Special Comment

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The Effects of Aging on Public Sector Pensions and Healthcare Systems: A Rating Agency Perspective

Prepared for: The Senate Special Committee on Aging
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Let me begin by saying that every industrialized nation will "default" on its pension and senior healthcare promises. What do I mean? It will be impossible for any major developed nation to meet presently promised public sector pensions, including promised healthcare benefits for seniors, simply because those promises are too generous compared to future resources. Benefits will have to be scaled back, in some cases, significantly. In others words, future governments will not be able to meet future pension and senior healthcare commitments embedded in law today. Conceptually, what is most intriguing as a credit analyst is that if governments were to handle their bond obligations in the same way, that is, not fulfill the original contract, then those government bonds would be considered in default. Fortunately, pension and healthcare "defaults" tend not to be viewed as seriously by the public as would a breach of promise by a government on its bond obligations. This appears to be simply the result of societal conventions.

It can be argued that the United States has already "defaulted" on its social security obligations once it changed the tax laws on social security payments in the 1980s. As this committee knows so well, payments that were previously exempt from income tax suddenly became taxable income for a large number of upper-income pensioners. The same result could have been obtained by decreasing benefits to those same pensioners, but the tax route was probably more politically palatable because it better obscured the final outcome — lower net payments to certain pensioners. This is just one example of how reductions in pension levels can be handled.

The list of pension reforms involving cutbacks in present-day benefits, never mind future benefits, is long indeed. In some countries, such as Canada, the language used to describe these types of benefit reductions is perhaps a little more transparent, and definitely more vivid — such reductions are called "claw-backs", leaving pension recipients in no doubt as to what happened.

In the Sovereign Risk Unit at Moody's, we continually look at the latest academic studies regarding public pension and healthcare benefits. No matter which study you look at, one must come to the same conclusion — public sector resources needed to fund existing pension and healthcare promises over the long-term will raise serious solvency issues if these systems are not reformed.

At Moody's our interest in pension and healthcare programs for companies and governments, at the national and sub-national level, relates to how these programs will affect the risk of default on financial securities. When looking at pension and healthcare promises, however, there is an important analytical distinction between what national governments can do compared to all other types of borrowers, including local governments. Companies and local governments are obligated to meet existing pension and healthcare promises if they are in the form of a contract, obviously subject to existing law. In other words, companies and local governments cannot unilaterally change these contracts unless allowed to do so by law. National governments, on the other hand, control the legal framework.

When looking at the creditworthiness of a local government or company, our analysts spend quite a bit of time analyzing estimates of unfunded pension and healthcare liabilities. For obvious reasons, emphasis is placed on programs that are contractually or legally binding. Much less weight is placed on unfunded pension and healthcare claims that can be changed at the discretion of the employer.

National governments are quite different because of the very nature of what it means to be "sovereign". All laws are subject to change. Access to legal redress, use of a government's taxing authority, and/or new legislative mandates can all significantly change the nature of any contract agreed to by a national government. Therefore, any pension or healthcare promise undertaken by a national government is a contingent liability at best. The consequences of this distinction for creditworthiness are significant.

The first step in our analysis of the effects of public sector pension and healthcare programs is to start with the existing level of government debt. There are a number of ways to examine relative debt burdens. The most commonly cited is the government debt/GDP ratio.

General Government Debt/GDP Ratio (%) 2004F

USA	66
France	65
Germany	65
Italy	106
Japan	170
UK	40
Mean (Aaa-Aa)	58
Median (Aaa-Aa)	56

Source: Moody's Investors Service

From this sample, you can see that the relative debt burden of the US places it slightly higher than either the median or mean for Aaa or Aa-rated governments. From its initial government debt position, it would appear that the US has much in common with most of the rest of the developed world. Clearly countries like Italy and Japan will face much greater stress if public sector pensions and healthcare programs are to be funded through borrowing rather than current revenues in the future. Both countries will have much less capacity to finance the costs through additional government debt.

Another measure of debt burden is the debt-to-revenue ratio. This is probably a better measure of the ability of a government to finance its debt because it takes into account the existing revenue-generating capacity of the government.

General Government Debt to Revenue Ratio (%) 2004F

USA	208
France	127
Germany	148
Italy	284
Japan	545
UK	103
Mean (Aaa-Aa)	142
Median (Aaa-Aa)	124

Source: Moody's Investors Service

Here we find that the US is significantly more disadvantaged. An important part of the difference is explained because the US has a much smaller government relative to the size of the economy than most European countries. This means that if the US is to fund public sector entitlements through tax increases, the tax increases have to be significantly higher in percentage terms than for France, Germany and the UK. Using this measure, we are not quite as bad as Italy, and it is clear that the problem is acute for Japan. Japan's extremely high debt-to-revenue ratio shows that the Japanese government has been funding itself through debt creation rather than through higher taxes. An attempt to solve Japan's fiscal problems through higher taxes alone would require a massive increase in taxation and thereby risk a prolonged deflationary spiral. This is a major reason why, despite Japan's enormous strengths, we rate Japanese government bonds A2, lower than any other industrialized country. It is not obvious how the Japanese government extracts itself from this debt bind, especially as the country has already reached its demographic inflection.

Given this background, an important question is, does it make a difference if government pension and healthcare systems are funded through the creation of trust funds as in the US, or through a pay-as-you-go (PAYG) system? From a credit risk perspective, we see no distinction between the two if the trust funds are simply invested in government securities or in non-viable economic projects. The trust funds simply represent the postponement of new debt issuance — really just an illusion of having "invested" funds. For Moody's, the only relevant number is the deficit that has to be funded by the public. In the case of the US, that number is the deficit including social security. The trust funds simply make it easier to run larger non-social security deficits today. Given their more straightforward accounting presentations, one could argue that the PAYG systems are more transparent. Indeed, when we analyze a government's creditworthiness we look at gross debt, not net debt. In the end, when the trust funds are "used-up", the net simply becomes the gross.

In a system where social security trust funds are invested in non-government securities and/or in viable investments (in other words not in government-sponsored white elephants) then these trust funds could be liquidated in the future to finance existing pension and healthcare promises without adding to the stock of government debt. On the other hand, such a scheme also carries risks, say if these alternative investments turned out to have poor rates of return. The government would then have to fill in the financing gaps even under such a system.

How much debt can a government comfortably bear before its solvency is threatened? When looking back through history, we find that as debt approached 170-180% of national income, public finances usually became stressed. The problem with simply looking at the past is that for industrialized countries, prior to the 1970s, public sector debt was normally only built-up because of war or defense-related initiatives. Therefore, resolving public sector problems were usually linked to settling war-related issues. To complicate matters further, since in the past most countries' monetary systems were based on the gold standard, it was hard to separate fiscal problems from balance-of-payments problems. In today's world, where fiat currency is the norm, it is not clear at what point markets would judge local currency-denominated debt to have reached "unacceptable" limits. Nonetheless, we recognize that as debt builds up, by definition, we are approaching that upper limit — Japan represents one such example.

I stated at the outset of my presentation that the cumulative financial obligations represented by existing debt plus future pension and healthcare promises represent an unsustainable burden for most developed country governments. When examining the scale of the obligations most observers discuss the net present value (NPV) of the existing claims, based on existing claims and contribution levels. Even small changes in either side of these assumptions can produce enormous differences in the final outcome. I remember seeing estimates for the NPV of Italian public sector pensions prior to the Dini reforms of the mid-1990s reaching several hundred percent of GDP. After those reforms, the NPV of such claims was cut by more than 200% of GDP — this for a partial, incomplete pension reform. From that example and others, it became clear to us to use such NPV estimates with great caution.

Although such NPV estimates are helpful in framing the problem, I believe they exaggerate the difficulty facing advanced industrialized democracies. One of the most common concepts discussed in this context is "intergenerational resource allocation". Analyzing fiscal problems using such concepts can exaggerate credit risks, because we are never in the future, but only in the on-going present. No fiscal problem is ever intergenerational in the sense that we are borrowing today to fund consumption to the detriment of future generations. The only intergenerational problems we can have are in the present where we are discussing income distribution among people alive today. All we really ever have is resource allocation questions in the present. If we borrow today, we are simply allowing the beneficiaries of those funds to consume more or control through ownership more resources than others in the society which may not be benefiting from higher consumption or ownership rights. What I mean by this is that once the future becomes the present, the existing level of debt will cause a different distribution of resources than would be true if the debt is not built up.

The problem is that society may find the consequences of such a redistribution of relative income and/or ownership difficult to reconcile within a desired distributional framework. If the problem is acute enough, one possible result is that the society of the day might opt to reschedule or default on its debt which is nothing more than a redistribution of income from creditors to debtors. If it is the government that defaults, then it is the equivalent of a capital levy or wealth tax. From society's point of view, such a default might make very good public policy sense.

This point that all fiscal problems are related to income distribution in the present is central to Moody's way of thinking about the public finance consequences of aging. When we talk about problems of pensions and healthcare we are really talking about future standards of living in a particular society. The question is not so much which particular pension approach we take, but rather how do we put in place an economic framework which produces the highest output over time so that society will have as many resources available as possible in the future.

A key part of the problem is fundamentally demographic. The good thing is that some of the dire predictions we're now used to working with — such as the dependency ratio forecasts given in the table below — will probably turn out to be unrealistic. We are convinced that some of these developments will not take place, at least not to the extent now feared. This doesn't mean we don't have a problem, it just means that we may be focusing on only one part of the problem: we are so caught up with the effort to change the benefit systems that we're failing to address the core issue of improving the demographic framework. My point is that simply reforming Social Security and Medicare is not enough, in fact some of the changes are likely to have consequences that are the opposite of their intent. For example, raising contribution levels and payroll taxes makes it more expensive for workers to have more children, discourages innovation, and reduces labor force participation rates.

Old-Age Dependency Ratios (Workers aged 20-64 per person aged 65+)

	2000	2050
US	4.6	2.6
France	4.0	2.0
Germany	3.8	1.9
Italy	3.5	1.5
Japan	3.6	1.5
UK	3.8	2.2
Average OECD	4.2	2.0

Source: UN

Don't get me wrong — the decline in the number of workers per retiree is a serious concern — but just like unfunded pension cost predictions, I think this particular point is exaggerated. It is clear to me, for example, that before Italy and Japan reach dependency ratios of 1.5, and in fact before any of the sample drop to the levels indicated above, three things will probably have already happened: 1) Birthrates in all countries will have risen. Children will have become one of the best insurance policies for adults to have a more comfortable retirement. Youth unemployment will have become a distant memory, causing a surge in relative incomes for all workers, and even more so for younger workers. 2) The concept of working beyond age 65 will revert to more traditional norms. For instance, in an admittedly extreme example, as recently as 1950-1955, nearly 47% of Italians over 65 were still in the workforce. Today that figure is down to 4.5%. For the developed world as a whole, over the same time period, the labor force participation rate for those above 65 has declined from 23.3% to 9.1%. 3) In all of these countries, immigration will rise.

I wouldn't dismiss entirely either the potential threat posed by the declining dependency ratio or another aspect of the aging problem: that a higher proportion of the elderly population will be comprised of the "very old" (those aged 80+) in the years ahead. Unless advances in medicine are so great that we will be much healthier in our 80s than we are today, society will face a significant healthcare burden in caring for the frail elderly. Once again, the US doesn't look quite as bad as Western Europe, with Japan looking the most problematic.

Very-Old Persons Ratio (% aged 80+ as % of aged 65+)

	2000	2050
US	26.5	36.1
France	22.2	37.5
Germany	21.1	37.5
Italy	21.0	37.1
Japan	21.9	42.2
UK	25.0	37.3
Average (OECD)	22.4	35.1

Source: UN

Going back to my essential point, Social Security or Medicare reforms are not the only answer — they won't change the demographic dynamics that are the fundamental source of the problem. The basic question is how will our societies divide up the economic pie when we are down to a smaller number of workers per retiree, no matter the specific ratio? On top of that, what happens when that pool of retirees will be more heavily comprised of the very old?

We believe there are a number of different approaches that can be taken to alleviate some of the demographic stress that have little to do with altering benefits or raising contributions. First, we need to make our society much more child friendly. We must do everything possible to encourage families to have more children. We must, as a society, make it easier for women to have children and yet continue working, which basically means better childcare. One reason why the US looks somewhat better than the other countries in this small sample is our fertility rate: more children are born per woman than most other industrialized countries. The problem is that despite our higher birthrate, it is still insufficient. Furthermore, because of voting demographics, societal incentives are often actually moving in the opposite direction. We spend and will continue to spend less on children relative to the elderly.

Besides adequate childcare, we need to provide the best possible healthcare for the young. We need to spend far more on their education. We also need to continue to provide incentives for technological advances that would improve our productivity even further. We are going to have to get used to looking at a society where human capital is in short supply. That means society will have a vested interest in on-going worker training to improve the flexibility of the existing workforce. We will need to remove any laws that discriminate against the young — zoning laws, education funding based on local real estate taxes, healthcare for the young based on means testing, etc.

A second change we need is to shift the entire retirement dynamic by encouraging people to continue working well beyond age 65. In the US, we have already moved to increase the retirement age for full social security benefits to 67. Other countries are moving in the same direction albeit starting often from even earlier retirement dates. We might consider using the tax structure to encourage retirees to continue working beyond 65. One possibility is to reduce or eliminate income taxes for non-social security related wage income. Various countries have different incentives to encourage hiring older workers. Wage subsidies are given to companies in France, Germany, Japan and Korea to hire older workers. In Korea companies are given a subsidy if more than 6% of their workforce is aged 55 or older. The subsidies might increase with age. In general, we should encourage the view that retirement is dependent on one's health, both mental and physical, not on the calendar. People should look at aging as representing career transition opportunities. Employers should encourage flexibility for older workers who do not wish to work the long hours they did during their youth. Our pension system and our tax system should reward workers who work beyond the normal retirement age.

The third alternative way to deal with the shortfall in labor supply is to encourage immigration. Immigration can be used by the developed world over the next several decades, but in the long-run immigration won't help because birthrates are falling around the world. For instance, we all know that many people around the world would like to emigrate to the United States. However, what we don't often realize is how rapidly demographic changes are occurring in so-called emerging market countries. For instance, the median age in Mexico in 2000 was 23.3 years compared to 35.5 years in the US. By 2050, the median age in Mexico is projected to rise to 39.5 years compared to 40.7 years for the US. Those under 14 years old in Mexico in 2050 will have reached 19.3% of the population compared to 18.5% for the US. Both countries will have similar demographics. Mexico is not alone in this. By 2050, China will have a median age of 43.8 years, or even higher than the US. At the same time, 22.7% of Chinese will be over age 65 compared to 21.1% of Americans. In 2050, China's population will be older than ours!

To sum up, we have examined various kinds of retirement systems across the developed world, and we have concluded that most of the differences can be explained by cultural and political preferences of the individual countries. However, we would emphasize that what matters most is countries' demographic situation more than on their specific pension and healthcare programs. Countries with disparate pension and healthcare programs like Italy and Japan, for example, end up facing nearly the same scale problem because they share the same demographic challenge. Unfortunately most governments have gotten bogged down in the minutiae of reforming benefit programs and have ignored the wider problem. It is our belief that we would be better served if we turned our attention to strategies designed to improve the role of woman in society, increase the supply of quality childcare, foster education and technological innovation, and finally increase incentives to lengthen working lives and promote sustainable immigration.

I must say that I am an optimist, in that I believe we who live in the advanced democracies will make the right choices. I would hope, however, that if we wish to maintain our preeminent position in the world, that we will undertake the reforms required early enough to avoid acrimonious political debate in the future. Dividing up the economic pie is always easier when it's growing than when it's stagnant or worse yet, shrinking.

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