

Pension Woes Linger*

The funding of traditional “defined-benefit” pension plans has suddenly emerged as a significant drain on the earnings of many major corporations such as GM, Ford, IBM, GE, and Honeywell. This could have a more pervasive and lasting impact on the financial markets and investors than last summer’s accounting scandals.

Please set aside for the moment everything you have heard about the woes of misinformed investors, misleading or even fraudulent accounting, and the various regulatory and legislative reforms that have been implemented and/or proposed to deal with perverse incentives facing managers, auditors, and security analysts that all too often have put their own interests above that of the investors they were hired to serve.

These problems have affected participants in “defined-contribution” pension plans (such as IRAs and 401ks), because the value of their holdings has decreased. On the other hand, companies that have continued to offer the traditional “defined-benefit” pension plans are now facing substantial drains on their earnings and cash flows.

How Pension Plans Work

“Defined-benefit” plans involve a contractual obligation of an employer to pay retired employees a stream of payments based, for example, on their years of service and/or their average final compensation. This promise is a contract, a legal liability for the employer leading to a specific financial liability. Its value, which can be calculated by actuaries, is the *present value* of the promised future benefit stream, taking into account variables such as life expectancy, wage growth, and turnover. For a large employer, these liabilities can easily reach billions of dollars.

The first pension plans were on a “pay-as-you-go basis”—an employer’s retirees were simply paid out of general funds. If the employer went out of business, the

retirees received no further income. To avoid this unpleasant possibility, employers often established separate trust funds to pay pensions that would not be subject to the claims of creditors in the event of bankruptcy. This was encouraged by the tax code, which permitted employers to deduct their payments into a pension fund (if it “qualified” by meeting certain requirements), without reporting such payments as income to their employees.

“Pay-as-you-go” plans are now illegal for private employers (but Federal, state and local government plans are exempt from these requirements). The Employee Retirement Income Security Act of 1974 (ERISA) *requires* private employers sponsoring plans to contribute cash into a separate trust or insurance contract for the exclusive purpose of paying benefits.

The establishment of a defined-benefit plan instantly creates a *past-service liability*—the present value of the benefits to be paid to retirees on the basis of their employment prior to the establishment of the plan. The same thing happens whenever prospective benefits are increased. Companies usually cannot afford to fully fund past-service liabilities when they are created. Instead they are gradually funded (amortized) over many years. Each year companies are required to pay into a defined-benefit pension fund enough to cover the current-service liability and to amortize any unfunded past-service liability.

Because pension liabilities are discounted to arrive at a present value, they are sensitive to changing interest rates. If you use a higher rate to discount the benefits, you end up with a smaller liability. The reverse is also true; a lower discount rate leads to a larger liability. While allowing some discretion, the law requires employers to use a discount rate based on

current market rates for long-term bonds. As those rates rise and fall in the market, the value of the employer’s pension liability fluctuates in the opposite direction—just like a bond. Similarly, the return on the assets in the fund can differ from the assumed discount rate. If the assets earn more than the discount rate, then any unfunded past-service liability will decrease and *vice-versa*. In short, an employer’s outlays to maintain a defined-benefit plan can vary greatly, depending on interest rates, investment returns, and price inflation.

There are two fundamentally different schools of thought on pension-fund investment strategy. The first is that pension funds should be invested in securities expected to match, as closely as possible, the performance of the liabilities. Since the liabilities are sensitive to interest rates, the closest matching assets are long-term bonds. If interest rates fall sharply, plan liabilities will increase; however, the value of bond assets will also increase, and overall funding will remain essentially stable.

In practice, funding is never completely stable, since there is no perfect matching asset for a pension liability. For example, liabilities are also sensitive to wage inflation, and an analysis may show that stocks and real assets can help hedge against inflation. But, if minimizing funding volatility is your objective, the closest you can come to a “risk-free” position is to hold a portfolio weighted toward long-term bonds.†

The other approach rejects matching in favor of strategies seeking to maximize long-term asset performance. Since most of a plan’s liabilities come due well in the future, the strategy reasons, a pension plan can afford to weather out epi-

† An employer’s pension outlays are far more stable and predictable for defined-contribution plans, which call for the employer to pay a specified amount (usually a percentage of an employee’s wages or salary) into an account invested only for the benefit of that employee. Presumably this accounts for the fact that nearly all new pension plans are defined-contribution plans and many defined-benefit plans have been terminated and replaced with defined-contribution plans, which shift the investment risks and rewards to the employee.

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sodes of market volatility. Adopting this viewpoint leads to portfolios invested heavily in stocks, real estate, and high-return/low-liquidity assets like venture capital. This has become the dominant strategy for U.S. pension plans, and through the 1990s it paid off handsomely. Asset performance greatly exceeded actuarial assumptions. Many large, well-established corporations with defined-benefit plans were able to fund their pension without contributing any cash.

Not so recently. The table illustrates recent pension performance for a hypothetical plan that started with (or reached) 100-percent funding on January 1, 2000. The returns on assets were calculated using a typical mix of 65% stocks (represented by the Wilshire 5000 index) and 35% bonds (represented by the Lehman Aggregate Index). Change in current liabilities is estimated based on a four-year weighted average of 30-year Treasury bond yields as specified by law. Remember, pension funding is maximized when assets rise and liabilities fall; conversely, when assets fall and liabilities rise, pension funding falls. Since the end of the 1990s we have experienced a “perfect storm” for pension funding with falling stock prices and simultaneously falling interest rates (causing the present value of liabilities to rise). Our hypothetical plan would now be under-funded, with an asset/liability ratio of 65%.

The immediate consequence for the unfortunate employer is a resumption of contributions. It is difficult to obtain timely and accurate estimates of pension liabilities due to reporting delays and highly individual circumstances, but it is likely that the vast majority of major corporate plan sponsors will resume contributions in the coming year. Cash-poor companies such as airlines, who are already struggling to survive through a sluggish economy, will feel the greatest impact.

The Effect on Corporate Earnings

Pension funding is driven by ERISA and other public laws. Accounting for pension plans on a company’s books is governed by Generally Accepted Accounting Principles, specifically an accounting standard known as SFAS 87. This accounting rule attempts to strike a balance between accurately portraying a company’s core operating earnings and recognizing the financial liabilities assumed by sponsoring a pension plan.

How should companies account for

Pension Plan Funding

The assets and liabilities of many pension plans have been greatly affected by recent trends in stock prices and interest rates. When the value of a plan’s assets decrease and its liabilities increase, it can quickly become underfunded. The example below shows how a hypothetical plan that was fully funded at the beginning of 2000, and was invested in a typical mix of stocks and bonds, would have been affected by recent market trends.

	<i>Change in Assets</i>	<i>Change in Liabilities</i>	<i>Funded Ratio</i>
2000	-3.0%	9.6%	88.5%
2001	-4.2%	7.3%	79.1%
2002	-10.8%	8.8%	64.8%
(YTD 10/31)			

pension plans? One way could be to fully recognize pension liabilities and assets on the company’s balance sheet, and gains or losses due to changes in assets and liabilities on the company’s income statement. The problem with this method is that, for many companies, recognizing a funded pension plan would greatly distort the company’s financial performance. An investor considering, say, the Boeing Company, would not see performance consistent with an aircraft manufacturer; that performance would be dwarfed by the gains and losses on a \$35 billion portfolio of stocks and bonds, making Boeing look more like a mutual fund!

Another approach would be to completely separate corporate and pension accounting. Under this method, pension assets, liabilities, income, and expenses would not appear on the company’s books at all, completely removing the distortion. Any cash contributed by the company would appear as an operating expense. However, the concern here is that companies with underfunded plans would not be adequately recognizing their obligation to fund the plan in the future.

SFAS 87 reflects a compromise between principles and, as with many accounting standards, a negotiated position acceptable to many parties at the time. The standard treats the balance sheet and income statements differently. For the income statement, companies are allowed to choose an assumed rate of return on pension assets based on long-term expectations. Regardless of the plan’s actual earnings, the assumed rate is applied to the plan’s portfolio and reported as pension income, offsetting any increases in liabilities. The difference between the assumed investment earnings and the plan’s actual earnings is booked to the company’s balance sheet and amortized over a lengthy period of time. Essentially, the plan’s investment gains and losses are fed to the company’s income statement through a smoothing process. Pen-

sion assets and liabilities are not shown on the company’s balance sheet unless the plan is severely underfunded, and then only a net liability is shown.

This accounting technique creates an incentive for companies to invest plan assets more aggressively, rejecting the concept of matching discussed above. That’s because they are able to enhance reported company profit by feeding stock-market returns into the income statement. Better still (from the company’s standpoint), those returns are smoothed out under

SFAS 87 accounting. During long bull markets like we experienced in the 90’s, pension income swells as portfolio gains are slowly amortized into corporate earnings. Greater pension earnings lead to more reported profits, which lead to higher stock prices, which lead to more pension earnings, expanding the “bubble” further.

During an extended bear market the reverse is true. Companies must report funding losses as pension expenses; not merely the cash they have to contribute to the plan, but the entire loss due to falling assets and rising liabilities. The smoothing effect of SFAS 87 lessens the immediate impact but also spreads out the period of bad news, placing downward pressure on corporate earnings for years to come.

Companies are simultaneously coming under scrutiny for the “expected-return” accounting assumption used to smooth actual portfolio performance into the corporate books. Many companies use assumptions based on stock-market returns of 15% or more, using the past 10 years of performance as justification. In the face of more recent returns and with accounting assumptions under a public microscope, many companies are lowering those assumptions. Still, pension assumptions provide management a means of “massaging” reported earnings. Individual investors and even many analysts have not focused on the quality of pension-related income and expense. Indeed, it is very difficult for an investor to draw any reasonable conclusions given the accounting complexities and low level of disclosure involved.

Looking Ahead

There are both genuine problems to be addressed and a great deal of noise concerning pension performance. The good news is that the U.S. private pension system is fundamentally sound, much more so than for most other countries. Employee retirement benefits are secured first by plan assets, second by the sponsoring

organization's promise to pay and, third, by government insurance (through the Federal Pension Benefit Guaranty Corporation) as the ultimate backstop. American workers should be much more concerned about their 401(k) savings than their traditional pension benefits.

The investment performance of defined-benefit plan assets affects the shareholder, not the employee. Thus pension

funding depends on two factors: performance of the assets (the stocks, bonds, and other investments held by the plan) and performance of the liabilities (the present value of future benefits). Both are affected by interest rates and other factors in the market, and both are now having a more negative impact on corporate financial statements than they have in many years. □

Kuttner used this to dismiss reform proposals; privatizers' timing, he crowed, "could hardly be worse."

So What?

The timing of the exhaustion date is highly dependent on a myriad of projections and estimates of future economic growth, price inflation, interest rates and wage levels, as well as projections of the future trends of labor force participation, births, deaths, and immigration. Table 1 shows that, from 1990 to 1997, both the long-term actuarial deficit—the difference between Social Security's projected stream of expenditures over a 75-year period and the projected stream of income over that period plus its initial assets—and the exhaustion date dramatically worsened, partly because the actuaries adopted more pessimistic assumptions about such key variables as fertility and productivity growth. Since then, the economic boom prompted a more optimistic productivity growth assumption, which with other factors generated lower actuarial deficits and later exhaustion dates.

Unfortunately, this focus on the trust fund exhaustion date is generating misunderstanding and unwarranted complacency.

For most of its history, the Social Security trust fund amounted to little more than a working balance because the system was designed to operate on a pay-as-you-go basis, with benefits to be paid from taxes. However, receipts began to exceed benefit payments in 1983, after the payroll tax was increased to its present rate. The intention of the rate hike was not to generate a surplus; rather, it was based on projections for slower growth, higher levels of price inflation and lower employ-

EXHAUSTION DATE DELUSION*

Fixation on Social Security's "exhaustion date" is utterly wrong-headed. The crucial issue is the program's cost, which is projected to cost \$4.3 trillion, or nearly seven percent of GDP, the year before the exhaustion date.

Every spring the Board of Trustees of Old-Age and Survivors Insurance and Disability Insurance (OASDI), or Social Security, issues its *Annual Report* on the program's operations and long-term financial outlook under various actuarial assumptions. Media reporting focuses on the projected date of exhaustion, under intermediate actuarial assumptions, of Social Security's trust fund—i.e., the year when Social Security's holdings of Treasury debt will all have been liquidated to cover the excess of costs over revenues

Since this date has recently moved farther into the future, reporting has had an optimistic slant. Thus, the *New York Times* opened its article on the 2000 *Annual Report* with "A vibrant economy has significantly improved the financial condition of Medicare and Social Security...The [Annual Report] today said the Social Security trust fund would not be depleted until 2037, three years later than estimated last year." Regarding 2002's *Annual Report*, the *Washington Post* wrote that "Social Security is expected to run out of cash by 2041, three years later than estimated earlier...the projections suggest that the nation has gained a small reprieve before the government's main forms of help for retirees become unable to pay their bills..." Likewise, the *Times* reported that "The financial outlook for Social Security and Medicare improved in the last year..." Headlines convey the same message, e.g., "Outlook Better for Social Security and Medicare."

Social Security's partisans have long cited the distant exhaustion date to argue that Social Security is sound, making radical reform unnecessary. Brookings Institution economist Henry Aaron noted in

1996 that trust fund surpluses were projected for the next 30 years, and that revenues plus surpluses could cover current-law benefits for the next 34 years. "Can a problem that does not become immediate for a third of a century be a 'crisis'?" In a pig's eye." Next year former Social Security commissioner Robert Ball found "no need to panic" because full benefits could be paid until 2029.

The *Christian Science Monitor* argued that with the 2000 *Annual Report* postponing exhaustion three years to 2037, "The Social Security financing 'crisis'—if it can be called that—keeps fading into the distance." National Committee to Preserve Social Security and Medicare president Martha McSteen argued that President George W. Bush's claim that Social Security is insecure "is not supported" by the 2001 *Annual Report*, which showed the fund "in better shape than a year ago."

When the 2002 *Annual Report* appeared, projecting exhaustion in 2041, Congressman Robert Matsui (D-Calif.) called this news "especially welcome. It clearly shows that Social Security is not facing the crisis that opponents claim...those who claim that [it] is collapsing are misleading the public." While admitting that inability to pay full benefits 40 years off is a "challenge," Matsui concluded that privatization is "unnecessary and dangerous." Likewise, economist Robert Kuttner wrote that "Social Security is healthier than previously thought. ...the system is fine until 2041." Like Matsui,

Table 1: OASDI Trust Fund's Status: Projected Dates of Trust Fund Exhaustion and Long-Term Actuarial Deficit (as Percentage of Taxable Payroll), Intermediate Assumptions

Year of Report	Projected Fund Exhaustion Date	Number of Years Out	Long-term Actuarial Deficit
1990	2043	53	-0.91
1991	2041	50	-1.08
1992	2036	44	-1.46
1993	2036	43	-1.46
1994	2029	35	-2.13
1995	2030	35	-2.17
1996	2029	33	-2.19
1997	2029	32	-2.23
1998	2032	34	-2.19
1999	2034	35	-2.07
2000	2037	37	-1.89
2001	2038	38	-1.86
2002	2041	39	-1.87

Sources: Office of the Actuary; OASDI *Annual Report*.

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ment levels than what transpired. The trust fund now totals over \$1.4 trillion.

Fixation on the trust fund exhaustion date is dangerously misleading many about the nature of the coming crisis. The exhaustion date signifies when OASDI will be unable to pay full benefits mandated under current law—when it can no longer meet its obligations. For most people, this is what “Social Security crisis” means.

The trust fund exhaustion date is an important piece of *programmatic* information, an indicator of Social Security’s ability to carry out its mission: paying old-age, survivors and disability benefits to those who qualify for them. But its significance is strictly internal to the program. What matters from an *economic and fiscal* standpoint is Social Security’s relationship to the budget and the economy, its cost and affordability. The exhaustion date says nothing about these all-important questions.

Even if the trust fund were large enough so that all currently promised benefits could be paid without any additional tax payments, the system would still be facing difficulty. This is because, by law, the trust fund is invested in non-marketable obligations of the U.S. Treasury. In short, the trust fund does nothing to ensure that future benefits can be paid. Accumulating the bonds simply shifted some of the burden of general spending from the general taxpayers to workers paying payroll taxes, and redeeming the bonds will return the burden to the general taxpayer.

The crucial indicator for fiscal and economic purposes, then, is Social Security’s cost, which, of course, is its projected outgo (see Table 2). Whether OASDI taxes suffice to pay these costs, or general revenues and/or borrowing are also required (meaning the trust fund is tapped), is immaterial. All three methods extract resources from the same source: the productive private economy.

Cost figures in current dollar terms are self-explanatory. Cash deficit data in current dollars reveal the magnitude of Social Security’s claims on the Treasury as its costs exceed its revenues. Measuring costs and cash deficits as shares of GDP indicates the size of Social Security’s claims on the economy.

Under intermediate actuarial assumptions, Social Security will cost \$465 billion in 2002 (4.46 percent of GDP) and \$708 billion (4.41 percent of GDP) in 2010. As Baby Boomers retire, Social Security’s cost explodes, more than doubling in just ten years, to \$1,427 billion (5.59 percent of GDP), in 2020. Social Security’s rising share of GDP means that

its claims on the economy will be growing faster than the economy that will have to meet them.

To Social Security partisans, even as costs are soaring, that’s all well as long as the trust fund is not depleted—which reveals the exhaustion date’s uselessness for fiscal and economic purposes.

In 2040, the year before the exhaustion date which Kuttner and Matsui find so reassuring and flaunt as a reason not to reform Social Security, projected costs are \$4,273 billion, almost ten times this year’s figure, and 6.72 percent of GDP. In that same year, when according to Kuttner Social Security is “fine,” OASDI’s projected cash deficit is \$1,090 billion. Can anything running a trillion-dollar deficit in one year be “fine?” By 2050, the projected cost reaches \$6,641 billion, over 14 times 2002’s figure, and 6.65 percent of GDP.

However, the “crunch” will come, not when the trust funds are expected to be exhausted, but when payroll receipts begin to fall short of benefit payments (about 2017). At that time, some of the trust fund’s bonds will have to be cashed in—meaning the Treasury will have to use general tax revenue to pay them or borrow from the public. Of note is that the trust fund *will still be growing*, owing to the interest credited by the Treasury on the fund’s balance. Trust fund

assets are projected to peak at over \$7.2 trillion in 2027.

To put this burden in perspective, total Federal spending averaged 22.2 percent of GDP in fiscal 1981-1990, 20.4 percent in 1991-2000, and was 18.4 percent in 2001. The much-maligned Reagan-Bush (1981-1992) deficits averaged 4.1 percent of GDP. So in GDP-share terms, by 2040 Social Security’s cost will be about one-third as much as the *total* cost of the Federal government in 1981-2001, and annual taxing or borrowing from the public needed to cover its deficit will be about 42 percent of the averaged Reagan-Bush deficits that Democrats (who are Social Security’s partisans) denounced as disastrous. These are obviously large and probably unaffordable claims on the economy.

The fixation on the exhaustion date, then, is mistaken. The real crisis is not that Social Security’s trust fund will be exhausted, but that Social Security will cost more than we can afford, *whether its assets are exhausted or not*. Complacency about the exhaustion date is utterly wrong-headed; long before then, Social Security will be bleeding the economy.

Deciding what to do about Social Security requires grasping what the real problem is. For this, it is vital to understand what the trust fund exhaustion date tells us—and what it doesn’t. □

Table 2: The Economic Irrelevance of Trust Fund Exhaustion: Projected Social Security Costs, Surpluses, Deficits, and Assets, in Current Dollars, and Years to Trust Fund Exhaustion, 2002-2055 (Intermediate Assumptions)

Calendar Year	Cost (Outgo)	Cash Surplus/Deficit	Trust Fund Assets	Years to Trust Fund Exhaustion	Cost as % of GDP	Surplus/Deficit as % of GDP
2002	\$465	\$80	\$1,372	39	4.46	.76
2005	525	112	1,994	36	4.25	.91
2010	708	110	3,382	31	4.41	.68
2015	996	41	5,021	26	4.90	.20
2020	1,427	-125	6,484	21	5.50	-.49
2025	1,993	-364	7,220	16	6.23	-1.14
2030	2,667	-628	6,712	11	6.64	-1.56
2035	3,426	-876	4,531	6	6.78	-1.73
2040	4,273	-1,090	294	1	6.72	-1.71
2045	5,315	-1,355	—	-4	6.66	-1.70
2050	6,641	-1,726	—	-9	6.65	-1.73
2055	8,367	-2,272	—	-14	6.70	-1.82

Source: 2002 OASDI Annual Report.

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