Rationalizing the Security and Ultimate Delivery of Promised Private Retirement Plan Benefits: The Missing Asset

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Abstract

The tension created by the opposing interests of plan sponsors versus employees and society (for example, the Pension Benefit Guaranty Corporation), managers versus the debt rating organizations, and investors versus customers cannot be resolved without requiring an expansion of the promissory instruments held by private retirement plans. Actuaries need to return to their unbiased roots to help their publics understand present values of future promises and how those values vary depending upon the source of the promise. Actuaries should also be more forthright about the principle that the person who carries the risk should receive the rewards of carrying that risk and the true nature of investments held by retirement funds.

The paper asserts that funding is the natural result of managing liability. The paper argues that (1) thinly capitalized entities should not be involved in the business of insurance and/or annuities, (2) all investments are promissory notes based on the anticipated values of future earnings, (3) the single most important promissory note is missing from the portfolio of every North American private retirement plan, and (4) retirement plan security should not limit the rights of employees and employers to bargain over pay and benefits. The ramifications of these arguments are discussed.

The paper looks to successes in other industries for examples. It also draws comparisons between public and private plans in the United States and Canada and identifies what funding can and cannot achieve, including some of the issues related to the defined contributions–defined benefits controversy.

The paper emphasizes the importance of rules that recognize the broad spectrum of retirement plan design around the world and the related importance of using that information to improve security and delivery of benefits in North America. The paper suggests that North Americans should recognize which elements of their retirement plan systems are universal versus those that are culturally bound.

1. A Story

A pilot works for a business. Her obligation is to fly an airplane on which her employer's customers travel. She is compensated by salary and benefits. The usual sequence of the employment exchange is, first, she flies the airplane, then she is paid her salary. During the time between performing her work and being paid her salary, she is an unsecured creditor of the employer. Fortunately, employee pay has a priority in employer insolvency—she has such a high probability of bring paid that she can get a short-term loan based on her next check.

She occasionally incurs expenses reimbursable by her employer. The period between incurring the expenses and being reimbursed is a period in which she is, like with her pay, an unsecured creditor of the employer. Unlike pay, however, reimbursable expenses do not have special priority in insolvency of the employer—if the employer fails to reimburse her and subsequently becomes insolvent, she will have a right to recovery only with other unsecured creditors.

As a pilot, she has a great final average defined benefit (DB) retirement plan. She is well paid, and she has many years of service; mathematically, she will be entitled to one of the largest benefits possible for an employee of her employer at an earlier retirement age than nonpilots. She doesn't understand, however, that company benefits, of any kind, are a special problem; during the period between performing the work for which she feels she earned the benefits and the benefits being provided, she is merely hopeful. Unlike her wages and her unreimbursed expenses, her employer does not accrue any legal obligation to her for her benefits as she works. Although she may have some legal rights based on the relationship with the provider or the associated trust, she has no recourse with her employer once in insolvency. Her employer's obligation is to the provider or the associated trust, and that relationship is governed either by contract or by law.

For her retirement plan, her employer has always paid the absolute minimum allowed, meaning that even her accrued benefit was not fully funded when her employer had taken a contribution holiday preceding the last market "correction." Social guarantees cover about 30 percent of her accrued benefit at a later retirement age, which is an even smaller fraction of her anticipated, full service and final pay, benefit.

Recently her employer began the process of seeking bankruptcy protection.

2. Real Life

Consider the real-life case of United Airline's ...

Judge Eugene Wedoff said the settlement, while disputed, does not violate any law or United's collective bargaining agreement, and he noted that employees at companies such as United could end up with fewer or even no benefits if no arrangement is made and the company goes broke. "The least bad of the available choices here has got to be the one that keeps an airline functioning, that keeps employees being paid," Wedoff said.[1]

A United flight attendant had this to say: "'We feel sold out,' by the action. … Tamuk, 49, said her pension will be reduced from $1,700 a month to $800 a month by Wedoff's ruling."[2]

[1] Dave Carpenter, "Judge Approves End of United Pension Plans," http://apnews.excite.com/article/20050510/D8A0KFLO0.html, Associated Press, May 10, 2005.

[2] Ibid.

3. Some Questions

1. Why are funding rules needed?
2. Why do sponsors underfund their retirement plans?
3. Why does society accept any obligation to protect the members of a retirement plan?
4. Why do plan sponsors find accounting rules so objectionable?
5. What's wrong with financial economics?

This paper contends that the missing asset plays a part in all of these.

4. Invested Assets/Storehouses of the Value of Future Economic Activity

What does future economic security in retirement depend on? President Bush has implied that there are government obligations that do not have much security; referring to the special bonds supporting the Social Security trust fund, he said "There is no trust 'fund'—just IOUs that I saw firsthand."[3] Other experts imply that invested assets supporting retirement benefits somehow can provide food (including the fuel needed to prepare the food), shelter (including clothing), and security (including health care) when one retires, no matter what happens to the economy between now and then. In particular, they emphasize that invested assets can support full, nonworking retirement when there are too few workers to support the nonworking dependents.

Let's stipulate that one's house is such an investment: it will provide shelter when it is paid for in advance, at little to no cost, no matter what happens to the economy. "The biggest reason to purchase a house is so you can, in effect, rent it to yourself."[4] The only costs are carrying costs such as maintenance and taxes such as real estate. Maintenance and taxes may be cyclical, in addition to the possibility of real estate taxes being low for advanced age. Failing to keep real estate taxes and maintenance up to date will ultimately result in the house failing to provide shelter.

Some commodities can be purchased well ahead of their intended use to provide food. They, too, have carrying costs; they must be stored, and, sometimes, they, too, can be taxed on an ongoing basis, depending on how they are owned.[5]

There are other assets that are actual storehouses of future value independent of the economy, but few can hold their values longer than a few years without major upkeep costs—roads, bridges, dams.

How many retirement plans own houses that the members live in for free or own useful/edible commodities that can be stored cheaply, then distributed eventually to the members free of charge? Virtually all assets held by retirement plan funds are assets whose values depend on future economic activity.

Debt instruments clearly depend upon the future earnings of the borrower: the

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[3] "Bush: Social Security Trust Fund Is 'Sitting in a Filing Cabinet,'" www.cnn.com/2005/politics/04/05/bush.social.security.ap, April 5, 2005.

[4] Jonathan Clements, "Seven Harsh Truths about Real Estate," *The Wall Street Journal Online,* www.realestatejournal.com/buysell/salestrends/20050510-clements.html, May 11, 2005.

[5] For example, Florida's intangible personal property tax; a short summary is available at www.myflorida.com/dor/taxes/ippt.html.

promise to pay interest and principal is essentially meaningless without the borrower's ability to earn. Secured debt is protected by a continuing market for the security itself; as with unsecured debt, future economic activity is required for principal repayment.

What about ownership assets, stocks, limited partnerships, other equity, etc.? The debacle at Enron provides evidence. When investors believed that Enron was well managed and had significant opportunities to increase *future* earnings for itself, its share price was enormous. Some of that value included the positive impact on the overall economy that the way Enron did business would increase the productivity of all businesses and, thus, overall wealth. After the truth was revealed, the distributable (useful/edible) value became essentially zero. Stocks are supposed to have a value related to the present value of the distributable future income stream.[6] "Break-up value" of an entity in insolvency is typically very small.[7] The PBGC recovers about 5 percent of the underfunding from the net worth of insolvent sponsors.[8] Remember that the underfunding determined by the PBGC is based on what the PBGC will owe beneficiaries, not what they thought they had been promised by their employers.

Belief in the level of future profits is the major determinant of the value of a company. The capital losses since 2001 occurred mostly because people finally believed that their earlier irrational exuberance was no longer realistic.[9]

This principle that value can be saved independent of future economic activity has been extended to recent recommendations to change U.S. Social Security. There has been an effort to convince ordinary people that they can save value for their future retirement in invested assets. They have been asked to subscribe to the concept that, if there are only two workers supporting each nonworker, the retired person can live well by having accumulated sufficient invested assets.

There is an assumption that the those currently working will "gladly" reduce their consumption in return for the retired person's perception of the value of the accumulated invested assets in the retired person's portfolio. Unless the retired person has saved in the form of his or own shelter and storable foods and other useful commodities, he or she is going to be dependent upon the workers creating value to

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[6] See www.wallstraits.com/main/article.asp?id=268, October 16, 2002 for a general discussion of this concept.

[7] In U.S. terms, a Chapter 7 bankruptcy.

[8] See C. David Gustafson's remarks in the Record of the Society of Actuaries, Volume 30, No. 3, Session 55 PD, "A Brave New World: Accounting Standards."

[9] "The Challenge of Central Banking in a Democratic Society," Remarks by Chairman Alan Greenspan, December 5, 1996, available at www.federalreserve.gov/boarddocs/speeches/1996/19961205.htm.

consume.

How much will the retirees/dependents have to pay? Enough to encourage the workers to produce enough for everybody! Workers ultimately control the value of money in an economy, not those who are retired.[10] If the workers are not getting what they perceive to be a fair share of their production, they will simply charge more for their work. Since the demand for work will exceed the supply, they will get what they ask for. Retired people who want to live well will have to help reduce the dependency ratio: they will work, they will pay employment taxes.

Virtually all invested assets owned by retirement plans are storehouses of the value of future economic activity; they represent promises to pay based on the contractual/legal relationships between the parties. Debt instruments typically promise to pay a fixed percentage of the principal over time with a return of the principal at some point. Ownership instruments promise to pay a share of any future income earned based on the relationship and shares at that time.

[10] Labor and resource mobility will reduce this tyranny somewhat.

5. What's Good for the Economy?

As Japan was arguing to implement "Japan 401K," those favoring the approach were talking up the favorable influence the additional saving would have on the economy. Advisors said that buying a share of stock, like buying a loaf of bread, would increase economic activity by the value of the share purchased. Although it is true that the trading transaction involves an economic activity—measured by the commissions and other costs of making the purchase and transfer, the purchase of a share of stock itself has no impact whatsoever—it is merely the transfer of ownership title; nothing has been produced, nothing has been consumed.

What has actually happened to the Japan economy since the implementation of "Japan 401K?" Japanese people are consuming less, since they are saving more. The economy has gone further into recession. In addition to the existing tax on interest earnings, taxing ordinary savers on principal has been considered.[11]

These additional savings occurred on top of the additional savings that were already occurring because of the very public efforts to stop age-based pay systems and lifetime employment; employees, feeling insecure about their current and future job prospects, had already begun saving more. The savings had and has nowhere to go. The supply of invested money exceeds the demand for capital.

That last statement may seem incendiary, but one doesn't need a Ph.D. in economics to realize that a savings account return of less than 0.2 percent per year indicates that savings dollars (yen) are chasing capital opportunities; it is a borrower's market. But, since there are fewer customers buying fewer goods, there is little call for additional investment.

Now that there is deflation, resulting in deferred consumption, waiting for the next price decrease is a popular pastime. The government of Japan is responding by planning to increase the consumption tax in preplanned, publicized steps, hoping there will be a bump in consumption before each planned increase.

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[11] Note that there is an asset tax on external funds supporting a retirement plan. This tax, although it acts to discourage such savings, is meant to be a proxy for the tax on benefits paid, since Japan permits a full deduction for retirement plan premiums, and benefits in payment attract only a small tax compared to current earnings in the same tax year.

Despite the popular criticism of the U.S. economy for not saving enough, interest rates in the United States, like Japan, indicate that too many dollars are chasing too few capital opportunities. Of course, both the Japanese and American governments, being significant net borrowers, benefit from the lower interest rates.

6. An Educated Consumer

The brokerages and fund companies would have you believe that only education stands between success and failure with a defined contribution (DC) plan. As a well-educated unsuccessful investor, I read a lot of the articles about the difficulty society has in educating people on how to invest their 401(k) and other DC moneys. Most of what I read points out that, among professional investors, only about half are above average. With more ordinary people being educated and investing their own money, I suspect the pros will see an improvement in that statistic; more will be above the average of all investors.

Even when the individual investor is well educated and lucky, the risk and/or cost is enormous. TIAA-CREF is diversified. Although it is possible to diversify $40,000,[12] the small investor is limited in choice of investments and, in fact, is often not only poorly diversified, but highly speculative. Is there a place on the efficient frontier for small portfolios?[13] Some plans continue to require the employer match in sponsor stock.[14] Even when it doesn't so require, employees often don't diversify.

Today's environment is seeing more companies moving toward automatic enrollment and automatic escalation. According to a Hewitt Associates survey quoted in MarketWatch,[15] automatic enrollees' contributions are mostly being placed in "conservative" portfolios.[16] Concerning the effect on retirement benefits, Lori Lucas of Hewitt is quoted as saying:

> Even people who would have proactively enrolled in a more aggressive or well-diversified mix of funds and a higher contribution rate, when they're automatically enrolled a percentage of them will allow inertia to keep them at a more conservative default. This can have the effect of reducing their retirement income adequacy.[17]

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[12] John Spence, "One-quarter of 401(k) Assets in Company Stock," www.marketwatch.com, March 15, 2005.

[13] A description/definition can be found at www.riskglossary.com/articles/efficient_frontier.htm.

[14] James J. Choi, David Laibson, and Brigitte C. Madrian, "Plan Design and 401(k) Savings Outcomes," written for the *National Tax Journal* Forum on Pensions, June 2004. Statistics from the Profit Sharing Council of America, www.psca.org/data/compstock2002.asp.

[15] Andrea Coombes, "Forced Savings: More Firms Move toward Automatic 401(k) Enrollment," www.marketwatch.com, June 14, 2005.

[16] For example, Florida's intangible personal property tax. "Conservative" here means low return, low risk, no diversification.

[17] Coombes, "Forced Savings" (see n. 15 above).

7. Defined Benefit versus Defined Contribution

From the point of view of an employee, these are two very different approaches to providing for old age retirement. Defined contributions, when the employer actually contributes to the savings, is an increase in current income that vests pretty rapidly (ERISA 203). The employer-sponsored DC plan trust often deducts its costs from the trust assets, leading to extra layers of expense for the employees compared to individual plans such as IRAs and Registered Retirement Savings Plans (RRSPs). There are also more opportunities for less-than-arm's length transactions.

DB plans provide an amount at a specified triggering event—old age retirement, for example—that varies according to employment facts concerning service and pay at the time of the triggering event. The benefit amount (normal form) can be defined in many forms:

1. In North America, the benefit amount tends to be determined as an annuity payable at what would have been the old age retirement date had the employee continued working. Early retirement reduction factors and loss of early retirement subsidies have a significant impact on the value actually available to the employee at actual severance.
2. In Japan, the benefit amount tends to be determined as a lump sum payable when the employee quits. Typically, there are no early retirement reduction factors and the benefit amount is determined without regard to age,[18] meaning that subsidized early retirement is available to all.

From the point of view of the employer sponsor in both jurisdictions, DC plans are exactly the same as they are for the employee—essentially an increase in current pay. In addition, there is flexibility; as we have seen since the advent of 401(k) plans in the 1980s in the United States, the sponsor has had the flexibility to change the degree of sponsor participation in these plans; employer match percentages frequently have been reduced from initial levels.[19]

But what about the sponsor's view on DB plans?

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[18] There can be vesting reductions, however, right up until normal retirement age.

[19] Alicia H. Munnell and Annika Sundén, "Suspending the Employer 401(k) Match," *An Issue in Brief*, June 2003, No. 12, Boston College, Center for Retirement Research.

In Japan a private sponsor provides a defined benefit in two primary ways; as a plan purchased from a provider such as an insurer or trust bank, previously called TQPP or EPF, or as internal promises made within the work rules, called a "Book Reserve" plan.[20]

Under the Book Reserve system, the sponsor does make a promise of future benefits for current work. The promise is a lump sum based on employment factors such as pay and service at the time it becomes due. Typically, at plan termination, the employees would be paid what they are owed under the working rules where the plan was described.[21] Under insolvency law, the preferential rights to those benefits exist but are limited.

The sponsor is required to pay specifically computed premiums for externally funded plans. At plan termination, the plan participants may look only to the plan for their benefits. The insurance company or trust bank seldom makes any promises that survive the exhaustion of the fund. There are extra-legal political maneuvers that may move the liability to others in the case of EPF,[22] but externally funded DB plans in Japan are actually DC plans—the sponsor's obligation is to pay premiums when due.

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[20] Several U.S. authorities have called these "severance plans." They are retirement plans from the Japanese point of view, requiring accruals, permitting sponsor deductions, and providing favorable taxation of benefits to the participants.

[21] Unlike in the United States, company policy in Japan, called the "Working Regulations," is essentially contractual and must be adhered to for all employees who have worked under them. In the United States, company policy is barely advisory. Canada gives them more contractual weight than the United States, but, like the case in the neighboring country, retirement benefits are gratuities.

[22] Japan's legal tradition is very different from those based on English traditions. The letter of the law is seldom final.

8. The Current Situation in North America

All private plans in North America are, in fact, Defined Contribution from the point of view of the sponsor. For example, multiemployer plans in the United States typically require fixed "cents-per-hour" contributions under the collective bargaining agreement. There are legally required withdrawal contributions[23] and other situations in which one or several employers may be required to make contributions beyond the collective bargaining agreement, but these are legally required contributions to the trust fund, not the payment of promised benefits to the employees. The employee may look only to the multiemployer trust for any "promised" benefits.

Well-written nonmultiemployer plans actually include phrasing that limits benefits in the event of plan termination to the "degree funded." ERISA goes into great detail about how plans qualify and what the limits are in *funding* a qualified retirement plan, including those situations in which unplanned additional contributions may be required.[24]

ERISA does not require payment of the promised benefit directly to the participant by the employer sponsor promising the benefit. Private pension plans must be qualified (ERISA 302(a)), which means they must be contained within a trust that is a separate entity from the plan sponsor; the plan sponsor and creditors are insulated by the trust. The trust makes the payments to its beneficiaries—the participants. The employer sponsor has an obligation to the trust, not the employee participant.

Interestingly, this is not true for public DB plans that remain outside of ERISA, many of which incorporate the deferred income promises into law. Although true insolvency is nearly impossible for most public entities because of their power to tax, the promise of future benefits for current work is enforceable—the promise is indeed a promise for the future. Although it is true that voters have the ability to change the promise, the governor of California recently found how well informed his public employees are and how willing they are to work to keep their valuable DB plans.[25]

None of the very generous (congressional pay, indexed) benefits of the U.S. president or the members of Congress are prefunded in the traditional sense. Not counting the foreseeable costs of security (including the cost of the Secret Service

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[23] ERISA 4201 (from Multiemployer Pension Plan Amendments Act of 1980).

[24] For example, those described under ERISA 302(d).

[25] "Pension Reform in California," May 2005, www.igs.berkeley.edu/library/htPensionReform.html. This URL references a number of newspaper articles on the subject.

assigned), office, and office support for a 55-year-old former president, the present value easily exceeds $3.9 million for this single retiree.[26] It is not externally funded. While the American president and Congress may want ordinary people to have individual accounts, it is unlikely the legislators will jump at the same opportunity for their own retirements.

Many state teachers are in a similar position, as are members of the military. The plan sponsor in each case has promised the actual future benefits, not limited to the funding contributions needed to achieve the actuarial present values of them. Military pensions are not externally funded.

So why aren't the president, members of Congress, the military, and other public employees with DB plans worried? Why are soldiers willing to risk their lives for not even a filing cabinet of IOUs?

[26] This is based on 75 percent U.S. male 2002 life tables, 1.5 percent real rate of return. This ignores value of survivorship benefit to the spouse. Details of the actual benefits may be found at the National Taxpayers Union Web site at www.ntu.org/main/press.php?PressID=432.

9. The Missing Asset: The Legal Responsibility to Pay What Was Earned

The employer in each case has legally promised the future benefit, whether or not there is an external funding program in place. The promised benefits of these plans are backed by the full faith and taxing power of the U.S. (or state) government. Are they funded? They are fully funded; these plans have the retirement plan's missing asset—the legal liability of the plan sponsor to pay the deferred future benefit. The promise to pay is not limited by the degree of any external funding. The promise is to pay the benefit amount when it falls due. Could the government back out of the promise? Yes, but history supports the contention that it is not a realistic concern for currently covered employees. These assets are more than a filing cabinet of meaningless IOUs.

The missing asset is not an invested asset. The value of the asset varies constantly with the state of the economy. When interest rates are high, the present value of the future promised benefits is low. When interest rates are low, the present value is high. This liability of each sponsor for a future benefit is a noninvested asset of these plans. This asset, however, is not available to private externally funded retirement plans in North America. Private employers subject to ERISA do not make promises of future benefits.

Many actuaries, including the author, were very uncomfortable with FAS 87 when it was first promulgated:

> The Board's conclusions in this Statement derive from the basic idea that a defined benefit pension is an exchange between the employer and the employee. In exchange for services provided by the employee, the employer promises to provide, in addition to current wages and other benefits, an amount of retirement income. It follows from that basic view that pension benefits are not gratuities but instead are part of an employee's compensation, and since payment is deferred, the pension is a type of deferred compensation. It also follows that the employer's obligation for that compensation is incurred when the services are rendered.[27]

This concept in the middle 1980s was very new, not present in many plans, and, in fact, promised by none (ERISA 302(a)). ERISA, through PBGC requirements, has imposed some burdens regarding the actual delivery of the accrued benefit, but those requirements don't actually take effect until a sponsor terminates the plan, and, as we have seen in the U.S. airline debacle, enforcing the requirement upon sponsor insolvency is virtually impossible, even for those much smaller benefits guaranteed by the PBGC, as

[27] Financial Accounting Standards Board Statement of Financial Accounting opinion No. 87, paragraph 79.

in the case of the pilots.

10. Payday Loans

FAS 87 says, and employees would like to believe, that deferred retirement benefits are actually earned deferred pay as part of the employment exchange (FASB FAS 87, para 79).

When an employee works, the employer's liability to the employee builds until payday, at which time the employer exchanges dollars for liability (credit cash, debit liabilities). This, of course, assumes a perfect accounting system that is always perfectly up to date. Even when the accounting system is not perfectly up to date and the transaction on payday is only debit pay and credit cash, the liability to the employee in the interim is real and enforceable.

The employer's creditors are extremely interested in regular paychecks. Not only would the employer's credit rating suffer for the inability to pay wages, but the employer's creditors run a higher risk of not being paid, since most jurisdictions give employee pay, to some degree, priority in insolvency. This means that, before most unsecured creditors can be paid under the terms of their contracts with the employer, back pay owed employees must be provided.

Other amounts due but unpaid to employees have no priority. Unreimbursed employee expenses have no priority; amounts owed employees under expense reimbursements are merely unsecured debt. The employee is a general creditor, who, incidentally, probably won't be represented on the creditor's committee.

What about deferred pay based on current work as perceived by the accounting profession and assumed under financial economics: future benefit amounts due under the DB retirement plan? The answer here is both good news and bad news. The good news is that the participant's right to a future benefit no greater than the accrued benefit is undiminished by the insolvency. The bad news is that, if it is not fully funded (the most likely scenario), it is unlikely that it will be fully honored; the employee can look only to the retirement plan trust fund for future benefits. Of course, the PBGC guarantees certain benefits, but, as overmagnified in the case of the airline pilots, that guarantee is not for the amount that appeared to be promised by the employer—it is often for something less.

FAS 87 calls accrued retirement benefits part of the employment exchange. But try to get a "payday" loan on the amount of deferred pay promised under the retirement plan. Although the employee and the accountants may feel that the benefit is deferred pay that has been earned, it remains a gratuity.

11. Sponsor Interests

The following is not in any sense a moral judgment.

An actuary's job is to rise above the very natural feelings that occur from adverse possibilities and events and look at the numbers, the "big picture." In any kind of disaster, actuaries need to rise above personal concerns for the victims and look at the numbers to help society come to grips with the financial impact in a timely way. Actuaries cannot be personally destroyed by tragedies, no matter how heart rending the results. Our job is to see what really is happening or did happen in terms of the overall economy and/or population.

Companies use their resources to achieve results. They strive to achieve the lowest costs per input to achieve the greatest value of the outputs. Employment costs are often the most expensive factor among the production inputs. Employment costs are controlled by setting pay levels that coordinate well with recruiting and retention policy and keeping the percent of payroll-related costs low. Retaining flexibility is also important: a sponsor occasionally will choose a higher-cost alternative in the present, knowing that changes to lower costs are available in the future. A great example is the case of 401(k) plans: some employers provide no match at all, and sponsor costs are zero for what is perceived to be a valuable employee benefit.

What is the situation with DB retirement plans? Actual employment-related costs are only the required contributions under ERISA in the United States (ERISA 302, IRS 412), with similar rules, by province, in Canada. Deductible costs are limited by the IRS (IRS 404) or other taxing authority. There is little relationship between the legal obligations of the sponsor and the required accounting. Income and balance sheets are controlled by FASB rules (FASB FAS 87, 88, 106, 132).

Perhaps the worst aspect is the need to show a minimum liability on the balance sheet that differs from the legal/contractual liability of the sponsor. The problem is significantly magnified under the international accounting standards (IAS 19). Under international standards, a sponsor must show net worth reduced by the present value of future benefits including the present value of future pay increases. This is despite an actual liability that in insolvency is a fraction of the total of immediate termination benefits.

This explains why plan sponsors choose high-risk investments for the retirement plan trust and try to reduce required retirement plan contributions to the maximum degree possible; the sponsor's liabilities in the retirement plan are severable from the liabilities needed to run the business. The proponents of financial economics claim it is against the sponsor's best interest to encourage high risk (even ignoring the efficient frontier) in the retirement plan's investments. Since the sponsor's actual liability is mostly limited by the "degree funded," in fact, it makes perfect sense to lower the unit cost of labor without increasing actual risks to the entity itself or its creditors. The unit costs of labor are best reduced by high-risk retirement plan investments; gains immediately reduce sponsor out-of-pocket costs because of the operation of the 404 full funding limitation in the United States, while losses are amortized over long periods.[28] Equity investments help achieve that result. Low-risk, low-return investments do not. Low-risk, low-return retirement plan trust investments increase actual sponsor costs for the retirement plan without decreasing any other business costs.

Going back to the story at the beginning, what difference did the investment losses of the past few years make to the airline companies seeking bankruptcy protection? They actually improved their bargaining positions—based on the old principle that the one who owes the most wins the argument! In addition, literally billions of dollars of corporate liability were shifted into the pockets of the creditors of the airline companies from the public through the operation and cooperation of the PBGC. One airline may not have been eligible for the special loans, but the courts and the PBGC gave them a gift that was just as valuable.

[28] This is limited somewhat by the deficit reduction rules.

12. Who Carries the Risk?

In the early days of the return of surplus arguments, actuaries felt that the participant's benefit was and should be limited by the promise of the accrued benefit from the trust. After all, the sponsor established the trust to pay a particular retirement benefit—why should the beneficiaries of the trust get any more than the minimum amount promised? To the degree that circumstances led to more funds than needed to meet that standard, those extra funds belonged to the sponsor. After all of the trust's obligations were satisfied, any money left after the last participant's rights to further benefits was exhausted belonged to the sponsor.

This was an incorrect analysis. The sponsor of a North American externally funded retirement plan does not bear the risk of default. The members and society bear this risk. The surplus should belong to the members of the plan and/or society based on the principle that the bearer of the risk of default should accrue the benefit of any surplus.

The sponsor's risk for a North American plan is only to the degree funded (whether stated in the plan document or not). If funds are short in a U.S. plan, the risk is carried by society through the PBGC (financed by premiums) and the members of the plan. The situation with the airline pilots is the perfect example.

13. Managing the Relationship

Management has an obligation to employ the capital of the entity to best results. Usually, that means purposely underfunding the plan to the maximum degree permitted by ERISA. A sponsor in bankruptcy has an obligation to creditors to direct as much money to them as possible—since it is often the creditors that have the most significant voice in whether the entity continues in business or not.

What is the social risk, where it is accepted, as with the PBGC? In North America, there has been little understanding of the relationships between various benefits possible for participants in their retirement plans. Most participants seem to understand that when they leave their employer before retirement age, the value of the retirement plan benefit will be small. However, there is a sense of injustice when they must take less than their anticipated benefit in an employer insolvency. Society bears only the risk of the basic, unmanipulated, promise of the trust; the "matured" accrued benefit at plan termination.

In addition to the plan termination risk, society bears the longevity and investment risk for benefits in payment, the insurance risk. Ultimately, all trusts are thinly capitalized.

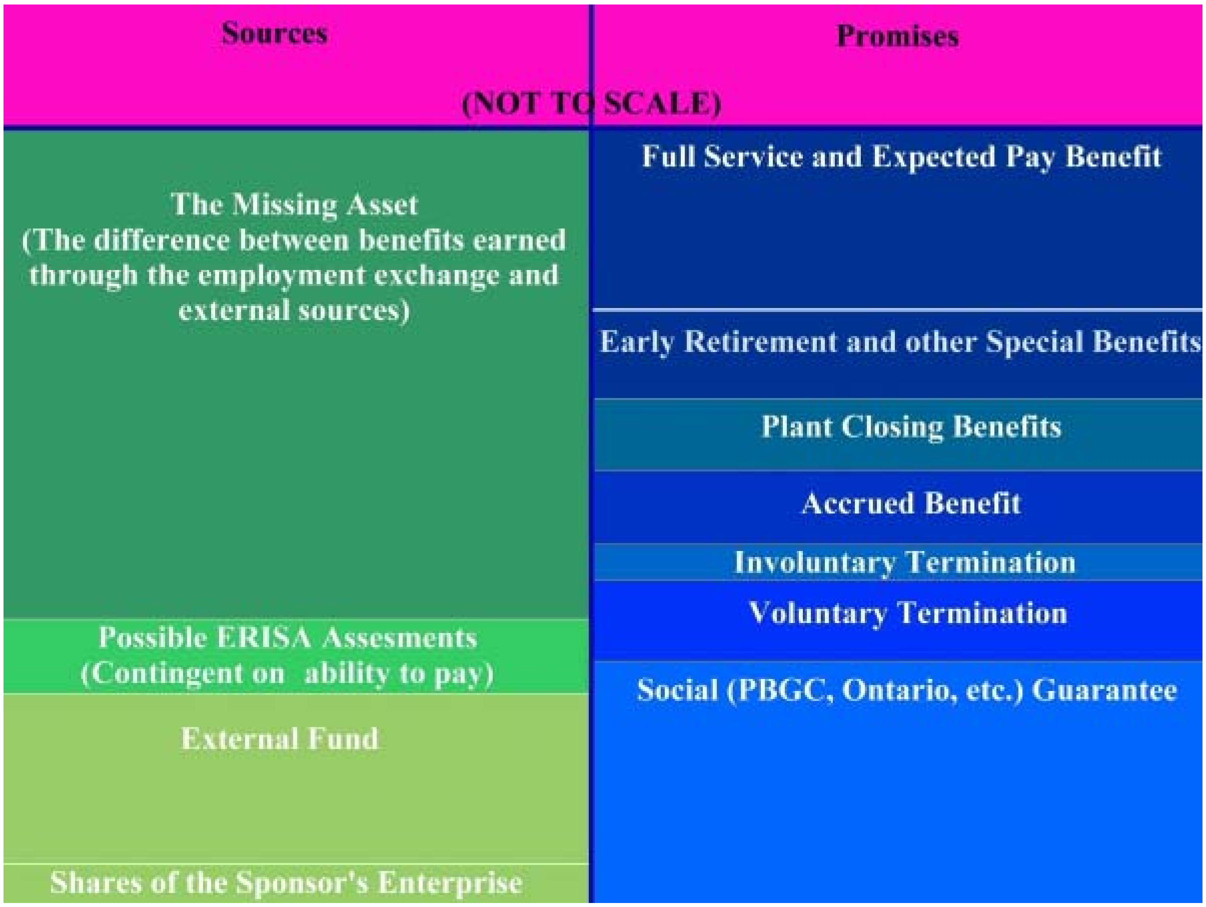
What is the real risk for members? Although the underfunding risk is the popular current issue, the difference between the value of the full accrued benefit and the funded share is small since the value of the accrued benefit itself is very small in North America, at least until a participant is close to the normal retirement age. The risk for participants is the loss of the projected, not the accrued, benefit.

Unlike in Japan, where the accrued benefit is highly portable,[29] the termination value of the North American accrued benefit is a tiny fraction of what an employee will use for personal retirement planning purposes, especially when the plan has early retirement and other subsidies. A plan termination or, worse, sponsor insolvency guarantees an inadequate benefit, especially for those just short of the earliest subsidized retirement age.

[29] For this paper, a benefit is portable when the former employee, after adding the accumulated value of the vested benefit, could achieve about the same level of retirement benefits if the new job had the same pay, prospects, and retirement plan as the former job.

A significant problem with the existing lack of accountability and responsibility for those promises that appear related to the employment exchange is the inability of employees to negotiate meaningful, event-triggered retirement benefits with the plan sponsor. Right now the debate is between the theoretical positions that the right liability for the balance sheet is the sum of all immediate voluntary termination benefits, the accumulated benefit obligations (ABO), the sum of all immediate involuntary termination benefits or the projected benefit obligations (PBO),. Despite the debate, employees cannot negotiate any different amounts, such as the projected full service benefit in a plant termination situation, since, even when such a benefit exists, its low probability assures actuaries that it can never be fully funded by the trust and it will not be socially guaranteed.

14. A Graphical Illustration



On the right-hand side, the graphic shows the various retirement plan benefits that a participant might "earn" while employed. Although they are not legal promises, they are named "promises" from the point of view of the participant. Included is the Japanese concept of voluntary versus involuntary termination, since it is the most rational and fair approach to vesting: if the sponsor fires you, you get a full benefit; if you quit, you get less. You have an obligation to balance the values going forward when you take advantage of a new opportunity. The Japanese approach also preserves benefit portability when it is most needed—in the involuntary severance.

The right-hand side also ignores present values and the probability of payment; it illustrates merely the relative sizes of straight lump-sum values as perceived by the participant. These values are not dynamic in a DB plan; they grow over time but do not vary greatly with the economic cycle.[30]

[30] This comment somewhat ignores North American lump-sum rules. In Japan, private retirement plan

Because of the unfortunate use of the same actuarial terms for how lump-sum values are calculated and the similar term for the present value of those same benefits, I will refrain from calling them the "present value" of the benefits, which, in North America, they are not.

The left-hand side shows where the money to pay the benefits might come from—the participant's proportionate share (recognizing that, in a DB plan, assets are fungible and all trust assets serve to provide benefits for all participants). For simplicity of illustration, most of the following comments will be based on the U.S. framework, in particular, the PBGC as social guarantor.

Although the "missing asset" is shown as filling the left-hand side—having the appearance of being equal to the PBO—it is nothing more than what is needed to fill in between the deferred wages ("benefits") promised by the employer for work already performed under the concept of the employment exchange and the external invested assets that can be used to support payment. In today's typical plan in the United States and Canada, the missing asset would represent the value to the retirement plan of the promise to pay the accrued benefit earned by work already performed to date when the payment actually falls due.

This particular left-hand side snapshot is intended to reflect a "standard," ongoing plan, a situation in which the sponsor is not in financial trouble and the plan is not "fully funded." It is, however, dynamic. The sizes of the sources of payment relative to the promises made change dramatically with the economic cycle.

There are some assertions and conjectures that can be made:

1. Invested external assets can never satisfy the total of the lump-sum values of projected benefits (full service and pay), the amounts anticipated, rightly or wrongly, by employees.
2. As recently discovered by the accounting profession, the present value of accrued benefits (the ABO) is less than the sum of immediate termination benefits.
3. Except in a positive economic climate, invested external assets will never equal the sum of lump-sum values of accrued benefits, the amounts that ERISA attempts to protect.
4. In a recession, invested external assets will fall below the amount needed to fund the PBGC obligation fully.
5. At insolvency of the sponsor, invested external assets will fall far short of

values are usually calculated as a lump sum; the pension is an alternate, somewhat equivalent, form.

amounts needed by the PBGC because of the loss of value of any sponsor shares in the trust and, often, a weak economy reducing the value of other invested assets.

Not illustrated, but behind these conjectures, is the reality that funding contributions will have legally (or illegally) fallen short in the years preceding any insolvency. Also not shown is the liability on the plan sponsor's balance sheet required by the accounting rules; in insolvency, that liability totally disappears, since the only real liability is one supported by law or contract.

It is a economic certainty that the unfunded liabilities the PBGC actually takes on will always be materially larger than they appear when a sponsor is healthy. This reality is aggravated by the fact that all plans eventually will be too small to fund annuities in payment; those with surpluses will continue or be liquidated in the grantor's favor, while those that run out will become liabilities of the PBGC.

Although the missing asset, in the illustration, makes up the difference between externally funded assets and the total of projected benefits, it could be crafted at many different levels based on the employer's actual promise to participants—similar to executive "parachute" packages that vary depending on the circumstances of severance. Certainly, to help protect the PBGC (the social guarantor), *the missing asset should be no less than an amount based on the sponsoring employer's promise that the future benefits guaranteed by the PBGC are earned, deferred pay under the employment exchange concept*. Corporate insolvency law should be amended to give these deferred pay amounts priority similar to unpaid current pay.[31]

At present the sponsor's best interest, in the absence of other considerations, is to underfund the plan.[32] The creditors of the sponsor share this interest. In fact, creditors are best served by a large balance sheet liability for the retirement plan; in insolvency, that amount will disappear in favor of the creditors. Unfortunately, participants and society are on the other side; participants want tangible guarantees of their anticipated benefits, and society would like its public institutions, like the PBGC, protected from abuse.

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[31] Multiemployer plans and collective bargaining agreements present a special problem that this paper cannot address.

[32] Stephanie I. Cohen, "Pension Dilemma: Fixing The Problem; Policymakers Pitch Plans to Overhaul Private Pension System," www.marketwatch.com, June 12, 2005.

15. The Perfect World—The Missing Asset

The "missing asset" represents the value to the retirement plan of the employer's legally enforceable promise to pay benefits that have already been earned through the employment exchange. Since the amounts promised are earned based on work already performed, they should have at least the same priority in bankruptcy as other wages. The actuarial present value of these promised, earned benefits would appear as a liability on the balance sheet of the sponsoring employer. The liability would be dynamic, based on the difference between the present value of the deferred pay promises actually envisioned by the concept of the employment exchange in the accounting rules and the market value of the external assets.

Requiring the employer to legally recognize the promise of deferred wages would create the missing asset for the retirement plan. Giving those wages priority in insolvency would align all parties and help protect society. In particular, creditors would want convincing evidence that their interests were not encumbered by a poorly financed retirement plan. Accounting, based on the employment exchange rather than legal requirements, would then match reality. Funding would be a natural part of optimum use of capital, and financial economics would have a chance to make sense; unfunded retirement plan liabilities would be unseverable liabilities of the sponsor.

Starting at the minimum of the value of benefits guaranteed by the PBGC, employees and sponsors could bargain for greater recognition of deferred pay, including pop-up arrangements, where, similar to executive parachutes, the amount promised would depend on the triggering event. As we have seen with the cancellation of airline retirement plans, no amount of negotiation can protect benefits that have no legal standing in insolvency, the current situation in North America.

16. The Perfect World—Managing the Liability

Obviously, if the sponsor's promise is a real one as opposed to the gratuity now forming the basis of North American "promises" of retirement income, the owner of the business making the promise will want to manage the deferred pay liability in a way that maximizes the value of capital to the entity. Unlike now,[33] in insolvency, the liability to the employees for work already performed but not yet compensated in the form of future retirement promises will stay ahead of other unsecured creditors.

In this perfect world, creditors would be very interested in how the sponsor was planning to meet the retirement plan obligation without diminishing creditor interests. The social guarantor (PBGC) would have a first right to remaining assets in insolvency/bankruptcy rather than the current residual right. DB and DC plans would exist together on a level playing field where the rights to pay for performance would be equal in their demands on residual assets.

Another benefit of full recognition of the right to the deferred wages earned under the concept of the employment exchange (the retirement plan's missing asset) would be a harmonization between the accounting liability and the actual liability, which does not now exist. Although the retirement plan accounting rules use the phrase "employment exchange" (FASB FAS 87), there is none in the American employment relationship.

Financial economics would then mean something; the promising plan sponsor would have a self-interest in managing the retirement promise liability to best meet cash-flow versus capital needs. Creditors, as mentioned, would look to the balance of unfunded, promised benefits to assess credit worthiness. Many plan sponsors would choose to fund externally to lower the cost of credit, regardless of any minimum funding rules.

17. Summary

There is a perception that a plan sponsor makes a promise of deferred pay for current service when the retirement plan is established. This impression is reinforced by the language of the various accounting rules (FASB FAS 87 para 79; e.g., IASB IAS 19 Objectives subpara (a)). In fact, among private plans for ordinary employees in North America, the sponsor makes no such promise. Retirement plan benefits there remain a gratuity at retirement.

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[33] As we have seen in the airline industry negotiations, the liability for earned but unpaid future pay (benefits under the plan) disappears.

All North American retirement plans are DC plans from the sponsor's point of view. A traditional DC plan is quite clean: some percentage of pay, typically, as long as the plan member fulfills certain prerequisites.

A plan called a DB plan is also a DC plan from the sponsor's point of view. In North America, a private plan sponsor establishes a trust in which the plan resides and from which the plan promises are paid. The plan, within the trust, makes the promises of future benefits (remember, the employee has not worked for the trust, so there is no employment exchange, no pay for performance owed by the trust). Except for the limitations of law, the trust is entirely voluntary on the part of the sponsor. The sponsor's only obligation is to fund the trust in accordance with the law, which usually imposes some minimum amount relative to the actuarial value of the promises of the trust. In North America, there are situations, short of sponsor insolvency, in which the legally required contribution is to the level of the total of the present value of accrued benefits. Few sponsors bump up against this requirement prior to insolvency.

Japan, having a different legal tradition, does not have trusts, so the plan sponsor does make the promise of future pay in its Book Reserve plans. However, in insolvency, the promise is limited in its priority compared to other creditors. The promise, unlike the situation in the common law countries, does have some priority in insolvency.

In North America, the employer has not, in fact, made any promises of deferred pay for performance to ordinary employees. In fact, under ERISA (IRC 041(a)), the sponsor may be constrained from doing so. The sponsor has created a separate trust that promises to deliver future benefits to plan members under the terms of the plan. The trustees have an obligation to oversee the trust assets, etc., and to ask the sponsor for "contributions." The trustees, existing at the will of the sponsor, have little enforcement power. Although the benefits of the plan use a formula based on employment with the sponsor to definitely determine benefits, those benefits are not pay for performance in a private plan and are not part of the employment exchange. DB retirement plans are part of company policy.

The operation of ERISA virtually guarantees that there can never be enough funds in a retirement plan to cover all promised benefits in the event of sponsor insolvency. Even if a plan sponsor felt that significant advance funding of a retirement plan was an appropriate use of capital, few would be willing to jeopardize the qualification status of their plans or incur nondeductible contributions to provide higher levels of benefit security. Essentially, the limit on funding is full funding of accrued benefits. Insolvencies and depressed asset values tend to coincide.

Finally, there is another important cultural characteristic of employment in the United States to support the assertion that the sponsor makes no promise of deferred pay for current performance. All benefits associated with employment are typically described in the company handbook as part of company policy. The handbook is company policy in a readable format. In the United States, company policy is not contractual.[34] Company policy can be changed virtually at any time without much recourse on the part of the employee who made the decision to join the company based on the company's historical adherence to policy and what it said at the time of employment. Even retroactive changes are typically permitted. Virtually all employment benefits are included in company policy; DB plan retirement benefits are part of company policy and, thus, noncontractual. ERISA does not require the sponsor to promise more than to fund retirement benefits in accordance with law; earned (as opposed to "accrued" under the law) benefits are not owed to the employee by anyone.

Requiring the creation of the missing asset by the legal recognition that retirement benefits are deferred wages would change this. "Wages earned should be the wages paid" should be the basic principle of private retirement plan benefit delivery.

[34] This varies in degree from state to state within the United States; "right-to-work" states give the company the most flexibility regarding changes.