Has the Pension Benefit Guaranty Corporation Been Effective in Preserving Retirement Security in the United States?

An Honors Thesis (HONR 499)

by

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Abstract

The Pension Benefit Guaranty Corporation (PBGC) was established in 1974 by the Employee Retirement Income Security Act (ERISA) to insure the benefits of American retirees. The PBGC currently faces the threat of insolvency within the next 25 years, jeopardizing the financial security of millions of Americans. The purpose of this report is to bring to light the history of pension funds and the PBGC as well as to examine the implications of legislation that pertains to the Corporation. I will explain the factors that led to the bleak financial forecast of the PBGC and explore the attempted solutions to these problems. I will also perform a Chow Breakpoint test to determine whether the Pension Protection Act (PPC) of 2006 was effective in changing the rate at which the net financial position changes from year to year in the single-employer program.

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Process Analysis Statement

As an Actuarial Science major, it has been quite some time since I last wrote a research essay of this sort. To produce this work, I looked back on the skills that I developed in my grade 12 composition class. I am most comfortable operating with algorithmic processes, so I took that approach. I was taught the standard process for writing a research paper and I stuck to that process. I started with developing a general idea for the direction of my paper and then I began to collect and read my sources. I took careful notes as I was reading and I color coded those notes to help me organize my ideas. I then created an outline to base the final work on. As I was writing the essay, in some cases, I felt that I needed more information so I collected more research along the way. I intended this paper to be understandable to anyone who would like to read it; I did not want it to only make sense to others who have studied insurance. I wanted to apply some of the skills that I learned in my Econometrics course, so I conducted a Chow Breakpoint test to draw some new conclusions. As a pension actuary, this topic is of the utmost importance to me. I learned a great deal of knowledge that will help me serve my clients better. The overall intent of this essay is to inform the general population about some of the threats facing pensioners as well as to inspire cooperation between corporations, Congress, and pension professionals.
I: Introduction

Before delving into the specifics of the problems facing the Pension Benefit Guaranty Corporation (PBGC), it is important to understand the origins and history of pensions. It is also necessary to recognize the basis of insurance and the nuances of how insurance is supposed to operate effectively and efficiently. In this section, I will also summarize some common problems that the insurance industry faces such as moral hazard and adverse selection. It may be helpful to refer to this section to better understand the reasons for the PBGC’s deficit.

The idea of pensions, defined payments made to retired workers, can be traced back to Ancient Rome. To ensure the loyalty of retired Roman soldiers, Augustus Caesar implemented the first known pension system in 13 B.C. Much like pensions today, the benefits that soldiers received were based on the length of their service. To qualify, soldiers had to serve in a legion for twenty years and remain in the reserves for an additional five years. Once a soldier had met the service requirements, they were entitled to a lump-sum payment which amounted to about thirteen years of the annual legionnaire’s salary.¹ The funding for such a program was initially provided through a general tax; however, Augustus Caesar soon created a distinct fund to cover these payments. A 5% inheritance tax ended up funding the retired soldiers’ benefits until the fall of the Roman Empire.² Just as the Roman pension system was designed to inspire loyalty; modern pensions are designed, in part, to increase loyalty of employees to their employers. To qualify for their benefits, workers must often meet vesting requirements. In other words, they must work for the company for a specified amount of time before they are entitled to pension

payments. Many defined benefit (DB) pension plans also include years of service as a factor for determining the amount of the benefit. Pensions reward workers for staying with one company for several years.

The remainder of the history of pensions presented in this report will focus on private-sector pensions in the United States, because the PBGC does not insure public pension plans or foreign plans. The first recorded private pension plan did not appear in the United States until 1875 when the American Express Company established one. Public pensions had existed in the U. S. prior to this, but until the 1870’s most companies were relatively small and could not support a pension program. In the late 1800’s, about 75% of males over the age of 65 were still working; generally, if a man stopped working it was because he was disabled and physically unable to continue working. Back then, the prospect of eventually retiring and relaxing in the later part of life was not a reality for most Americans.

The first legislation that directly dealt with pensions in the United States came in 1914 and was a provision to the first federal income tax law which was enacted in 1913. The 1914 legislation defined pension benefits as “ordinary and necessary business expenses,” which meant that they became tax-deductible to employers. This law further encouraged private businesses to set up pension funds to defer tax payments. By 1919, there were over 300 private pension plans in the United States; these plans covered about 15% of all hourly and salaried employees in the country at the time. A report by the Georgetown University Law Center credits the sharp rise in

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the number of private pension plans between 1914 and 1919 with the following incentives to the employers. Employers benefited from providing pension plans to their employees because it "attracted more workers, reduced labor turnover, and 'more [humanely] removed older, less productive employees'" from the workforce.6 This reinforces the millennia old idea held by Augustus Caesar that providing benefits to employees benefits the employer.

In the 1920's, two pieces of legislation directly related to pension funds. The first, the Revenue Act of 1921, stated that trust income is taxed at the time when it is distributed to the employee and only the amount that exceeds the employee's own contributions.7 In 1926, another Revenue Act became law; this Act pertained more directly to the private pension system than its predecessor did. The Revenue Act of 1926 made clear that pension plan trust income generated by pension plans was exempt from employees' current taxable income. In addition, rules for the establishment of pension funds were also included in the Revenue Act of 1926. The law states that "pension plans must be established for the exclusive benefit of 'some or all' employees."8 In other words, the law limited the ability for pension funds to be abused to the benefit of certain individuals or interest groups.

By 1940, about 15% of American workers in the private-sector could expect to receive a pension when they retired. The life expectancy for an American in 1935 was 60 years; if a person survived to age 65, they would only be expected to live to age 77.9 Just as the increase in life expectancy since 1935 has undermined much of the Social Security, it is a contributing factor to the insecurity of many private-sector pensions. Since most pensions now are paid as a lifetime benefit and sometimes include survivor benefits; the length of time that a person is expected to

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live is a key factor for determining the amount of money needed to be set aside to meet future liabilities.

The Revenue Act of 1942 provided more rules for pension funds which harkened back to ideas from the Revenue Act of 1926. The Revenue Act of 1942 clearly defined non-discrimination tests that employers must satisfy for their plan to qualify for tax exemptions. The test allows three different ways for a plan to qualify. First, if a plan covers “70 percent of all full-time employees”, it qualifies. The next way a plan can qualify is by covering “80 percent or more of all the employees who are eligible to benefit under the plan if 70 percent or more of all employees are eligible to benefits under the plan.” Finally, a plan can qualify if it provides coverage for a “group that the IRS determines is a bona fide employee group.” These rules were put in place to ensure that plans did not favor certain, often highly compensated, groups of employees such as executives. Companies have bent these rules in some cases due to a loose definition of the term “employee.” It is more common in recent years for employers to set up separate retirement plans for their executives and highly compensated employees that simply do not qualify for exemptions under the tax code. The Revenue Act of 1942 was a key piece of legislation that strengthened the average workers’ rights pertaining to pensions.

The 1950’s also ushered in pension legislation in the United States, beginning with a new IRS Treasury Regulation in 1956. IRS Treasury Regulation Section 1.401-(b)(1)(i) provides a clear definition of pension plans. It states that a pension plan is “a plan established and maintained by an employer primarily to provide systematically for the payment of definitely determinable benefits to his employees over a period of years, usually for life, after

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retirement."\(^\text{14}\) That same year, the IRS created Revenue Ruling 56-693 making clear that pension plan funds cannot be accessed until employment with the plan sponsor is terminated.\(^\text{15}\) These rules are important because they clearly define and outline the expectations for pension plans. Two years later, in 1958, the Welfare and Pension Plans Disclosure Act laid out reporting requirements for pension plans. For the first time, corporations had to disclose the financial procedures and wellbeing of their pension plans.\(^\text{16}\) This act was a milestone for pension plans; it was the beginning of a legacy of increasing transparency regarding pension fund operations.

By 1960, the percentage of workers in the United States that were covered by pension plans had grown to about 41% of all private-sector workers; this totals to at least 18.7 million workers. By 1970, this number had grown to 26.3 million workers making up 45% of all private-sector workers.\(^\text{17}\) Additional legislation, beginning with the Employee Retirement Income Security Act of 1974 (ERISA) which chartered the PBGC, will be covered in a later section.

The PBGC, by design, is an insurance company; it is important to understand the origins of insurance as a concept, the ways that insurance is meant to function, and the common obstacles that are faced in the insurance industry. Insurance, in its most basic form, is a way for people to share risk. The idea of sharing risk is simply part of nature. For example, when a pack of wolves goes hunting, they are spreading the risk of injury or a failed hunt throughout the entire pack. Ancient humans also hunted in groups for many of the same reasons.\(^\text{18}\) When people work together, the chances of success go up and the consequences of an individual’s failure are

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greatly reduced. The first known written form of insurance appeared in the Code of Hammurabi which was conceived around 1754 B.C. While the code did not provide insurance in the traditional sense, it did allow for the citizens of Ancient Babylon to share risk. The Code allowed for debt forgiveness in the event of a personal calamities such as disability, death, or flooding.\textsuperscript{19} Essentially, this program allowed for these risks to be transferred from the borrow to the lenders and to be dispersed throughout a group rather than one individual. A flood may have been devastating for one farmer; however, it would have a much smaller impact on the lenders in most cases.

The first more modern form of insurance took form to meet the needs of English merchants in the 17\textsuperscript{th} century. Early forms of this marine insurance were relatively rudimentary; merchants entered agreements to give financial assistance to other merchants who had suffered a loss. While this did effectively disperse some of the risk of a ship sinking amongst the merchants who participated, there was still a problem; merchants did not know how much they would be liable for until after a loss had occurred.\textsuperscript{20} This problem was soon solved by the process of underwriting. Once merchants had obtained an initial investment from venture capitalists, they would go to Edward Lloyd's coffeehouse to deliver a listing of their cargo to the underwriters and investors. The underwriters and investors who collected at Lloyd's would take responsibility for certain portions of the cargo by signing the bottom of the manifest and paying set premiums. This is where the term underwriting originates.\textsuperscript{21} Having many investors investing in small portions of a ship's cargo meant that if a ship sank, it would not financially ruin any one

\textsuperscript{19} The History of Insurance
\textsuperscript{21} The History of Insurance
individual. Underwriters could also diversify their investments by financing small amounts of cargo on several different voyages rather than large amounts on one voyage.

The next development that greatly increased the efficiency and effectiveness of insurance was the formalization of probability theory by Blaise Pascal and Pierre de Fermat in 1654. Probabilities were soon applied to risk which opened a wealth of opportunities for insurance providers. Premium rates could now be calculated more accurately and the process of underwriting became more formalized which ultimately resulted in more efficient and reasonably priced insurance. Probability is the main driving factor behind modern insurance. For insurance providers to charge appropriate premiums; they must accurately forecast future losses which can only be done with the application of probability theory.

To summarize, insurance works by individuals agreeing to share risk. With a great degree of accuracy, insurance companies can predict the expected frequency and severity of claims; this means that they can properly price the coverage that they provide. To make these predictions, actuaries often rely on past claim experience and advanced modeling techniques. Insurance providers operate most efficiently in an open and competitive market. Premiums will naturally find the balance between being high enough to cover expenses, claims, and profit while at the same time being less than the covered amount. It would not be to the benefit of consumers to purchase insurance unless the premiums are well below the covered amount. Some other key insurance principles are indemnity, moral hazard, insurable interest, and adverse selection. In the insurance world, the term "indemnity" means that policyholders cannot benefit from experiencing a loss. In other words, the coverage cannot exceed the true value of the thing being insured. When people can benefit from experiencing a loss a moral hazard is created. They will

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22 The History of Insurance
23 How Insurance Works
be incentivized to either intentionally create a loss or will be discouraged from properly managing their risks. Moral hazard is not only a problem when the coverage amount exceeds the value of the thing being insured, but it applies to all insurance. Policyholders may act differently and manage risks differently once they obtain coverage. Insurance policies must be carefully worded to ensure that the insureds are still properly reducing risks, otherwise the frequency and severity of claims will artificially increase resulting in higher premium prices. The idea of an insurable interest simply means that an individual can only purchase insurance for something if they have a legitimate reason for doing so. The risk must be definable and measurable in financial terms to be insurable. For example, corporations can take out life insurance policies on their executives because if an executive were to die, the company would face real, quantifiable costs such as the cost of finding a replacement. As an individual, however, I could not take out an insurance policy on someone unless I relied on their income or was responsible for their end of life expenses. If individuals could take out life insurance policies on anyone they pleased, it would create a serious moral hazard problem. The final insurance concept that I would like to address here is the idea of adverse selection. Adverse selection means that, by nature, the more risk that a person has, the more likely they are to purchase insurance to cover those risks. This problem is addressed by underwriting and charging premiums that truly reflect the value of the coverage. Insurance in the real world is far more nuanced because it is highly regulated; however, the basic concepts are applicable in any case, including pension insurance.

24 How Insurance Works
25 How Insurance Works
II: Pension Benefit Guaranty Corporation

In 1963, Studebaker-Packard Corporation discontinued operations at its plant in South Bend, Indiana and terminated its employee pension plan. At the time of the plant's closing, the pension fund for hourly workers did not have sufficient assets to cover its liabilities. Thus, the accrued benefits of over 7300 workers were reduced by 85 to 100 percent. These workers had been promised pension benefits and, in many cases, were relying on those benefits as their sole source of income during retirement. This financial disaster highlighted the need for pension management reform and protection for workers. In 1967, Senator Jacob Javits from New York began creating legislation to help meet this need. In 1974, the Employee Retirement Income Security Act (ERISA) was passed by Congress and signed into law by President Gerald R. Ford. ERISA established the Pension Benefit Guaranty Corporation to insure pension plans and protect the financial security of Americans. The President eloquently described the intent of the PBGC; he said, "Under this law, the men and women of our labor force will have more clearly defined rights to pension funds and greater assurances that retirement dollars will be there when they are needed." Unfortunately, the security that the PBGC was intended to provide is coming more and more into question. The remainder of this section will focus on the operations of the PBGC,

28 History of PBGC
29 History of PBGC
the difficulties that the Corporation is facing, the reasons for those problems, and the potential solution.

The PBGC operates two separate types of pension plans, single-employer plans and multiemployer plans. These programs are run separately and receive separate sources of funding. Funds from one program cannot be used to assist the other and financial results must be reported separately. The 2016 Annual Performance Report published by the PBGC reports that they currently insure over 40 million Americans who belong to defined benefit pension plans. The Corporation is currently in charge of paying the benefits of over 1.5 million workers and retirees who were part of pension plans that have failed. Without the PBGC’s insurance services, these Americans would have little to no retirement income. The PBGC is responsible for covering close to 24,000 pension plans; since its inception in 1974, it has paid benefits to over 4,800 single-employer and multi-employer plans that failed. In the 2016 fiscal year, the PBGC made $5.8 billion worth of benefit payments.

The multiemployer program run by the PBGC insures plans that are created through collective bargaining agreements between unions and employers. The event that is being covered in the case of multiemployer plans is insolvency. When a multiemployer plan becomes insolvent, the PBGC provides financial assistance to pay benefits up to the amount guaranteed by law. The common industries covered by these plans are construction, hospitality, transportation, and mining. The PBGC’s role in aiding multi-employer plans goes beyond simply paying benefits. In addition to providing financial assistance, the PBGC also provides “technical assistance to

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31 Annual Report 2016
32 Annual Report 2016
multiemployer plan administrators, service providers, and other stakeholders." The PBGC reports that "the multiemployer insurance program is likely to run out of money by the end of 2025." The PBGC is currently working to keep this program afloat to protect Americans. The reasons for this bleak projection as well as the steps being taken to prevent it from coming to fruition will be discussed at a later point.

The single-employer program, as the name suggests, covers pension plans that are sponsored by a single employer. When a covered single-employer plan terminates, the PBGC becomes responsible for paying the benefits of that plan. Unlike multiemployer program that provides financial assistance to the plan, the single-employer program assumes the responsibility of paying each individual pensioner. The PBGC generally must step in because of the plan sponsor going bankrupt or discontinuing operations while their plan is underfunded. When this happens, the PBGC takes control of the "plan's assets, administration, and payment of plan benefits up to the legal limits." Single-employer plans can terminate without the PBGC having to take control of the plan if they are funded enough to pay all the benefits that the workers have already become entitled to. The single-employer program has a more positive outlook than the multiemployer plan; however, it is still currently facing a large deficit. Later, I will discuss the issues that led to the current underfunding of the single-employer plan and highlight the steps that are being taken to improve the program.

Before discussing the funding shortfalls in the PBGC's programs, it is important to explain how the PBGC calculates its assets and liabilities. For both programs that it runs, the

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33 Annual Report 2016
34 Annual Report 2016
36 Annual Report 2016
37 Annual Report 2016
PBGC separates its business activities into the categories of “Underwriting Activity” and “Financial Activity.”\textsuperscript{38} Underwriting Activity relates to the process of collecting premiums in return for providing insurance coverage. The PBGC includes both realized losses and expected probable losses when reporting Underwriting Activity. Underwriting Activity also includes “actuarial adjustments based on actuarial assumptions, such as mortality.”\textsuperscript{39} Calculating expected benefits for pensioners is not an exact science, it is based on actuarial methods that include several different assumptions. When these assumptions such as interest and mortality rates change over time, it can have a drastic impact on the value of liabilities; therefore, it is accounted for in the PBGC’s financial reporting. The Financial Activity that the PBGC reports relates to the investment performance of its assets and liabilities. The PBGC’s assets include the premiums it collects, the assets of insured plans that have terminated, and recoveries from those plan sponsors. Future benefit liabilities of the PBGC include “those future benefits, under statutory limits, that PBGC has assumed following distress or involuntary terminations.”\textsuperscript{40} The difference between the assets that the PBGC controls and the liabilities that it is responsible for is known as its net financial position.

The net financial positon for the multiemployer program as of September 30, 2016 was $(20,580) million. The net financial position for the single-employer program as of the same date was $(58,833) million. The PBGC’s annual report notes that “the Corporation has sufficient liquidity to meet its obligations (liabilities) for a significant number of years; however, neither program at present has the resources to fully satisfy the PBGC’s long-term obligations to plan

\textsuperscript{38} Annual Report 2016
\textsuperscript{39} Annual Report 2016
\textsuperscript{40} Annual Report 2016
This leads into the next topic of discussion: the reasons why the PBC is in such financial turmoil.

One of the biggest problems that the PBGC faces is its entanglement with the United States Government. The PBGC was created by Congress and the premiums are set in law by Congress. The PBGC, however, does not receive any monetary assistance from taxpayers; ERISA mandates that the PBGC be completely self-financed. In addition, the United States Federal Government, under ERISA, is not responsible for any liabilities that the PBGC acquires. The Corporation’s sources of income are premiums, investment returns, and acquired assets from terminated plans that are trusteeed by the PBGC. The benefit payments are regulated by federal law and are subject to the original provisions of trusteeed plans. Because premiums are decided by Congress, political factors influence the rates charged. The lawmakers who set these premiums are under enormous pressure from interest groups, especially unions, to keep premiums low. Government officials have been influenced to reduce contribution requirements so that employers have more funds available in the short term for things such as hiring new workers and increasing wages. Essentially, although the PBGC is a separate entity from the Federal Government, the Federal Government restricts them from charging premiums that are actuarially appropriate for the coverage that they provide. In 2005, the PBGC estimated that premiums would have to increase by a factor of 6.5 times to fully fund expected claims. This is a large contributing factor to the current deficits in both the single-employer and multi-employer plans; they simply are not collecting enough money to cover expenses.

41 Annual Report 2016
42 Annual Report 2016
44 Blahous
Another problem that has contributed to the PBGC’s deficits is a result of political interference; certain industries are permitted to use higher discount rates for funding calculations than others. The airline industry as well as certain automakers have received special privileges. The effect of using these higher discount rates is that future liabilities are undervalued. When liabilities are undervalued, the required contributions are lower than they should be which puts the plan in danger of not being able to fulfill its obligations in the future.

One issue with pension insurance as a concept is it inherently creates a moral hazard. The safety net that the insurance provides to protect workers and retirees, in some cases, inspires corporations to take more risky actions. Employers can reduce the costs of funding their pension plans by investing in riskier assets that have the potential for higher rewards. If the fund’s investments perform well, the companies need to invest less. If the investments do not perform well and the plan becomes insolvent, the PBGC takes the loss. It is in the interest of corporations to reduce expenses to report higher earnings, thus raising the stock price. Companies have chosen to report higher earnings in the short run rather than meet the long-term obligations they owe to their employees. The PBGC does not have the power to regulate the investment policy of the pension funds it insures, so it cannot prevent fund managers from making poor investment decisions. In addition, the PBGC does not have the power to enforce contribution requirements. One plan sponsor in the airline industry simply stopped making contributions once they had filed bankruptcy and because the PBGC is an unsecured creditor, it could not place a lien on the skipped contributions. The fact that their pensions are insured also reduces the incentive of workers to investigate the state of the pension fund to make sure that adequate contributions are

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being made and that the money is being invested wisely.\textsuperscript{48} The program intended to increase retirement security of Americans may have contributed to the problem. The benefits of the PBGC, however far outweigh this problem, because without it millions of Americans would have no access to the retirement income they were promised.

One of ERISA’s features was it requires all corporate pensions to purchase insurance from the PBGC.\textsuperscript{49} This means that unlike other forms of insurance, the PBGC cannot screen out the risks that it feels to be too great. Plans do have to meet certain requirements to qualify for PBGC insurance; however, these requirements are written in law rather than being designed by the PBGC.

Another contributing factor that has contributed to underfunding of pension plans is that fund managers predicted that they could earn much higher rates of return on their investments than they experienced. An extreme example of this phenomenon is demonstrated by a study which Milliman USA, an employee benefits consulting firm, conducted. The study looked at the returns that the 100 largest firms in America expected to earn on their pension funds from 2000 to 2003. In 2000 and 2001, the median expected rate of return was 9.5 percent. In 2002, fund managers expected to earn 9.25% as a median and in 2003 this number was 8.55%. The actual average rate of return earned on these funds between the beginning of 2000 and the end of 2003 was just 1.3%.\textsuperscript{50} The underperformance of the market compared to such high projections resulted in many plans that are insured by the PBGC becoming more of an insolvency risk.

Another issue that has led to the probable insolvency of so many pension plans in America is that plan sponsors faced barriers to overfunding in times when the market was

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\textsuperscript{50} Hudson
performing well. Before the Pension Protection Act of 2006 (PPA) was passed, plans could not deduct contributions that exceeded 100% of the plan’s current liability. The PPA increased this percentage to 150% which is a step in the right direction; however, the problems that were created before this new rule still linger. In the late 1990’s the market surge spurred on by the internet age caused plan assets to grow at above average rates. Many employers stopped making contributions during this time because investment returns caused their plans to be fully funded. When these unusual market conditions ceased, however, the funding percentages dropped to well below what they would have been if companies had overfunded during this time. The restrictions placed on plan sponsors as to how much they can set aside in their pension funds has had a negative impact on pension security.

The United States Federal Government benefits by reducing required pension plan contributions. Because contributions to pension plans are tax-deductible, the government can increase their revenue by lowering contribution requirements. This tactic was used to help fund federal spending in 2010. This sort of behavior has consequences for American workers and retirees; it places their retirement income sources at risk.

A problem that is specific to multiemployer plans is the phenomenon of “double-counting.” The premiums that the PBGC collects are counted both for the Corporation’s operations and as a source of income for the Federal government. The Government considers these inflows when making funding decisions for separate programs, even though these premiums are not funded by taxpayers. The fact that premium rates are set by the Government

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instead of by the PBGC adds an extra layer of complexity to this problem. The threat is that these funds may not actually be used to insure the retirement interests of Americans as intended. This may also lead to premiums being artificially inflated to generate government revenue which could mean a massive expense for plan sponsors and in turn could further jeopardize their plan’s funding status.\(^54\) If corporations that are already struggling financially are forced to pay premiums that do not truly reflect the value of the insurance they are receiving they may be forced to terminate their plans and add even more liability to the PBGC. Fortunately, this phenomenon has been addressed by H.R. 4955, the Pension and Budget Integrity Act (PBIA).

The PBIA’s main feature is ending the practice of “double-counting.”\(^55\) The PBIA has attracted attention from leaders in the employee benefits consulting field. Most notably, the CEO of Mercer, Julio Portalatin wrote a letter to Congress voicing his support from the PBIA.\(^56\) Mr. Portalatin noted that the PBGC premium increases in 2012, 2013, and 2015 are “counterproductive to the goals of enhancing the agency’s financial health and improving American’s retirement security.”\(^57\) He goes on to say that these sharp premium increases “undermine employers’ desire to maintain pension plans.”\(^58\) This is one area where Congress has taken steps necessary to address a problem with the pension system; since this legislation is relatively new it will be important to continue analyzing its impact over the next several years.

To summarize, several different factors have led to the current poor financial security of the defined benefit pension system. Government interference with the PBGC’s operations as well

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as the structure in which pension funds are allowed by the government to operate are the main driving factors behind the current underfunding problems. Since the original inception of ERISA in 1974, many new regulations have been added and old ones have been amended. Congress has been moving in the right direction with pension reform; however, there is still much work to do to preserve the retirement income of millions of Americans.

III. Pension Protection Act of 2006

Now that many of the problems with the defined benefit pension sector have been addressed, my focus shifts the Pension Protection Act of 2006 (PPA). I will analyze the solutions that the PPA intended to bring to the table and I will perform a statistical test to determine whether this policy has been effective in influencing the rate at which the net financial position of the single-employer program changes from year to year. All the data for this analysis was taken directly from the PBGC’s website available at www.pbgc.gov.  

Rather than getting into the nitty gritty of the almost 400-page piece of legislation, I will summarize some of its key features. The PPA was designed to address some of the funding loopholes that plan sponsors were using to minimize contributions to their pension funds. The following summary is provided by the United States Government; it was made available at www.congress.gov.

Title I: Reform of Funding Rules for Single-Employer Defined Benefit Pension Plans: Subtitle A: Amendments to Employee Retirement Income Security Act of 1974 - (Sec. 101) Amends the Employee Retirement Income Security Act (ERISA) to repeal existing funding rules for defined benefit pension plans for plan years beginning after 2007. Establishes new minimum funding standards for single-employer defined benefit pension plans, single-employer money purchase plans, and multiemployer plans. Requires employers to pay

certain minimum required contributions. Allows the Secretary of the Treasury to:
(1) waive minimum funding standards in the event of a temporary substantial business hardship for single-employer plans or a substantial business hardship in the case of a multiemployer plan if application of the standard would be adverse to the interests of plan participants in the aggregate; (2) require a single-employer maintaining such a plan to provide security to such plan as a condition for granting or modifying a waiver. Limits the number of waivers that may be granted. Prohibits any amendment which increases the liability of a plan from being adopted if a waiver is in effect. 61

The reason that I am only conducting this study on the single-employer program rather than the multiemployer program is that the multiemployer program is currently experiencing exponential growth in the level of underfunding. 62 No statistical test is required to see that the PPA has done little to protect the financial stability of the multiemployer program, despite efforts to do so. The change in the single-employer program’s net financial position over time requires more investigation. There is a downward trend in the funding status of this program between 1995 and 2016; however, I am interested in whether the PPA had a significant impact on the rate of this trend. 63 To determine whether the PPA had a significant impact, I conducted a Chow Breakpoint test on the data. The Chow Breakpoint test is a common test used to analyze structure change within data. The test essentially separates the data into two separate time intervals and identifies whether the regression results are statistically different between those intervals. For the purposes of my test, I have chosen to identify 2007 as the breakpoint; this is because the PPA applies to plan years beginning with 2007. It is important to note that the figures that I used are reported as millions of United States dollars. I used EViews statistical software to conduct my analysis.

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62 See Appendix Chart 1.
63 See Appendix Chart 2.
The trend model for the single-employer data is

\[ SENFP_t = \beta_t t + \beta_0 + u_t \]

Where

\( SENFP = \) Single Employer Net Financial Position($millions)
\( t = \) Time Trend
\( \beta_0 = \) Intercept
\( u_t = \) Error Term

The estimated equation is

\[ SENFP_t = -1668.058t + 5886.877 \]

The standard errors for the estimated coefficients can be found in the appendix.\(^{64}\)

The null hypothesis for my Chow Breakpoint test is that there is no break in the data in 2007. The test yielded an F-statistic of 1.312268 which has a probability value of 0.2938. Because 0.2938 is greater than 0.10, I fail to reject the null hypothesis at the 10% significance level. To summarize, this test shows that the PPA did not significantly influence the rate at which the net financial position of the PBGC’s single-employer program changes from year to year, starting in 2007.

**IV. Conclusions**

The retirement security of millions of Americans is at stake. Poor management of pension funds as well as poorly designed legislation has led to many U.S. pension plans to face the risk of not being financially able to meet their pension obligations. The Corporation that was set up to insure these benefits, the PBGC, does not currently possess the tools necessary to effectively meet is demand either. While recent legislation such as the Pension Protection Act of 2006 and

\(^{64}\) See Appendix Chart 3.
the Pension and Budget Integrity Act are a step in the right direction, they have not been entirely effective to this point. Solving these problems for the benefit of American workers and retirees will take cooperation between the Federal Government, employee benefits consulting experts, and plan sponsors.
Appendix:

Chart 1. Multiemployer Program Net Financial Position in Millions of U.S. Dollars

Chart 3. Standard Errors of Estimated Coefficients

<table>
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<tr>
<th>Coefficient</th>
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<tr>
<td>$\beta_1$</td>
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<tr>
<td>$\beta_0$</td>
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Chart 4. Net Financial Position Data

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References


Retrieved from https://www.pbgc.gov/about/who-we-are/pg/history-of-pbgc


310(1859), 35-40.


http://www.humanresourcesmba.net/faq/what-is-the-pension-protection-act/

http://www.newyorker.com/business/currency/the-real-reason-for-pensions

https://www.newsmediaalliance.org/advocacy1/americas-pension-plan-problem/