

- Every country with individual accounts provides a minimum income, in the form of a minimum pension guarantee or a flat (uniform) benefit to retirees, most commonly between 20 percent and 30 percent of the average wage.

Keeping Administrative Costs Low. A 1% annual expense ratio reduces the final accumulation and pension by 20 percent for the full career worker. Administrative costs vary widely across countries and time, allowing us to learn which techniques keep costs low. In all systems startup costs mean that costs will be high initially and economies of scale mean that they will fall over time as a percent of assets, as average account size grows. Administrative costs have been lower in the wholesale, or institutional, market used by employer-based systems and higher in the worker-based systems that invest small individual accounts through the retail market, incurring high marketing expenses. Passive investment also reduces costs. All Eastern and Central European countries (with the exception of Hungary) and about half the Latin American countries use centralized collection systems, piggybacking on the tax or social security system (or, in the case of Croatia, a private clearinghouse) to keep marginal collection costs low.

What could a well-run U.S. system expect? Assuming that the system (1) keeps record-keeping and communication costs per account to about $20 per year (the estimated cost in the Thrift Saving Plan for U.S. federal workers and low-cost mutual funds), (2) invests in low-cost index funds and (3) chooses a limited number of asset managers in a competitive bidding process (thereby harnessing the institutional market), after eight to twelve years the annual expense ratio in the new personal account system will be 3/10ths of 1 percent of assets or lower. This is less than what people with small accounts would pay in the mutual fund market today.

Reducing Investment Risk. In most countries with worker-based plans, financial markets were undeveloped and investment choices were tightly circumscribed at first, limited to

government bonds and bank deposits. In some cases, most notably Chile, financial markets have considerably matured, in part due to their pension reforms. As a result, investments are now diversified across corporate bonds, equities, mortgage-backed securities and international funds — diversification is the best way to reduce risk. Although a variety of investment portfolios are now offered in Chile, the proportion that can be invested in stocks remains limited for those nearing or past retirement age. This is an example of "life cycle investing" (a gradual shift out of stocks and into bonds or annuities over a period of years for older workers), designed to reduce their exposure to a sudden drop in the stock market or the interest rate.

In addition, some countries require fund managers to offer absolute or relative rate of return guarantees for the private accounts. For example, pension funds in Kazakhstan must guarantee that no one will lose money (or earn a negative rate of return). Switzerland's pension funds must pay at least a 4 percent nominal return (recently reduced to 2.5 percent) over the worker's tenure with his employer. Chile and many other Latin American countries penalize funds whose rate of return deviates from the industry average by more than 2 percentage points. The object is to reduce volatility across time and disparities across individuals. A better way to accomplish this, in countries with well-developed financial markets, is to require that portfolios closely track broad stock market benchmarks such as the S&P 500 or Wilshire 4500 or to use options to protect workers from a sharp downturn in the stock market. Large employer-based plans have used these techniques for many years. New financial instruments are being developed for sharing risk between individuals, asset managers and insurance companies, during the accumulation and payout stage. The minimum pension (described below) also reduces risk.

Protecting Against Poverty. All countries with individual retirement accounts guarantee a minimum benefit to workers who participate in the system. This is usually financed

by the government, out of general revenues. Most Latin American countries guarantee a minimum income from private accounts, while most Eastern and Central European countries maintain a floor on the traditional pay-as-you-go benefit. Most countries with employer-based plans accompany these with a flat benefit that is paid to all older residents regardless of earnings and contributions, although the trend is to partially replace these benefits with means-tested benefits. Most commonly, the minimum pension varies between 20 percent and 30 percent of the average wage.

Protections for Women. Minimum benefit guarantees are especially important for women, who are at a greater risk of old-age poverty than men due to their longer life expectancies and time spent out of the labor market. In Latin American countries, wives are also protected by a group survivors insurance policy that covers all workers and by a requirement that, upon retirement, husbands purchase a joint pension from their individual accounts. Widows of retirees get a survivor's benefit — but it is financed by their husbands rather than by taxpayers. Widows get to keep their own pension in addition to the joint pension. In Chile, Argentina and Mexico, the minimum pension combined with the joint pension mean that the relative position of women is projected to improve after the pension reform. The lifetime benefits of married women with full work careers are projected to equal to exceed the lifetime benefits of men.

Introduction

Since 1980, more than 30 countries around the world have adopted some kind of privately managed plan, usually based on personal accounts, as part of their social security systems. Each has done so in a different way. As the United States considers Social Security reform, including some form of personal accounts, it may be useful to examine options that other countries have implemented. This paper surveys the approaches they have used to resolve key issues, such as how to keep costs and risks low, protect vulnerable groups and make sure that the accumulation in the account lasts for the individual's lifetime. The experiences of these countries do not offer answers to all our questions, but they do suggest the range of options available to us and some of their potential effects (both good and bad).

Prefunding Social Security through investments that earn a market rate of return can help make the system more sustainable. It would avoid passing a large debt on to our children, and could help to increase national saving, and therefore productivity and growth. But if the government manages the funds, several dangers emerge that could negate these potential advantages: If invested exclusively in government bonds, the funds may end up increasing government deficits; if invested in the stock market, they may lead to conflicts of interest between government as regulator and as investor; and their use could be subject to political manipulation and the misallocation of capital. These are the main arguments for establishing personal accounts, with private management of the funds.

But private management of social security funds also entails potential problems. Administrative costs may be high, thereby reducing final pensions; financial market risk adds uncertainty to retirement income; some workers may not accumulate enough to keep them out of poverty during old age; retirees may use up their accumulation too quickly; and the transition financing gap may increase the nation's explicit debt.

How we solve these potential problems determines whether the new system is good or

bad and whether it improves or harms the welfare of future workers and retirees. The devil is in the details. Fortunately, we can learn from the experience of others.

The Basic Structure of Personal Accounts

Most of the countries we examine in this study began with traditional pay-as-you-go defined benefit systems, similar to the United States. When these countries reformed their retirement systems, they shifted part of the responsibility for benefits to the private sector, usually to defined contribution plans, also known as personal accounts. But the proportion of benefits that was shifted varied widely, as did the management of funds. How much of these systems remain as government-paid, pay-as-you-go benefits? How large are the personal accounts? How are they managed? And what explains the differences across countries?

Worker-Based versus Employer-Based Plans. In the well-known case of Chile, the worker chooses the investment manager for the retirement funds, a pattern evident across Latin America and Eastern Europe. When these public systems were reformed, they were typically near insolvency, beset by evasion and inequities, and publicly discredited. Major change was needed.

In Western European countries (Switzerland, Denmark and the Netherlands), as well as Australia, the employer, sometimes together with a union, makes the investment choice [see Table I]. In these countries, employers are primarily responsible for private pensions, while the government continues to provide a separate public benefit, as it did before the reform. These are countries with long histories of employer-sponsored plans, traditionally defined benefit and often due to collective bargaining. During the 1980s and 1990s the governments of these countries realized that while employer-sponsored plans provided good pensions for half of the labor force, they did little or nothing for the other half. They also realized that, with aging populations, the bottom half of the income spectrum would become a growing fiscal burden unless private pensions were in place. Therefore, they mandated that virtually all employers provide retirement

plans for virtually all their workers.[1]

In effect, this was an add-on for employers who didn't already provide such plans. The mandate was made explicit in Switzerland in 1985, and later on in Australia and Hong Kong. It was achieved in a less formal way in Denmark and the Netherlands, but with similar effects. In the United Kingdom, employers are not required to provide a pension plan, but they can opt out of the government plan by providing an equivalent private pension and they get a tax rebate if they do so. British workers can opt out of the government system or their employer's plan into their own personal plans.

In most of these countries, employers who didn't previously have pension plans have added defined contribution plans. And, many employers are transforming their preexisting defined benefit plans into defined contribution plans, just as has occurred in the United States. As this happens, control over investment choices for the personal accounts shifts toward workers.

Defined Benefit versus Defined Contribution Plans. Employers around the world have found that in globally competitive labor and product markets they are unable to credibly insure against longevity and investment risk, which is the goal of defined benefit plans. If investment returns are lower than expected, or if workers live longer than expected, employers (facing competition from other firms without these pension burdens) will be unable to come up with the extra money needed to keep their promises in the long run. And if employers try to avoid these risks by conservative funding policies, their costs will be higher than those of competitors who accept higher risk, in the short run. Regulations have placed increasing financial burdens on defined benefit plans to make their promises credible. Additionally, defined benefit pensions are difficult for workers to carry from one job to another. In contrast, defined contribution plans are typically more portable and help employers avoid longevity and investment risk. As a result, even though some employer-sponsored defined benefit plans remain, they are gradually being phased out, and in this paper we sometimes refer to all private plans that are part of social

security as personal accounts.[2]

Although employers (sometimes together with unions) chose the trustees and the investment strategy under defined benefit plans, it is likely that workers will increasingly demand this power as the shift to defined contributions takes place — since they bear the risk and receive the return. In Australia, legislation has just given workers increased choice, and this will probably happen elsewhere as well.

Contribution Rates to Personal Accounts. Table I depicts the contribution rates to personal accounts, which vary from 2.5 percent in Sweden to 10 percent or more in a number of other countries. Assuming a worker works for 40 years, has real wage growth of 1.5 percent per year, realizes an investment return net of administrative expenses of 4.5 percent per year, and retires with 20 years of expected lifetime, these varied contribution rates will provide pensions from the accounts that range from 14 percent to 56 percent of final salary. Except for Sweden, no country plans to keep its contribution rate to the accounts below 4 percent. In fact, it would not be efficient to have smaller accounts, because the fixed administrative expense per account would significantly reduce gross investment returns. (Sweden can do this only because its high average income results in fairly large accounts, even with a 2.5 percent contribution rate, and it has taken special measures to keep administrative costs low.)

Contribution rates to the employer-sponsored plans tend to be higher than average, perhaps because defined benefit plans require higher contribution rates, given the aging labor forces in these countries.

Private Sector versus Public Sector Benefits. All countries have retained some kind of public benefit, in addition to the new private benefit. Table I and Figure I depict the share of total benefits an average worker can expect from his account. The private share of benefits is much larger than the private share of contributions, since the expected rate of return on the accounts is usually greater than what pay-as-you-go systems can credibly promise. For example,

in Sweden, which has the smallest private pillar in relative terms, about 14 percent of total contributions go *into* the accounts; but 30 percent of total benefits are projected to come *from* the accounts.

In most cases the public benefit is partly or wholly financed out of general revenues, rather than by an earmarked contribution [see Table III]. Often the public benefit is progressive, so it provides a higher proportion of total pension income to low earners than to high earners. For example, in Chile, which has the largest private pillar in relative terms, 100 percent of contributions go into the accounts and, for the average worker, the personal account pays 100 percent of benefits. [See Figure I.] But the minimum pension guarantee, which is Chile's public benefit, is financed from general revenues and will provide about 20 percent of the total benefit for low earners.

Table I and Figure I show that countries are basically divided into three groups: those where the personal accounts have almost the full responsibility (high) for supplying retirement benefits, those where personal accounts have supplementary responsibility (low), and those where the responsibility is shared roughly equally between the public and private benefits (medium).

> Most Latin American countries depend primarily on the personal accounts, following the Chilean example, where workers may divert (carve out) their full payroll tax to the accounts while the government simply provides a minimum pension guarantee.
>
> In contrast, some Eastern and Central European countries, as well as Sweden, depend primarily on the traditional benefit, with the personal account playing only a modest supplementary role (in some cases, this role is projected to increase over time).
>
> In between are the industrialized countries of Western Europe and Australia, where responsibility is shared almost 50-50 between the public and add-on private benefits.

How can we account for these differences in relative size of the private benefit and the use of add-on versus carve-out? Countries of Eastern and Central Europe typically have large implicit pension debts due to aging populations and generous benefits owed to workers and retirees in the traditional systems. These countries were more likely to start relatively small private plans, because they could not afford the high transition costs they would face with a larger shift of contributions. Nor could they afford an add-on in view of their already high payroll tax rates, which often exceeded 25 percent.

The opposite is true for countries with younger populations and smaller pension debts, such as those in Central America. Workers could and did divert most of their contributions to the accounts. Finally, countries like Switzerland, the Netherlands and Australia were able to move toward a 50-50 division with an add-on approach. They had relatively small contribution rates or financed their public benefits from general revenue, and they added mandates for substantial employer pensions that will provide about half of most workers' total pension.[3]

Voluntary versus Mandatory Personal Accounts. Practically every country that has established worker-based accounts used a payroll tax carve-out — diverting part of the contribution from the traditional system.[4] Switching to personal accounts was usually voluntary for existing workers but mandatory for new entrants to the labor force. Once a person switched, this choice was usually irrevocable.[5] Allowing individual choice over changing from public to private plans reduces political opposition and transition costs, since some workers may choose not to switch. However, the past 25 years have shown that, given the opportunity, the vast majority of workers have switched; almost all younger workers have switched; and in total, many more workers switched than was projected — demonstrating their lack of confidence in their old systems. Therefore, transition costs have been higher than expected.

Making the new system mandatory for new entrants to the labor force ensures that the old system will eventually phase out of existence. Colombia and Argentina have not included this mandate and have kept the two systems existing side by side. The old system has few

participants, but imposes duplicate administrative costs on everyone.

In contrast, countries that used employer-based plans as the basis for privately funded social security benefits effectively imposed an add-on for employers who did not already offer such plans, and participation was mandated for virtually everyone. (If an add-on is voluntary, it is no longer part of the mandatory social security system.) While employers were required to add a benefit, the cost of that mandate was undoubtedly passed back to workers in the form of lower wage growth over time. For example, in Australia the new pension contribution by employers was an explicit trade-off for wage growth in an inflationary environment.

How Much Choice among Investment Portfolios? When the Latin American and Eastern European countries initiated their personal account systems, their financial markets were undeveloped, with limited financial instruments. And, few workers had any investment experience. As a result, investment choices were tightly circumscribed, with strict limits placed on equities, derivatives and foreign investments. Bank deposits and government bonds were the main investments. Diversification was limited because financial instruments were limited and international investment, which would have permitted much greater diversification, was restricted. Moreover, relative rate of return guarantees (described below) led most asset managers to offer similar portfolios — giving workers little choice. [See the sidebar, "Personal Account Investments in Chile."] The basic ethos at the beginning was to be cautious, prevent disasters and wide disparities across individuals, and liberalize later as workers developed financial experience.

In some cases, most notably Chile, financial markets have developed considerably over the past 20 years, in part due to their pension reforms. Consequently, countries are now gradually liberalizing these restrictions, with Chile taking the strongest steps in 2002, when it opened the door to multiple portfolios, including some with considerable equity and international exposure.

Employer-sponsored plans, in contrast, were mandated in countries with well-developed financial markets and employers who had years of experience operating in those markets. So a

much wider range of investment choice and diversification was permitted from the start.

In worker-based defined contribution plans it is desirable for individuals to have some discretion over investment portfolios, allowing workers with different degrees of tolerance for risk to make different risk-return trade-offs. However, the British experience, where workers could choose between their own account, their employer's plan and the state plan, illustrates that unconstrained choice is not necessarily better. Many inexperienced workers chose poorly. Choices need to be carefully structured to enable inexperienced investors to use it well. [See the sidebar, "The British System."]

Lessons for the United States. Compared with other industrialized countries, the United States currently has a trust fund surplus and a relatively small pension debt stemming from our younger population — which makes it easier to divert some of the current payroll tax into personal accounts. On the other hand, we have a relatively low contribution rate, which makes an add-on easier. Our public benefit rate is relatively low, which limits the degree to which it should be cut. Viewed from this comparative perspective, the United States should be able to move toward personal accounts that have a contribution rate of around 4 percent (which could be phased in), on the basis of a mixed add-on plus carve-out. This would cover about half of the total expected benefit for the average worker.[6]

We could move directly toward a new system of personal accounts that workers manage themselves, or we could build on existing employer-sponsored plans. First some comments on the latter option.

The most common employer-sponsored plans are 401(k) plans, under which contributions are deducted from employees' wages before taxes and are deposited in mutual funds, often with a matching contribution from the employer. These plans appear to be working well for much of the labor force. But some participants make poor investment choices or face high administrative costs, and therefore experience low net rates of return. Some concentrate their investments in the company where they work, thereby increasing their risk because of the

lack of diversification. Some young and low-income workers do not participate, or withdraw their savings before retirement, and many small employers do not offer any retirement plan for their workers. If we wanted to make employer-sponsored 401(k) plans part of our Social Security system, we would have to regulate them more tightly and make participation mandatory. Small employers who do not currently have such a plan (and larger employers who want to avoid the administrative burden) could be required to "add-on" contributions to low-cost pooled index funds, patterned after the Thrift Saving Plan (the retirement plan for federal civil servants). This approach would eventually achieve lower administrative costs than existing 401(k)s and could gradually replace many existing employer plans.

In contrast, if we choose to develop a new system of worker-based accounts, this could be done through an add-on or a carve-out or a mixture of the two. If a carve-out is used, switching could be voluntary, to defuse opposition from workers who do not want to face financial market risk. If they did stay in the old system, transition costs (discussed later in this study) would be reduced — but in making projections we should anticipate that most workers under the age of 50 are likely to switch. The choice to participate in these accounts should be irrevocable and mandatory for new labor market entrants or for all workers under a designated age, such as 35.

If we finance the accounts partly through an add-on, participation for all workers under some age such as 35 would have to be mandatory from the start (otherwise it would simply be part of voluntary retirement saving, which we have now, and is unlikely to expand coverage). In either case, some degree of mandate would be involved and low risk investment options, such as inflation-indexed treasury bonds would have to be offered for those who preferred to avoid financial market risk.

The United States has the most sophisticated financial markets in the world. But many workers, especially low-income workers, have had little investment experience. Therefore we would be wise, especially at the beginning, to give workers very limited choices, to prevent big

mistakes and disparate outcomes. Unlike Latin America, all the permitted portfolios in the United States should be broadly diversified among industries and sectors — the best recipe for reducing risk — and indexed to well-known benchmarks. The Thrift Saving Plan for U.S. federal employees is a good model. It started with only three portfolios — money market, large cap stocks and bonds — which individuals could mix in varying proportions. It has just added two additional portfolios — a foreign fund and a small cap fund — and is on the verge of adding a life cycle fund that combines the underlying funds in different proportions automatically as the individual ages. Other risk-reducing techniques using modern financial tools should also be considered (see section on guarantees).

Reducing Administrative Expenses

If administrative expenses consume 1 percent of assets annually, they reduce a 4 percent rate of return by 25 percent (to 3 percent) and final pensions by 20 percent for a full-career worker who contributes throughout his working life. It is obviously important to keep these costs of pension funds and fees charged to worker-contributors under control, and this has been a source of considerable controversy and criticism in the overseas pension systems. Comparisons of costs and fees across countries are difficult because data are not always available. Moreover, fees are based on contributions in some cases and on assets in other cases, and converting contribution-based fees to equivalent asset-based fees depends heavily on how long workers keep their money in the system after the fee is charged.[7] In most of this paper we compare systems in terms of their equivalent asset-based fees for full-career workers, because this immediately tells us how much the fees reduce gross returns and eventually the pension. The following generalizations emerge from a variety of studies [see Table II].

Retail versus Wholesale Securities Markets. Costs are much higher in worker-based systems that use the retail market than they are in employer-sponsored plans that use the institutional market. Latin Americans used the retail market because they had poorly developed

financial systems. The institutional market was not available unless they sent their money abroad. In the retail market, fund managers must attract and sell to individual workers, one sale at a time, and they incur high marketing expenses to accomplish this — often more than 50 percent of total costs — which they pass on to workers in the form of higher fees. In contrast, the employer-sponsored plans described above use the wholesale or institutional market and get much lower costs. For example, costs are less than 0.1 percent of assets in the U.S. Thrift Saving Plan for federal employees and 0.3 percent to 0.7 percent of assets in large company or industry plans in the United States, Western Europe or Australia. This compares with personal account administrative costs of 1.2 percent in Chile currently, 2.5 percent in Mexico and 4.4 percent in Argentina.[8] We can structure our personal account system to reap the cost benefits of the institutional market — as several countries described below have begun to do.

Startup Costs versus Long Run Costs. Brand new personal account systems incur high startup costs. Pension funds managing the accounts must invest in information technology systems, staffing and marketing, often for two or three years before the contributions start flowing in. Furthermore, fees charged by pension fund companies do not cover their costs in the early years, although they hope to recoup them later on. It typically takes five to 10 years for pension fund companies in these countries to break even.[9]

In El Salvador, fees were 29.8 percent of assets in 1999, the year after they started operating, but fell to 9.5 percent by 2002.

Similarly, in Poland, costs were 21 percent of contributions in 2000, its second year of operation (half of those costs for marketing), but by 2002 had fallen to only 8 percent of contributions (less than one-quarter of this was for marketing).

In Poland, fees covered only two-thirds of costs in 2000 but they reached 90 percent of costs in 2002.

Economies of Scale. Incremental costs decline rapidly as the volume of assets rise.

Systems with large asset bases and large accounts have lower costs, as a percentage of those assets. Economies of scale have led to mergers in the new systems, so the number of asset managers diminishes over time. Incremental costs of record-keeping also decline as the number of accounts increases, which is why many mutual funds in the United States outsource their record-keeping functions to a small number of companies that specialize in providing that service. The combination of startup costs and scale economies means that costs and fees will inevitably be high relative to assets in the early years of a new personal account system and will fall over time.

> In Chile, costs of pension funds and fees charged workers were 12 and 9 percent of assets, respectively, in the first year, 4 to 6 percent of assets in the next couple of years when average account size was around $1,000, but fell to 1.2 percent by 2002, when average account size exceeded $5,000 [see Figure II].
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> Based on the current fee structure, they are estimated to be equivalent to 0.7 percent of assets per year for the full-career Chilean worker who contributes for 40 years.

Costs of Record-Keeping and Communications. Aside from marketing expenses, the biggest cost item in personal account plans is the cost of record-keeping and communications. These tend to be fixed per account — the same for a $200 account as for a $20,000 account. Thus, record-keeping costs as a percent of assets fall rapidly as average account size increases — which in turn means that the net return on investments grows. For example:[10]

> In the U.S. Thrift Saving Plan, the expense ratio fell from 0.7 percent in 1988, when average account size was $3,000, to 0.1 percent in 1998, when average account size reached $27,000. [See Figure III.]
>
> Most of these costs were for record-keeping and communications. The estimated dollar cost for record-keeping per account was roughly constant at about $20 in both cases.

Examples of Cost Reduction Techniques. Several countries have taken special measures to keep costs low. For example, Bolivia entered the institutional market and used an international competitive bidding process to choose two asset managers to handle all the funds in the system; workers choose between them. The fee set by the bidding process leaves few resources or incentives to spend a lot on marketing. This accounts for the fact that Bolivia's expense ratio is one of the lowest in Latin America, despite its small account size. Kosovo has also used a competitive bidding process to choose two asset managers, thereby avoiding marketing expenses; its fees are much lower than those of other countries in the region [see Table II].

Sweden collects contributions centrally and allocates them among some 600 mutual funds according to the workers' choices, but the funds do not get the names of the workers; they only get the aggregate amounts. The funds report back their investment earnings, which the central record-keeper records in the individual accounts. This blind allocation is designed to rule out sales commissions. However, Sweden does not have total confidence in this process, so the country also uses price controls. High-cost funds must pay a rebate to participants, which reduces their effective fee. The net result is an expense ratio of 0.7 percent of assets, which is expected to fall to 0.5 percent within 15 years as average account size grows [see Table II].

All Eastern and Central European countries (with the exception of Hungary) and about half the Latin American countries use centralized collection systems, which is usually the social security administrator or tax authority (although Croatia uses a private clearinghouse). In worker-based schemes, piggybacking on the tax system keeps marginal collection costs close to zero and builds in an automatic monitoring mechanism — providing it is a well-functioning tax-collection system. Centralized record-keeping exploits scale economies. One reason for the Swedish system's low cost is that it has an efficient tax-collection system and uses centralized record-keeping. The employer-based plans in Western Europe, Australia and Hong Kong, in contrast, use a decentralized method, since each employing unit essentially applies its money to

its own plan.

The U.S. Thrift Saving Plan for federal employees uses a competitive bidding process and passive investing, which is much cheaper than active investing. Passive investing means that the asset manager simply replicates the benchmark index and moves with the entire market, rather than attempting to pick individual stocks or sectors. Most studies have shown that in large efficient markets (as we have in the United States), index funds get a higher net return than the average actively managed fund — because they (1) save money on research operations, (2) have less product differentiation to market, and (3) active managers often guess incorrectly. Passive investment costs can be less than 0.01 percent of assets. The Thrift Saving Plan indexes to such benchmarks as the S&P 500 and Wilshire 4500, and most large company pension funds also index to a large extent.

Lessons for the United States. The United States will be starting from scratch and will have millions of small accounts. This environment will exist for many years, due to the large number of low-income earners and part-time workers. Therefore, strong measures must be taken to keep administrative expenses low, or they will consume much of the investment return. This suggests the United States should:

Use the institutional rather than the retail market. Aggregating assets and choosing a small number of asset managers will give the system "all or nothing" bargaining power. The asset manager will spend less on marketing. This should result in lower costs and fees. The Thrift Saving Plan sets a good example, since it chooses the asset managers for its portfolios in a competitive bidding process, with very low costs. Of course, there is always a trade-off. The trade-off in this case is that workers have less choice in the institutional market than they would in the retail market. As discussed in the previous section, restricted choice in a mandatory program may be desirable, as well as cost-effective.

Use passive investing. Passive investing keeps costs low, reduces disparities across workers and also prevents inexperienced investors from making mistakes by trying to "beat the

market." Some analysts worry that this emphasis on passive investment will reduce the number of active investors, who are needed to keep the market efficient. However, the personal accounts will be a small part of total market capitalization in the United States for many years to come. Moreover, currently large company plans use passive investing much more than small investors do — one reason for their lower costs. Perhaps some of these large investors will switch to active investing if the personal account system focuses on passive investing — and they will be more effective at maintaining market efficiency.

Amortize startup costs over a long time period. Otherwise, older workers who only participate in the system for a few years prior to retirement during the start-up phase will pay a high price. Amortization requires a loan upfront, probably from the government, that is gradually paid off over the first 20 years or so of the new system.

C*harge asset-based fees.* Asset managers should base fees on a percentage of assets rather than a flat fee per account. Otherwise, low earners with small accounts will receive a lower net rate of return on investments, further deterring growth of their savings. (This does not decrease total costs but it involves a policy decision to cross-subsidize small accounts).

Estimated cost for a personal account system in the United States. Assuming that the new system will (1) keep annual record-keeping and communication costs per account at $20 (the estimated cost in the Thrift Saving Plan and low-cost mutual funds), (2) use index funds and (3) choose asset managers in a competitive bidding process — the expense ratio for the new personal account system will be 30 basis points (0.30 percent) or lower, after eight to 12 years. This is a lower administrative fee than workers with small accounts could get for themselves in the mutual fund market today.

Preventing Poverty and Controlling Risk

Personal account systems are not inherently redistributive and they entail financial market risk. So how do we prevent poverty and control risks? One way to reduce market risk,

discussed previously, is to limit investment choices to less risky portfolios that track broad market indexes. Another way, discussed in a following section, is to encourage or require annuitization. There is also a risk that workers with low wages or workers who spend a number of years out of the labor market will have insufficient balances in their personal accounts to provide adequate retirement incomes. This is especially important to women, who are likely to work fewer years and at lower rates of pay then men. [See the sidebar on "Protections for Women."] It is also important to all workers who fear the possibility of a prolonged downturn in investment or labor earnings. To reduce the risk of old-age poverty, every country with a personal account system includes a minimum pension, usually financed out of general government revenues.

The minimum pension takes one of several alternative forms: a minimum pension guarantee (MPG) on the personal accounts, a floor on the traditional defined benefit only, or a flat (uniform) benefit that every eligible person receives, regardless of other benefits [see Table III]. Women have been disproportionate gainers from the minimum benefit, whatever form it takes.[11]

Minimum Pension Guarantees on the Personal Accounts. Most common is the minimum pension guarantee, which guarantees a minimum retirement income from the social security system, including the personal accounts, for all eligible workers (those with 20 to 25 years of contributions). Most Latin American countries and Kazakhstan incorporate this feature into their plans.

Floors on the Traditional Benefit. A second type of minimum pension sets a floor on the traditional defined benefit only, regardless of the size of the personal accounts. This is common in the Eastern and Central European countries, which retained large earnings-related defined benefit plans. In these countries the public benefit increases with work and contributions, but it also has a floor. This has the disadvantage that the government's liability is not reduced if benefits from the personal accounts are larger than expected — nor does it protect

retirees from unexpected negative outcomes in the accounts. Often, this feature is a remnant of the old systems and, as such, the years of work required for eligibility are quite low (five to 15 years). Not surprisingly, the minimum is smaller in the "floor" countries — 10 percent to 20 percent of average wage in most "floor" countries versus 20 percent to 40 percent in most minimum pension guarantee countries [see Table III].

Tradeoffs with minimum pension guarantees and floors. In both minimum pension guarantee and floor countries, the government incurs an unfunded contingent liability that is often not calculated in advance. Mexico reduces the unfunded liability in its minimum pension guarantee by putting a peso-per-day-worked into the account of every worker, thereby making it less likely that they will fall below the minimum and encouraging work at the same time.

The eligibility requirement for the minimum pension guarantee or floor poses another problem, as workers who miss it by one year receive no protection while workers who have many extra years get no additional reward. Some countries (for example, Switzerland and Croatia) counter this problem by offering a higher minimum for workers with more years of contributions. All three examples (Mexico, Switzerland and Croatia) illustrate ways to reduce the trade-off between work incentives and the safety net.

Flat Benefits. The remaining countries have established a minimum by giving a flat (uniform) pension to all people who have passed a specified age, such as 65, even if they haven't worked and contributed. This is characteristic of the industrialized countries that recently added mandatory employer-sponsored plans to the flat public benefit that they had had for many years. Since money goes to every person, the flat benefit is considerably more expensive than the minimum pension guarantee or the floor. While the minimum pension guarantee and floor countries concentrate their subsidies on the bottom 20 percent of pensioners, the flat benefit redistributes as well to the second and third quintiles, whose members are likely to receive, on average, more than they put in the tax pool. Thus, the choice between these methods depends in part on the degree and nature of redistribution desired and feasible.

To control the fiscal costs, some countries have tried to downsize their flat benefits and replace them with means-tested benefits. Britain, for example, shifted from wage to price indexation of the flat benefit to accomplish this. As wages grew over the last two decades, the basic benefit fell from 24 percent to 15 percent of the average wage. Fiscal costs are very low as a result. But expenditures have increased on means-tested benefits, where the income threshold is wage-indexed and now exceeds the basic benefit. If the current system continues, more than half of all Britain pensioners will qualify for means-tested benefits as they age. The recent report of the British Pensions Commission pointed out that either the basic benefit or the personal accounts would have to increase (or the span of retirement would have to decrease), in order to keep pensioners above the poverty line without excessive use of means-testing.

Australia cuts the cost of its flat benefit in a different way: by income- and asset-testing eligibility to exclude the top income group. About 70 percent of retirees are below the threshold and receive the benefit. **Wage or Price Indexation of the Minimum?** In all these minimum pensions, indexation is a key issue. Wages usually rise faster than prices, due to productivity growth. If the minimum pension is indexed to wages, its cost may grow more rapidly than expected and it may become a large unfunded liability. But if indexed to prices, it will fall in value relative to the average standard of living in society, which is set by wages. Which is better? Temporary price indexation is a possible method to reduce the fiscal burden in cases where the minimum is very high to begin with. In Sweden, for example, the minimum was 40 percent of the average wage and is now being reduced through price indexation. The Netherlands, which pays a flat benefit of 38 percent of the average wage to single individuals (28 percent per person to couples), is also considering temporary price indexation or no indexation at all when finances are strained. But if wage indexation does not resume eventually, the minimum will become irrelevant (as discussed above for the United Kingdom).

In Chile, the minimum pension guarantee is currently 25 percent of the average wage — almost double the poverty line — for workers with at least 20 years of contributions. It rises to

27 percent once workers pass age 70, but is lower for workers who retire early. The minimum is formally indexed to prices; however, due to a series of political decisions, it has increased with wage growth over the past 20 years, and the increase applies to all retirees, not simply to new ones. As a result, it may lead to higher costs than were initially projected.

If Chile wants to slow down the growth in expenditures on the minimum pension guarantee, one option is to wage-index the minimum for new groups of retirees but to price-index after retirement (as we do for our defined benefit in the United States). Another option is Swiss indexation — which is a combination of wage and price indexation. Benefits would then grow as wages grow, but at a slower rate. Still a third option is to modify payout rules so that fewer retirees fall below the rising minimum.

Moral Hazard Problems. The minimum pension guarantee has the advantage of being less expensive than a flat benefit and easier to administer than a means-tested benefit, since it doesn't require a careful check of all income sources. Its main disadvantage is that it may involve moral hazard problems; that is, risky behavior may increase, which raises total costs, when a minimum is guaranteed. Evidence from Chile suggests three types of moral hazard:

> First, low-income earners may stop working, or try to evade contributions, once they pass the 20-year point required for eligibility, since any small addition to their pension would simply displace the government subsidy.
>
> Second, when given a choice of investment options, workers near the minimum may choose the riskiest option, since they will benefit from the upside potential while the government bails them out of the downside risk. (This has only become relevant in Chile since investment choice was expanded in 2002.)
>
> Third, retirees with small accumulations — who are not necessarily required to annuitize their accounts — may use up their retirement savings as fast as possible because they know that the government will pay their pension when their own money

is gone.

These moral hazard issues could be mitigated by making the minimum pension guarantee a positive function of years worked, ruling out very volatile investment strategies, and setting stringent payout rules that prevent lump sums and front-loading.

Rate of Return Guarantees. Besides the minimum pension, many countries have established rate of return guarantees designed to smooth returns in the personal accounts over time and reduce variations among individuals. Asset managers, not the government, bear these costs, but ultimately pass them on to worker-investors.

Absolute rate of return guarantees are rare. Kazakhstan requires a zero real rate of return guarantee. This is likely to be called upon very rarely if it applies as an average over the workers' lifetime, but it can obviously be costly and distortionary if it applies on a year-to-year basis.

Switzerland has a more binding floor on returns to accounting contributions in plans whose investment strategy is determined by the employer. Until 2002, a worker's account was required, over his tenure with a particular employer, to earn an average nominal return of at least 4 percent per year. During the 1980s and early 1990s this was not a demanding rate to achieve, as even conservative government bonds yielded more than 4 percent. However, as interest rates plummeted over the last few years, asset managers found it difficult to earn 4 percent without taking on considerable stock market risk, and this risk meant that at times the floor would not be reached. Pressure grew for a change in regulations. Finally, in 2002, the Swiss government began a downward readjustment of the guarantee, and by 2005 it had fallen to 2.5 percent. Moreover, a process to re-evaluate the rate automatically every two years was put in place. This illustrates the dangers of absolute rate of return requirements: they become political footballs when rates in the broader economy unexpectedly change.

More common than absolute rate of return guarantees are relative rate of return

guarantees, in which limits are set on the degree to which an asset manager can deviate from the industry average [see Table III]. For example, if an asset manager in Chile beats the industry average return by more than 50 percent or 2 percentage points (whichever comes first), it must put the excess into a special reserve fund. When the manager earns less than the industry average by more than 50 percent or 2 percentage points, it must make up the difference in the accounts by drawing down the reserve fund and then by dipping into owners' equity, if necessary. Understandably, asset managers were reluctant to deviate from the typical industry portfolio — thereby creating "herding," where all the investment portfolios are very similar. To overcome this problem, Chile has recently allowed pension funds to offer multiple portfolios, with different bands and penalties allowed for each portfolio (see earlier sidebar on Chile).

While herding may have reduced investment choices, the purpose of this guarantee — to reduce volatility across time and disparities across individuals — remains worthwhile in a mandatory system. A better and more transparent way to achieve this goal is to require that all portfolios be indexed to broad market benchmarks such the S&P 500 or Wilshire 4500, rather than allowing concentration in particular companies or sectors. The Latin American and Eastern European countries did not have this option, given their undeveloped financial markets, but we do. Additionally, some financial analysts have recommended "life cycle investing" (a gradual shift out of stocks and into bonds or annuities over a period of years as individuals approach retirement) or the use of options, to protect older workers from a sudden downturn in the stock market. These arrangements would automatically reduce disparities among individuals and across different age cohorts.

Lessons for the United States. As we revise our system to include personal accounts, the United States needs to rethink how high the safety net should be, how it should be financed, and what linkages and trade-offs we want to make between work incentives and poverty prevention. In this context, we should seriously consider establishing a minimum pension as a way to redistribute income to low earners and protect retirees from investment risk.

One simple way to accomplish this could be to modify our current defined benefit to become a flat benefit that pays a poverty-level pension (currently about $750 monthly for an individual living alone[12]) to everyone, as in several Western European countries. Our current average defined benefit from Social Security is $1,000 per month and it is slated to go up around 1 percent per year. Flattening out the public benefit to the poverty level would make the system solvent and, in fact, would generate a surplus that could be used to help fund the individual accounts.

Alternatively, and more consistent with good work incentives, the benefit could be a flat sum per year worked. For example, retirees could be promised a public benefit that is 1 percent of the average wage per year for the first 20 years of contributions, and 0.5 percent per year thereafter. A 20-year worker would then get $600 per month while a 40-year worker would get $900 per month. If defined in terms of the average wage, it would grow over time together with the average standard of living — it would thus be wage-indexed for successive cohorts but could be price-indexed after retirement, as our current benefits are. This would be a highly progressive public benefit, with work incentives built in, that would cost less than our current scheduled benefits. Yet, together with an annuity purchased with a 4 percent account, the total benefit would exceed that received by the average worker today.

In general, countries with large accounts complement them with very progressive public benefits to get desired distributional outcomes over-all. Our public benefit is not as progressive as we sometimes claim, given the longer life spans of high-income earners. We should consider making it more progressive — yet still positively related to years worked — as part of the package of changes that establishes personal accounts. This would protect low-income earners both from labor market instabilities and financial market volatility.

As an alternative to government-financed minimum pensions, financial analysts are now developing alternative market mechanisms (sometimes called “collars”), in which worker-

investors agree to give up some of their upside gain in order to qualify for a downside floor. The worker must also relinquish control over the portfolio to private market guarantors. A contract would peg returns to a particular index, but the guarantor rather than the worker would control specific investments, in order to avoid moral hazard (excessive risk-taking) problems. While this may turn out to be a promising way to guarantee a minimum pension without incurring a contingent liability for the government, it introduces two new risks: 1) workers may not be able to evaluate these guarantees, to figure out whether they are getting a good or bad deal, and 2) the private market guarantor may not be able to honor its commitment when it comes due. This is particularly a potential problem given that many workers will be trying to collect at the same time if the market drops precipitously. Such private market guarantees are promising, but they place an extremely heavy burden on regulators — and introduce a third new risk — 3) that regulators may fail and government (or workers) will end up bearing the burden after all.

Paying Retirement Benefits

How can we be sure workers won't spend all the money in their accounts before they die, then live at the minimum pension level, or worse, in poverty? Most countries with personal accounts require that workers annuitize or take their money out of the system in very gradual installments. Annuities are desirable because they guarantee workers a life-long income. However, retirees who need the money early — say, because they have high medical expenses — can't get it. And if everyone is put into a community-rated annuity pool, those with short lifetimes (who are also disproportionately low-income earners) end up subsidizing those with longer lives (who are disproportionately high earners).

Can the private sector handle annuitization, given the inherent investment and longevity risk, as well as the inflation risk, if the annuities are price-indexed? The annuities market is currently tiny in practically every country — in part because in the past, defined benefit social security systems have paid public annuities, leaving little demand for the private market. How

will this change if the defined benefit is partially replaced by individual accounts? Will annuities be offered on good terms? Will workers buy them if annuities are not required? The Chilean experience suggests that these problems can be resolved. Chile has the most extensive annuity market in the world. The annuities provide a good money's worth ratio on price-indexed annuties. Life insurance companies sell more annuities than life insurance. [See the sidebar "Case Study: Annuities in Chile."]

Annuitization in Eastern and Central Europe. All these countries require annuitization through insurance companies, except in cases where the accumulation is too small to make this feasible. Kosovo, for example, initially required annuitization, but has not been able to implement this requirement because accounts were simply too small. Other countries that require annuities may find this, too. They may also find that costs are higher and payouts lower than expected due to the absence of good mortality tables and the risk of longevity improvement. Many of these countries require that unisex mortality tables be used, so that women do not receive a lower monthly payment because of their greater expected longevity. It is not yet clear how this requirement will work in private insurance markets, where insurance companies prohibited from basing premiums on longevity, will try to enroll only those individuals who are good risks.

Annuities versus Programmed Withdrawals in Latin America. Either annuitization or gradual withdrawals are permitted in Latin America, but lump sum withdrawals are not allowed unless the pension exceeds a specified threshold. Generally, the threshold is 70 percent of a worker's own wage and 120 percent to 160 percent of the minimum pension guarantee. [For more details and variations, see Table IV.] This is a compromise that enables retirees to get some of their money out early, but it is supposed to ensure that these withdrawals are not at the

expense of a minimally acceptable lifetime income. Of course, for any of these arrangements to work well, good mortality tables are needed. Today, many Latin American countries face problems stemming from an undeveloped insurance industry and obsolete mortality tables.

Other Practices. Britain requires price-indexed annuitization of the mandatory contribution by age 75. Sweden requires annuitization, through the public sector. In Switzerland, annuitization is not required but it is usually the default option (pensions are annuitized unless the retiree deliberately requests some other payout mode). The Swiss government also sets the annuity terms at very favorable rates. Calculations from 1999 have shown that the present value of expected lifetime benefits is substantially greater than the premium — due to increases in life expectancy combined with decreases in interest rates.[13] While this situation was unsustainable in private insurance markets, government regulations prevented efficient change. Starting in 2005, however, the conversion rate is scheduled to decline gradually from 7.2 percent of the premium per year until it reaches 6.8 percent in 2014.[14] If current trends continue, that will still be a very good deal for retirees. The combination of favorable terms and default inertia has led 70 percent of all Swiss retirees to annuitize.

Lump Sum Withdrawals in Australia and Hong Kong. These countries deviate from the norm — they do not require annuitization or gradual withdrawals. Some analysts fear that retirees will spend down their accumulations quickly and thereby qualify for the means-tested old age pension. As a counter-incentive, Australia has recently instituted strong tax advantages for gradual withdrawals.

Lessons for the United States. There is a trade-off between giving retirees control over their retirement funds versus ensuring that they will have an income even if they live 30 or 40 years after retirement. Mandatory old age plans exist precisely because we believe that a) not all

individuals will make the right decisions, and b) if they become destitute society will have to pick up the bill. At the same time, some people desperately need their money earlier, perhaps to pay medical bills, and others know they will not live long after retirement. The latter group includes retirees in ill health and others with low life expectancy. The solution to this trade-off is to choose a guaranteed income threshold, after which lump sum withdrawals are permitted. The threshold should take into account that the poverty line or minimum pension is likely to rise over the retirement period, as the average wage and standard of living rise. For this reason, all countries have chosen a threshold well above the poverty line; the United States should follow this example.

Once a realistic threshold is reached, we should also consider exempting pensioners from the requirement to contribute further to their accounts. In Chile this exemption has increased their net take-home pay and therefore the labor supply of older workers— which is beneficial for the economy as well as the workers themselves. (Contributions to the traditional benefit should continue, however, because of its redistributive function.)

Of course, a number of other issues remain. Should joint annuities be required? Should variable annuities be permitted? Should gender-specific or unisex mortality tables be used? Should rate differentiation by socioeconomic group and DNA group be encouraged or allowed? Countries with personal accounts are only now beginning to confront these questions, and the United States will have to address them, too.

Covering Transition Costs

When money that used to pay benefits to pensioners is instead diverted to personal accounts, a temporary financing gap is created, known as the “transition cost.” This is not a real

cost in the long run, since eventually the accounts will offset future government promises and reduce costs. But that is many years into the future. How will ongoing benefits be financed in the meantime? All countries that started their personal accounts by diverting money from the payroll tax faced the issue of how to finance the transition (though the few countries that used add-ons avoided this problem). How did they do it?

It is difficult to answer this question because money is fungible, many other government policies were changing at the same time, the old systems were usually insolvent and so would have had to change anyway, and the counterfactual (what would have happened otherwise) is unknown. For those reasons, we don't really know the degree to which tax hikes, spending cuts or debt finance were used to finance the transition to personal accounts. We do know that Chile accumulated a fiscal surplus before the reform to help cover transition costs. Most countries downsized their traditional systems so they had a smaller pension debt to cover. And all countries used some degree of debt finance.

Honoring Past Promises and Recognition Bonds in Chile. In Chile, old system pensions were downsized, mainly by raising the retirement age. Beyond that, workers who stayed in the old system got their old pensions, and Chile is still paying that bill. Over the past 20 years, the Chilean government has paid between 2 and 3 percent of GDP per year to old system retirees — the government was paying almost as much to subsidize the old system before the reform[15] — and this will be a considerable part of total government spending for another 10-20 years.

Workers who switched to the new system received "recognition bonds" for their past service. The bonds could be cashed in and applied toward their pension upon retirement. This was equivalent to a forced loan from workers to the government, with redemption tied to their

dates of retirement. The cash-ins therefore did not begin until the late 1980s and have been growing since; they now cost the government about 1 percent of GDP.[16] This financing gap will slowly diminish until all workers who switched have died — about 40 years from now. Econometric studies indicate that the government has financed these expenditures largely out of higher taxes and lower government spending on other goods and services, not out of debt finance as a primary source. This has produced an increase in national saving to which economists attribute much of Chile's dramatic and prolonged economic growth.

Debt Finance in Argentina. Unlike Chile, Argentina did not issue recognition bonds, but promised to pay all workers who switched part of their old benefits. This implied a longer redemption than Chile's, since the loan was to be gradually repaid over the workers' entire retirement period. Also unlike Chile, Argentina had greater political difficulties in raising taxes and cutting benefits or other government spending. Thus, transition costs added large amounts to Argentina's debt and was one factor leading to its economic crisis, rather than to the economic growth that occurred in Chile.

Lessons for the United States. The impact of reform on the U.S. economy will be largely determined by how the transition is financed. And the broader economic impact largely determines whether or not the reform was desirable in the first place. As we plan for personal accounts in the United States, we should take care not to do what many other countries have done — underestimate transition costs by underestimating the propensity of workers to switch. And we should include an explicit strategy for covering transition costs, which does not place heavy reliance on borrowing. If we finance the transition primarily by borrowing, this will negate one of the primary goals of the accounts — to increase national saving — and will perpetuate the burden that will have to be paid by future generations. Increased personal saving

would be offset by increased public dissaving. Options we should consider include, among others, downsizing benefits by raising the retirement age or slowing benefit growth, raising the ceiling on wages subject to the payroll tax, postponing income and estate tax cuts for the wealthiest Americans, creating a new "legacy debt surtax" or financing the accounts in part by an add-on, which does not create transition costs.

Conclusion

Although workers will "own" the money in their accounts, it is clear that ownership comes with many strings attached, regarding allowable investments and withdrawals. The reason for having a mandatory system in the first place is that some people won't save enough or will make extremely poor investments, if given unfettered choice. The mandatory system should avoid this outcome, for the sake of the individuals directly concerned as well as the rest of society. Also, properly constructed rules should result in lower costs for a mandatory program than is available to individuals on a voluntary basis.

The way we design the personal account system will determine reform's winners and losers, the economic status of the elderly as a group as well as the cost to the coming generations, and its impact on the broader economy. Other countries' experiences don't give us answers to all the design issues, but they do show the variety of options available and some of their effects. Administrative costs and risk vary widely across plans, depending on their particular design features; low cost, low risk options are available — and they imply limited choice. The most important commonalities among all these systems involve the creation of a minimum pension and strong restrictions on payouts, both consistent with the original purpose of Social Security — to ensure that the elderly remain above a reasonable income level throughout their retirement years.

Table 1: Nature and size of private funded pillar (personal accounts)

	Year operations began	Contribution rate to accounts[a]	% of total benefits from accounts[b]	Add-on (A) or carve-out (C)	Mandatory or voluntary[c]	Worker- or employer-based
Latin America						
Argentina	1994	7.7%	medium	C	V	W
Bolivia	1997	10.0%	high	C	M	W
Colombia	1994	10=>12%	high	C	V	W
Chile	1981	10.0+2.5%	high	C	V	W
Costa Rica	2000	4.25%	low	C	M	W
Dom.Rep.	2003	8.0%	medium	C	V	W
El Salvador	1998	10.0%	high	C	V	W
Mexico	1997	7.0%	high	C	M	W
Peru	1993	8.0	high	C	V	W
Uruguay	1995	varies	medium	C	V+M	W
Eastern & Central Europe & FSU						
Bulgaria	2002	2=>5.0%	low	C	V	W
Croatia	2002	5.0%	low	C	V	W
Estonia	2002	4.0+2%%	medium	C+A	V	W
Hungary	1998	6=>8	medium	C	V	W
Kazakhstan	1998	10.0%	high	C	M	W
Kosovo	2001	10.0%	high	A	M	W
Latvia	2001	2=>9.0%	low	C	V	W
Macedonia	2003	7.0%	medium	C	V	W
Poland	1999	7.3%	medium	C	V	W
Western Europe and Asia-Pacific						
Denmark	1993	9%	medium	A	M	E
Netherlands	1986	14%	medium	A	M	E
Sweden	2000	2.5%	low	A+C[d]	M	W
Switzerland	1985	10%[a]	medium	A	M	E
UK[e]	1978-88	varies	medium	C	V	E or W
Australia	1992	9.0%	medium	A	M	E
Hong Kong	2000	10.0%	high	A	M	E

Sources:
Contribution rates for Latin America and Eastern Europe: Palacios 2003 and Chlon-Dominczak 2003.
Contribution rate for Netherlands is from van Ewijk, Casper and M. van de Ven 2005.
Contribution rate for Switzerland is based on personal communications with Monika Butler.
Other contribution rates and benefit shares: James and Brooks 2001.
Other columns: miscellaneous country studies
Figure 1 is from simulations in James and Brooks 2001 and data in Palacios 2003 and Chlon-Dominczak 2003.

Notes:

a Contribution rate is usually gross of fees, but in some cases fees are additional. In Chile fees totaling about 2.5% of wages are added, to cover disability and survivors insurance and administrative costs. In some cases, e.g. Bulgaria and Latvia, contribution rates start small but are supposed to rise. For employer-based plans in Western Europe, which include some defined benefit plans, a required contribution rate is not specified and contributions vary by year and age of worker—usually between 5 and 15% of wages. In Switzerland 10% is estimated, based on current contributions by employers/total wage bill.

b High means 70% or more, low means 30% or less, med means 40-60%. See Figure 1.

c Except in Argentina and Colombia, all new entrants to labor market had to join new systems. This column indicates cases where current workers were given a choice to voluntarily join the new system, versus cases where participation was mandatory. In Mexico everyone had to switch but retained the right to return to the old system upon retirement if this yields a higher pension. In Uruguay the switch was mandatory for high earners, voluntary for others.

d The new system explicitly required a 18.5% contribution, of which 2.5% was allocated to the account; in that sense it was a carve-out. However, this was a political compromise in which some influential parties were unwilling to raise the total contribution above 16% without the accouts; in that sense it was an add-on.

e In UK state earnings-related plan started in 1978. Employers were given the right to opt out at that time if they provided benefits that were at least equivalent. In 1988 workers were given the right to opt out of state plan or employer plan to start their own account. Currently UK has worker and employer-based plans as well as state plan. Workers or employers who opt out get age-related payroll tax rebate.

Table 2: Administrative costs and charges (net of insurance premia), 2002

	Fee as % of assets[a]	Fee in US$ per account[b]	Reduction in final capital & Pension[a]	Centralized collections
Latin America				
Argentina	4.4	$72	23%	x
Bolivia	1.6	12	11%	
Colombia	NA	NA	14%	
Chile	1.2	60	16%	
Costa Rica	2.1	20		x
Dom.Rep.	NA	NANA		x
El Salvador	9.5	50	18%	
Mexico	2.5	45	22%	x
Peru	3.8	65	19%	
Uruguay	2.6	39	14%	x
Eastern and Central Europe and FSU				
Bulgaria	NA	NA	NA	x
Croatia	NA	NA	NA	x
Estonia	NA	NA	NA	x
Hungary	NA	NA	NA	
Kazakhstan[c]	3.7	9	NA	x
Kosovo[d]	1	2	20%	x
Latvia	NA	NA	NA	x
Macedonia	NA	NA	NA	x
Poland[c]	4.3	19	NA	x
Other				
Sweden[e]	.7		15%	
TSP[e]	.1	27	2%	x
US, retail[e]	1.5	360	30%	
US, institut'l[e]	.7	NA	15%	
Australia, av[f]	1.3	$150	26%	
Australia, retail[f]	2.0	NA	40%	
Australia, corporate [f]	.7	NA	15%	

Sources and notes:

a Numbers and simulations are from James, Ferrier, Smalhout and Vittas 2001, which also give details on methodology. These fees include investment and record-keeping services, and also cover marketing and profits. Simulations assume that fee as % of contributions remains so fee as % of assets fall as average account size grows.

b Latin American numbers are derived from fees per contributor in FIAP 2003. A distinction must be made between contributors and affiliates. About half the number of affiliates contribute at any point in time. Money and accounts are managed for all affiliates, including those who have temporarily dropped out of the labor market or the system and therefore don't contribute currently. These calculations assume that the number of accounts is twice the number of

contributors, which is a typical case. Fee per contributing worker in FIAP are double the number given.
c from Chlon-Dominczak 2001.
d Start-up costs in excess of 1% of assets per year in the new Kosovo system are subsidized by the UN. Kosovo was still in start-up phase taking in new contributors in 2004. These numbers are estimates.
e US numbers are from James, Ferrier, Smalhout and Vittas 2001. Numbers are averages across mutual funds, weighted by assets, for 1997. Swedish numbers are from 2004, based on personal communications with Annika Sunden.
f Australian data are from Clare, 2001. Data are for 2001. Conversion to US$'s is based on exchange rate in December 2001.

Table 3 Minimum Pension and guarantees

	MPG, floor or flat[a]	Min pen/ av. wage	Yrs for eligibility[b]	Financed by	Rel. rate of return guarantee[d]
Argentina	flat	28%	30	ss+gen rev	x
Bolivia	flat	7%	Na	gen. rev.	
Colombia	mpg	50%	25	gen. rev.	x
Chile	mpg	25%	20	gen. rev.	x
Costa Rica	floor	20%	NA	ss	
Dom. Rep.	mpg	41%	30	gen. rev.	x
ElSalvador	mpg	32%	25	gen. rev.	x
Mexico	mpg	23%	24	gen. rev.	
Uruguay	floor	20%	NA	ss	
Eastern and Central Europe and FSU					
Bulgaria	floor	19%	15	ss	
Croatia	floor	10.5[c]	15	ss	x
Estonia	floor	13%[c]	5	gen. rev.	
Hungary	mpg	17%	20	gen. rev.	x
Kazakhstan	mpg	20%	20F/25M	gen. rev.	x
Kosovo	flat	20	universal	gen. rev.	
Latvia	floor	17%	10	ss	
Macedonia	mpg	35-41[c]	15	ss	
Poland	mpg	30%	20F/25M	gen. rev.	x
Western Europe and Asia-Pacific					
Denmark	flat	NA	universal	gen. rev.	
Netherlands	flat	28-38%	universal	ss	
Sweden	MPG	40%	universal	gen. rev.	
Switzerland	floor	22%[c]	44/45		
UK	flat	15-20%	b	ss	
Australia	mt flat	25%	universal	gen. rev.	
Hong Kong	flat	15%	universal	gen. rev.	

Source: Palacios 2003, Chlon-Dominczak 2003, Clark and Whiteside 2003, country studies and personal communications.

a MPG means that the personal accounts are covered by the guarantee. (In Peru this was recently established and is being phased in). Floor means that the public pay-as-you-go plan is earnings-related but has a floor that is independent of earnings. Flat refers to a public benefit that is uniform for almost everyone. In Australia access to the flat is by a means-and asset-test that excludes about 30% of retirees. In Denmark the flat benefit has been means-tested against wages since 1993. In the UK the flat benefit is price-indexed and less than the minimum income guarantee, which is wage-indexed; both are given. In the Netherlands the flat benefit is about 38% of average wage for a single person, 28% for each member of a couple. In countries where minimum pension is price-indexed, it will be a smaller percentage of average wage every year, if wages rise faster than prices.

b Eligibility for the mpg and the floor usually requires a minimum number of contributory years. Eligibility for the flat benefit is usually universal, based on residence. In the UK both years of

market work and years of child or elder care count toward eligibility.
c Minimum pension is higher for those with more years of work. (In Switzerland, floor is lower for those with less than 44 years of work).
d Asset managers that deviate from the industry average or benchmark by more than a specified amount are penalized. Kazakhstan also requires a 0 real rate of return guarantee. Switzerland has an absolute average annual rate of return guarantee over the worker's tenure with an employer.

Table 4: Annuitization rules

	Annuity required	Gradual withdrw'l permitted	Lump sum allowed after threshold [a]	Threshold for lump sum (% own wage)[a]	Threshold for lump sum (% MPG)[a]
Latin America					
Argentina		x	x	70	300
Bolivia		x			
Colombia		x	x	70	110
Chile		x	x	70	120
Dom. Rep.		x	x		50
El Salvador		x	x	70	160
Mexico		x	x		130
Peru		x	x	80	
Uruguay	x				
Eastern and Central Europe and FSU[b]					
Bulgaria	x				
Croatia	x				
Estonia			x		
Hungary	x				
Kazakhstan			x		
Kosovo			x		
Latvia	x				
Macedonia	x				
Poland	x				
Western Europe and Asia-Pacific					
Denmark	c				
Netherlands	c				
Sweden	x				
Switzerland	c default				
UK	x				
Australia		x	x		
Hong Kong		x	x		

Source: Palacios 2003, Chlon-Dominczak 2003 and country studies.

a Lump sums are sometimes allowed once the pension passes a threshold, specified as % of worker's own wage and % of MPG. Australia and Hong Kong have no threshold.

b Estonia, Kazakhstan and Kosovo allow lump sum withdrawals for small accounts. Most accounts are still small. Other countries that supposedly require annuitization may find this impractical until account size grows.

c Employer-sponsored plans often started as defined benefit plans. Annuitization was implicit. As switch to defined contribution occurs, explicit choices will have to be made regarding and annuitization. In many Swiss plans annuitization is the default option.

Figure 1 Percentage of Total Benefit from Private Pillar

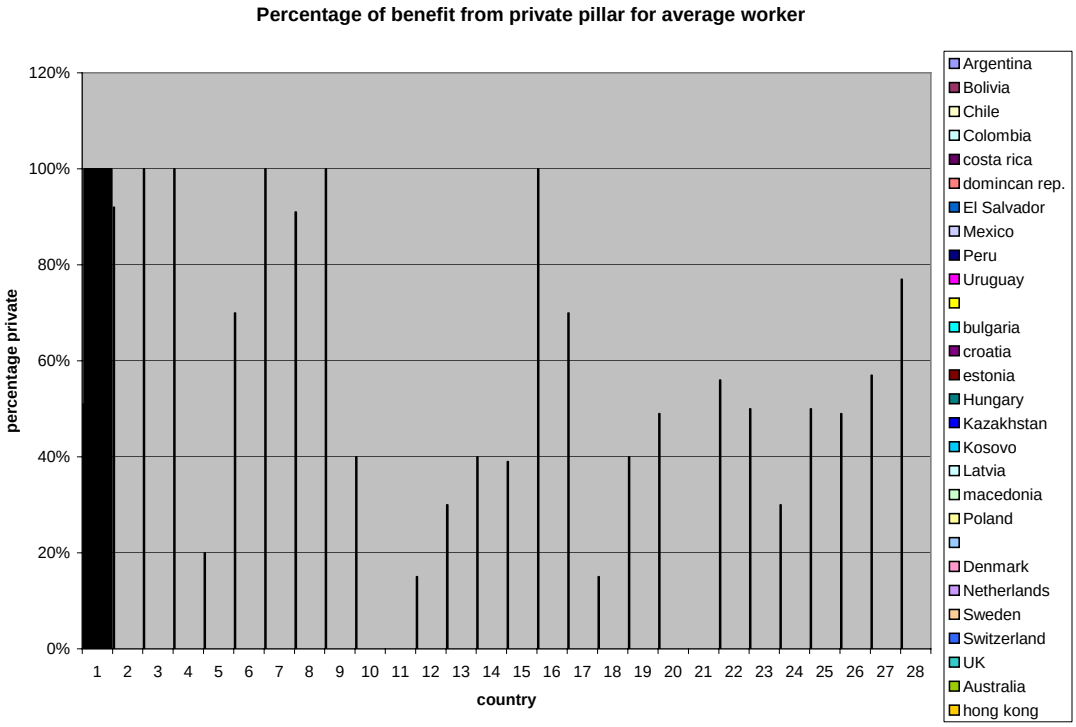


Figure 2: Costs of Chilean AFP System, 1982-1998

Relation Between Fee as % of Assets and Average Account Size

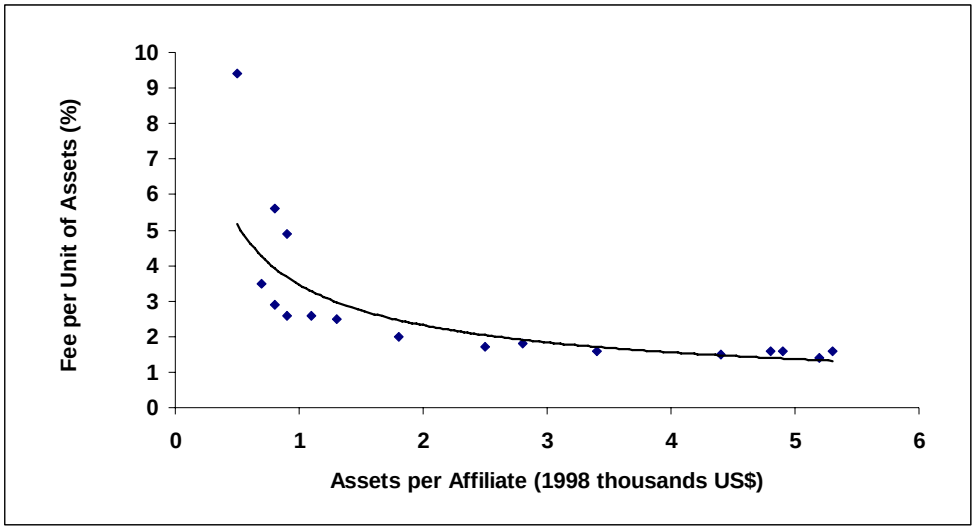


Figure 3: Cost as % of Assets in Thrift Saving Plan, 1988-98

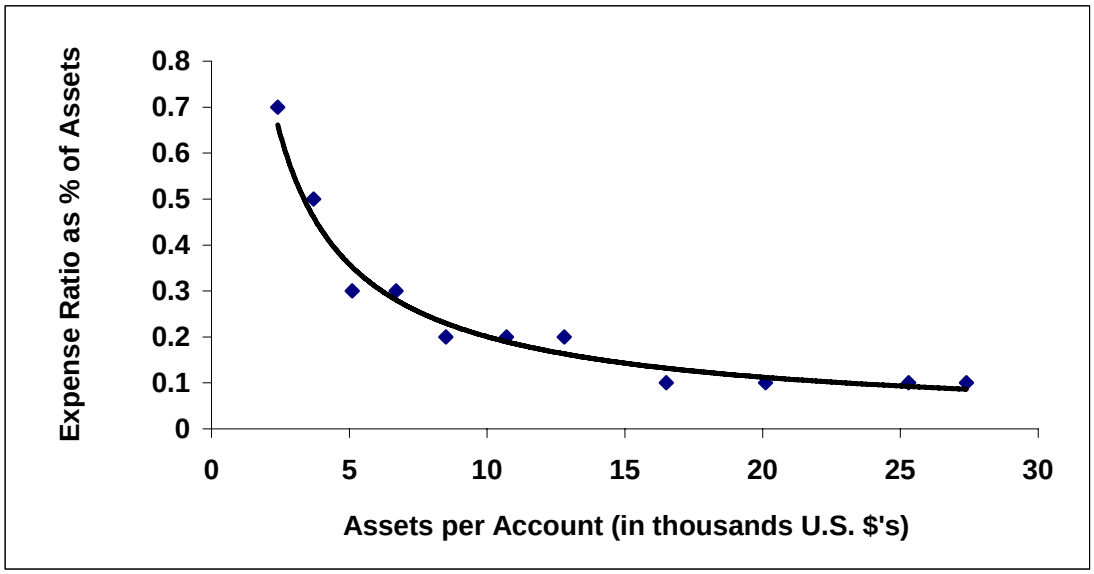
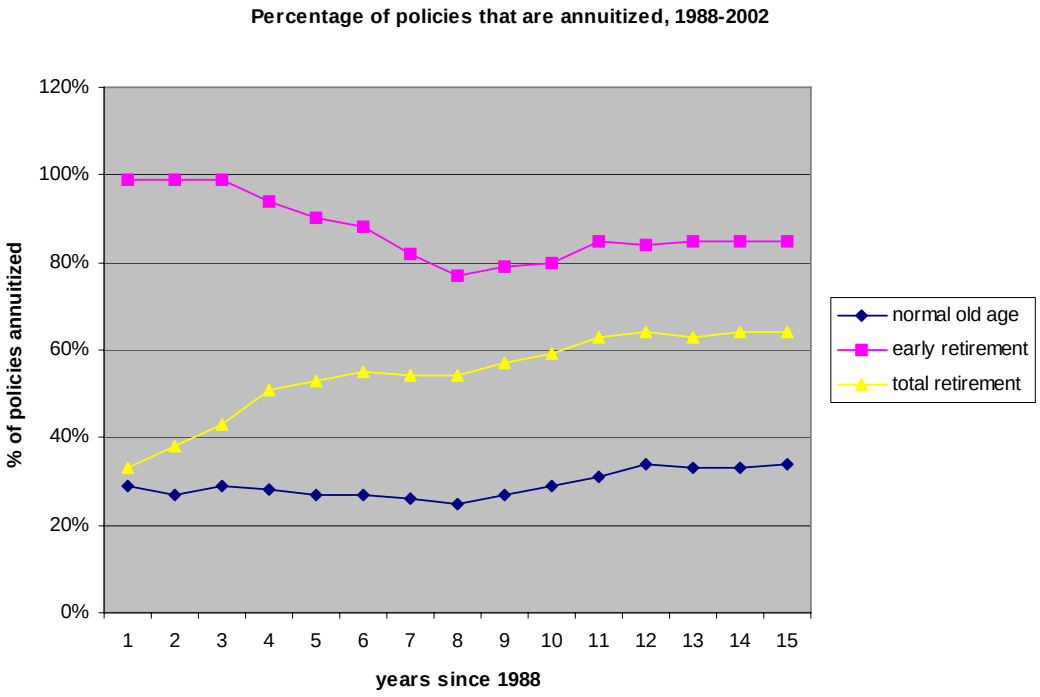


Figure 4: Percentage of policies annuitized in Chile, 1988-2002



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Notes

[1] Workers with very low earnings were often excluded, to avoid the high administrative costs associated with small accounts.

[2] Most defined benefit plans in the UK are closed to new members. In Australia the new plans are all defined contribution and many old plans have been transformed as well. In Switzerland, even when the plan is described as defined benefit, it must meet certain defined contribution criteria (the accumulation at the end must be at least as great as would be achieved by a contribution rate and interest rate that is specified by law). In the Netherlands, which is one of the last strongholds of defined benefit plans, employers are beginning to actively consider a switch to defined contributions.

[3] See Estelle James and Sarah Brooks, "Political Economy of Structural Pension Reform," in Robert Holzmann and Joseph Stiglitz, eds. *New Ideas about Old Age Security* (Washington, D.C.: World Bank, 2001).

[4] In Kosovo, an add-on contribution was used and the new system is mandatory, but this is because the old system was left behind in Serbia. In Sweden the new system raised the total contribution rate — it is now 18.5 percent of wages — with the agreement that 2.5 percent would go to the account. Some influential parties would not have agreed to 18.5 percent without the accounts. In that sense, the Swedish agreement was an add-on/carve-out hybrid that might be relevant to the United States.

[5] In the United Kingdom., switching back and forth is permitted, which has the perverse effect that it becomes financially advantageous for workers to switch back into the state defined benefit system as they age — and that seems to be happening now. New entrants to the labor force can also choose between the public and private systems. This adds cost and uncertainty to the public plan. Switching to the accounts for existing as well as new workers was mandatory in Bolivia, Kazakhstan and Mexico. However, in Mexico workers were given the right to switch back to the old system upon retirement, if this raises their pension.

[6] A worker who contributes 4 percent of wages for 40 years and retires for an expected lifetime of 20 years, with wage growth 1.5 percent and rate of return 4.5 percent per year, will be able to purchase an annuity that provides 23 percent of his final wage, with his retirement accumulation. Given the progressivity of our defined benefit system, the proportion of total benefits coming from the accounts would be smaller for low earners and larger for high earners. This is desirable because high earners are more able to cope with the volatility of account investment returns.

[7] If a person pays a year-end fee at the end of the year that is 20 percent of first-year contributions and retires immediately afterwards, that fee equals 20 percent of his year-end

assets. But if he keeps that money in the system for 40 years, it will have the same effect on final pension as an asset-based fee that is only 0.6 percent of his year-end assets, for each of the 40 years. If he contributes every year for 40 years, paying a 20 percent fee on each new contribution, all these fees together are equivalent to an annual fee of 1 percent of assets per year. This will reduce his final pension by 20 percent. See Estelle James et al., "Administrative Costs and the Organization of Individual Account Systems: A Comparative Perspective," in Robert Holzmann and Joseph Stiglitz, eds., *New Ideas about Old Age Security* (Washington, D.C.: World Bank, 2001); a revised version was published in *Private Pension Systems: Administrative Costs and Reforms* (Paris: Organization for Economic Cooperation and Development, 2001). Also see Estelle James et al, "Mutual Funds and Institutional Investments: What is the Most Efficient Way to Set Up Individual Accounts in A Social Security System?" in John Shoven, ed. *Administrative Costs and Social Security Privatization* (Chicago: University of Chicago Press, 2000.

[8] Ibid.

[9] See *Pension Reforms: Results and Challenges* (Santiago, Chile: Federacion Internacional de Administradoras de Fondo de Pensiones, 2003).

[10] James et al., "Administrative Costs and the Organization of Individual Account Systems."

[11] See Estelle James, Alejandra Cox Edwards and Rebecca Wong, "The Gender Impact of Pension Reform," *Journal of Pension Economics and Finance,* 2003, and "The Impact of Social Security Reform on Women in Three Countries," National Center for Policy Analysis, Policy Report No. 264, November 2003.

[12] Or $1,000 monthly for a couple. See the poverty guidelines of the U.S. Department of Health and Human Services.

[13] See Estelle James and Dimitri Vittas, "Annuities Markets in Comparative Perspective: Do Consumers Get Their Money's Worth?" in *Private Pension Systems: Administrative Costs and Reforms*.

[14] At present, annuitants get an income of $7,200 annually for a $100,000 premium. In the future, they will get $6,800.

[15] *The Chilean Pension System* (Santiago, Chile: SAFP (Superintendencia de Administradoras de Fondos de Pensiones), 2003).

[16] Ibid.

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