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FACING THE CHALLENGE OF AGING POPULATIONS

Moderator: ROBERT M. KATZ
Panelists: CHRISTOPHER DAVID DAYKIN
ESTELLE JAMES*
ROBERT J. MYERS
CHARLES BARRY H. WATSON
Recorder: ROBERT M. KATZ

This session will focus on potential solutions to the problems encountered by national social security schemes in providing retirement income security in the face of aging populations and diminishing resources. Issues to be considered include private-sector initiatives and privatization. The World Bank model, presented in its policy research report, "Averting the Old Age Crisis," will be discussed. The session "Social Security Systems Around the World" [No. 4A, p. 507] provides additional background information for this session.

MR. ROBERT M. KATZ: In a previous session, we presented facts about a number of social security systems around the world, including some of the problems. In this session we will present one of the solutions. At next year's annual meeting, we will have a session assessing these problems from an actuarial perspective. The problems of aging populations and the financial viability of social security systems around the world are topics that cannot be addressed adequately in these brief sessions. We hope that the sessions here and those planned for Orlando next year will help raise awareness of these issues within our profession and start us on the road of participating in the solutions.

This session will focus on the World Bank's solution, presented in its study "Averting the Old Age Crisis." We are honored to have with us Estelle James from the World Bank, who is the principal author of that study. Joining Estelle on the panel are Barry Watson, Chris Daykin, and Bob Myers, who will comment on this study and present some of their own views.

Estelle will start with a presentation on the study. This major work came out in October 1994 and presents the World Bank's collective wisdom on a possible solution to the "old-age crisis." Following Estelle, Barry, Chris, and Bob will present some perspectives of their own. They will not necessarily agree with Estelle, although they will not necessarily differ with her either. We intend to set the stage, however, for next year's follow-up session at which we will devote the entire time to an assessment of this very important issue.

Estelle James is the lead economist for the policy research department at the World Bank. Before joining the World Bank, she was professor of economics, chair of the economics department, and dean in social and behavioral sciences at the State University of New York at Stony Brook. She is the author of several books and numerous articles. She has received many fellowships and research grants for her work from the National Science Foundation, the Social Science Research Council, the Yale University Program on

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*Dr. James, not a member of the sponsoring organizations, is a Lead Economist at the World Bank in Washington, DC.

Nonprofit Organizations, and the Woodrow Wilson International Center for Scholars, among others. She received a Ph.D. in economics from MIT.

DR. ESTELLE JAMES: I was pleased when I got the invitation to speak to this group because actuaries have a very special role to play when both private and public pension plans are set up. When you travel around the world, you see that many countries are revamping their old plans, or are setting up new plans. They don't have any actuaries, or perhaps there's one actuary in the country. Those of you who have worked in other countries have probably encountered this situation. It's important for the actuary to go to these countries to help them set up plans and to put this issue in a broader context.

Let me just set the stage to explain to you why the World Bank undertook this study. Many groups were surprised that we did this, because it's a little bit different from the kinds of studies that the World Bank normally undertakes. The reason we did it is that in looking ahead at what's happening now and what will happen during the next 30 or 40 years, it was clear that the world is aging. The entire world is aging. Aging will occur much more rapidly in developing countries than it has. This will pose some major fiscal challenges and have a major impact on the growth of these countries. If they do it right on the one hand, there might be a positive effect; and if they do it wrong on the other hand, there might be a negative effect. We're concerned about the negative effect. That's why this study was undertaken by the World Bank four years ago.

Let me illustrate these points. In 1990, 9% of the world's population was over age 60 (Chart 1). By the year 2030, 16% will be over age 60. That proportion is growing rapidly, and every region is growing. The process is increasing rapidly, especially in Asia and Latin America where the World Bank does a lot of work. By the year 2030, 80% of the world's old people will live in what are now developing countries. Over half will live in Asia and more than a quarter will live in China. I've just spent two months in China, and the government there is trying to figure out how to prepare for this situation.

CHART 1
PERCENTAGE OF THE POPULATION OVER 60 YEARS OLD, BY REGION, 1990 AND 2030

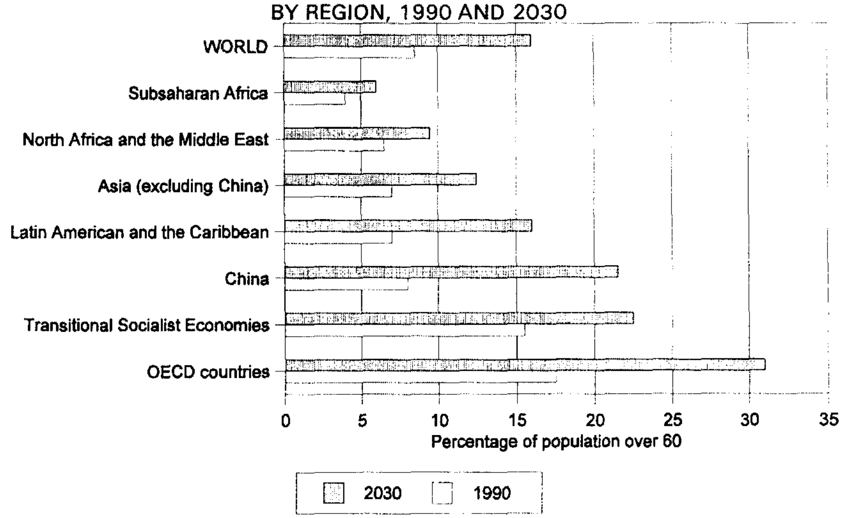
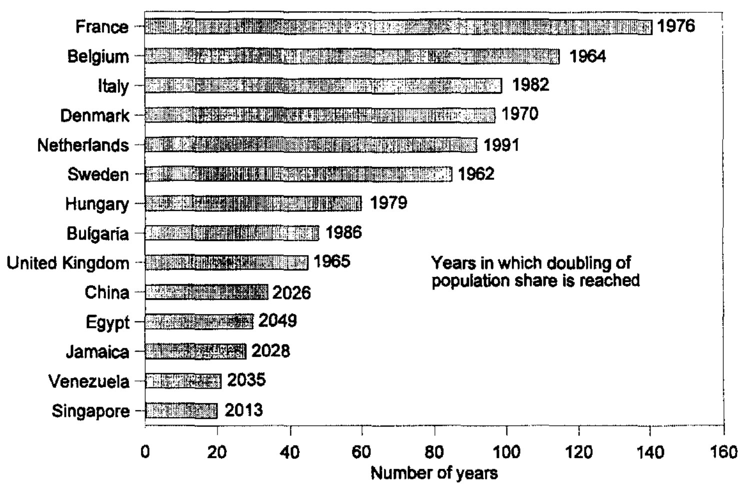


Chart 2 shows how long it took for this aging process to occur. It shows how long it took the proportion of people over age 60 to double, from 9% to 18%. It was a very gradual process in the European countries, such as France, Belgium, Italy, and Denmark, but if you look at the developing countries of China, Egypt, Jamaica, and Singapore, it's happening quickly. It's happening in 30–35 years. That means they have to think this situation through very quickly, and they have to get it right, because the aging will be upon them very soon. Our report is mainly geared toward the developing world. That's the mission of the World Bank. It has some implications for industrialized countries as well.

CHART 2
NUMBER OF YEARS REQUIRED TO DOUBLE THE SHARE OF THE POPULATION OVER 60 FROM 9% TO 18% IN SELECTED COUNTRIES

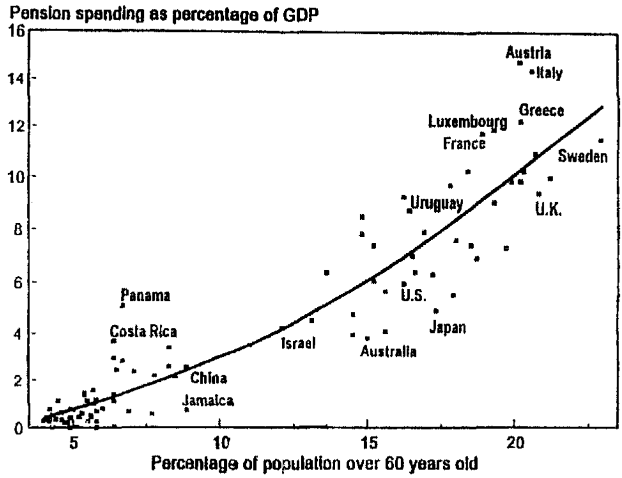


When populations age, public spending on pensions increases exponentially. Chart 3 shows the relationship between the percentage of the population over age 60 and the percentage of the gross domestic product spent on public pension plans. You can see that it gets to over 15% in a few countries now, and it's going to get far greater than that for many more countries during the next 20–30 years. This consumes a huge amount of the resources of a country.

With such a large program, how this money is generated and how it's spent affects everyone's welfare, both old people and young people, because it's bound to influence the way the economy operates. It's bound to influence productivity and the size of the guaranteed minimum pension pie. Of course, the larger the size of the pie, the more there is to go around for everyone, both young and old. Therefore, we took the point of view in this study that countries should use criteria for choosing their old-age programs. First, the programs should protect the old, because obviously that's why we have them in the first place. Second, they should promote, or at least not hinder, economic growth, which we thought was very important for both the young and the old. The economic growth impact becomes especially important because of the aging population, because of the fact that, relatively speaking, we will have more old people and fewer working-age people.

This means that it's important for the productivity of those working-age people to be high, because their output has to support the consumption of both old and young, and a larger inactive population.

CHART 3
RELATIONSHIP BETWEEN PERCENTAGE OF THE POPULATION OVER 60 YEARS OLD AND PUBLIC PENSION SPENDING



We took both criteria very seriously, and throughout my talk, I will keep referring to these two objectives or criteria that we use for evaluating systems. What impact does it have on the welfare of the old? What impact does it have on the broader economy?

I want to do three things. I'll summarize the problems that we found with the dominant systems today. I'll present our recommended solutions, which are really plural solutions, because we have a broad outline. But there are many variations that are appropriate for different countries. And if I have time, I'll discuss briefly how these recommendations might apply differently to different groups of countries.

What are the problems with current systems today? You're all familiar with the dominant systems in the world today; that is, the dominant formal systems that cover most people today. The dominant systems are publicly managed. They pay pensions based on a defined benefit that depends on the workers' earnings. They're financed on a pay-as-you-go basis, which means that workers are taxed today to pay benefits to old people who collect pensions today. So capital does not build up and assets do not build up, but rather what goes in is paid out. That's a kind of oversimplification, but basically that's what you find in many countries today.

As we studied these systems around the world, we were somewhat surprised to find the same problems over and over again, both in industrialized and developing countries. This is not to say that we found every problem in every country. Obviously, each country is unique, but we found many of these problems in many countries, and this led us to believe that the problems that we observed were not simply accidental design flaws.

Rather, they must be inherent in the economics and the politics of the way pay-as-you-go defined-benefit systems work. That is one of the basic reasons that we suggest that a somewhat different type of system might work better.

Let me run through the litany of problems as quickly as I can so I can get to our recommended solutions. We found that payroll tax rates, which are high already in many countries, are rising and are bound to go higher in the years ahead. In pay-as-you-go systems, when populations are young, and especially when the systems are immature and don't have many retirees yet, a very small contribution rate can be imposed on a large number of workers. That makes generous benefits possible to the small number of retirees who receive benefits. In many countries in these circumstances, politicians have made very generous pension promises. The pension promises don't cost much today, and they win political support for the politicians. Unfortunately, tomorrow comes; and tomorrow comes as populations grow older and as the systems mature, so they have more retirees. At that point, these systems must charge high taxes to pay those same benefits to the growing number of retirees, and sometimes it comes as a surprise. It was not necessarily something that people at large thought they were getting into when the system started. Even some countries with young populations are charging high contribution rates, in part because they went overboard at the very beginning in terms of the benefits promised and in part because of other abuses that I'll talk about.

Payroll tax rates for pensions alone, not for other social insurance, are already more than 25% in Egypt, Hungary, Russia, Brazil, Italy and other countries, and they will exceed 25% in many countries during the next two decades if current systems are not changed. High payroll taxes are a potential problem because they mean lower take-home pay for workers if they're borne by workers, or they mean higher labor costs, and therefore, less competitiveness and more unemployment if employers bear the cost. That's problem number one.

Problem number two is high payroll tax rates that are not closely linked to benefits, which leads to evasion in labor markets. You might think that a system could be devised that links the benefits closely to the contributions. In fact, in a defined-benefit system it's not impossible, but it's hard to do, especially in a defined-benefit program with many young workers. To the older worker, the value of that defined-benefit contribution is much greater because the benefit formulas usually make it very valuable in the last few years of employment. For the young workers there's a great incentive to evade. In fact, we find a high rate of evasion. In many Latin American countries, more than 40% of the labor force works in the informal sector, partly to avoid these payroll taxes. Of course, there are other reasons as well. The informal sector is growing rapidly in eastern Europe.

Why is evasion a problem? Again, let's consider our two criteria. Evasion means that many people whom you might want to be covered are not covered because they've evaded, so it's not good for the old. It also means that some people manage to evade their contributions, but they still collect benefits, because perhaps after being in the system for five or ten years, they can collect benefits. So they stay in the system for only five or ten years. That's not good for the old-age system and, therefore, ultimately for the old, because it means the system has to pay out benefits on the one hand, but it's having trouble collecting the contributions on the other hand. It also hurts the economy because people who work in the informal sector are often less productive. It's bad again by both criteria and a system that discourages evasion is needed.

Problem number three is early retirement. In Hungary, the average retirement age is 54, and the payroll tax rate needed to support this is 31%. In Turkey, many people retire with a generous pension below the age of 50, or even below the age of 40. In all the Organization for Economic Cooperation and Development (OECD) countries, the labor force participation of men over the age of 55 has been falling substantially during the past two decades while their longevity is increasing at the same time.

Again, going back to the basic nature of the plan, early retirement is particularly subject to abuse in defined-benefit plans. It is somewhat less, though, in defined-contribution plans, which is one of the reasons why some countries are now shifting to national defined- contribution plans. They think it will stem the incentive to early retirement.

Looking back at our two criteria again, early retirees pose a problem for the system and the economy. They hurt the system financially because the financial balance of the system depends very much on the retirement age. If you retire a year earlier, it means you're contributing for a year less and you're collecting benefits for a year more. It's a double whammy on the system. Early retirement also hurts the broader economy because it means there are fewer experienced workers to produce. Again, by both criteria, early retirement is a problem. This is a simple design flaw that could be corrected, and now countries are in the process of correcting it. Unfortunately, this is not simple to correct. It's very difficult to raise the retirement age in countries that have pay-as-you-go defined-benefit plans. The politics of these plans makes it very difficult to take this benefit away from people and, therefore, it's not simply an incidental random design flaw, but rather we see it as something that's more basic.

The fourth problem is misallocation of public resources. In 1990, Austria and Uruguay spent more than one-third of their public budgets on pensions. Governments can't tax indefinitely. In every country, some more than others, but in every country, there are political and economic limits to how much a country can tax. If a country has to spend a lot of its budget on pensions, it will have less capacity to spend on other public investments that are very important for economic growth, such as infrastructure, education, and health services. We thought it was very important to set up a system in which the contribution was less likely to be regarded as taxes and, therefore, posed less of a limit on other important government spending. This means a system in which benefits are closely tied to contributions and where workers have some control over what happens to those funds after they've made the contributions.

Problem number five is lost opportunity to increase national savings. Many countries believe they have inadequate long-term national savings, and this hampers their economic growth. I think this is a prevailing view among economists and policymakers in the U.S., for example, and also in many other countries. However, most countries have not used their old-age systems as a way to induce people to save more and, in fact, some economists believe that existing systems have induced people to save less.

Why do people save? People don't just save without reason, and we might think that one good reason for saving is to provide support to yourself in old age. Yet, this has not been systematically built into the public mandatory programs in most countries, and this is one of the reasons behind the structure of the system we propose: increasing long-term national savings.

Problem number six is failure to redistribute to low-income groups. Conventional thinking is that the kinds of systems we have, the pay-as-you-go defined-benefit systems financed by payroll taxes, are needed to redistribute to low-income groups. In fact, if you look at studies that have been done of the lifetime redistributions by public systems in progressive countries such as the Netherlands, Sweden, the U.K., and the U.S., these studies have found little, if any, redistribution from rich to poor. That is on a lifetime basis. Add up all the lifetime contributions made, compare them with the lifetime benefits received, properly discounted to the present, and you find that there's very little, if any, redistribution among the income groups, despite the rhetoric to the contrary.

Why does this happen? The reasons are a nontransparent system. Try to figure out what you can get in one of these systems and it's not very easy. One reason it happens is that high-income people tend to enter the labor force later because they've gone to the university, for example, and they tend to live longer. They have higher expected lifetimes. They collect those benefits for more years. Even if the benefit formula on an annual basis looks progressive, it turns out that on a lifetime basis, it is not progressive. That's why we list failure to redistribute to the poor as one of the problems. I would say that's something that we should be concerned about at this point in OECD countries, where we find an increase in polarization of income between the rich and the poor. I think we have to think seriously about how we're going to keep the bottom of the income distribution above the poverty line, both when they're young and when they're old.

Problem number seven is positive lifetime transfers to early cohorts and losses to their children. Generally, covered workers who retire in the first 20–30 years of a scheme get back much more than they contributed. They contributed for only part of their working lives, they contributed at relatively low contribution rates, but they get back the rather generous benefits that are paid at this point. However, their children and grandchildren will get back less than they paid in, and they'll get back lower rates of return than they could have earned elsewhere. This is what study after study has shown in many countries. There are some winners and some losers, but even the winners may not be winners because their children and grandchildren will end up losing.

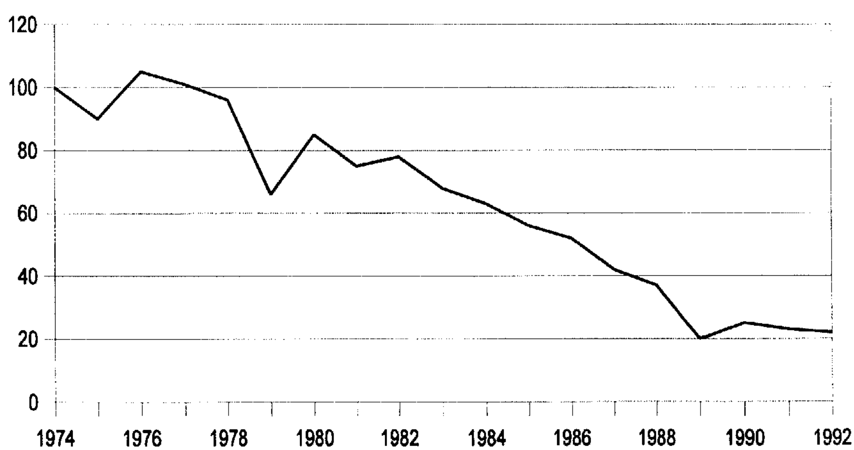
Sometimes we want to redistribute across generations. We may have wanted to redistribute to people who lost their savings in the Great Depression and who didn't have time to generate savings during World War II. But this particular redistribution took place in many countries without much thought about the redistributive consequences and without participation in the discussion by the younger generation, who were ultimately going to be the losers, because they weren't even around to participate in the discussion. Many of the winners in those early cohorts were high-income, not low-income, winners. In fact, in many countries, the biggest winners are people with the highest incomes because they have the highest pensionable salaries and, therefore, they've gotten the largest positive transfers when they retired.

It seems unlikely that many societies would consider this an equitable outcome, or a good way to use limited redistributive capacity, but that is what these systems have achieved in many countries. Both poor and rich in the early generations benefited. Numbers are often distributed that show they probably went down, and you might think that means it was a redistribution to the low-income group, but what it really means is that everyone in those early cohorts gained. It's true that both low-income groups and high-income groups in those early cohorts gained, and that may be reflected in the old-age poverty numbers, but it's also true that in the future cohorts, in general, people will be losing. So if you don't target those schemes carefully, you could very well see a resurgence of poverty, not just among the old, but among the young who are paying high payroll taxes currently to support these pension benefits. Recently there was an article in *The New York Times* about that situation here in the U.S.

As a result of all these forces, old-age systems are in financial trouble around the world. They're not likely to be sustainable in their present form. Something will have to give. It may be higher payroll tax rates, it may be lower benefit rates, or it may be a basic structural change.

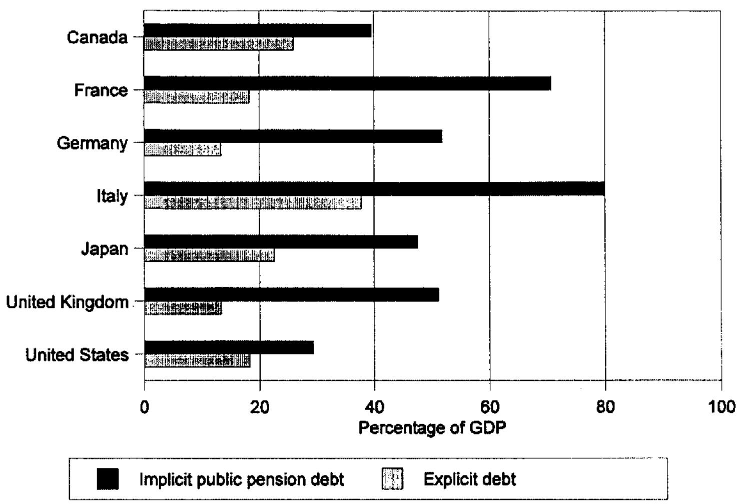
Chart 4 shows the method that's been used most commonly to escape from these unsustainable promises. Inflation is allowed to take place without indexing benefits, because we know politically it's very difficult to take away a benefit that you've given. We read about that in the newspapers everyday—how difficult it is politically. Many countries have taken these benefits away because of inflation without indexation, and that relieves the pressure on the fiscal purse and on the pension system. But it's the worst way to do it. It does not protect the old, and this is not a good way to reform a system. In Venezuela, the value of public pensions fell 60% during the 1980s due to inflation without indexation. You might think a simple remedy is to index benefits. But the answer wasn't that simple, because if Venezuela had indexed benefits, it would have had to come up with the money to pay those benefits, and it didn't have that money. That was the basic problem—it should not have promised those benefits in the first place. It promised them because of the political pressures that are inherent in these systems to promise overly generous benefits.

CHART 4
REAL PENSION LEVELS IN VENEZUELA, 1974–92



Problems are also looming in OECD countries. Chart 5 gives a glimpse at the problems. The dark bar shows the implicit public pension debt, which is the present value of the amounts promised to current retirees and workers as of this point in time. That is, if you stopped the system at this point in time, this is how much you would owe to existing retirees and workers in several OECD countries. As you can see, we've compared the implicit public pension debt with the explicit debt, which is the conventional debt that we read about in the newspapers that's financed by bonds but that gets a lot of public attention. People think their explicit debts are too high in many countries, but as you can see, the implicit public pension debt, which is less known and less transparent, is much larger than the conventional debt and it exceeds 200% gross national product (GNP) in some countries.

CHART 5
IMPLICIT PUBLIC PENSION DEBT, 1990

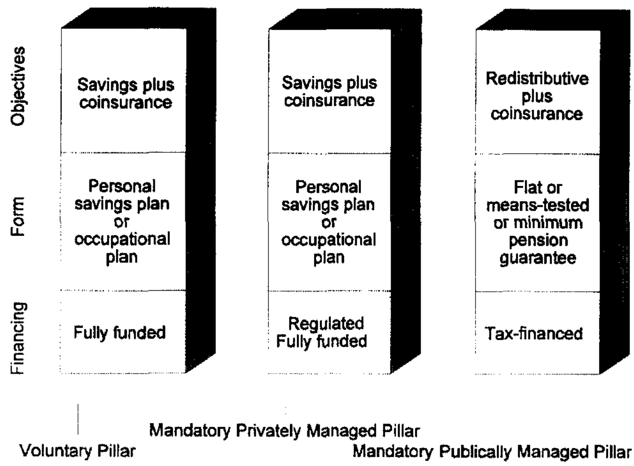


We can also look at the cash-flow deficit over time; that is, the difference between the expected flow of contributions and the benefit payouts that are expected, and we would get a similar picture. Current payroll taxes are much less than is needed to pay off this debt, and most countries will have a hard time closing the gap. They'll either have to reduce pension benefits below the promised amount, or they'll have to reduce spending on other public goods, which has the problems that I mentioned before, or they'll have to raise taxes. All these are very difficult politically.

After looking at these problems that we found in many countries, we found that public pension plans have not always protected the old. They especially will not protect people who will grow old in the future, and they have not always distributed these benefits in an equitable way. They have also hindered economic growth, which is bad for both the young and the old. In addition, they are simply not sustainable in their present form.

This brings me to my second point—a framework for reform. Chart 6 sums up our framework for reform. Basically, we recommend establishing a multipillar system that puts greater emphasis on savings, but has separate financing and managerial mechanisms for redistribution and savings and that shares responsibility between the public and private sectors.

CHART 6
THE PILLARS OF OLD-AGE INCOME SECURITY



Everyone in this game favors a multipillar system, but when you look below that line, you find that everyone has a different multipillar system in mind. Let me describe what each of our pillars would consist of. There would be a publicly managed, tax-financed, pay-as-you-go pillar for redistribution. That is, this pillar would have the object of providing a social safety net, making sure that old people stay out of poverty. A second pillar would also be mandatory, and it would be a competitively managed, fully funded pillar for savings, and it would link benefits closely to contributions. It would be the opposite of the redistributive pillar. In the redistributive pillar you deliberately don't link benefits to contributions, because you want to redistribute to people who have greater needs. In the second pillar you would maintain that link strongly for the reasons that I alluded to before. Finally, a third pillar would be voluntary for people who want more protection and more consumption in their old age because, of course, people have different preferences.

Let me describe in somewhat greater detail each of these pillars and what they would look like, what their functions would be, and how they differ from the current system. I want to start with the middle pillar, which is the mandatory pillar for saving, because that's probably the most different recommendation and it's the most controversial part of our recommendations. Let me explain the characteristics of these pillars and why we thought these were important characteristics.

The basic idea is that at least a substantial portion of people support themselves when they're old from their savings when they were younger. Many people should be required to save for this purpose. We thought this pillar should be mandatory so that it can play a large role in the overall old-age systems of a country. When looking at countries with voluntary systems versus mandatory systems, personal savings plans, or occupational employer-sponsored plans, we find, in general, that the voluntary systems cover half or less of the labor force. Most often they don't get to cover a majority of the labor force, and this goes back to some basic assumptions about high discount rates. If you didn't think you needed a mandatory program in the first place, if you really thought people would voluntarily save for their old age, we wouldn't be here talking about this topic. There would be less need for these public programs. We think it should be mandatory to play a large role.

We think it should link benefits closely to contributions to discourage evasion and labor market distortions and to discourage early retirement. As I mentioned before, in a defined-contribution program that has this close linkage, one would expect that people would be less likely to retire early because this would automatically reduce their benefits. If they did retire early, then it would come out of their own hide. It would be their decision about how to spend their money; it would not come out of the system as a whole or out of other people's contributions. We thought this linkage between benefits and contributions was very important.

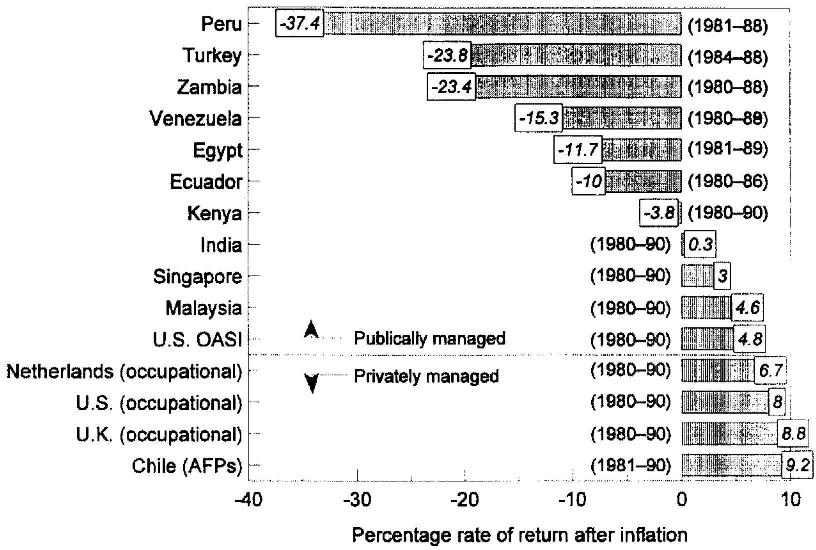
We thought it should be fully funded. This is a crucial feature of our middle pillar for a number of reasons. This will make costs clear upfront so that politicians won't make promises now that they will be unable to keep later to avoid the large tax increases that would otherwise be seen later as people retire and as populations age. Full funding also prevents the large intergenerational transfers. This is especially important in developing countries where populations are aging rapidly. If full funding is not adopted during the next 30 years, there will be very large intergenerational transfers, very large tax increases, and many social conflicts for that reason.

Finally, we thought it should be fully funded to help build long-term national savings. Full funding won't do this alone, but as part of a national program to increase long-term national savings, we think this can play an important role.

Moving on, we think that once there are funds, there's a very crucial question of how those funds are managed and who does the investments. We think it's important for these funds to be managed in a private, competitive, decentralized way. This is one of the controversial aspects of our recommendations, but we think this is important to produce the best allocation of capital; that is, to put capital to the uses where the productivity growth will be higher. Capital should be allocated based on economic, rather than political, objectives to achieve the highest return. If there is public management, it's likely that political objectives will play an important role. Finally, we thought private management was important to develop financial markets, which is where some developing countries are right now—trying to develop their financial markets.

Here's a piece of the empirical evidence, because most of our recommendations are based on empirical evidence, which led us to this conclusion. We collected data on the rates of return during the 1980s for publicly and privately managed pension funds. In Chart 7 we show the returns to all the publicly managed funds that we were able to get our hands on for that period, and we also show a few privately managed funds in a few countries where they play an important role. Since we did this, a group in Europe that represents employer-sponsored plans have added to our list. I hope to enlarge this and show the returns for privately managed plans in a much larger set of countries; it would be completely consistent with what we show here.

CHART 7
GROSS AVERAGE ANNUAL INVESTMENT RETURNS
FOR SELECTED PENSION FUNDS, 1980s



Note: Simple averages for countries with at least five years of data during the 1980s. Malaysia, Singapore, Kenya, India, and Zambia are publicly managed provident funds. Rates reported are returns credited to worker accounts. Peru, Turkey, Venezuela, Egypt, Ecuador, and the U.S. are publicly managed reserves of partially funded pension plans. Amounts reported are gross returns to the funds. In many cases data on administrative costs are not available. The Netherlands, U.S. and U.K. are privately managed occupational plans; estimated average net returns have been reported by subtracting one percentage point from simulated average gross returns. Actual average net returns, after all administrative expenses, are reported for the Chilean AFPs; average gross returns were 12.3 percent. For the Occupational plans and AFPs actual returns and expenses varied by fund.
Source: Mesa-Lago (1991), Davis (1993), Asher (1992a), Iglesias (1992), India Employee Provident Fund (1991); U.S. Social Security Administration (1991), Palacios (forthcoming).

This shows that during the 1980s, the publicly managed funds did not do well. As you can see, most of them have large negative rates of return. This is not a good way to provide old-age security. At the same time, in countries where there were large privately managed sectors, on average, they got high returns. Why is this the case? It's not the case that the managers of the public funds are bad people who don't know how to invest their funds. Rather it is the case that typically, publicly managed funds are required to be invested in government securities or in loans to state enterprises that are in financial trouble. Because they need to get money from somewhere, why not the pension fund? They're required to make these loans at low nominal interest rates. They don't have the control over where their funds will be invested and what the rates of return will be. That's determined by the government because after all, these are public funds.

When inflation occurs, as it did in most of these countries, these low nominal interest rates become large negative real interest rates, and that's exactly what you see in this picture. In contrast, the privately managed funds were able to invest in a much broader range of assets. They were able to invest in equities, in real estate, and in foreign assets, which enabled them to earn a higher rate of return; and it protected them from country-specific risks, such as inflation, in their own country. We have observed this over and over again in a large set of countries. That is the basic reason why we concluded that private, decentralized management of pension funds was a better way to go. It was likely to achieve a higher rate of return, which in turn reflects a higher productivity of capital, which is what we basically care about. It also allows financial market development and international diversification of investments that we think will play an increasing role in the years ahead.

Let me list three very important caveats. First, countries must have at least rudimentary capital markets to get this pillar going. Second, considerable government regulation is needed to prevent overly risky investments, fraud, mismanagement, and so forth, and this requires a regulatory capacity. For both these reasons, this is not appropriate for all countries. For example, it would not be appropriate for most African countries. We think it is appropriate for many middle-income countries that are now in the process of developing new systems, expanding small systems, or revamping their old systems that are in financial trouble. My third important caveat is that a public pillar is very much needed in this system to provide a social safety net for low-income people who don't accumulate enough in that middle pillar and for people whose investments failed despite all those safeguards. We don't think you can let people rely strictly on the mandatory funded, privately managed pillar, although we think that has an important role to play. We think that the publicly managed, tax-financed pillar has an equally important role to play.

Let me make a brief comment about the public pillar. In many ways the public pillar would be similar to public plans with which we're all more or less familiar. That is, it would be tax-financed, it would be publicly managed, but it would be much smaller and more targeted to low-income groups than most current plans are. The important point is that it would have a limited function. Today our current plans are supposed to do everything. They're supposed to provide a social safety net and they're supposed to substitute for people's savings. These are contradictory objectives. It's not surprising that they're in trouble. That's why we think these functions should be separated. The public pillar should provide the social safety net, particularly for the old whose lifetime incomes are low. This could take the form of a flat benefit that is given to everyone, but that benefits the low-income proportionally; or it could provide a minimum pension guarantee as it does in Chile, or a means-tested pension.

The point is because it has a limited function, it should cost much less than it does today. It would play a smaller role. It would provide a smaller benefit. It would cost less than it does today. And it would be easier to figure out if it was accomplishing its purpose, which is to provide a social safety net. As I said before, it's very difficult to figure out where the current systems are doing that; and when you look at the evidence, it's often disappointing. It often turns out that they're not doing it as well as we would like to believe they are.

That's the gist of the public pillar. Sometimes we've been attacked on grounds that we think there is no role for the public pillar. I want to emphasize that this is simply not true. We think there's an important role for that pillar.

The third pillar is a voluntary pillar that could consist of personal savings plans or employer-sponsored plans. (I should mention that the second pillar also could be personal savings plans or employer-sponsored plans.) In Chile, it takes the form of mandatory personal savings plans. Australia has mandatory employer-sponsored plans. You should just have this institutional framework in mind.

The third pillar would be personal savings plans or employer-sponsored plans that are voluntary, but there may be tax incentives. I don't want to talk about whether there should be tax incentives, and if there are, what they should look like.

I would like to emphasize one key advantage of this system, and that is the insurance function. You're all familiar with insurance, and most of the insurance that you deal with is insurance against specific risks. There's health insurance, there's automobile insurance, there's fire insurance, and so on. Old-age pensions deal with very long periods of time, because from the time a person enters the labor force until the time of death could easily be 70 years. Longevity is increasing by leaps and bounds. We're talking about very long periods. If you think about what the world was like in 1925 as compared with 1995, there is no way that in 1925 or 1935, when the U.S. was setting up its social security system, that we could have envisioned or predicted what the world would look like today or what the economy would look like today, and how that would affect the welfare of the old and the sustainability of our old-age system. It's very important when talking about old-age systems to have a system that's resilient to the unknown, to unexpected changes. What it must insure against most are those things that happen that change the world. We want a system that's going to work regardless of whether a government or a private firm goes out of business, because all those things will happen.

How do you protect against the totally unknown? One of the best ways to protect is by diversifying—don't put all your eggs in one basket. Any one of these pillars may turn out not to work the way we expect it to work, or the way we would like it to work, simply because the world doesn't always behave the way we expect it to behave. In a situation such as this, broad diversification is the key to insurance in a very uncertain world. That's one of the major reasons why we think this is a good system. It's a very diversified system. Part of it depends on public management, part of it depends on private management. Part of it depends on tax financing, part of it depends on contributions that are essentially people's own savings. Part of it is defined benefit and part of it is defined contribution. I would like to have my old-age security dependent on this kind of diversified system rather than on one dominant pillar in which if something goes wrong, we're all in trouble.

This is our system. If you look around the world, you will see a number of countries that are adopting or have adopted variations on this theme. For example, Chile is one of the most famous or notorious examples. It has a mandatory savings plan accompanied by a government guarantee. Argentina has adopted a variation on this theme. Also, Columbia and Peru have done this, and Uruguay, Paraguay, and Bolivia are considering it. Australia has a system of mandatory occupational plans bolstered by a government means- and asset-tested social safety net. Switzerland has a mandatory employer-sponsored system, and Denmark and the Netherlands have mandatory employer-sponsored systems that depend on collective bargaining. That works in those countries because collective bargaining is so widespread—nationwide and industrywide.

Several countries around the world have been moving in this direction in recent years, and I think I will find many more countries moving in this direction, pushed by the demographic and the economic pressures.

I'll take one more minute to give a quick message to developing countries and a quick message to industrialized countries. To developing countries, such as those in Asia, for example, that are now starting with basically new systems from a very small base, our message is to look at the experience of industrialized countries and learn from it and avoid the mistakes that they have made. Every time you start something new, mistakes will be made, and one advantage of starting later is that you can learn from those mistakes. In learning from that, bear in mind that you will be aging very rapidly, so you had better think quickly and do it right.

Our message for developing countries is that things change. The U.S. started its system before World War II. Then, after World War II, all the OECD countries greatly expanded their systems. We could say that the current systems in many countries started after World War II, even though there were antecedents before World War II. The world is a very different place now from what it was in the 1930s when the system was started in the U.S. At that time, financial markets were in disarray domestically, and you could not count on international capital markets either. At that time, we had a relatively young population, and we were not anticipating a high rate of population aging. Then, after World War II, when the U.S. system expanded, as it did in other OECD countries, economic growth was very high and the old-age growth was high. This was a time that was very auspicious for the pay-as-you-go systems that depended on payroll taxes, that depended on relatively high fertility and high productivity growth, but that didn't depend on private financial markets, because they were not functioning well.

Let's contrast this with the world today. Financial markets are not only functioning in industrialized countries, but they're also taking off in developing countries. They've become internationalized, so there are possibilities for global diversification that did not exist at that time. But, we're extremely concerned about our low rate of economic growth, our low rate of productivity growth, and our low rate of savings. This is a problem not just in the U.S. but in other OECD countries. And at the same time, populations are aging. The low dependency rates that worked very well for pay-as-you-go systems are just not found today, and we're not going to have them in the future. We'll have them even less in the future.

I would say that times have changed, and it would be most surprising if the system that we started up 60 years ago was exactly right today. That would be remarkable. Times change and programs and policies have to change with the times. That's why we recommend that industrialized countries, with this old-age crisis, can transition gradually to a system that has a large funded component, that is decentrally and competitively managed, while the public pillar becomes relatively smaller and more targeted toward those with low lifetime incomes in the form of flat or minimum benefits or minimum pension guarantees. There are many options to choose from, but there should be a realignment of the relative role of these pillars, with a larger emphasis on privately managed savings. If we begin now, this process can be a gradual process. I would urge that we all begin thinking about it and planning for it now, both in industrial and in developing countries.

MR. KATZ: Now each of our panelists will present some different views and perspectives on this issue.

MR. CHARLES BARRY H. WATSON: I've spent 20 years advising employers on retirement security programs around the world. Therefore, I come with practical experience over a long period in these countries, rather than from a theoretical position. I have disagreements with what Dr. James has said, but not on practical issues. I accept generally her statement of the problem of the demography and weaknesses of the system. It must be remembered that she was talking about public pension systems almost entirely throughout her speech, and I generally support the analysis. Like everyone else, I support a three-pillar system of pensions. I do have some philosophical disagreements with it, and they relate to the nature and importance of the retirement security system. This disagreement leads to three specific problems that I have with the particular solution that the World Bank seems to be advocating. I might add that those solutions are spelled out in more detail in this substantial report, and I would recommend that anyone might well wish to read it. It's worth reading, and it does present in considerable detail what is going on.

My problem basically is the nature of the focus on social economic goals. Dr. James will further the fact that she wants to look at the retirement systems as relating not only to the protection of the old, but also to promotion of economic growth. I would argue that the retirement system must focus on the particular problem it is intended to mend: the economic security of that population which is at risk because of the danger of untimely life. You may live too long. The retirement system must be devoted to this goal and not to the general goal of advancing the economy of society as a whole. If you look closely at many of the things that are proposed, the emphasis is on using the retirement system as an engine for advancing the general economy, an engine of development. From this development, it is hoped and intended that the security of the old, in effect, will trickle down.

Put another way, I would argue that whatever solution is generally adopted, and certainly the World Bank's solution is widely focused, should permit variability to meet different situations. But at the same time, the general shape should be appropriate to what will eventually become a developed economy, as it is the goal of every economy to become developed. The World Bank's solution is more adapted to the needs of developing economies. I would argue that you can design a system within the three-pillar concept that meets the needs of developed economies, which is somewhat different from what the World Bank suggests.

Like the World Bank, I think the first pillar must meet the basic needs. This means it has to meet the poverty level; that is, make sure that people remain above the poverty level. That is an indexed figure and it is, therefore, a defined-benefit plan and not a defined-contribution plan. I think this is fairly consistent with what the World Bank says.

The second and third pillars deal with expectations. The second pillar should deal with the replacement of income that the individual thinks he or she needs to lead a satisfactory life in retirement, and that is a defined-benefit situation. The third pillar should deal with what he or she might additionally afford, and that can be either a defined contribution or a defined benefit.

I come to my first problem with the World Bank's situation. That is that it focuses on defined-contribution plans rather than on defined-benefit plans. I would argue that in a real world, the defined-contribution plan, under which what you get out of the plan can fluctuate, depending so much on the economic situation at the time of retirement, cannot truly meet a replacement goal situation. Furthermore, it cannot, in the long run, meet the need of indexed benefits at the time of retirement, because even though you may argue that the rate of return is higher in times of inflation (and even that may be dubious), the amount of money to which you apply this higher rate of yield is continuously diminishing. Therefore, there is an inadequate amount to produce a fairly level amount of retirement income.

My second problem is that the World Bank concentrates on an individual, rather than on a collective, solution. It does not focus on the need to involve the employer in the situation. With a mandatory second pillar, I would suggest it is certainly just as difficult to persuade the individual to make mandatory contributions as it is to try to persuade employers to make mandatory contributions and, in fact, perhaps more difficult.

Third, and this is a particular problem of developed countries, there is the difficulty of transferring from a pay-as-you-go to a funded system. The goal of the pay-as-you-go system is to have this generation pay for the next generation. If a country is going to change, as Chile did and as some of the other countries would do, the current generation will pay for two generations: themselves and the previous generation. With a very young country, with low liabilities for retired people, this is perhaps possible. It is not possible for the developed countries of the OECD, and it is certainly not possible for the overaged countries of eastern Europe. I would merely suggest that these are items that should be considered when evaluating the World Bank's proposal.

MR. CHRISTOPHER DAVID DAYKIN: I want to throw some light on the aging of the population in the OECD countries at this stage and, inevitably, Europe is particularly advanced in this aging process. It's the result of the past that we've experienced, particularly in terms of fluctuations in fertility in past years, and the very dramatic improvements in life expectancy that have taken place in the last century.

Chart 8 shows the declining completed family size, and there's some element of projection involved in this. The U.K., for example, has been steadily coming down from about 2.3 from the generation born in 1942 to about 2, which is below the theoretical replacement level of 2.1. Much more dramatic, however, is the Italian situation, which is shooting down and is already down to 1.8 and is heading lower. Germany has been at the level well below 2 for the whole of this period. Those two countries in particular are experiencing the most severe aging.

Chart 9 is the expectation of life for the males in a number of European countries based on the mortality rates from 1910 to 1990. You can see that there's quite a strong element of convergence. All these countries are converging on a figure that is around 72 or 73 at the present time.

CHART 8
ACTUAL AND ASSUMED COMPLETED FAMILY SIZE
BY YEAR OF BIRTH OF WOMAN

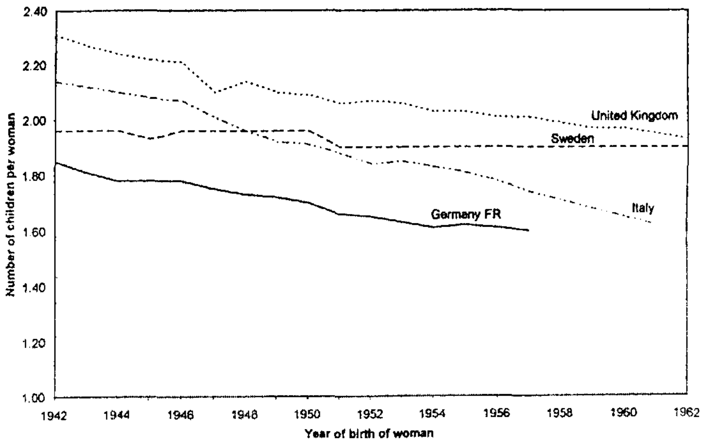
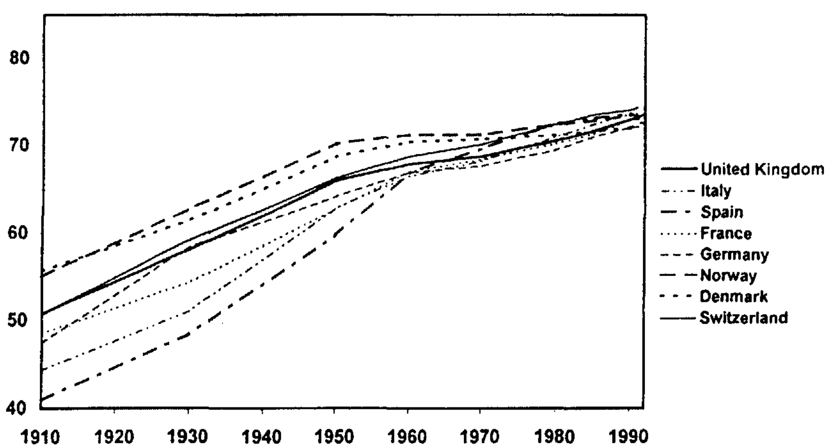
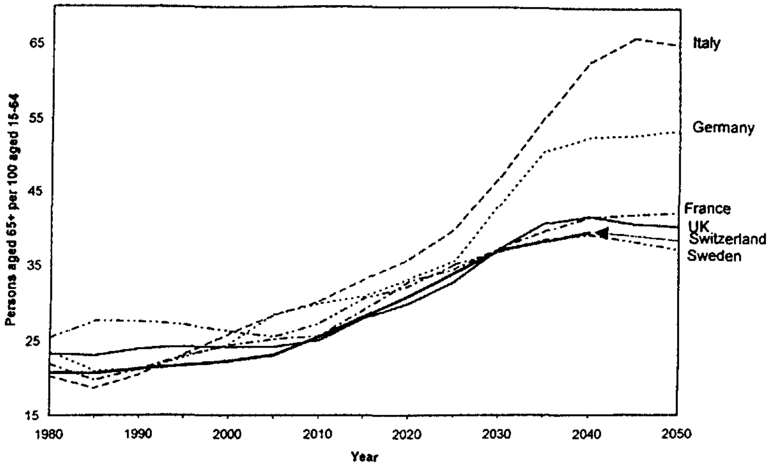


CHART 9
EXPECTATION OF LIFE—MALES



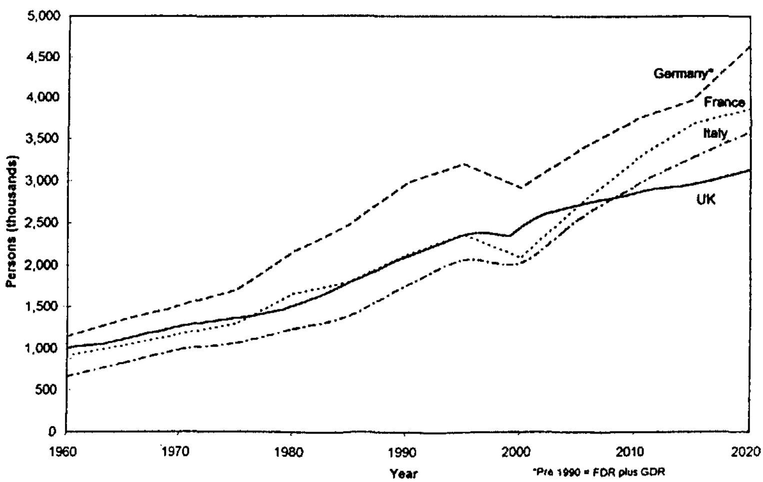
The effects of this on the relationship between the elderly and the working population is quite dramatic. Chart 10 shows the ratio of persons aged 65 and over to those aged 15–64: the burden for the elderly imposed on the working population. We are mostly down around 25% at the present time, but during the next 50 years or so, France, the U.K., Switzerland, and Sweden will go up from about 25% to 40%. Germany will go up to 50% or 55% and Italy will go up to 65%. That is quite a massive shift in the balance between the elderly and the working population.

CHART 10
DEPENDENCY RATIOS FOR OLDER PEOPLE
SELECTED EUROPEAN COUNTRIES, 1980–2050



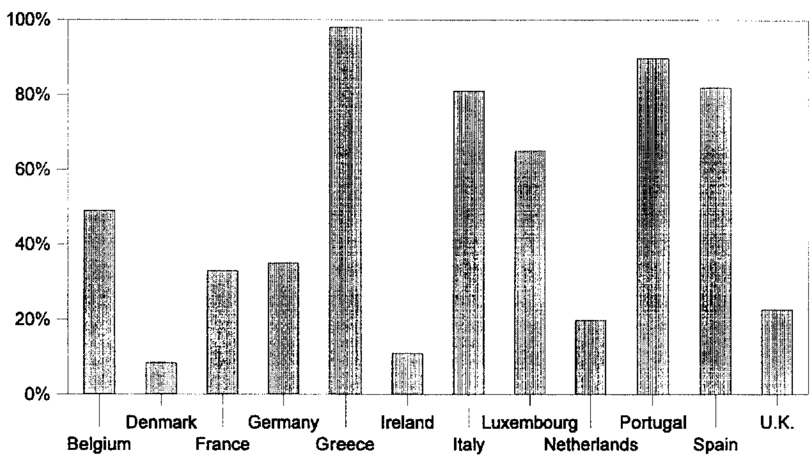
In some ways even more worrying is the very elderly population. Chart 11 hits the long-term path and medical side of things, because the numbers of the population in these countries over the age of 80 are going to increase dramatically during this period.

CHART 11
NUMBERS IN THE POPULATION AGED 80 AND OVER
1960–2020



In Europe there are some very different approaches to social security (Chart 12). Greece, Portugal, Spain, and Italy have extremely generous social security systems designed to provide a high rate of replacement of lifetime earnings. The other extreme is Denmark, Ireland, the Netherlands and the U.K., which have already adopted something akin to the World Bank's solution with a flat rate or a similar scheme, either tax-based or contribution-based, that is, essentially a flat scheme, a second tier, which is largely occupational or personal pension, and then a third tier of personal savings. These schemes are trying to do everything through the same schemes and are failing to do so. All those schemes are experiencing severe financial difficulties.

CHART 12
PENSION AS PERCENTAGE OF FINAL PAY
RETIRING ON TWICE NATIONAL AVERAGE EARNINGS



What can people do about it? We've heard some of the solutions. We can increase taxes or contribution rates. We can cut back benefits. Most countries do that by not revamping. Retirement age is shooting up in many countries. We can go for a privatization solution.

Most of the countries in Europe are trying to push up their retirement ages (Table 1). The solution is to go for some element of privatization, mandatory or otherwise, but have a funded solution for the second and third pillars. It takes some of the pressure away from the political profile. Unfortunately, it still requires transfers from the active population of those generating wealth to those who are consuming it in the elderly groups. Whether it is done through a direct public system or a private funded system, you still have to create an economic transfer at the time, and you can't really work that out in advance. Many more things could be said on this subject, but perhaps that will be for another day.

TABLE 1
CHANGES TO PENSION AGE

	Current	Planned	Timing
United Kingdom	60/65	65	2010–2020
Germany	60/65	65	2001–2012
Greece	60/65	65	1993–2043
Italy	55/60	60/65	1994–2004
Portugal	62/65	65	1994–2000
Switzerland	62/65	64/65	1996–2004

MR. KATZ: Chris, for the European perspective, we look forward to another day for further discussion.

MR. ROBERT J. MYERS: As to the solution of the World Bank, as in the case of any solutions, one can agree with many things and disagree with others. I particularly agree with the need to raise the retirement age, although I don't agree that this is difficult to do if it's done gradually and on a somewhat deferred basis.

As to the aging in the U.S. and the planning for Social Security, we were not unaware some 60 years ago that there was going to be an aging of the population. I don't think we knew there was going to be as much aging as there actually has been, but at least we knew the general direction. I think it's fair to say that Congress has been responsible over the years, particularly when the costs were low, for not overliberalizing the benefits, or at least not doing so very much.

I strongly believe in pay-as-you-go financing rather than in trying to build up huge funds. I think there are great dangers with huge funds. I'd further say that in the U.S., despite what many people say, we are not now funding the OASDI on a pay-as-you-go basis. We're not far from it, but I think we're still too far. I think one change should be to go back to the responsible pay-as-you-go financing, looking ahead 75 years or more to see where we are going.

I think that the solution, as far as the U.S. is concerned, in any financing problem is the traditional one of 50/50: 50% on cutting down benefit costs and 50% on raising contribution rates eventually. If this was done in the U.S., we wouldn't see any of the astronomical figures that have been quoted for some of the European countries. I still think it's within the affordable range, although that's not always too precisely measurable.

As to coverage compliance, I would take a bit of exception with Dr. James. I think in the U.S. we have extremely good coverage compliance in the defined-benefit plan. The only area of weakness in the past has been with household workers. I think with the new simplified basis adopted and with the publicity of some political aspirants, there will be much better coverage compliance, and there's certainly excellent coverage compliance elsewhere.

But in Chile, which the World Bank worships so much, the coverage compliance is very poor. Not more than 75–80% of the people who should be covered are actually covered, and many of those covered are underreporting wages, particularly very low-paid people who are questioning the use of putting more money into the system. Just put in enough to get a credit for a year of coverage, because they will get the minimum benefit anyhow, and they have a very liberal minimum benefit. So there is great underreporting in Chile, both as to amount and as to numbers.

Another thing I think the World Bank report pays too much attention to is whether people get their money's worth. I don't think this is at all important. It's just the same as with school taxes. You pay school taxes whether you have kids going to school, whether you've ever had kids going to school, or whether you ever will. I think as long as benefits seem generally reasonable, you shouldn't worry whether you do or don't get your money's worth. Furthermore, those of the early generations who got such good buys or windfalls were taking care of their aging parents. Now, younger people have to do that much less.

The World Bank report also seems to emphasize that what we need is more means-testing, and I think this is very undesirable. I think it's a device to divide populations into two groups, the so-called lazy people who get means-tested benefits, and all the rest of us responsible people. Whereas, with a uniform system, such as we have with OASDI, everybody's in it. Means-testing also is very costly to administer. It brings about fraud and abuse as people try to and do hide their income and assets. Perhaps worst of all, it causes what the World Bank doesn't want to do either: it will result in less savings. Many middle- and lower-income people, when there's a general means-tested system, will say, "Why bother saving, they'll just take away my social security benefits, so why save? Even if they now say they'll only take away a small part, you can't trust them. By the time I get to retirement, they'll take it all away, so why save?"

Finally, I want to deal with one factual point that Dr. James brought out about the great rate of return in Chile. It's in the double digits as a real rate of return. This is not due to the wizardry of the money managers of the pension insurance companies. It's due to the unusual situation in Chile. More than 40% of the assets of these pension insurance companies are in government bonds that bear double-digit rates, and they are completely indexed. As I recall, another 20% of the assets of the Administradas de Fundos de Pensiones (AFPs) are in bank deposits. Again, this doesn't seem to show much wizardry on the part of the money managers.

MR. KATZ: My conclusion from this is that there is a great deal for us to talk about. I appreciate very much the fact that Estelle came and shared with us many of the results and the thinking that went behind this very important research. As our three panelists have pointed out, a number of questions can be raised. I would editorialize that I think we have a tendency to want to group many countries together when, in fact, we probably can't do that very well. Certainly, the World Bank's opinion on this would be that you do have to look at countries individually. Therefore, if I can speak on both sides, I think that we have a situation in which each country will have to work out its own situation, benefiting from the experience of others, but also taking a very individual approach to its particular problems. This discussion will continue in Orlando next fall. I hope our actuarial profession will become more involved in this very critical issue and join in the process of solving this old-age crisis.