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The Role of the PBGC in Pension Guarantees: An analysis of efficiency and effectiveness

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THE ROLE OF THE PBGC IN PENSION GUARANTEES:

An analysis of efficiency and effectiveness

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I. Introduction to Pensions and the PBGC

The retirement-income system in the average American household can be described as a three-legged combination of private and government savings. The first leg includes Social Security and other government welfare programs designed for the elderly. The second is individual savings. This leg includes IRA's, savings accounts and stock and bond portfolios, among other things. The final leg includes Privately-sponsored pension plans (Schmitt, 1993). In simplest terms, there exist two types of pension plans in the United States: defined-contribution and defined-benefit. For general information -- as well as later discussion -- we will now define both.

A defined-contribution plan offers a combination of employee and employer-funded savings. The plan sponsor¹ sets up the plan and guarantees a specified contribution to each employee's individual fund. This contribution is usually either a percentage of salary or a capped match of employee contributions. The amount and requirements can change depending on years of service and other factors. The employee is then able to invest those funds in a variety of ways. Usually the company offers a number of stock funds, bond funds and money market accounts. The monthly benefit upon retirement is therefore based on the contributions and investment returns of the individual employee. All of the money in the fund at retirement is used to buy an annuity for the employee to pay the employee and

¹The plan sponsor is the company that initiates or offers the pension to its employees.

spouse until they die.²

A defined-benefit plan differs in that it guarantees a specific amount to be paid each month at retirement. The amount is easily calculated using a formula based on years of service and salary. A sample defined-benefit plan would pay 1.5% of the employee's final salary for every year of service. Therefore an employee who served 40 years with a company and had a salary of \$50,000 in his final year would get 60% of \$50,000. This equates to \$30,000 a year or \$2,500 a month until death.³ The difficulty with these plans comes in funding these future benefits. The plan sponsor is entirely responsible for funding these obligations. The company therefore must predict the actuarial present value of future obligations in order to keep the plan able to pay benefits as they come due.

Before we discuss further the differences in these plans, we must be able to differentiate between the pension plan and the pension fund. The pension plan in both cases is the agreement or contract between the company and employee to provide for retirement savings. It consists of the investment, qualification and contribution details. The pension fund is the asset pool used to back these guarantees. For defined-contribution plans, this fund consists of a separate account for each employee. For defined-benefit plans, all funds are lumped together and dispersed as employees retire. The defined-benefit pension fund, unlike the individual accounts in a defined-contribution plan, can have different levels or classifications of funding. If no funds exist, the plan is unfunded. If a fund has asset values less than the calculated liabilities, the plan is underfunded. If assets and liabilities are --

²Some companies will offer an income floor on defined-contribution plans to provide against retiring with no income, but it is usually very small and not an incentive to risk money unwisely.

³ERISA (the bill that formed the PBGC in 1974) also provided provisions for the spouse. When the wageearner dies, the spouse is entitled to 50% of the monthly benefit until they also die.

theoretically -- exactly equivalent, the plan is fully-funded. Should assets be greater than liabilities, the plan is considered overfunded.⁴ This difference in makeup of the pension plan and fund equates to different risks. One of these is default risk. Default risk is the risk, to the employee, that the plan will not have enough funds, upon his retirement, to pay vested benefits. Vested benefits are those that employee has earned through his tenure that are guaranteed by plan specifications at normal retirement age.⁵ Default risk only exists in defined-benefit plans. As stated, defined-contribution plans guarantee only specified contributions by the sponsor, not the benefits upon retirement. Therefore, as long as those contributions are made, the plan sponsor has fulfilled its obligations. With a defined-benefit plan, however, the sponsor is responsible for making sufficient contributions to pay a defined amount in the future. If the company estimates future obligations incorrectly or insufficiently funds the plan, the employees could lose a portion of their pensions. Therefore, companies must incorporate into the pension plan some sort of hedge against this risk. There are three ways to do this. The first is to keep the plan fully funded and backed by a guaranteed right of retirees to a sufficient portion of company net worth. The second is to privately insure the fund and employees against default risk.⁶ The final way of defending against default risk is a government guarantee. Enter the PBGC.

The PBGC (Pension Benefit Guarantee Corporation) was established in 1974 under Title IV of The Employee Retirement Income Security Act (ERISA). Its purpose was to provide pension plan termination insurance for all private defined-benefit pension plans.

⁴Plans that are overfunded will generally be referred to as fully-funded, including throughout the rest of this paper.

⁵Many companies delay vesting until the employee has been employed for a designated period of time, say one year.

⁶At present, very few if any insurance companies write pension fund insurance, especially for larger plans.

The PBGC is a self-financed government agency. This means all operations and costs are to be covered by premium income, investment income and funds seized from terminated plans. Originally, premiums were set at \$1 per participant per year. Provisions were made for increases in this amount, but only as a flat-rate increase. Since then, a risk-adjusted premium structure has been allowed. Present premiums are \$19 per participating employee plus \$9 per \$1000 of underfunding, with a cap of \$72 per participant per year. The general policies and regulations of the PBGC are governed by a committee functioning under the Department of Labor and chaired by the Secretary of Labor. This oversight committee also includes the Secretaries of Commerce and the Treasury. The everyday operations and direction of the PBGC are left to the Corporation's Executive Secretary who, along with the other 500 or so employees, is appointed in the same manner as all other civil servants. The oversight committee and Director receive assistance and consultation from an advisory committee. These committee members are appointed by the President and serve staggered terms. Their main function, though they may advise on any area, is to provide guidance on general policy and the investment of Corporation funds.

The PBGC, as previously stated, requires that all qualified private defined-benefit pension plans pay for PBGC coverage. Qualification is determined by IRS and based on the design of the plan. Once a plan is deemed qualified, all benefits that accrue while the plan is qualified are covered, even if the plan later loses its status. Benefits that accrue after the plan loses qualification, however, are not. The following is a list of groups ineligible for coverage as detailed in ERISA: individual, religious, fraternal or government plans, plans established for nonresident aliens or highly paid employees only, or groups established solely for the purpose of pension coverage. These exceptions were put into place to

prevent moral hazard and overutilization. Consider a defined-benefit plan formed by ten wealthy investment brokers solely for the purpose of additional retirement income. The plan is designed to give them all \$50,000 a year from age 65 until death. Each contributes to the pension fund enough to cover their calculated future liabilities. Therefore, at the inception of the plan, it is fully-funded and covered by the PBGC. They then take that pension fund and throw it into a 'go for broke' type of investment. Should the investment prosper, they have gained significant income for future luxuries. Should the investments fail, they are guaranteed to get back what they invested by the PBGC. This 'gambling insurance' was not in ERISA's intentions. The exceptions were put into place to protect the integrity of the PBGC's mission. It was not formed to help special interest groups increase their retirement income. Rather, ERISA was put forth to help provide protection for the American worker should a pension disaster occur.

Upon termination of a covered plan, the PBGC assumes control of the plan and its funds. Once the PBGC has assumed control of a fund, the corporate sponsor is still responsible for 100% vesting. With respect to the enforcement of this responsibility, the inability of a plan sponsor to satisfy these obligations could result in the plan being retroactively terminated. This equates to major tax implication for the company, as plan contributions are tax deductible.

The PBGC covers both single-employer and multi-employer plans. In 1995, single-employer plans made up more than 96% of both premium dollars and gross plan numbers. Therefore, our scope will be limited to single-employer plans, with all references to numbers or values of pension plans under the PBGC presented as such.

ERISA also set out specific guidelines as to types of terminations. They are partial

termination, discontinuance and suspension/curtailment. A partial termination occurs when coverage ceases for only a portion of covered participants for reason of plan alteration, changes in group eligibility classifications, or a plant shutdown or layoff. In such a case, the PBGC rules regarding termination apply only to those areas terminated or removed. Any time contributions cease and benefit responsibility is turned over to the PBGC, the plan is considered completely discontinued or terminated. A temporary cessation of employer contribution constitutes a 'contribution suspension'. In this case, current benefits are not stopped. Similarly, if contributions cease and employees are refunded, the PBGC will categorize the plan 'curtailed'.

When termination occurs, a chain of events follows. First, the net assets of the plan are disbursed to those areas covered, according to priority. Priority is as follows: voluntary employee contributions, required employee contributions, benefits to those who have already received benefits for at least three years under provisions of the plan that have been in place for at least five years, any other vested benefits, and non-vested benefits. Therefore, if a plan is terminated with sufficient funds, all benefits are paid in full and on time. Should a plan terminate underfunded, the funds are then disbursed according to priority. When the plan's net assets are depleted, the next step is a lien on the company's net worth. Under original ERISA provisions, The PBGC had claim to only 30% of a company's net worth. The Omnibus Budget Reform Act of 1987 (OBRA) removed this 30% limit. This net worth is based on the operating value of the company up to 120 days prior to termination. Any unfunded liabilities the PBGC cannot recover from net worth become claims on the assets of the PBGC, much like an insurance claim. These claims would be funded by the premiums and investment income of the PBGC.

One in flaw the original provisions of ERISA was in defining the insured event. In the simplest sense, the event insured under ERISA was a plan termination. This created two problems. First, until 1986, when the Single-Employer Pension Plan Amendment Act (SEPPAA) was passed, a sponsor could terminate a plan for any reason, as long as the PBGC was notified at least 10 days in advance. Therefore, the determination of when the PBGC would take over the responsibility of a pension benefit was left, for the most part, up to the plan sponsor -- hardly an unbiased party. Secondly the plan's regulations gave the sponsors an incentive to terminate plans coupled with a disincentive to keep them fully-funded. A company could ensure itself relief of a portion of liabilities should future disaster occur by keeping the plan inadequately funded. Furthermore, a company in turmoil could terminate a plan for the sole purpose of decreasing liabilities, leaving The PBGC a mess to clean up. In fact, many companies did just that until SEPPAA in 1986.

SEPPAA put forth two types of allowable terminations: standard and distress. A standard termination is one where the assets of the plan are enough to cover all vested benefits, thereby leaving no burden of support on the PBGC. If the plan is not fully-funded, it cannot terminate unless deemed by the PBGC to be in 'Distress'. In order for a company to terminate under Distress classification, at least one of the four following criteria must be met:

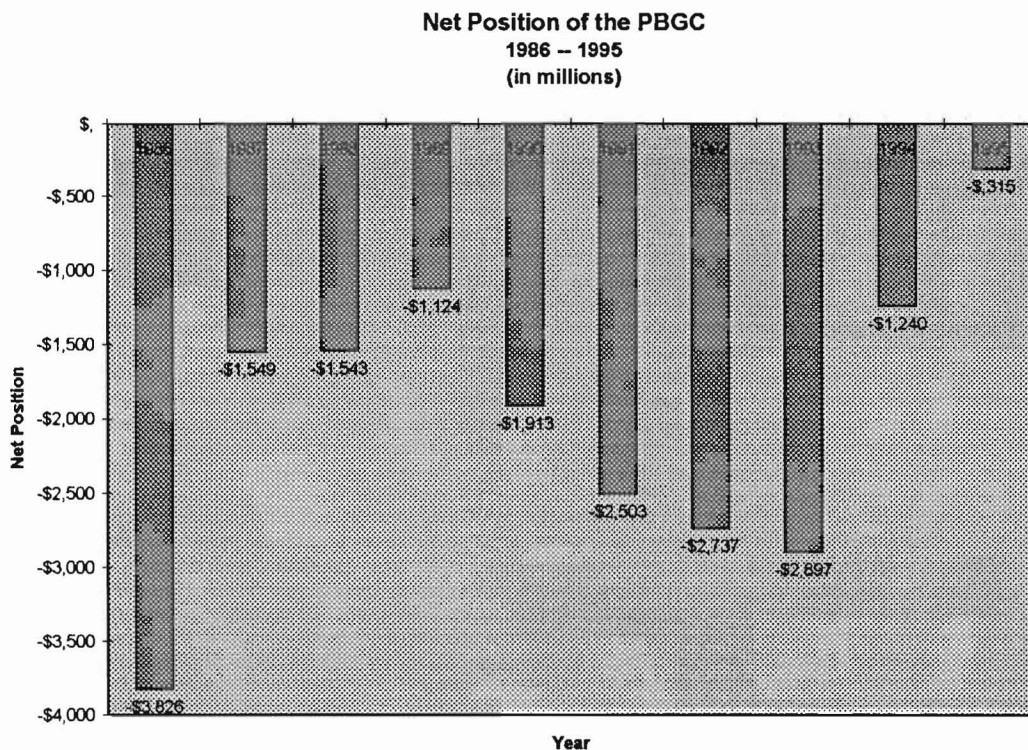
1. A petition for liquidation of the fund sponsor has been filed under US bankruptcy laws,
2. The plan sponsor is reorganizing company structure according to bankruptcy law regulation, has been deemed temporarily unable to pay off its debts or continue business and the termination has been court approved,

3. The PBGC deems the company unable to continue business unless the plan is terminated, or
4. The PBGC feels the costs of the fund to the company have become unreasonable through no fault of the company or its management.

This allowed much more regulation by The PBGC as far as plan termination. The PBGC could now, for companies in trouble, allow them to 'freeze' plans. No new benefits would be accrued, but the company or sponsor was still obliged to fund the remaining liabilities of the plans vested benefits. Such an action would limit the spread of the underfunding problem.

II. Problems with The PBGC

The net position of the PBGC is based on the difference between assets and liabilities. The graph below shows the net position of the PBGC for the last ten years, in millions of dollars.



Before we discuss the implications of 10 years of loss, we will first examine the assumptions made in determining the net position. Because the PBGC only includes already

terminated plans in terms of liabilities, this net position measurement is flawed. It makes the assumption that there will be no terminations in the future. In 1995, the net position of the PBGC was negative \$315 million. This means that if the PBGC were discontinued at year end 1995, it would be \$315 million short of covering the benefits due for plans in its control. Any plans terminated in 1996 have been ignored.

As of the end of December 1994, the total underfunding among PBGC insured plans was \$31 billion. Not to be misleading, this is the total shortfall of all covered plans, not just plans under PBGC control. This does not take into consideration the improvement of the plan or the probability of the sponsor terminating the plan. Only a few of these plans will terminate. The PBGC should however, take into consideration these potential liabilities when reporting net position, which will be lower as more plans terminate.

All of these numbers can be misleading. The actual amount of underfunding and therefore the present value of the PBGC guarantees can vary depending on what assumptions are made. Pension liabilities are based on the present value of future liabilities and are affected by changes in employee characteristics and economic conditions. All of these components are difficult to predict accurately and leave room for interpretation. How to measure the underfunding of a plan fund is a problem the PBGC has approached, but not solved. The table below shows in very simplified terms the effect of minute assumption changes in the funding of a plan.

Interest Rate	Amount needed in 2026	Amount needed in 1996
4.50%	\$1,000,000	\$267,000
5.00%	\$1,000,000	\$231,377
	Change:	13%

This plan will need \$1 million dollars to pay benefits in 30 years. How much do they need in the fund in 1996? That depends on what you assume the interest rate will do. An assumption change of just half of a percentage point causes a change of 13% in the funding requirements of the plan⁷. For a multi-million dollar plan, this equates to a major difference. Interest rates are not the only problem. There are other questions fund managers must ask themselves in order to fund for future liabilities.

- How long will employees stay with the company?
- When will they retire?
- How much will they be making at retirement?
- When will they die?

Different fund managers and actuaries will assume different answers to these questions. It is these discrepancies that cause a problem for the PBGC.

Another problem facing the PBGC is one of demographics. As baby boomers near retirement age we will see a mass exodus from the workplace which could prove that many seemingly strong plans are underfunded. Plans that are slightly underfunded can manage by using contributions meant for present employees to pay retirees, much like the operation of the Social Security System. When a large number of baby boomers leave, this will no longer work. What is causing our recent Social Security debate will also affect the PBGC. If this happens and a number of plans terminate, the PBGC will become liable for obligations it cannot fulfill.

⁷The difference changes depending on the maturity date of the liability. I have chosen 30 years simply to illustrate the changes. Liabilities can range sometimes from 1 to 50 years, but again I wanted to simplify the example.

The next group of the PBGC problems are best discussed in comparison with the FSLIC (Federal Savings and Loan Insurance Corporation). The downfall of the FSLIC can be attributed in the most part to poor regulation and operation and mismanagement of resources. The following similarities suggest the same could happen to the PBGC.

The similarities include:

- Inconsistencies between stated goals and implicitly evident objectives,
- Operations incongruous with effectual operations,
- Failure or difficulty in determining true and accurate financial data,
- Attribution of losses to human error or 'freak' occurrences,
- Tendency to allow problems to grow for too long before reacting, and
- Conflicts of interest between government agencies involved.

GOAL INCONSISTENCIES

The objectives of the PBGC are put forth in ERISA. To quote from former Executive Director James B. Lockhart, III in response to a 1993 paper by Zvi Bodie and Robert C. Merton, "The PBGC's missions, as spelled out in ERISA, are to encourage the growth of private pension plans, ... to ensure the timely payment of benefits, and to keep [PBGC] premiums at the lowest possible level." (Schmitt, 1993) Many critics, however, have pointed out fairly clear indications of other intents. One such attempt is the use of the PBGC as a boost for struggling industries and companies. A guarantee of benefits combined with a capped premium structure renders the government as a tool of subsidization. Cyclical industries are the most likely to fall on hard times. These industries -- usually manufacturing -- are dependant upon blue-collar labor, who in turn are the most

likely to have defined-benefit plans rather than defined-contribution. Companies are able to use the PBGC guarantees to stay afloat during down years by promising unions higher pension benefits. By not funding these promises, the company has transferred a portion of potential liabilities to the PBGC. This transfer is subsidized by companies who have neither reason nor desire to do so amounting to a put option. Companies are able to 'sell' these huge negative assets to the government for the price of the PBGC premiums.

OPERATIONS

As stated previously, the main goal of the PBGC is to provide private pension holders with a fair and effective means of protection against default risk. To do so, the PBGC must utilize some combination of three regulatory principles. These three principles are:

1. Efficient premiums based on the risk imposed on the pool,
2. Regulation of the investment of fund assets,
3. Monitoring of funding and operations.(Schmitt, 1993)

The omission of any of these three can result in the guarantor failing to fulfill its promises. We will examine each separately.

The flat-rate premiums originally set forth in ERISA guaranteed subsidization among good and bad risks. This was recognized and changed. The new risk-based premiums are still a step short of efficient. First of all, the existence of a cap still provides areas of subsidization. Severely underfunded plans that have hit the cap are then subsidized for the excess by more healthy plans. In addition, the PBGC premiums do not take into account the firm's non-fund assets which back the fund assets. Should a plan terminate, the

PBGC has priority claim on at least 30% of a company's net worth. A financially strong company with \$1 million underfunding would therefore pose much less a risk than a struggling company with the same pension shortfall. Under present structure, however, both are charged the same. This subsidization could be -- in part -- a reason for the shift away from defined-benefit plans. Healthy defined-benefit plans that are tired of subsidization and feel no need for default risk insurance are still required by law to have it. The only way to get out is to change the plan to a defined-contribution or other format. Consider a person who invests wisely and hedges any major risks he takes. If he were required to subsidize other private investors in the form of government insurance of only his stock investments, and no other investments, he would more than likely look into bond funds or other options. Even if he felt stocks would perform better, who wants to assume the risks and costs of another? He would feel rightly cheated at being 'punished' for wise investment and choose alternative methods. So have strong defined-benefit plan sponsors, leaving the PBGC with a weakening pool. This is adverse selection.

The PBGC must also regulate the investment of pension funds. Let us say a particular company with a fully-funded PBGC guaranteed pension plan is having a bad year. Management may feel that putting capital into the pension fund is impossible. To make up the needed increase in funding they may choose to increase expected returns by investing in riskier markets. If these gambles pay off, the plan stays fully-funded. If it falls flat, the PBGC can assume the liabilities. Therefore we have a moral hazard problem for the PBGC. Either way, they have kept more capital for operations. To prevent such an occurrence, the PBGC must regulate the allowable investment options for portions of pension funds.

Monitoring follows much the same logic. A plan that is strong can only stay strong through continued funding. The PBGC cannot assume plans are good until they are not. That is like not hitting the brakes until you hit the stopped car ahead. By then, it's too late.

DATA INACCURACIES

As far as the inaccuracies of reported data, the PBGC cannot be held to blame for the lack of high-quality modeling and estimation techniques, as discussed earlier. A problem without blame, however, is a problem all the same. By not being able to predict accurately a pension plan's future assets or liabilities, the PBGC has no way of guaranteeing its own comfortable operating cushion without excessive premiums. In a later section we see the PBGC arguing against loosened restrictions on pension fund withdrawals. They state that, due to the volatility of pension fund balance sheets, a seemingly fully-funded plan can go broke in the blink of an eye. So could the PBGC -- with a difference. If a pension terminates underfunded, the PBGC covers it. If the PBGC terminates underfunded, the difference will be absorbed by the taxpayers.

BLAME AND SLOW ACTION

Just as PBGC officials could take a lesson from private insurers as far as premium structure, so could they in the case of blame for losses. Attributing poor years to freak occurrences or human error is a cardinal sin in the insurance industry. It is the job of an insurer to predict big losses and plan for even bigger ones. Insurers need to prevent problems before they occur rather than react once they materialize. Both the FSLIC and

the PBGC were and are guilty of waiting too long to step into a dangerous situation.

Though they may intend to be gentle and allow as much chance as possible for recovery, the resulting subsidization by healthy plans is unfair. The guarantee is meant to help all plans, not just poor ones. The PBGC has a stated goal of keeping premiums as low as possible, right along side maintaining a healthy pension system. It seems in practice that this goal has taken a back seat.

CONFLICTS OF INTEREST

The final area of comparison between the failed FSLIC and the PBGC involves conflicts of interest. As seen in the overview of PBGC operations, several government agencies take part in the functioning of the PBGC, including Congress, the President, the courts and the IRS. By the design of the Constitution, each area of government functions to balance out one another. This checks-and-balances system, however admirable, can wreak havoc on the PBGC's micro-level management. At no time was this more evident than in the debates concerning legislative tax and spending changes of 1995. A difference of opinion arose between the IRS and the PBGC. The IRS sets the funding standards for pensions, the PBGC regulates them. Unfortunately, the IRS also takes in tax revenue. The arguments were a result of a Congressional bill allowing companies to withdraw funds from pensions that are at least 125% funded without the 50% PBGC penalty previously assessed. The PBGC was obviously opposed because plans were losing funding and therefore at greater risk of default. The IRS was in favor because the company would now pay a corporate income tax, resulting in more tax revenue for them. To have two of the agencies controlling pension guarantees in direct conflict does not allow for efficient operations or

management.

Another problem arose in 1987 with the enactment of OBRA. The Act included tougher regulations of maximum funding standards. This came as a result of the IRS complaint that companies were hiding too much money, tax-deferred, in pension funds. Overfunding, however, is not a problem the PBGC wants solved.

The PBGC has also had trouble with the American court system. Despite OBRA's lift of the 30% limit on PBGC claim to net assets at bankruptcy, the courts ultimately decide who gets the money. In recent years, the PBGC has had trouble getting even the 30% guaranteed in ERISA. Legislation to improve the operations of the PBGC will do no good if other areas of the government do not recognize and uphold those changes.

The combination of all the similarities allow for a valid questioning of PBGC operations. The bailout of FSLIC can serve no good purpose but to prevent a similar fiasco.

III. Improvement Suggestion -- Premiums

As we stated earlier, management of default guarantees requires a combination of premiums, fund regulation and monitoring. We will focus our improvement suggestions on premiums, as other improvements have been offered previously.

Premiums are now set at \$19 per plan participant, plus \$9 per \$1000 of underfunding, capped at \$72 per participant. Though better than the previous flat-rate, it is a risk-adjusted, not risk-based rate, meaning there is still a significant discrepancy between the premium charged and the risk presented to the PBGC. Two interesting solutions have been advanced and merit discussion.⁸ The first is from Jack VanDerhei from The Journal of Risk and Insurance, June 1990. In his paper, "An Empirical Analysis of Risk-Related Insurance Premiums of the PBGC," he suggests a more private-style approach to premium structure. In simplest terms, the premium charged would be a combination of probability and severity, based on OBRA definitions and fund liability.

The second is from Bodie and Merton's "Pension Benefit Guarantees: A Functional Analysis." They suggest premiums based on 'percent immunization'. The liabilities of a pension fund are fixed-level annuities. Investment in default-free bond income securities would therefore effectively hedge these guarantees. Say a plan, for simplicity's sake, has one employee who gets 1.5% of salary for each year employed. The plan would be fully immunized by purchasing zero-coupon bonds each year to mature sequentially after retirement for the 1.5% amount, based on expected retirement age and death. Though this

⁸Many others have been published, but again we must limit our focus.

model could be flawed if the employee lives to 100, if calculated using mortality tables on a large scale, the risk would essentially be zero. The Bodie and Merton plan would have premiums based on the percentage of liabilities immunized and the percentage of underfunding. The two would be combined into a formula to produce premiums calculated as a percentage of present-valued guaranteed benefits, rather than on a per-participant basis, with no cap.

Both of these plans have flaws. The VanDerhei plan fails to recognize that the PBGC, unlike private insurers, cannot choose its risks. Any plan that meets IRS qualification is automatically covered, and coverage cannot easily be terminated. The Bodie and Merton plan allows too much credit for net worth. Even though the assets of a plan are backed by net worth, the PBGC has no regulatory control over general operations. It cannot monitor those funds or their investment in the same way it can with pension assets. Both plans do, however, offer excellent improvement suggestions and show even more clearly the need for a structural change in the PBGC's premiums.

IV. A Solution: Abolish the PBGC

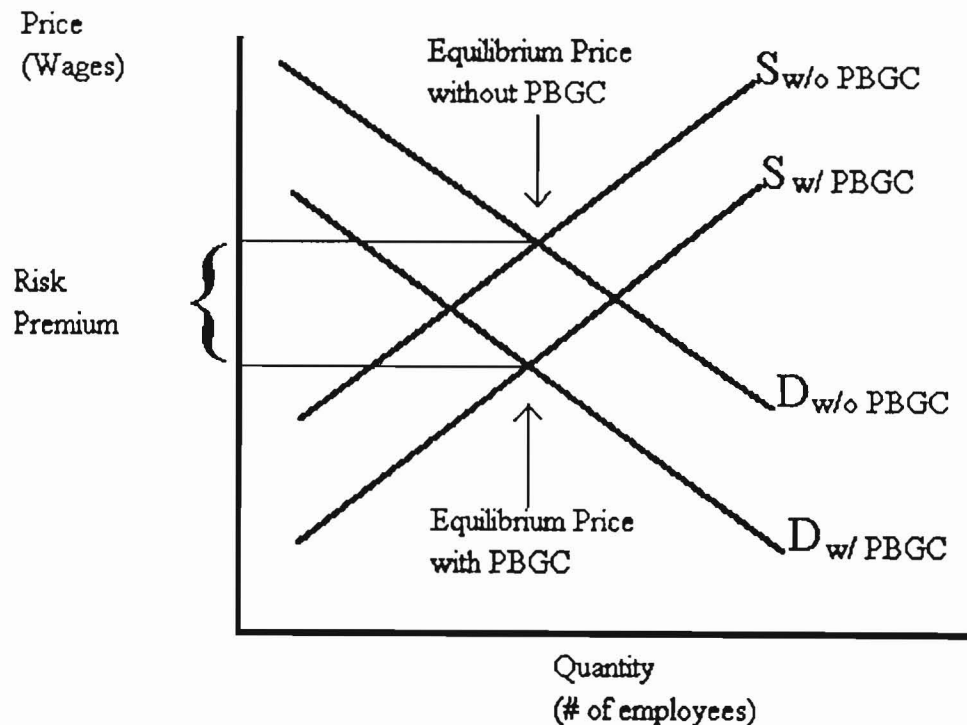
With any organization, government or otherwise, there exists a period of reforms and improvements in the years after inception. The PBGC is no different. The PBGC has made several changes to the original ERISA guidelines. SEPPAA and OBRA -- mentioned earlier -- and the RPA (Retirement Protection Act) -- mentioned later -- are all examples. I feel, however, after my research into the Corporation and its operations, that all reforms skirt the inherent flaws of the PBGC. Due to its design and function, the PBGC distorts behavior and has been ineffective from a cost analysis basis. For these reasons, to be discussed herein, I feel the best solution to the problems discussed in this paper is to abolish the PBGC.

We start the argument with an analysis of the PBGC's behavior distortion in the American economy. Previously discussed were the large amounts of underfunding that accrue in American defined-benefit pensions. Advocates of the PBGC will point this out as a problem the government must address. We cannot allow the average worker to lose vested benefits after 40 years of devoted service should the pension fund falter. I agree, but I also feel it is the PBGC which has helped to cause this problem.

A large percentage of defined-benefit guarantees covered by the PBGC is in high fixed-cost industries. Many of these are also the most cyclical industries. The management of these companies must cut cost in down years. How do they do this? The main variable expense for these industries is their blue-collar labor. In order to survive these cyclical downturns, they can use the government, via their defined-benefit pension plans and the PBGC. They keep labor happy during these times by promising more pension benefits

rather than increased wages. Then, by delaying the funding until better financial times, the company has effectively reduced operation costs without reducing operations.

If labor unions are supposed to protect workers against these sorts of empty promises, why then do they allow companies this leeway? The PBGC. Should the plan fail, they know the government will indemnify their pension holders. If the PBGC did not exist, unions would be much stricter in demanding companies back increased promises with increased funding. They would also never let companies get as far in the hole as they are now. The supply and demand curve below illustrates what would happen to the labor market should the PBGC guarantees no longer be in effect.



The removal of the PBGC would cause a shift in both the supply and demand curves. The supply curve would shift back because, *ceteris paribus*, fewer people would be willing to work, for the same wage, for a company with a severely underfunded pension were it not covered by the PBGC. The demand curve would shift because of an increase in

the marginal net revenue product.⁹ Removal of the PBGC also removes their premiums. For individual companies, these curves will differ (See Supply and Demand Comparisons, page 33). Those with fully-funded pension plans will have less of a shift in supply as their safe pension plan will not cause as great a worker demand for wage increases. Their demand curve will shift further, as the PBGC is a greater cost to those companies that keep their plans fully-funded. For severely underfunded plans, the opposite occurs. Supply shifts further as workers want to be compensated for the significant risk of pension default. Demand will shift less because the money they save on premiums is offset by the value of the PBGC 'put option' we mentioned earlier. They purchase the ability to shift massive liabilities to the PBGC for the cost of capped premiums; a great value to underfunded plans. The difference in the equilibrium price with and without the PBGC for any company equates to a risk premium. It is the extra wages companies with underfunded plans would have to pay for the shift in pension default risk from the government to the employees.

Our supply and demand curve shows that the very existence of the PBGC distorts behavior. Companies that would normally be forced to fund all pension promises have been able to get away with massive underfunding due to PBGC guarantees, as well as enjoy lower labor costs.

We will now examine the abolition of the PBGC from a cost/benefit perspective. In order to justify removing the government guarantee, we must show that the costs of the coverage outweigh the benefits. The PBGC generally has two sorts of costs. The first are the operational costs; \$138 million in 1995. These cost are covered by the premium income from PBGC covered plans. One flaw is that since PBGC coverage is mandatory, these

⁹The MNRP = (marginal product)x(marginal revenue - PBGC premium costs)

costs equate to a tax on companies involved. But it can be easily argued that \$138 million is hardly enough to warrant removal of pension guarantees. Let us then turn to the PBGC's second cost; terminations.

In 1995, the total underfunding of all PBGC-covered plans was \$31 billion. In 1994; \$71 billion. These numbers represent the total possible liabilities of the PBGC. If all plans were to have terminated at year end 1995, the PBGC would have been responsible for \$31 billion in pension promises. To cover this, they had total net worth of negative \$315 million. Now it is ridiculous to assume all plans will terminate at any time. It is not ridiculous, however, to think that a significant portion could. Let us briefly examine what portion of the \$31 billion could become government liabilities.

Almost 50% of the 1995 underfunding was found in the steel, navigational / aeronautical instrument, transportation equipment, airline and automobile industries, according to the PBGC's 1995 annual report. All cyclical industries, these pose the greatest threat to the PBGC. As explained earlier, should we experience a major economic downturn, all of these industries could falter, and their pension plans would follow.

Let us now examine underfunding from a different perspective. One cause of the \$40 billion improvement in pension underfunding from 1994 to 1995 could also aide in the downfall of the PBGC. There are two main reason for this drastic one year improvement. The passage of the Retirement Protection Act (RPA) in late 1994 increased funding requirements for numerous severely underfunded plans. The most significant cause, however, was the rising interest rate. Although assets may have fallen, liabilities fell even more. As seen in our example of interest rate changes earlier, as the interest rate rises, the present value of future liabilities falls. This dropped the liabilities of plans significantly.

Therefore, a company that did nothing to increase funding would still look better from a net position standpoint. How is this a dilemma? We look at the performance of the PBGC over the same period of time. Investment income was over \$2 billion in 1995, a 579% increase over the \$400 million investment loss in 1994. Herein lies the problem.

The PBGC has steadily increased its percentage of investment in the stock market. It has done so on the debatable belief that, in the long run, stocks will outperform all other investments and increase the PBGC's ability to cover a large termination year. This has resulted in an asset / liability mismatch that I put forth as the final reason for PBGC removal.

Pension fund managers have certain guidelines they follow for investment. They want to make as much money as possible without putting the fund at any significant risk. Most have found the best way to do so is a mix of both bonds and stocks, usually at a 2:1 ratio. The PBGC has done the same. Last year, the PBGC's asset mix was 30% equity and 70% fixed income securities.¹⁰ They have been increasing the equity portion in the hopes of increasing returns. This was a reaction by the PBGC to the increasingly clear danger of terminations exceeding PBGC funds.

This theory works well in strong economic years, like 1995. Unfortunately, by looking at 1994, we can see that the effects of a slower year can be disastrous. In 1994, the total underfunding reached a record high of \$71 billion. This was coupled with over \$400 million in investment losses. Should the economy experience an extended slump, the ramifications for the PBGC could be a collapse. This would lead to a taxpayer bailout of FSLIC proportions.

¹⁰Real Estate and other investments make up less than 2% of investments, and have been ignored.

Insurance companies must operate so as always to maintain the ability to cover potential liabilities. If they cannot, they themselves are in need of insurance and are not serving their purpose. To do this, they must match their assets and liabilities effectively. At present, the PBGC is not doing so. In a good year, the assets of the PBGC will rise and liabilities will fall, creating a false sense of security. In a bad year, assets will fall and liabilities rise (as pension assets decline in value), creating a crisis situation.

The PBGC has shown through its first 20 years that it cannot hold an operating cushion; it never has. This trend towards equity markets to increase revenue is an indication that the PBGC is realizing it can never operate effectively. In order to have enough money to cover liabilities, the PBGC has two options. The first is to charge fair premiums. The second is to use stronger plans to subsidize weaker ones. To charge a fair premium, the companies who pose the greatest risk must pay the higher-end premiums. The problem is that these plans are severely underfunded usually because they cannot afford to make adequate contributions. How then could they afford to pay the highest premiums? They cannot. The PBGC has realized this and attempts to use stronger plans to subsidize weaker ones. That is why this is a government safety-net tool rather than government insurance tool. The problem with this approach is that the strong plans do not want to subsidize. Unlike Social Security or other welfare programs, participants can leave the system. By switching to a defined-contribution plan, they are no longer forced to carry PBGC coverage. This has happened and the PBGC is carrying more and more underfunded plans with fewer and fewer strong plans to subsidize them; adverse selection. As with any welfare or safety-net program, the only way to catch everything is to keep the net wide. There will always exist flaws and loopholes because removing them would ultimately hurt the ones for whom

the program is designed.

As we say that the costs of the PBGC are too much, are they sufficient to make up for the loss of pension benefit guarantees? Ensuring that American defined-benefit pension holders will get their vested retirement income is a valuable benefit.

As stated earlier, there are three ways to cover pension default risk: keeping the plan fully-funded and backed, insuring privately, and insuring through the government. If we remove the PBGC, how then do we replace its function? Private insurance is unavailable. Insurers cannot efficiently insure pension default risk for two reasons. First of all, all risks are correlated. As we have shown, a poor economic year would hurt all pension fund assets. It is operationally unwise to insure numerous large policies with correlated risks. The second is that an insurer would need numerous plans to diversify the individual risks of each. There would be no way to start a program with less than 50 plans. Such a large pool of multi-million dollar risks would result in an additional \$10-20 billion dollar liability pool. No insurer will take that chance. We are therefore left with the need to keep pension plans fully-funded without the PBGC.

In theory, companies would want to keep pensions fully-funded, otherwise employees would demand higher wages or go to a company with a better plan, as shown earlier in the supply and demand curve. In practice, this is very difficult. The average American has neither the knowledge nor the information to judge pension strength. Even labor unions and other worker's associations would have a difficult time with it. To this end I suggest the PSAC, Pension Security Assessment Council. Consisting of a staff of three or four pension experts and a few assistants, the PSAC would serve the same function as the PBGC, but without the guarantee. It could monitor and regulate pension plans on the basis

of funding and operations. It could then add to its duties a ranking of all plans. This ranking, similar to a Best's ranking of insurance companies, could be made mandatorily available to all prospective employees. Under this scenario, pension plans could still be regulated. Labor unions and employees would have a credible source for pension information as well. And most importantly, the government -- and taxpayers -- would not be responsible for unfunded liabilities.

The very existence of the PBGC causes moral hazard and distorted behavior. Because of the PBGC guarantees, companies have a disincentive to keep pension plans fully-funded. As our supply and demand curve shows, the PBGC causes companies to act in ways other than what the market would normally dictate. Why not take advantage of an opportunity to delay costs? The PBGC gives companies the ability to wait for improved financial performance before funding for future liabilities. Funding pensions results in too much of an opportunity cost. Companies would be better off to invest the money and continually delay contributions. The use of the PBGC to indemnify the default risk of defined-benefit pension holder causes more problems than it solves. We then combine that with other problems. Adverse selection is occurring due to the lack of an effective risk-adjusted premium. As all the strong companies leave the PBGC pool, the overall default risk to the PBGC grows. We also have the asset / liability mismatch of the PBGC. A major recession could cause numerous pension failures, lower the assets of the PBGC, and result in yet another taxpayer bailout of a federal insurance corporation. The PBGC is not operating as an efficient insurer of pension default risk. In addition, they are distorting the behavior of their insureds and placing the risk of PBGC default on taxpayers. It is for these reasons that I suggest the abolition of the Pension Benefit Guaranty Corporation.

V. An Alternative Solution -- PBGC Changes

As an alternative solution to the removal of the PBGC guarantees, there are changes which could be made to remove its fundamental flaws. The problems that need the most attention are the adverse selection and moral hazard that have caused a behavioral distortion of the companies involved, as well as the asset / liability mismatch of the PBGC itself. For reference sake, adverse selection is the insurance of high risks at an unprofitable premium rate. In our case it refers to the PBGC being forced to insure plans that in a private market would be uninsurable. Moral hazard is the risk to the insurer of losses due to an insured's intentional misuse of the coverage. It is the risk that an insured will act differently because he knows he is covered in the event of a loss.

To reduce the adverse selection problem, you must make PBGC insurance cost-effective for fully-funded plans as well as underfunded plans. This can best be done by a change in premium structure. As it stands now, the premiums of the PBGC allow for too much subsidization among plans. My premium suggestion contains two components, assessing both the probability and severity of a loss (termination). In order to calculate the probability rating, three characteristics would need to be considered: the stability or strength of the industry, the historical and recent performance trends of the company, and the stability of the fund (based on the asset makeup). In order to measure the potential severity or magnitude of a termination, the PBGC would need to analyze the amount of underfunding, the number of covered employees, the growth of the employee base, and potential additions to the plan in terms of benefits. The premium amount would be based on a per dollar of guaranteed benefits basis rather than per person basis. The combination

of these two components would result in a much more risk-based premium than present. There would, however, need to be a cap. Although it reduces the effectiveness of this structure, it is necessary. Because this is a required government insurance program, the PBGC cannot charge struggling companies premiums so excessive that the company must go out of business or give up their plan. The PBGC does not want to eliminate private pension plans, but rather they want to keep pension plans strong. This cap would cause subsidization, but the intention is to keep premiums low enough that the benefits of pension coverage (and the costs of restructuring), even for fully-funded plans, are greater than the costs of the subsidization.

To combat the moral hazard problem is more difficult. Moral hazard exists here because the PBGC can neither choose its risks nor remove them if they lose funding. Therefore, the PBGC must develop some sort of disincentive to terminate. My suggestion is to grant the PBGC the right to retroactively 'uninsure' pension promises that are made and then not funded. Do not allow companies to make empty promises. Immediately following these changes, all pension benefits that are funded are covered. All those that are not have no coverage until they are. Once a portion of liabilities is funded, they are covered for their duration, provided the company does not remove fund assets. As new liabilities accrue, they too must be funded or they are not covered. The purpose of the PBGC is to cover companies in the event of a pension disaster. This does not include planned underfunding or delayed contributions. It is the responsibility of the company, not the PBGC, to compensate or fund employee pensions. By eliminating the guarantees of unfunded liabilities, the PBGC would then have the force of labor unions to help funding. A union would no longer accept pension increases in place of wage increases if they felt the

company could not fund them. In addition, the unions would have legal cause to go after companies should they not fund the promised benefits. Non-union workers would be forced to rely solely on the information they get from the PBGC. For this reason, all employees would get notices if their pensions were not covered. From there it is up to the employee to decide what to do about the transfer of default risk. The PBGC could notify employees as they do now, which would allow for greater decision making power on the part of employees and their organizations.

These two changes would reduce the behavioral distortion we saw in the supply and demand curves. The ability to retroactively remove pension guarantees on unfunded benefits would help keep the equilibrium price where it would be without the PBGC. The demand curve would still be shifted due to the premiums, but not as much for fully-funded plans. The supply curve would be less shifted as companies would still need to pay more if their plan were underfunded.

The main problem with these suggestions is that the PBGC will no longer be covering all pension benefits. The guarantee is not as large, but the risk of a taxpayer bailout would be greatly lessened. In the operations of the PBGC, there must be a tradeoff of effectiveness for efficiency. In order for the PBGC to be totally effective, they must guarantee all pension benefits. In order to be efficient, they must charge sufficient, uncapped premiums based solely on the risk presented to the PBGC. By trying to operate in the middle, with risk-adjusted premiums, they still have the adverse selection and behavioral distortion problems.

We now move to the asset / liability mismatch. The best available investment option the PBGC could use that would fluctuate inversely with the assets of pension funds are

derivatives. Unfortunately, the volatile nature of these vehicles are not consistent with insurance. The PBGC could not afford major losses. Instead, they need to invest for long-term growth. Most agree that the best way to do so is through equity markets. Therefore, the asset / liability mismatch is a risk for which the PBGC must charge. Unfortunately, we have seen that higher premiums will only remove strong plans from the PBGC pool.

The main problem we see arising is that the PBGC is not and cannot operate as an insurer should. The PBGC is designed so that they cannot diversify their risks. Most any factor that would decrease the assets of an individual fund will do so for all funds. This correlation of risks means the PBGC has only one option to continue to function. It must build up funds through higher premiums and riskier investments in order to cushion itself for potential liabilities. As we have seen, however, by doing so they will continue to lose strong plans and distort the behavior of those that stay. Although these suggestions could help to lessen the problem, the fundamental dilemmas still exist. The PBGC cannot effectively and efficiently guarantee defined-benefit pension plans.

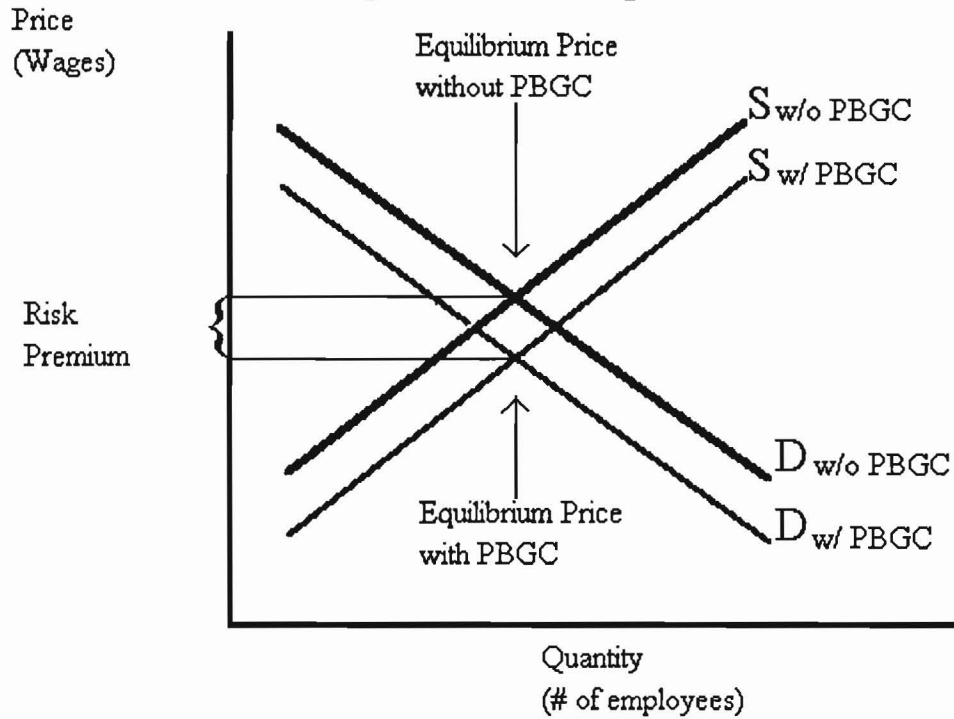
VI. Supply and Demand Comparison

The two pages following show two separate comparisons of the supply and demand changes that would occur with removal of the PBGC. In Comparison #1, we see the effects of PBGC removal on a hospital and auto manufacturer, both with full-funded pension plans. The demand curve shift in both is the same because both have the same premium amounts removed, thereby reduced the marginal net revenue product. The supply curve for the auto manufacturer would shift more because it is a more cyclical industry. The chances of it reducing pension fund contributions to help in a downturn is greater than the hospital's. For this reason a larger default risk has been placed on the workers at the auto manufacturer. In return, they will demand a greater compensation for this risk.

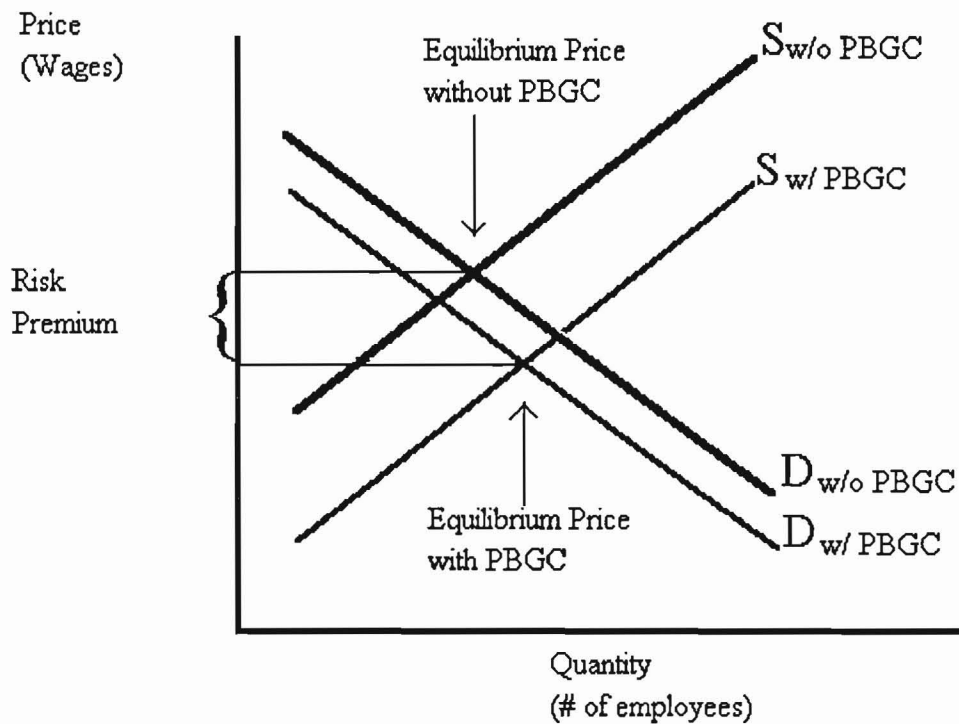
In Comparison #2, we see the same two industries, except with underfunded plans. Here we will see a large shift in the demand curve, the same for both, as they have had a large PBGC premium removed, thereby significantly reducing the marginal net revenue product. Again we also see a larger shift in supply for the auto manufacturer for the same reasons as above.

Comparison # 1

Fully-funded hospital

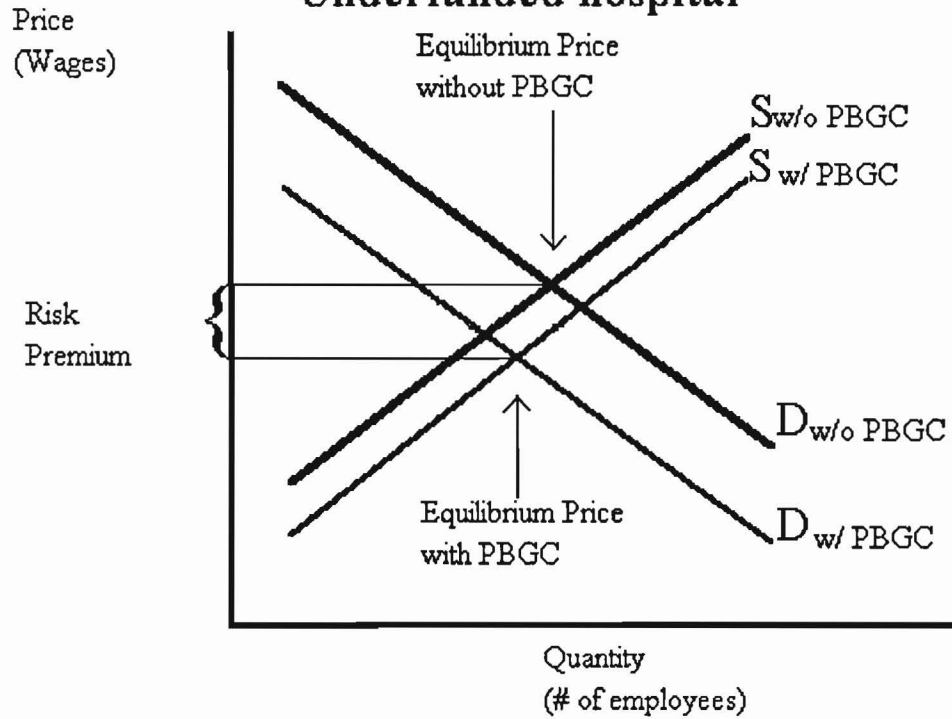


Fully-funded auto manufacturer

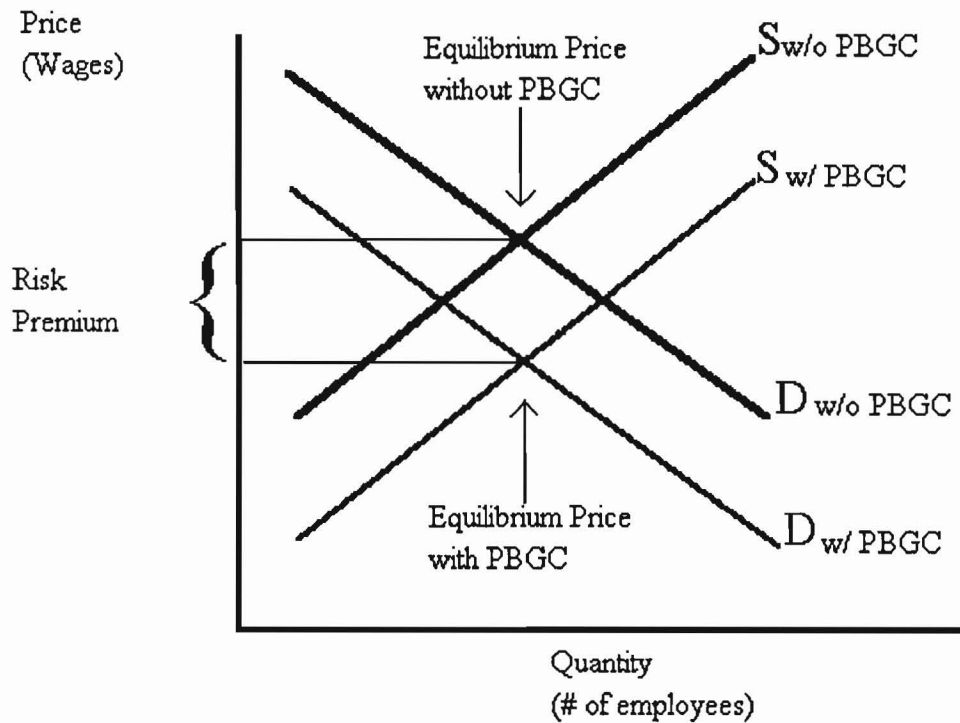


Comparison # 2

Underfunded hospital



Underfunded auto manufacturer



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