

PUBLIC POLICY EVALUATION, SOCIAL RISK AND PENSION CAPITAL*

ABSTRACT

Today's demand for social insurance is supported by economic reasoning showing that private insurance markets do not provide efficient coverage for medical insurance, for inter-generational risk sharing and for income instability. It is unfashionable to say but government intervention in these areas *is the solution and Conservative economic ideology is the problem*. Hence, policy in the 21th century will focus on publically managed social insurance. In studying the problem of Social Security, I show it arises from changing demography which generated a deficit. Study of proposed solutions lead me to four conclusions: (i) Privatization of Social Security is infeasible since system has a «Legacy Debt» of \$11.6 trillion. (ii) Proposals to privatize Social Security are ideologically motivated and offer no real solution. (iii) Privatization is undesirable since it is not optimal to rely entirely on the markets to determine retirees' incomes. Volatility of financial markets will result in unacceptable inter-generational income inequality.

Key words: Welfare state, Social Security, public policy, social insurance, insurance markets, risk sharing, Legacy Debt, privatization, private retirement accounts, conservative economics, market volatility.

JEL Classification: D52, D6, E12, E6, H55, G2.

I - INTRODUCTION: ON PUBLIC POLICY EVALUATION

Evaluation of the desirability and efficacy of public policy has undergone major changes in the past three decades. One component of the change is the rejection of the redistribution goals of the traditional welfare state which were based on the, now discarded, view of the class struggle. In the age of open labor markets and globalized trade, public policy has different goals. A second component is the changed perspectives of post-Keynesian economic thought about the effect of policy. This was shaped by the Rational Expectations (in short, REE) paradigm that stressed the effect of policy formation on expectations, and by developments in the theory of incentives. These require us to study the impact of a policy by considering the direct and indirect, general equilibrium, effects of any proposed policy.

But something else also happened since 1981. Public policy debates since 1981 have been characterized by a sharp disparity between the true political objectives of

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a policy, and the economic reasons used by policymakers and by political writers to explain the policy. In essence, the disparity amounts to justifying a policy with economic arguments which are false but are politically popular. In many cases persuading the public to adopt a policy is not accomplished through a debate of the merits of the policy. Instead, it becomes a propaganda campaign to mobilize as much support as possible by using arguments which are often false but appeal to politically friendly constituencies. Policymakers say in private what they would not say in public and well known incidents, going as far back as the Reagan administration, revealed the administration's efforts to hide its true intent. For a recent example of such disparity, recall that in 2005 President Bush traveled across the country explaining that his reform to privatize Social Security is justified on the ground that the rate of return earned on taxes paid to Social Security should be the same as the rates of return on private assets. This argument is not only wrong, it is also socially disruptive. But why do we find such a wide disparity in policy debates? In Section 2.1. explain that policy debates have become political battle fields in which economic reasoning and efficiency considerations play a secondary role to ideological positions and political interests. The disparity in policy evaluation is then a results of different ideological perspectives. These do not necessarily reflect sharply diverse economic options available to the policymaker. Recognizing this political reality, I evaluate in Section III the Social Security debate, *aiming to distinguish between the ideological components of the debate and the true economic choices available to us*. Let me briefly sum up my conclusions.

I first show the real problem of Social Security is the changing demography which creates a structural deficit that must be resolved. There are two approaches which are at the core of proposals made to solve the problem. The first is to fix it by a combination of tax increases and benefit decreases. The second seeks to find added resources with which to privatize the present system. Analysis of the specific proposals made lead me to four basic conclusions:

1. True privatization of Social Security is infeasible since the system has a \$11.6 trillion «Legacy Debt» to present and future retirees who paid past payroll taxes. Moreover, realistic proposals for solving the Social Security problem do not constitute real privatization since they maintain the compulsory payroll tax and differ only in the use of the tax receipts.

2. Proposals which aim to *fully* privatize Social Security are thus ideologically motivated and offer no real solution to the problem.

3. Interest on the «Legacy Debt» is real cost, making it impossible for tax contributions to Social Security to earn the same rate of return earned by capital in private financial markets.

4. Even in the absence of the Legacy Debt it is not socially optimal to rely entirely on the open markets to determine retirees' income levels. Private markets do not provide adequate inter-generational risk sharing. Hence, due to high volatility of financial markets a fully privatized pension system would result in politically unacceptable inequality in income levels of different generations of retirees, depending upon their retirement date.

Once we remove the political-ideological perspective and restrict discussion to realistic proposed policies that respect the «Legacy Debt», the two main alternative policies are very close in nature. *They both maintain the compulsory payroll tax thus leaving in place the existing system of government financed retirement.* Their differences can be summarized as follows:

a) Proposals to fix Social Security without private retirement accounts are modest. They reduce some benefits and increase some taxes very slowly *over the next several decades*, attaining the objective of a low risk retirement safety net.

b) Proposals which use private retirement accounts keep much of the existing, traditional, retirement system in place. They add a second tier of benefits by creating incentives for voluntary increased private savings while preserving the present benchmark of *expected* total benefits. However, they require households to accept *more market risk* in their future benefits. Hence, the two approaches differ in the mix of *expected benefits* and *risk*.

All sides agree that any solution to the problem must be implemented now when the Baby Boom population of active workers is large, not later when they start retiring. With a large working population small changes in tax rates, benefits or savings rates have a strong cumulative effect over time. *The longer we wait the more costly the solutions become.* Paradoxically, the disparity in the debate has led to a public's distrust of the political process. The public's suspicion of a political-ideological bias in the proposed Private Retirement Accounts has deprived all plans of political credibility. Without public support no solution will emerge and, I fear, the main outcome of the debate may be an impasse. In the next few years we may end up with the worst outcome.

II - THE CONSERVATIVE ECONOMIC POLICY AGENDA: ON MIXING IDEOLOGY AND SCIENCE

The Keynesian paradigm had a profound impact on two generations of economists. By the 1960's Keynesian thinking became the dominant paradigm underlying the conduct of stabilization policy. But, there was a problem with the Keynesian theory. Although the *General Theory* says much about market expectations (e.g. Keynes, 1936, Chapter 12), Keynes did not develop a rigorous theory of expectations and thus his theory failed to account correctly for the effects of market expectations. During the 1970's the US experienced a sustained period of *simultaneous* high inflation and high unemployment. If unemployment reflects *insufficient* demand and inflation reflects *too much* demand then there must be something fundamentally wrong with the Keynesian paradigm. Indeed, the scientific vacuum left by Keynes gave those espousing the REE theory the scientific basis to attack the Keynesian perspective. In contrast to Keynes, economic agents in the REE world forecast accurately all economic variables and hence, *Perfect Foresight* was the new element that was not present in the Keynesian system. The result was a drastic revision of the range of points of view about the role of public policy. These included some very extreme views such as the suggestions of the Chicago school lead by M. Friedman who urged

that the Federal Reserve be abolished and replaced by a computer to increase the money supply at a fixed annual rate.

Much of subsequent research work applied the REE tool to a frictionless economy under the added assumptions that information is free, that prices are at their competitive equilibrium values, and that markets for future risky events are «complete» and work perfectly well as in Arrow and Debreu (1952). This last point says that for any risk there exist private markets that offer efficient ways for people to hedge that risk. Under such conditions the REE hypothesis is able to argue that money is neutral (see, Lucas, 1972) in the sense that changes in the money supply change only the price level, not the real economy. The REE hypothesis is at the basis of the claim that monetary policy has no effect and deficit spending, aiming to achieve counter-cyclical stabilization, has no real effect and hence is useless. The REE paradigm insists all unemployment is a result of worker's *voluntary* search for new jobs (see, Phelps, 1970) and rejects any unemployment as «involuntary».

I mention in passing that the process of evaluating and rejecting the above REE based paradigm has accelerated since the late 1990's. Those who reject it fall into two categories. First are studies that revise the above assumptions. For example, to explain why monetary policy has real effects and has been a most successful stabilization tool, researchers introduced various frictions such as slow adjusting wages in the labor market, known as the sticky wage model (see, Woodford 2005). Others reject the REE hypothesis altogether since «perfect foresight» is not a plausible requirement. They observe that rational people disagree and hold diverse forecasting models. Such work amounts to introducing an explicit theory of why diversity of expectations matters to market dynamics (see Kurz, 1994, 1997), a task which Keynes failed to do.

Apart from a rejection of Keynesian economics, two other developments took place during the 1970's. First, improvements in our understanding of the incentive effects of public policy in general and the negative effects of high tax rates, in particular (see, for example, Mirlees, 1971). Second, and related to the first, is the continued re-examination of the foundation of the traditional welfare state. The welfare state originated from ideas about a class struggle between «workers» and «capitalists» and some components of the welfare state were designed to strengthen the ability of workers to organize, to strike and to extract better terms from employers. Other components sought a more egalitarian income distribution, leading to direct transfers via various welfare programs. The ideas about a presumed class struggle have been discarded long ago and in the 1970's began the process of recognizing the failure of some of the ambitious 1930's welfare state and the 1960's Great Society programs which aimed to eradicate poverty by direct transfers. These have raised the deeper question of defining the exact role of public policy in the economy. I address this question later.

The combined effect of all these changes was a decline in public support for the policy goals of the depression era Welfare State and a rise in influence of conservative thinking on the conduct of public policy. These forces have ultimately brought the conservative movement into power. Thus, in 1981 a new economic policy agenda was launched by President Reagan, known as *Reaganomics* (or supply side economics) in the US, Thatcherism in the UK and by other names across the world.

2.1. *The policy objectives of Conservative Economics*

The conservative movement opposes the welfare state, the New Deal and Keynesian economics. It champions an «economic man» which is the foundation of conservative economic policy. I describe this «man» as one who lives by his own work and risk-taking. His world is a competitive universe in which each person takes actions which are best for himself. He sees no need for cooperative institutions, he does not give or receive what is undeserved, he honors achievement and rejects handouts. Champion of full rationality he accepts all consequences of the market allocation as a result of his own choices. He thus strongly believes all should be held responsible for the outcome of their life. Government must be restricted to protect each person's life, liberty, and property. This political perspective was popularized by writers such as Ayn Rand (1905-1982) in fiction but many of these ideas are also found in Friedman's *Capitalism and Freedom* (see, Friedman, 1982). This vision motivates the economic policy agenda launched in 1981 and which is, by and large, still in effect today. Conservative economic policy has three true goals:

- 1) Eliminate all social programs introduced since the 1930's New Deal and the 1960's Great Society.
- 2) Reduce marginal tax rates to increase incentives of the private sector to work, innovate and invest and hence to enhance economic growth.
- 3) Enhance supply side policies by eliminating all regulations which prevent the private sector from freely maximizing profits.

But how were these goals justified publically? The answer consists of two «Basic Principles» which are the heart and soul of conservative thinking:

- a) Free market economy produces efficient outcomes hence it requires no government intervention.
- b) Laissez-faire market allocations are fair since they result from individual choices. *Hence, each person gets exactly what that person deserves. Public policy should not help anyone.*

It is obvious that, *if compatible with other public needs*, taxes should be cut to improve incentives and that we should remove all *unnecessary* regulations. But there is a deeper truth which is more complex. In their extreme form, the two Principles are wrong and are rejected by elementary economics. They constitute political ideology that has impaired a sensible public debate of economic policy in the US and abroad. Let me explain by examining each of the two Principles.

2.2. *Do private markets work well without public interventions?*

An important achievement of economic theory in the 20th century is the identification of circumstances when market based solutions can achieve Pareto Optimal allocations. Arrow and Debreu (1952), and subsequent work have demonstrated that these circumstances are demanding. There are many *economic textbook's* situations

when competition fails to attain a socially desirable outcome and consequently justifies government intervention. Let us recall some standard cases.

(i) *Scale economies*. When large size gives monopoly power, antitrust regulations restore efficiency.

(ii) *Asymmetric Information*. Markets allocate inefficiently when sellers and buyers have different information. It results in inferior products and fraud. Regulations are thus needed in vast areas such as sale of food, drugs, credit markets, public sale of securities, durable goods warranties, etc.

(iii) *Externalities*. Cooperative public policy is the only remedy when we have an effect on each other. This occurs in the use of land, extraction of natural resources, use of the environment, etc.

However, what is less frequently discussed is the fact that *Insurance and Social Risk* is a fourth and vast area of our economy where free competitive markets do not attain efficient outcomes and these areas are central to public policy in the 21st century. Many private insurance markets lead to inefficient results for several reasons *which vary from market to market*. We now review them.

a) *Moral hazard* arising when having insurance reduces the level of care given to the insured. Anticipating this, companies restrict coverage and raise rates.

b) *Adverse selection* arising when the insured know their conditions better than the insurance company as is the case with health insurance. Under these circumstances, profit maximizing firms try to differentiate among customers in order to attract the less risky and more profitable, and apply exclusions with which to reduce payments for claims. Since companies cannot fully succeed in these efforts, insurance which is subject to moral hazard and adverse selection is an adversarial business. Customers must struggle to secure their rights and competitive companies have incentives to wear their customers down in order to minimize payment for claims. This is wasteful and very expensive. As a result, in the US 16% of the population has no medical insurance and 31% of all of medical expenses cover administration cost (see, Woolhandler - Campbell - Himmelstein, 2003 and Aaron, 2003). These cost do not include *private cost* incurred by households who spend substantial efforts filing, pursuing and litigating health insurance claims. Although the US has the best medical facilities in the world, a significant proportion of the population is unable to benefit from them. International comparisons are inaccurate but statistics of the World Health Organization suggest there are more than 30 countries where the average household has better quality of health care than the average US household. Some rigorous studies show the per-capita cost of medical health in the US are twice to three times the cost in Canada, which has a government managed single payer system (see, Woolhandler - Campbell - Himmelstein, 2003 and Aaron, 2003). The US private market-based health insurance is flawed and inefficient. If we change the market oriented culture of managing health care then for the same cost we can attain a much higher average quality of health care through a single payer, government directed, system. I note that a single-payer system has its own faults and waste. Since a perfect system does not exist we must choose only among the imperfect systems available.

c) *Correlated risks* leading to substantial income insecurity. Private insurance does not cover well the cost of hurricanes or a major recession.

d) *Private markets do not provide adequate inter-generational risk sharing.* To accomplish such risk sharing, society needs to establish contracts among generations which are enforced by taxes and by reserves of durable assets. There are no market institutions to attain such risk sharing. Indeed, a private retirement system cannot provide more security than is available in asset markets. But asset returns are much too volatile hence people who retire during long bear markets are worse off than those who retire during market booms. A public retirement safety net is the only solution, a point which I further discuss later. I note that a family unit can attain some inter-generational risk sharing, but this mechanism is inadequate. Keep in mind that Social Security restored security to a generation of retirees who were impoverished by the markets during the Great Depression.

In sum, the problem of social risks consisting mostly of retirement security, health security and disaster insurance are the central problems of public policy in the 21st century. By 2030 health and retirement cost could rise to some 30%-40% of GDP in the US. If provided via private markets, the resulting inefficiencies would not be politically tolerated.

2.3. *Do people get what they deserve?*

Consider an example. Suppose in 1976, at the age of 20 you started to work for a South Carolina Furniture company. In 2006 the company moved to Malaysia. It had no pension plan and your savings in a 401(k) plan were adequate for a 50 years old worker but not enough to retire. In short, your job disappeared when you are 50 years old and your savings are too small to retire. You cannot find a job at your skill level since other furniture companies moved abroad. Are you fully responsible for these events and do you agree that you, *and only you*, should bear all consequences as the two «Basic Principles» insist?

The conservative answer is «yes». But why? Since you should have known in 1976 that the company may move abroad in 2006 and you could have taken precautionary actions by buying insurance or by self insuring via saving a larger proportion of your income to counter the risk of the company going abroad. You chose to work at the company and hence you bear all the risks.

It is obvious people do not have perfect foresight, do not always predict the future correctly, and that markets for insurance are insufficient. Hence, the entire argument above breaks down. Instead, our society accepts part of the responsibility to help this worker through unemployment insurance, retraining programs, progressive social retirement program or through public assistance. The argument in support of these programs is similar to the one in support of free trade. Introduction of free trade is a justified policy only if those who gain from it compensate those who are harmed. Economic progress is enhanced if those who are harmed are allowed to share the benefits of progress.

Social insurance is thus further justified as a fair policy and as a sound strategy to enhance progress.

In sum, when you next hear the usual claim that free market economy is the best of all worlds, keep in mind that these are purely ideological claims, not sound economics. Some important markets fail to deliver good results and then the government must step in to attain a better outcome!

2.4. *Some by-products of Conservative Economics*

What has been the impact of Reagan-Thatcher type policies? There is no doubt lower tax rates and less regulations have improved incentives with favorable effects on corporate profits, capital formation and economic growth. But apart from the Great Society and welfare programs, most government intervention programs established since the Great Depression are essentially intact. Also, most political writings have exaggerated the contributions of tax cuts. These writings attribute to tax cuts all investments, rates of economic growth and the rise in stock prices since 1981, claims that have no merit (e.g. see Laffer, 2004). Let me explain.

The Kennedy and Reagan tax cuts lowered rates when the federal tax rates were very high: 91% in 1961 and 70% in 1981. Both had positive effects on the economy. But the record shows the rates of capital formation and economic growth in the 1980's were *moderate*. The dramatic rates of capital formation and economic growth occurred after the large Clinton *tax increases* in the 1990's. The rapid rise in stock prices and high rates of economic growth occurred mostly after 1994, fueled by advances in information age technology. Since productivity is generated by technological and organizational innovations, the claim that *all developments* after 1994 were due to the 1981-1983 tax cuts is in conflict with the evidence. Similarly with the large tax cuts of 2001. These contributed to the shallow recession of 2001 by sustaining high consumption rate. But this is a Keynesian deficit spending argument. Tax cuts aim to enhance incentives for capital formation, but since 2000 we have seen no sign of a boom in capital spending in the US. One may note that since the 2001 tax cuts started off from relatively low marginal rates, they are not likely to have significant effects on capital formation and economic growth. Indeed, the data on aggregate investment suggest these tax cuts have resulted mostly in a wealth transfer to rich individuals, financed by large Federal budget deficits.

Looking around the world, what are other by-products of these policies? The limited evidence available suggests that a greater reliance on markets (i) has increased social risks born by individuals, and (ii) resulted in increased income inequality and increased rates of poverty.

2.5. *The disparity in policy debate: welfare policy in the 21st century*

A distinct by-product of Conservative Economics is the wide *disparity between policy objectives and their public justification*. Such disparity makes it difficult to

carry out a sound economic policy analysis without first removing the politically motivated and false arguments. In the next section I review in detail the Social Security debate in order to demonstrate the complexity of policy evaluation. For now, I provide a short explanation of the disparity itself.

The «Basic Principles» and the social theory underlying Conservative Economics are not supported by scientific evidence. The long term political objective of the policy is to return to laissez-faire capitalism and this goal is motivated by ideology. Actual policy based on this universal goal will lead to inefficient economic outcomes. Apart from the public's preferences for more equal income distribution, the fact is that private competitive markets cannot provide efficiently the level of social risk insurance demanded by the public. This is particularly true of medical care and retirement security, the cost of which will grow in the 21st century to the range of 30% - 40% of GDP. An efficient allocation of social risks requires an active public policy and the majority of voters see a great need for such public services. In short, Conservative Economics is justified on a false theory about the functioning of markets.

The cause of disparity is then clear. Although the public sees some merit in conservative economic policy, it rejects its real objectives. It is thus difficult to consistently persuade the public to support policies which are inherently against the interests of the majority of voters and there are signs of the public's awakening to this reality. The present administration has failed to advance its policies of Social Security «reform» and of the elimination of other social programs mostly because the public did not support them. Unfortunately the administration's loss of political credibility can also be the reason why we may not make progress on solving the real problems of Social Security.

More broadly, the fact is that interventionist policy objectives of the traditional Welfare State are now irrelevant. We now know that the solution for the income distributional objectives of the traditional welfare state are equal opportunities and universal right to education. Under such conditions every member of the advanced economies has the opportunity for a high standard of living. But this same high standard of living has dramatically altered the welfare goals of public policy in the 21st century. It has generated great demand for economic security. In essence, people seek to ensure that they can enjoy what they already have rather than redistribute what they do not have. The advent of globalization further heightened the public's demand for social insurance and better risk sharing. These demands are in conflict with the reality that private insurance markets cannot provide efficient coverage of these risks. Today's «markets know best» ideology masks the fact that market-based solutions to the public's concerns about retirement income security, medical care, income instability and disaster insurance fail to deliver efficient solutions. Unfashionable as it may be to say so, government intervention *is the solution and Reaganomics is the problem*. Economic policy in the 21st century will not revolve around the traditional welfare state; it will be all about social insurance and economic security. The justifications for public intervention in those areas are well grounded in science not ideology. The Social Security debate is thus one of the important policy debates of the new century.

III - RETIREMENT RISKS AND SOCIAL SECURITY

3.1. *Defining the problem of Social Security*

Social Security and the associated Medicare which provides health insurance to retirees under Social Security are by far the largest federal government spending programs. Most elderly in the US depend upon Social Security for over half of their income. Social Security provides the majority income for two thirds of elderly beneficiaries and all income to 20% of them. At the median income level, the replacement rate of Social Security (i.e. the proportion of income prior to retirement replaced by Social Security) is 40%. But since the benefit schedule is progressive, replacement rates below the median are larger than 40%. The progressivity of benefits accounts for the fact that since inception of Social Security, poverty of the elderly has been sharply reduced. Indeed, prior to Social Security the poverty rate among the elderly was higher than in the rest of the population, but today that rate is lower than in the rest of the population. The proportion of elderly living in poverty is still about 10%.

Most workers pay more in Social Security payroll taxes than in personal income tax. With the decline of Defined Benefits corporate pension plans, the Social Security program plays a major role in the life of workers in the US both in terms of cost as well as benefits. Their retirement decision is dependent upon the legally defined «normal» retirement age of Social Security which is now gradually increasing from 65 to 67. After retirement the schedule of benefits is adjusted in accord with the consumer price index. In short, the Social Security program has had a profound effect on the life of the elderly, their self esteem, their mobility and ability to lead a secure life style independently of the financial conditions of their extended family. As a result, the program is extremely popular with the public who sees it as an economic and political success. Yet Social Security faces a crisis that has been a gathering storm for some years.

The Social Security program is a pay-as-you-go program only in a long run average, where reserves and present payroll taxes are used to pay for the benefits of the retired. Fluctuations in the conditions of the program thus require large reserves to be held for future use. Unlike private pensions, these reserves are not accumulated by holding private stocks or bonds. Instead, the trust fund holds only US government bonds. All revenues received by the Social Security program are paid to the Social Security trust fund and receipts which are not used to pay benefits to retirees are loaned back to the federal government to finance other expenses. Hence, the trust fund receives government bonds for its surpluses and is credited with interest at the current rate on US treasury bonds. However, this is just an accounting device to keep track of past deficits and surpluses of the trust fund. In recent years the trust fund has run a large surplus which is an important source of financing the federal government budget deficit. Thus, from an economic point of view a surplus of Social Security does not create any real assets in the economy and the income of social security is not a return on assets owned by the system.

As in any overlapping generation scheme, the first generation of retirees received

from the Social Security program benefits which exceeded the payroll taxes they paid. This windfall of the initial generation extended over many years. The Social Security system started with a large relatively young population hence the payroll tax in 1937 was only 2%. Keep in mind the calculus of a *strict* pay-as-you-go Social Security schemes. I denote by B the benefits of an average retiree, τ the payroll tax rate, W the wage rate, L the size of the labor force which pays the payroll tax, and P the size of the retired population. The tax base at date t is then $W_t L_t$ and the benefit formula is

$$B_t = \tau W_t \frac{L_t}{P_t}.$$

The implied growth rate of the benefits earned in a strict pay-as-you-go system would then be

$$(*) \quad \frac{\Delta B_t}{B_t} = \frac{\Delta W_t}{W_t} + \frac{\Delta L_t}{L_t} - \frac{\Delta P_t}{P_t}.$$

The growth rate of the benefits equals the growth rate of the wage rate plus the growth rate of the labor force minus the growth rate of the retired population. The system is not a strict pay-as-you-go because of fluctuations of these factors. Any discrepancy between the right and left sides of (*) generate changes in the size of the trust fund.

In addition to the effect of the initial generation who received benefits which far exceeded the amount they paid into the program, a second factor which has a crucial effect on the long term financing of Social Security is the age distribution of the US population. The dramatic rise in the birth rates during 1943-1963 created what is known as the post war «Baby Boom». This large bulge in the age distribution of the population distorted the prospects for a long term «financial sustainability» of Social Security. Recognizing these facts, the trustees have been releasing an annual forecast of the long term viability of the program that provided the background for the public discussion. Anticipating larger future expenditures when the large Baby Boom generation reaches retirement, the Social Security payroll tax rate was gradually raised, reaching 10.6% today. The problem is that on several occasions in the past, when the trust fund had a significant surplus, Congress came under political pressure to raise benefits to retirees. Such increased benefits naturally reduced the long term viability of the program. In 1977 the trust fund ran out of money and after a short term adjustment it ran out of money again in the early 1980's. By that time the 75 year projection of the trustees showed that with the retirement of the «Baby Boom» generation expected to start around 2008 the system is not viable and requires a major fix.

The 1983 Greenspan Commission designed a package of reforms which aimed to ensure the viability of the system up to 2063 when the youngest members of the Baby Boom generation would be 100 years old. Based on the commission's report, the adopted program consisted of changes in the payroll tax rate, changes in the maximal payroll subject to tax, and some changes in benefits and retirement age. During

the 23 years since the Greenspan Commission, conditions have changed. Using current projections based on intermediate assumptions of tax receipts and benefit payments by Social Security, the 75 year projections show that by 2018 the payroll tax receipts will fall below the annual benefit payments hence the trust fund will start to decline. By about 2044 the trust fund will be out of money. The trustees estimate that the shortfall in 2004 was 1.9% of the payroll tax or 0.7% of GDP. That is, if the payroll tax is raised today from 10.6% to 12.5% the system will continue to be viable for 75 years. Correspondingly there are many combinations of benefit reductions that would accomplish the same goal.

Any solution for Social Security that works for the next 75 years may not work for the long term, steady state, since a third demographic factor is at work. It consists of *a secular rise in the longevity of life together with a decreased average family size*, reducing the long term steady state ratio L/P. As a result, projecting the present value of the shortfall for the next 75 years leads to a different estimate of the true long run, steady state, shortfall of the system which is estimated today to be about \$11.6 trillion. This sum is the present value of future outstanding net obligations of the Social Security system. This amount is larger than the GDP of the US and about 30% of the US capital stock. I refer to this debt as the *legacy debt* (see, Geanakoplos - Mitchell - Zeldes, 1999, and Diamond - Orszag, 2005) and explain later that the problem of handling the legacy debt is the crucial problem of all proposals for the privatization of Social Security.

All participants in the debate on Social Security agree on one thing. *If we are to solve the problem of the Social Security system, the earlier we start the better.* All proposed solutions have the property that if introduced today, they require only small changes that lead to the attainment of long term sustainability. And conversely, if we do not act soon, changes that would need to be made later will be sizable and politically painful. The problem is that the debate on financing Social Security suffers from the disparity problem of policy debates explained earlier. It is tainted by ideological motives of followers of Conservative Economics whose political agenda does not seek to fix or reform the system but rather, to abolish it. Indeed, the proposed Bush Administration reform of Social Security via the Private Retirement Accounts (in short, PRA) was defeated by public opinion since it was taken by most Americans as a reflection of a hidden agenda to destroy the system. The disparity in the public debate on the future of Social Security makes it likely that no changes will be introduced in the near future and valuable time will be lost.

So what is the *real problem* of Social Security? Most economists and the public believe Social Security has been a success. Hence, had it not been for the demographic factors explained above there would be no deficit, and since the principle of using taxes to assure universal retirement security is supported by the public across the world, Social Security would not be a seriously debated issue. I thus insist *the main problem is that changes in demography have made it impossible, at current projected tax and benefit rates, for the government to keep its promises to current and future generations of workers.* These workers have payed payroll taxes for a long time and will continue to pay taxes for years to come. By the time they reach

retirement age, the system will not have the funds to finance their retirement. Where do we then find the added resources to pay for the obligations of the system? *This is the heart of the Social Security problem.* But then, what does this have to do with privatization? The theme of this paper is that in such public policy debates one must keep a clear perspective of the political agenda versus the true economic reasoning which applies. I will use this principle to understand the role of privatization in the Social Security debate.

3.2. *The Social Security rate of return and the «Legacy Debt»*

Rates of return on payroll taxes paid by past US cohorts are very high since cohorts born prior to 1940 received (most are still receiving) benefits which exceed in present value of the payroll taxes they paid. Rates of return earned by later cohorts depend upon future taxes and benefits. Assuming payroll taxes continue to rise so as to pay future retirees benefits *under current Social Security benchmark rules*, rates of return on payroll taxes earned by future retirees depend upon future growth rate of the tax base as in (*). Under plausible assumptions one estimates this rate to decline to about 1.5% for cohorts born after 1975 (see, Leimer, 1994). Other estimates of the Social Security rates of return are even lower (see, Caldwell et al., 1998, but I do not go into these detailed accounting issues). Expected rates of return on stocks and bonds are also subjects of some recent debate, but reasonable estimates of these and their standard deviations are as follows:

	<i>Real Rate of Return</i>	<i>Standard Deviation</i>
<i>Stocks - rate of return on the S&P500</i>	7.0%	18%
<i>Long Term US Government Bonds</i>	2.5%	10%

The 1.5% Social Security rate of return is clearly lower than the 2.5% rate of return on US government bonds, which is the rate of return on private assets, adjusted for market risk. The difference between the 7% return on stocks and the low rate of return on Social Security has been central to much of the misleading political campaign in support of privatization of Social Security. During the election campaign in 1996 Steve Forbes criticized Social Security on the ground that

the average worker retiring today receives a lifetime return of only about 2.2% on the taxes he has paid into the system. Contrast this with the historic 9-10 percent annual returns from stock market investments...

In all speeches promoting the PRA, President Bush says his reason for introducing such a privatization law is that «young people deserve to receive the same rate of return on their payroll taxes as private assets». He then insists people will be better off putting their tax money in the stock market rather than be part of the Social Security system. Since this is the pivotal argument used *in the political arena* to push for privatization we first ask: is this argument valid?

Before proceeding it must be clear that comparing returns on Social Security to

the returns on stocks is wrong for the simple reason that the difference between 7% and 2.5% on bonds is a risk premium on stocks. This risk premium should be ignored. If any comparison is to be made at all, then it should be made with the 2.5% return on bonds. I turn to this specific question.

I suggest the above question cannot be answered without addressing the obligations of Social Security to those who have already paid into the system and are entitled to future benefits. One possible way to solve this problem is for Congress to enact a law cancelling these promises. Some who wish to abolish Social Security on political-ideological grounds may support such a plan but a majority of Americans would reject it. *Hence we need to assume that this \$11.6 trillion debt must be part of the solution.* For this reason I need to clarify the relationship between this debt and the expected rate of return on Social Security.

To understand the nature of this debt recall that past Social Security cohorts (this includes most retirees today) received larger benefits than could have been financed by their contributions plus compound interest on the contributions at a market rate (US bond rate). These extra benefits were paid by payroll taxes of other workers and this fact created the legacy debt, carried forward to future cohorts of Social Security. *This debt plus the funds in the trust fund are equal in value to the present value of the obligations of the Social Security system to future beneficiaries,* based on present Social Security rules. To see why the last statement is true suppose past generations of retirees did not receive any windfall and instead suppose that all generations receive only benefits that are financed by *their own* contributions plus market interest. In that case the trust fund's assets would be much greater today since payroll taxes paid by all workers until today was much greater than the benefits paid to old generations. This increased asset base in today's trust fund would then earn market interest and that interest would contribute to finance the retirement of those currently retired or soon to be retired. The trust fund would then have exactly the correct amount needed to finance the retirement needs of all those who paid in. This increased asset base of the trust fund is the missing legacy debt. As long as Social Security continues to function, this debt does not need to be paid off but the interest on that debt is real. It reduces the rate of return on payroll taxes that members of each generation pay and *this is the crucial impact of the legacy debt.*

To understand why the legacy debt impacts the rate of return of Social Security consider the consequences of privatizing the system while respecting past obligations. We would do it by cancelling the existing system and maintaining the compulsory payroll tax whose receipts would now be invested for each worker in Private Retirement Accounts (in short, PRA) holding US government bonds and earning market rate. Now we must face the obligations of Social Security to the generation of workers with rights to benefits. To handle this we issue US government debt with a market value of \$11.6 trillion, in the form of consols which is debt without maturity and which pays market interest rate¹. We then use this debt to pay off all obliga-

¹ Or else, the government can issue regular long term bonds with fixed maturity. When these mature the government will need to issue an amount which is sufficient to cover the cost of paying for the retiring bonds. Hence, the principal is never paid off but interest is paid at each date.

tions of the system and these assets are placed into the PRA which would own these bonds. But then how do you pay the interest on the debt? You impose a tax on all capital incomes, including the PRA. This new tax will then reduce the rate of return on the market return of assets in these PRA. The tax on the return of the PRA will reduce the net return and this fact will bring down the net return from the 2.5% return on long term bonds to the 1.5% return on Social Security. *Indeed, the expected return on Social Security payroll taxes is exactly the same as the rate of return that would be earned by the PRA after taking into account the effect of the tax* (see, Geanakoplos - Mitchell - Zeldes, 1999). There is absolutely no gain from privatization!! This fact shows the common argument of conservatives writers and politicians that young people are entitled, *at no cost to them*, to earn on their payroll taxes to Social Security the same rate of return earned on private assets, is politically motivated and nothing short of political propaganda. Moreover, it can only encourage an inter-generational strife between young and old.

In sum, a privatized retirement security requires ownership of real capital. In the US it requires \$11.6 trillion. In contrast, Social Security provides retirement income security to the public *without needing to own the real capital a private system must have*. The cost of this «miracle» are the rates of return on payroll taxes which are lower than the rates of return on private assets. Instead, these rates of return depend upon the growth of the payroll tax base which, in turn, depends upon the growth of wages and upon demographic factors. Also, Social Security has an important income redistribution role. Being the institution it is, the Social Security rates of return are only partly linked to the rate of return on private assets. Any demand that the Social Security rate of return must be exactly equal to the rate of return on stocks or any other private asset is not based on economic reasoning.

3.3. *The debate on the future of Social Security*

To understand how privatization fits into the debate we must distinguish between a political agenda and the economic reasoning behind the proposals to solve the problem. Conservative policymakers promote a simple argument and a simple solution to the Social Security problem. They claim that complete privatization is the best solution to retirement security hence we do not need Social Security which is a disguised welfare program. They support this ideological position by arguing that privatization provides young people with the opportunity to invest in all assets traded on the open market. Furthermore, it is not optimal for young people to stay with Social Security since the rate of return on Social Security is inferior to what the private sector offers. Finally, they argue, young people have the right to earn on their payroll taxes, at no cost to them, the same rate of return as earned in private markets.

I have shown that the above argument has no merit. Unless they are able to find \$11.6 trillion to pay off the obligations of Social Security, supporters of the privatization agenda do not even address the basic problem of Social Security as defined in Section 3.1. But then, what does privatization have to do with the solution of the pro-

blem? I answer this question in the context of explaining those two real economic positions in the debate which respect the Legacy Debt. The first position holds the view that «the system works hence we just need to fix it so that it works better». The second position insists that «the system does not work and we need to fix it with the help of the private capital market». In the rest of this section I will explain the underlying ideas more precisely and discuss them.

3.3.1. Fixing the Social Security system

The Social Security deficit will develop over the next 30-40 years. Hence, if we start early while the Baby Boom generation is still paying payroll taxes, the cost of solving it would spread over many years hence the *annual* cost may not need to be big. An increase of 1.9 percentage points in the tax rate solves the problem for 75 years and, given the consensus demographic projections, and a 3.5 percentage points increase attains «sustainable solvency» forever. However, proposals in support of the existing system (e.g. see Aaron, 1999, Diamond - Orszag, 2004, 2005) address the specific causes of the imbalance in Social Security rather than just uniformly raise taxes or cut benefits. They take the pragmatic, common sense, view that a pay-as-you-go system *must be a dynamically adjusting institution* that responds to changes in productivity growth, demography and other factors. On such grounds these proposals make specific suggestions on how to attain better balance. Given the heated debate about Social Security, it is rather surprising that relatively small changes in benefits and taxes can actually solve the long term «sustainable solvency» of the system *if introduced soon*. The key elements in these adjustments are as follows:

a) *Small adjustment due to changed life expectancy*. As life expectancy rises and retirement period increases, taxes must gradually rise and benefits spread over longer time. Hence, annual benefits need to be reduced. Some proposals also raise the retirement age.

b) *Adjustment due to rising earning inequality*. Maximal income subject to payroll tax is \$90,000 in 2005 but the fraction of earnings above the maximum taxable earnings, *which is free of tax*, increased from 10% in 1983 to 15% today. The growing proportion of earnings above the maximum taxable, increases income disparity and in response to that the payroll tax structure should adjust upward to become more progressive. The proposal then introduces some low payroll tax rate above the level currently projected as a ceiling on payroll tax.

c) *Sharing the legacy debt*. 6 million State and Local employees are, as yet, not included in the Social Security and never paid anything for the legacy debt. It is only fair that, like other public employees, they should pay a small share of the cost of helping past retired workers.

d) *Other adjustments*: issues related to disability, benefits of widows and widowers and others.

Each one of these adjustments is not very large, some phased in slowly after 2012 and spread over many years in the 21st century. Some provisions in these proposals come into effect after 2023.

3.3.2. Using privatization to solve the problem of Social Security

So, what is «privatization»? I start by briefly explaining the main component of the plans proposed by President Bush's Commission on Social Security reform. The public discussion of the Commission's plan has been framed in terms of «privatization», a term that was associated to the creation of the PRA. In reality, the key component of the Commission proposal is the elimination of an important clause in Social Security benefits which currently indexes the *starting* level of retirement benefits to real wages at retirement time. Instead, the Commission proposed to index the benefits to the cost of living. Hence, retirees in 2070 will be given the same real retirement income as the income of retirees in 2005. Such indexation will break the long standing Social Security tradition of providing the safety net of a minimal earning replacement rate at retirement. Since real wages are expected to rise annually by 1% in the next century, the proposal is equivalent to raising the payroll tax today by 2.07 percentage points from 10.6% to 12.67%. Since we have already seen that raising the tax by 1.9% fixes the problem for the next 75 years, it is clear the proposal to change the indexation is a major reduction in Social Security benefits. The rest of the Commission's proposals retains the compulsory payroll tax. It introduces the PRA into which workers who are younger than 55 could voluntarily direct 4 percentage points of their payroll taxes with a maximum of \$1,000 per year. This redirection of payroll taxes reduces taxes available for retiree benefit payment and hence reintroduces a deficit into the system for which the Commission had no solution. In short, under this plan the level of benefits falls, payroll is compulsory and no financing is offered for the privatization of the PRA. Since this proposal is not under consideration, it requires no further discussion at this time.

Leaving aside politics and focusing on economics I note that no serious economist has proposed to abolish the payroll tax which finances retirement security and rely entirely on the free market to solve the problem of retirement insurance. It is clear that one possible solution would be to find added resources with which to prevent a reduction in future benefits to retirees. Note that I am phrasing the problem as one of «finding additional resources» since this way of thinking helps to understand the issue better. For a sample of papers who advocate some privatization see Feldstein (2005), Feldstein - Samwick (2002) and Shoven (1999). The idea of «privatization» is then defined by a perspectives which I would formulate as follows:

Can the compulsory 10.6% of payroll paid by workers be used to persuade them to increase voluntarily their aggregate savings, invest these savings in the private market so as to generate the additional retirement income? This larger private retirement income will then replace the promised benefits of Social Security which the system cannot pay.

The question is then not one of increasing taxes or reducing benefits. Instead, it is the question of persuading workers to *voluntarily increase private savings* and thus increase future retirement income which will then compensate for the lowered benefits from Social Security. This idea of «privatization» entails the use of the market to voluntarily let the government write off the legacy debt. Proposals for such a policy fall

under the heading of «mixed» plans (e.g. Feldstein, 2005, Feldstein - Samwick, 2002) or , «two tier» plans (e.g. Shoven, 1999). To explain how they work I review the plan in Feldstein and Samwick (2002). It keeps the compulsory 10.6% paid by individuals for retirement security, but with changed composition. The plan has two parts.

(I) The first is the traditional pay-as-you-go Social Security. It will receive a payroll tax of 9.1% out of the 10.6%. When the mixed plan is fully phased in, benefits from this traditional component will pay 60% of projected benchmark benefits specified in the Social Security rules.

(II) The second is of a PRA which is individually owned and invested in a mutual fund consisting of 60% in the S&P500 stocks and 40% in a corporate bond fund which will mirror the Lehman Baa bond index.

The PRA works as follows:

- a) 1.5% of the 10.6% tax becomes an individual «contribution to the PRA».
- b) An individual has to come up with an additional 1.5% out of pocket contribution to the plan. *This is the crucial added resource which is voluntary.*
- c) Individuals who opt out of the plan lose their own 1.5% «contribution» to the plan. This is designed to increase the incentive of people to participate.
- d) At retirement time investments are cashed in. Individuals can either receive the capital or use it to buy annuity which is then added to the pay-as-you-go component of the annuity.

To clarify this plan I make several comments on it:

1) It keeps the trust fund solvent permanently since it decreases the tax paid to Social Security by 14.15% (1.5% out of 10.6%) but ultimately decreases benefits paid by Social Security by 40%.

2) The combined annuities of the two parts attain the benchmark *expected* retirement income because the voluntary contribution of 1.5% of payroll provide the needed added resources. However, it also hinges upon the high rate of return of the PRA with return which is much more risky. Thus a PRA has a higher expected return but it also has much higher volatility and risk.

3) A crucial component of the plan is the assumption that people treat the tax on social security differently from the way they treat a compulsory contribution to a pension plan. According to this view people will consider the PRA as a private asset they own like any other asset. Supporters of the plan thus claim that although the «contribution» of the first 1.5% is *compulsory*, this 1.5% is not a tax but a contribution to their retirement fund. Based on this reasoning, they insist their plan reduces the payroll tax from 10.6% to 9.1% and this reduction is estimated to yield additional social efficiency benefits. Finally, supporters argue that people would make the voluntary cash payment of the added 1.5% since otherwise they lose the «contribution» of their compulsory part.

3.3.3. What are then the main issues in disagreement?

What are then the central issues between the two types of plans: those which fix the sustained solvency of Social Security and those that introduce a privatized com-

ponent along the lines outlined above? Those who advocate the two tier, mixed, plans justify them on the following grounds:

1. *The plan attains its goals.* It provides retirement income equal to the promised benchmark

2. *The payroll tax has negative welfare effects including labor supply decisions.* The current 10.6% rate (actually 15.3% if we add 1.8% for disability insurance and 2.9% for medical insurance) is not the status quo. Any plan of «sustainable viability» increases the tax rate and hence has larger social welfare cost. The mixed plans reduce the tax rates and improve the PRA efficiency by *linking payments to benefits*.

3. *Negative welfare effects of the Social Security itself.* The system encourages early retirement. The mixed system removes part of the bias for early retirement by lowering the effective tax rate.

4. *All plans are risky.* A pay-as-you-go system is subject to the risk of future wage rate growth, demographic risks and political risks that Congress may change benefits and taxes.

Are these arguments convincing? The crucial point is the claim that PRA increase efficiency by linking payments to benefits. The argument is that a payroll tax stops being a tax and becomes a contribution to a retirement plan which is a private asset. That is, the public does not perceive a compulsory payroll tax as a tax since it contributes to an asset used for retirement many years later.

Does the payroll tax become a private contribution? Many economists doubt the size of this effect. First, there is already such a linkage in the present Social Security system. Benefits are calculated today based on *the 35 highest years of payroll taxes paid to Social Security*. Hence, any worker whose present earning level is higher than his past earnings, benefits from paying the tax. Second, is the link so strong in a mixed system with PRA? Economists doubt it since the tax is compulsory and the asset is received many years later. Since assets are used by households for self insurance against all risks, a PRA asset has only a very limited substitutability with other assets. The idea of a better link between tax payments and benefits is now popular in many countries, but the consensus view is that its net effect relative to the existing system is small.

A second key argument is that one should not reject PRA on the basis of their market risk since every system has some risks. *What are the risks in the present Social Security?* The mean growth rate of the wage rate over the last 100 years was about 1.5% while the standard deviation of the growth rate of the wage rate was about 0.7%. The trajectory of the ratio L_t/P_t of employed to retired changes very slowly and is predictable decades in advance. Hence the total economic risk in Social Security is, in my opinion, entirely minimal. Changes in taxes and benefits, causing large fluctuations in the trust fund, are a different matter. Indeed, today's problems have been known for years and have become more severe because Congress has refused to act upon them. More broadly, is political risk a legitimate risk from which Social Security beneficiaries must be free of? This is a complex issue but there are good reasons not to compare this risk to stock market risk.

In a fully privatized system each person selects his own risk level and any factor that impacts his realized return is a legitimate source of risk, including political risks. In a framework of social choice about retirement security, political risk amounts either to the risk of time inconsistency in social choice or simply changes in policy due to correction of errors in earlier decisions. It is a fact that in a world without perfect foresight and without perfect knowledge of the dynamics of the economy, the boundary between time inconsistency and correction of past errors is subtle. Should we consider this risk to be the same as stock market risk? To highlight why I do not think so, note that stock market volatility is a source of risk to retirement security on which beneficiaries and policymakers completely agree: both wish to limit it as much as possible. When it comes to political risks, retirees and the public at large may not agree. What may appear to some as irrational public decision makers who reverse earlier decision to take advantage of naive and poor retirees may very well be nothing but a decision to correct an earlier error in assessment. Also, the proportion of voters with a stake in retirement security is typically very large and often a majority. It is thus hard to see how they would strategically try and take advantage of themselves and cancel earlier obligations. I thus place little weight on the issue of political risks.

In my view the crucial factor is *market volatility*. I will address it after I evaluate the argument of those who oppose the two tier, mixed, plans and support fixing the existing system. A typical such plan is motivated on the following grounds:

1. *The plan attains its goals with small adjustment of benefits and taxes spread over many years.*

2. *Privatization puts retirement income at risk of market fluctuations.* Once this is done, the problem of retirement security could find itself in the same place it was before Social Security, during the Great Depression. We can always fund the Social Security trust fund and permit it to invest in the stock and bond markets but not pass the risk to the retirees.

3. *Personal Retirement Accounts are very costly.* The standard fee Wall Street charges for mutual funds ranges from 75 basis points to 1.5%. Privatized plans in other countries are even more expensive. Substantial part of the benefits will, therefore, go to Wall Street.

4. *There are other ways to increase national savings.* For example, repeal all the tax breaks to wealthy Americans and create a Federal budget surplus.

5. *The welfare effects of the payroll tax and of Social Security are small.* In addition, many economists doubt the validity of the pivotal argument that a payroll tax is different from a compulsory contribution to a pension plan which will pay an annuity many years later. Even if the two are different, the difference is far smaller than claimed.

6. *Introduction of Personal Retirement Accounts is a Trojan horse.* Once introduced it will give future politicians a basis to abolish retirement security as an objective of public policy.

Are these arguments convincing? We have discussed most of these before. It comes down again to the crucial problem of *market risk* which I now take up.

3.3.4. Market volatility and retirement security

I start the discussion of market risk by asking a simple «hypothetical» question. *Suppose the trust fund had \$11.6 trillion of real capital owned by the public sector with which it could buy back all the government's obligations. Should we privatize the system and take the government out of the retirement security business?* If we do that we would be in a society in which households save as much as they want and bear all consequences.

History offers an answer to this question since the environment sought by supporters of Reaganomics actually existed prior to Social Security. The fact is that a free market economy resulted in a totally impoverished generation of depression era retirees and the Great Depression was the reason for creating Social Security to begin with. But we have more evidence to consider.

Prior to Social Security any major market decline resulted in a generation of retirees who had a low level of retirement income. In some cases these retirees found themselves in poverty due to sharp declines in asset prices. Large fluctuations in asset prices were then major contributors to the inter-generational income inequality in the US and to the high poverty rate among the elderly. To see the significance of this factor recall that the standard deviation of the growth rate of the real wage rate has been 0.68%. In contrast, the standard deviation of the return on the S&P500 has been over 18%, and the standard deviation of the return on long term bonds has been about 10%. These standard deviations do not capture the large tails of the distributions². To assess this factor I examined some episodes when the real values of the S&P500 fell by more than 50%. During such episodes many people lost substantial parts of their savings. There were four such episodes in the last 100 years and Table 1 reports *three* of them. The table is based on real S&P500 data measured at the end of each January. Data covering a period from January to January inevitably misses a significant part of market volatility hence the actual sizes of the decline during these episodes are larger than reported here. Nevertheless, the three episodes reported are very large. The fourth episode took place recently between March 2000 and May 2002 when the S&P500 fell by 50%.

TABLE 1
Episodes in which S&P500 Fell by More than 50%

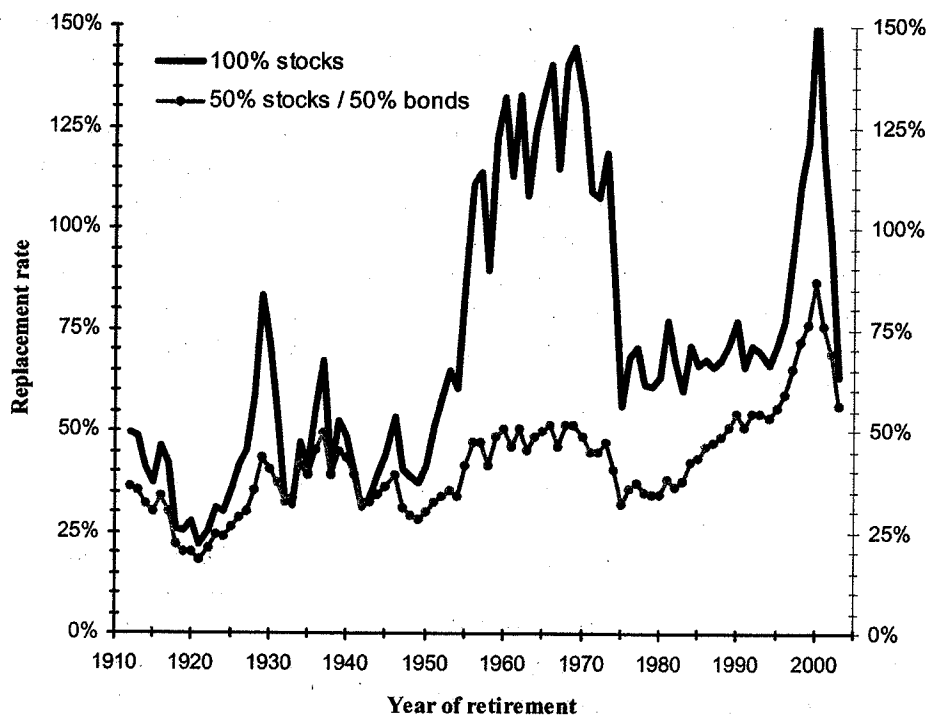
Starting Year	Ending Year	% Decline of S&P500
January, 1906	January, 1921	68%
January, 1929	January, 1933	62%
January, 1969	January, 1982	57%

Data Source: http://www.econ.yale.edu/~shiller/data/ie_data.xls

² For more details on excess asset price volatility see Kurz (1994), (1997), and Kurz - Jin - Motolese (2005).

A very important measure of the effect of asset prices on retirement security is the *replacement rate at retirement*. It is the ratio between retirement annuity income and average income just prior to retirement. Burtless (2003) reports simulation results on replacement rates of males retiring during 1912-2003. These apply to people whose income is derived only from private assets without Social Security providing a «safety net» income as suggested by the mixed plans above. Burtless (2003) reports on an experiment in which, starting in 1872, hypothetical males enter the labor force each year at the age of 22, work for 40 years and retire at the age of 62. He assumes the workers contribute 7% to their retirement account and when they retire they purchase an annuity. The annuity is computed on the assumption that it will be provided by an insurance company that will invest the capital at the long-term US Treasury bond rate. During their working years workers can choose one of two portfolios: 100% stocks or 50% stocks and 50% long term Treasury bonds. By using actual data on wage rates and rates of return on the two asset categories one can simulate the model to determine the replacement rates that would have been realized. Results of this simulation are reported in Figure 1 which is Figure 1 in Burtless (2003)³

FIG. 1 - *Individual Retirement Account Replacement Rates for U.S. Workers under Alternative Investment Portfolios, 1912-2003*



Note: Assumed contribution rate is 7% of wages. Tabulations of U.S. equity and bond return data supplied by Global Financial Data (March 2003).

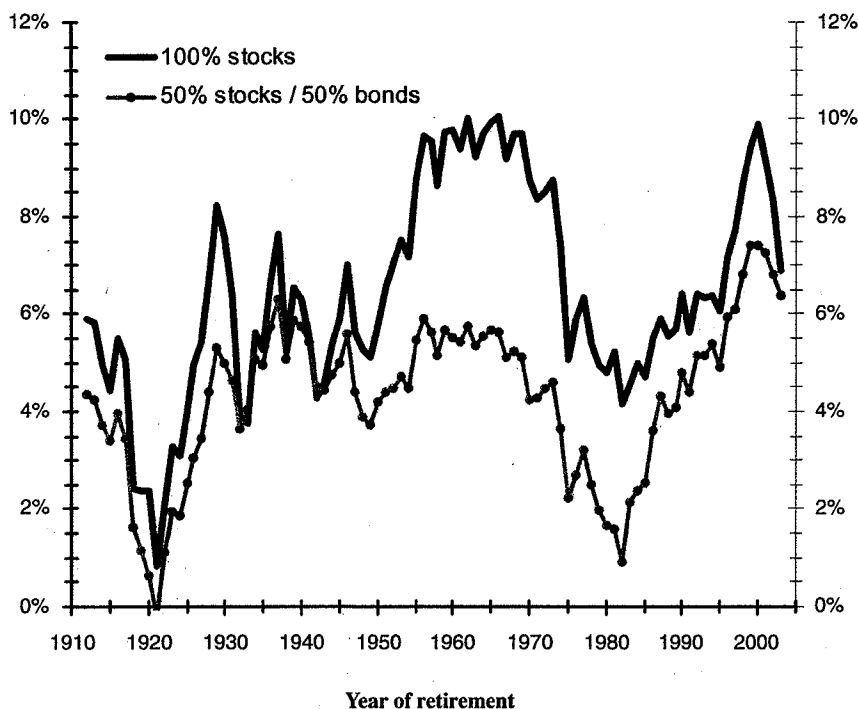
³ Figures 1 and 2 were provided to me by Dr. Burtless and I thank him for them.

The replacement rates for the portfolio with 100% stocks fluctuate between 25% and 130%. Hence, when PRA are invested 100% in stocks, the asset values at retirement fluctuate widely, resulting in substantial inequality of incomes across retirees. Indeed, we see that income distribution of retirees varies drastically, depending upon the date of their retirement and, by implication, their birth. When the portfolio is composed 50% of stocks and 50% of bonds the replacement rates are lower and the level of their fluctuations is reduced. In this case replacement rates vary between 20% and 75% which also result in substantial inequality in income distribution of retirees.

To see the great variability of the implied life-time rates of return of individual retirement accounts, Figure 2 exhibits rates of return associated with the results in Figure 1. The mean rate of return on the stock portfolio clearly exceeds the rate on the portfolio with 50% stocks and 50% bonds. But Figure 2 also shows that there are extended periods in which the blended portfolios earn, over their life-time, *less than 3% even after investing 50% in stocks*.

Note the *perfect match* between Table 1 and Figures 1 and 2. During long peri-

FIG. 2 - Real Internal Rate of Return on Individual Retirement Account Contributions for U.S. Workers under Alternative Investment Portfolios, 1912-2003



Note: Internal rate of return is calculated at assumed age of retirement. Tabulations of U.S. equity and bond return data supplied by Global Financial Data (March 2003).

ods of low asset prices replacement rates are low and during long periods of high asset prices, replacement rates rise extremely high towards the upper range. Fluctuations in asset prices and interest rates generate high risk of retirement income if such income is financed only through private markets.

A society in which the private market is the only source of retirement security is thus a society with high inter-generational income inequality and with higher poverty among the elderly. Such inequality is only a function of the date at which a person is born and the date at which that person retires. The future unborn have no insurance against poverty at retirement. Private markets are inefficient: they do not provide retirement security and do not offer a mechanism to enforce inter-generational risk sharing of retirement income. Hence a social objective of risk sharing across generations is attainable only through a government enforced contract. This is what Social Security can attain. I have asked the question whether we should prefer a totally privatized retirement system that excludes any public retirement security. My answer is that even if we found \$11.6 trillion needed to abolish Social Security, we should not do so and should not privatize retirement security.

Modern democracy would not tolerate the resulting income inequality among the elderly. Political forces would ultimately generate public action for inter generational risk sharing. Such public action would then restore the safety net retirement security which Social Security provides today. Based on such assessment most economists maintain the government's role in retirement security by retaining the compulsory nature of the payroll tax to social insurance, even if PRA are introduced.

Our discussion above is hypothetical. Since the Social Security Trust Fund does not have the extra \$11.6 trillion of real capital, a complete privatization is infeasible. In contrast, Social Security can offer low risk retirement income security without the capital which the private system needs in order to provide risky retirement income. Hence, the only question on the table is how to reform Social Security. The categorical answer is *that we must solve the problem now and not later*. The sooner we start to solve the problem the easier would be the solution in the long run. So what is left to discuss is how much privatization should we include in the solution of the problem.

IV - SUMMARY EVALUATION: REAL OPTIONS AND DISPARITY OF MOTIVES

The true cause of the Social Security problem is the changed demography of Social Security, but the debate about solutions has exhibited substantial disparity between the arguments made and the ideological agenda behind them. I have shown in this paper that once we disregard the ideologically motivated arguments, it becomes clear that present proposals which advocate some PRA *should not be regarded as «privatization» of Social Security*. They maintain a compulsory tax\contribution and use the private market as a vehicle to generate voluntarily⁴ additional private savings. Indeed, supporters of such proposals are often motivated by the empirical fact that

⁴ Some supporters of PRA that maintain a *compulsory* tax\contribution component to retirement security justify their support of the compulsory tax\contributions on the Behavioral Econo-

the saving rate in the US is much too low, being close to zero. Some even argue that compulsory savings by the government is warranted by irrational behavior of people who do not plan sufficiently well for their future. Once we focus on the practical ways a society can provide a safety net retirement security (to supplement any additional private savings) the *economic debate* is actually simple. It shows that we have two types of proposed solutions:

A. Proposals to fix Social Security without PRA. These are modest proposals to reduce some benefits due to increased life expectancy, increase some taxes to cover the legacy debt and expand the tax base. All changes are phased in slowly *over the next several decades*.

B. Proposals which use PRA keep most of the existing Social Security system intact as a first tier of the safety net. They add a second tier of benefits by creating incentives for voluntary increased private savings while preserving the present benchmark of *expected* total benefits per retiree as promised at present. However, they require households to accept *more market risk* in their future benefits in exchange for keeping the expected benefits.

A comparison of the two approaches show that the expected benefits of the two are similar. Type A proposals offer slightly higher taxes and slightly less benefits but these at very low risk. Type B proposals offer the present day benchmark expected benefits but to accomplish this they demand increased private savings by 1.5% of payroll and offer the benefits at higher market risk, depending upon the composition of the PRA portfolio. The economic outcomes of the plans are clearly very similar; the small differences between them revolve around the mix of *expected benefits* and *risk*.

As to the choice between the two, I do not put much weight on the argument that we should use Social Security to induce the US to save more. Why should Social Security be the vehicle to generate more savings in the US? The government can use simpler methods to increase savings. For example, it can roll back the very large 2001 tax cuts given to wealthy Americans and produce a Federal Budget surplus. I am also not persuaded by the increased efficiency of linking payments to benefits in the PRA and think the riskiness of the returns on the PRA and the transaction cost of running them have been underestimated given the experience in Britain, Chile and Mexico. Finally, we must keep in mind that we collectively receive social insurance via Social Security by using an efficient inter-generational contract which provides retirement security *without real capital to support it*. All private components of retirement security require the accumulation of vast capital. Our efficient inter-generational contract has worked well in the past and by making it more flexible and more responsive to changing conditions we can enjoy its benefits in the future as well. The problem is that the economic policy of the present administration has increased the public's suspicion regarding its long term motive and the influence of Conservative Economic thought behind it. The disparity in the debate has lead the public to fear

mic ground that people are not rational and do not save enough for their retirement. Thus public policy is needed, according to them, so that collective public policy will do for the good of individuals what individuals would not do for themselves.

the introduction of the PRA is a prelude to abolishing Social Security. With the loss of political credibility, the administration's plans have not received public support. The political impasse appears to suggest that, at this time, the most likely outcome of the debate would be the least desirable one, which is no action at all.

But the Social Security debate is only one of the debates about the nature of public policy in the 21st century. Equally important are the debates about the public's role in medical insurance, in job security during the age of globalization, and in catastrophe insurance and relief in view of the massive damage on the Gulf coast. In all these cases Conservative Economic thinking aim to minimize the government's participation in solving the problems and instead seek to introduce market based solutions, motivated by the premise that «markets know best».

For a proper historical perspective I noted earlier the discarded ideas of the «class struggle» as the basis of the traditional Welfare State. Consequently, the Conservative agenda to eliminate the distortions of the traditional Welfare State on grounds of economic efficiency was supported by economic reasoning. For example, the reductions of the disruptive effect of rigid labor contracting on the efficiency of labor markets, the reduction of marginal income tax rates from 90% to 35% and the elimination of the distorting effect of welfare payments on labor incentives of working age Americans, all were supported by economic reasoning. In this respect the Conservative Economic agenda of the last thirty years made some positive contribution supported by science. The answer of the advanced economies to the challenge of the old welfare state consists of two principles: open labor markets with equal opportunities to all and a universal right to high education with which any capable person can attain the high standard of living which prevail in these economies.

We still dislike severe inequality across members of our society but in the 21st century the focus of social welfare policies turns to the complexity of social risks which we face and must share. I have explained that in the 21st century the resources which our society will spend on medical care, on retirement cost, on job security and on other components of social risk such as disaster relief, will rise to some 30%-40% of GDP. Hence, it is essential that we provide these services efficiently. The ideological argument against Social Security is based on the premise that private markets can provide efficiently all services, including efficient social insurance such as medical insurance, retirement income security and inter-generational risk sharing. This is a fallacy. The modern view of public welfare policies is based on the scientific fact that competitive markets fail to deliver efficient services of social insurance at reasonable cost. The role of the public sector in coordinating and managing social insurance is a proposition supported by scientific truth not by ideology. In this case, government is the solution of the problem while Conservative Economics is the problem. A central role of government in this field is thus needed and inevitable. The battle of Conservative Economics against this fact can only be viewed as a very costly Don Quixotic battle against history's windmills.

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