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INTERNATIONALE VEREINIGUNG FÜR SOZIALE SICHERHEIT

International Conference of Social Security Actuaries and Statisticians

Berlin, Germany, 30 May – 1 June 2012

The impact of economic conditions on the financial sustainability of social security schemes

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Security System

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Introduction

This paper presents some observations on the financing of the United States (US) Social Security System from three different perspectives. The first part examines the relationship between the actuarial values of two projected streams of cash flows that represent the asset/income and liability/outgo for the system. This relationship is quantified by presenting the results of a cash flow adequacy test to measure the ability of the system to meet projected scheduled benefits over periods of 25, 50 and 75 years based on the official results from the latest Trustees Report. The second part explains the nature, operation, purpose and size of the Social Security Trust Funds, describes the securities held, and their maturity schedule and interest income features. The third part explores the dilemma arising from the fact that the assets held in the Trust Funds arising from the accumulated surplus of income over outgo are lent to the US Treasury; the Trust Fund holds special issue treasury bonds in respect of these loans and the amounts lent to the treasury are available for financing part of the Federal budget deficits. Although these securities are a legal obligation of the US Treasury, this use of the surplus funds creates a controversial “lent or spent” dilemma since the funds cannot be used for both the purpose of paying future Social Security benefits and for the purpose of financing current budget deficits.

United States Social Security: Cash flow adequacy test

The Social Security Trustees publish a report every year on the financial condition of the system. Although the report contains the results of very detailed actuarial assessments of the range of plausible projected financial outcomes for the system, nevertheless, when the trustees’ results are released, the public is regularly subjected to misrepresentations of the true financial position of the system by the popular media and by various ideological opponents of the system. Headlines typically proclaim that the system is “bankrupt” or will face a “meltdown” in some future year. In fact the trustees’ report contains the results of actuarial projections of expected income and outgo including payroll tax revenue and scheduled benefits. These projections, together with the value of interest income and the maturity values of assets held by the Trust Fund, provide a reliable measure of the ability of the system to meet its financial obligations to current and future generations. These projections are made

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over a short-term 10-year period and for longer periods of 25, 50 and 75 years. The report contains a clear statement to the effect that the longer-term projections become less reliable as the length of the projection period increases. The results of these projections are presented on the basis of three different sets of economic and demographic assumptions concerning the range of plausible future outcomes. These are generally referred to as the “intermediate”, “low-cost” and “high-cost” projections. The “intermediate” results are widely regarded as the official assessment of the financial condition of the system, while the “low-cost” and “high-cost” projections may be regarded as representing the extremes of the range of plausible future outcomes.

It is important to note that the US Social Security System is a social transfer system; current payroll tax income is used to pay current benefits; the Trust Fund is merely a short-term reserve fund that serves as a means to stabilize the necessary payroll tax rate at a fixed level and provide a small buffer between cash flow income and cash flow outgo. The ability of the system to meet its financial obligations for future scheduled benefits may be assessed by comparing the relative values of the two cash flow streams over various projection periods with appropriate allowance for the accumulated reserves in the buffer fund and the interest income generated from securities held in the Trust Fund. This cash flow adequacy or solvency test may be quantified in terms of the relative values of these income and outgo cash flow streams on a percentage scale where 100% represents full cash flow adequacy over the projection period and a percentage above or below 100% indicates that a future surplus or deficit is likely to emerge. This metric provides a response to the frequently-asked question from the public: “will there be enough money in the system to pay my benefits when I retire?” This cash flow solvency measure is readily computed from the results published in the trustees report for all three projection bases and for various projection periods.

The latest available results from the trustees' 2011 report on the “intermediate” basis indicate that the system has a solvency ratio of 100% for 25 years and has corresponding solvency ratios of 90% and 87% for the 50-year and 75-year projection periods. On the “low-cost basis”, the 25, 50 and 75-year solvency ratios are 110%, 103% and 103% respectively. On the “high-cost” basis, the 25, 50 and 75-year solvency ratios are 91%, 78% and 72% respectively. It is apparent from these results that the system will almost certainly generate sufficient cash flow to meet obligations over the next 25 years and is projected to generate a very high percentage of the expected required cash flow over the next 50 and 75 years. On the “intermediate” basis the implied shortfalls in cash flow income that amount to 10% over 50 years and 13% over 75 years will require some adjustments to the system in order to move the projected cash flow values into long-term balance. In percentage terms these adjustments are not large and do not mean that the system is unsustainable in its present form. Indeed, relatively modest adjustments to the payroll tax or benefits provisions would serve to achieve a 100% long-term cash flow balance between projected income and outgo for 50 or 75 years.

These cash flow solvency measures speak for themselves in terms of the strong ability of the system to meet its scheduled obligations. The future year at the end of the period for which the intermediate projection indicates the solvency ratio first drops below 100% to 99.99% is the source of frequent misunderstanding and misrepresentation by the media and the system’s ideological opponents. This point in time has been unfortunately labeled as the “exhaustion point” for the Trust Fund and has led to widespread misunderstanding about its significance and relevance. In fact this point in time is merely the year in which the buffer fund will require increased projected incoming cash flow in order to maintain a modest reserve level sufficient to pay the then current benefits; it does not mean that the system is unsustainable. It simply provides an advance warning signal that adjustments will be required before that point is reached.

The US Social Security Trust Fund: Structure and operation

As explained previously, the US Social Security System is a social transfer arrangement that is based on intergenerational transfer financing. Under this system of financing, current payroll tax income is used mainly to pay current benefits; the Trust Fund is merely a short-term reserve fund that serves to stabilize the necessary payroll tax rate at a fixed level and provide a small buffer between cash flow income and cash flow outgo. There are in fact two separate Trust Funds; one is for old-age and survivors insurance (OASI) and the other is for disability insurance (DI). The combined Trust Funds are relatively small in relation to the value of the scheduled benefits expected to be payable over the official 75-year projection period, although they are seemingly large in terms of the absolute magnitude of the dollar value of their assets. The system operates essentially on a modified pay-as-you-go basis; future scheduled benefits are not pre-funded as is the typical practice for employer-sponsored defined benefit pension plans in the public and private sector. According to the 2011 Trustees Report, the assets held in the OASDI Trust Funds at December 31, 2010 amount to USD2.61 trillion, representing a multiple of 3.53 times the expected benefit and expense payments for 2011. Future payroll tax receipts, together with interest income and the proceeds from assets held in the Trust Fund, are approximately equal to the value of the expected payments for scheduled benefits and expenses over the next twenty-five years. As explained in the preceding section of this paper, the solvency of the system on a projected basis is 100% over this 25-year period in cash flow terms. However, the program in its present form is projected to generate deficits of 10% over 50 years and 13% over 75 years.

The assets of the Trust Fund are invested in special US Treasury securities that are issued at current market interest rates and have a specified maturity date when the US Treasury repays the principal amount to the Trust Fund. The interest rate on new issues of these special obligations is computed as the average market yield on all outstanding marketable US obligations that are due or callable more than four years in the future. The Trust Fund, as reported at year-end 2010, comprises a laddered portfolio of fixed income Treasury bonds with maturities occurring in each year from 2011 to 2025 and carrying annual interest rates between 2.875% and 7.00%. The average rate of interest earned on the assets for 2010 was 4.6% for the OASI Trust Fund and 4.9% for the DI Trust Fund; the total interest income for 2010 amounted to USD117 billion. The issuance and maturity of these special issue Treasury securities is a routine process that operates continuously and smoothly; the US Treasury regularly meets its obligations for interest payments and scheduled principal payments as the securities reach their respective maturity dates. In this respect, these special issue Treasury securities operate in the same fashion as for other US Treasury bonds. The Social Security system is a lender to the US Treasury; it does not borrow money and it does not have any debt; it is a separate entity financed by payroll taxes and holds its assets in the form of securities that are an obligation of the US Treasury. Future projected deficits in the cash flow of the system beyond 25 years will require some relatively modest adjustments to be made to the payroll tax rate or the benefit provisions to ensure that the Trust Fund remains viable. The viability of the Social Security System requires careful attention to the management of its solvency and sustainability, while recognizing the reality of the financial impact of demographic changes that result in an ageing population and the need for increasing subvention to maintain the system and meet all scheduled benefit payments when due.

There are many common misperceptions and misunderstandings regarding the role and nature of the Social Security Trust Fund. Some are due to a genuine misunderstanding of the facts and some are attributable to misrepresentation. A common mistake is to simply ignore the amount of the Trust Fund assets and interest income and simply compare payroll tax income to benefit outgo and then misrepresent this inappropriate and incomplete comparison as a measure of alleged financial weakness of the system. A recent example of

misrepresentation is a false statement that is intended to create an impression that Social Security has to borrow money from China in order to pay its benefits. Another source of misunderstanding arises from a viewpoint that, instead of recognizing the reality of the system as a social transfer system, chooses to inappropriately evaluate it as though it were a pre-funded system, and then declares that the excess theoretical reserves that the system would be required to hold if it were in fact a pre-funded system represent a debt or liability of the system. The reality is that the Social Security System has worked efficiently over the last 75 years and has provided an invaluable and reliable service to beneficiaries; it can be readily maintained in its present form with only minor modifications to its established financial transfer arrangements so as to eliminate projected long-term deficits.

The Social Security Trust Fund: The lent or spent dilemma

A controversial question that is being widely debated concerns differing viewpoints as to whether the Social Security Trust Fund has been lent or spent. According to the trustees, the fund holds assets of USD2.6 trillion invested in US Treasury securities; this represents the accumulated value of surplus amounts transferred from Social Security to the Treasury. The evidence is clear and indisputable that the issuance and maturity of these special issue Treasury securities is a routine process that operates continuously and smoothly; the US Treasury regularly meets its obligations for interest payments and scheduled principal payments as the securities reach their respective maturity dates. This is the *de jure* position, meaning that these securities are legal obligations of the US Treasury to the Social Security Trust Fund and are subject to the full faith and credit of the United States.

Recent negotiations in 2011 to raise the national debt limit by Congress brought attention to the possibility that the US might conceivably default on its financial obligations. There was even some speculation that a failure by Congress to increase the debt limit might jeopardize the ability of the Treasury to disburse Social Security benefit payments. A logical and oft-repeated question during these negotiations over the debt ceiling was: “If the Social Security Trust Fund has USD2.6 trillion in assets (equivalent to about three and a half years worth of benefit payments) why is there any doubt about the timely payment of benefits”? From the perspective of a typical senior citizen entitled to Social Security, this was a “show me the money” moment. The explanation for this paradox is that the proceeds of the bonds are used by the Treasury for a variety of current expenditures. However, the Treasury is obligated to repay the principal at some future date (such as fifteen years later) as well as interest on the principal amount. To meet its emerging obligations, the Treasury must generate sufficient revenues from taxation, or apply existing reserves, or borrow through the issuance of new securities. Due to its practice of running large current budget deficits, the ability to borrow becomes essential to avoiding default and hence necessitates an increase in the authorized ceiling for the national debt limit. The recent concerns in 2011 over a possible default arose from a liquidity problem within the US Treasury due to the effects of deficit spending. Without an increase in the authorized national debt limit, the Treasury would have faced a liquidity crisis that could have affected its ability to meet current payments when due.

Although the *de jure* view of the Social Security Trust Fund is indisputable, there is an alternative *de facto* view that is based on economic realities. This alternative view arises from the fact that Treasury has used the proceeds of its special bond issues (received in the form of surplus transfers from Social Security) for current expenditures. This practice temporarily obviates the necessity for greater current tax revenues and/or more borrowing to meet current expenditures. However, this process essentially transfers the funding of current deficits to a future date. The availability of cash transfers from Social Security has resulted in the obfuscation of the true extent of deficit spending. This *de facto* view of the Trust Fund emphasizes the diversion of Social Security surplus revenues to the Treasury for use to meet

current government expenditures. It essentially takes a view that the Federal Insurance Contribution Act (FICA) contributions in the form of payroll taxes are simply a part of the aggregate current tax revenues and are not specifically reserved for current and future Social Security benefit payments. Adherents of this view claim that the Social Security surplus has been spent not lent. Obviously, Social Security surpluses cannot be used both for current expenditure and for future benefit payments. The *de facto* view implies that from the government's perspective the economic effect is that benefit payments must be met from future general tax revenues or from future borrowing by the Treasury. This line of reasoning then leads to the conclusion that the Social Security Trust Fund has no real assets and that it is merely a product of arcane accounting procedures.

While it may be claimed that from a purely economic standpoint the *de jure* and *de facto* views of the Social Security Trust Fund do not differ in their effect, it is an irrefutable fact that the special issue securities held by the Trust Fund are a legal obligation of the Treasury and are subject to the full faith and credit of the United States. This fact makes clear that there is an important distinction to be made between the *de jure* and *de facto* viewpoints concerning the Social Security Trust Fund. The *de facto* position could only be substantiated in the unlikely event of the government actually defaulting on its legal financial obligations to the Social Security Trust Fund.

The lent or spent dilemma presents an issue that merits both academic and political debate. At its most fundamental level, the issue is whether the overall effect of applying the surplus funds from the Social Security System to meet current general federal government expenditures, that will be subsequently funded by repaying the amount of these transfers from future general tax revenues, has implicitly converted the established modified pay-as-you go financing arrangement with its fixed level percentage payroll tax into a full pay-as-you go system with escalating future financing requirements. The viewpoints of both those who view the Social System in isolation, as well as those who view the aggregate economic effect of the obligation to fund the interest and principal cash flows of the securities held in the Trust Fund, make this interesting dilemma into an opportunity for a real philosophical debate. It is hoped that this paper will serve to highlight the key features of the dilemma and stimulate a productive debate on the relevant issues that may impact policy makers' reactions as to how best to address the dilemma and ensure the continuing solvency and sustainability of the US Social Security System for current and future generations.