

**THE IMPACT OF THE SHIFT AWAY FROM DEFINED BENEFIT PLANS TO DEFINED
CONTRIBUTION PLANS IN AUSTRALIA, THE UNITED KINGDOM, AND THE UNITED STATES**

By

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ABSTRACT

This paper examines the shift away from defined benefit plans towards defined contribution plans in Australia, the United Kingdom, and the United States and will compare the way it changed the relationship between workers and the financial industry. For example, workers' investments helped fuel the growth and volatility of these countries' stock markets. This movement also required workers to have a greater financial literacy than prior generations had. Unfortunately, the educational systems in these countries left many workers financially illiterate. These factors played a role in the recent financial crisis and, if left unaddressed, may contribute to future financial crises.

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OUTLINE

INTRODUCTION

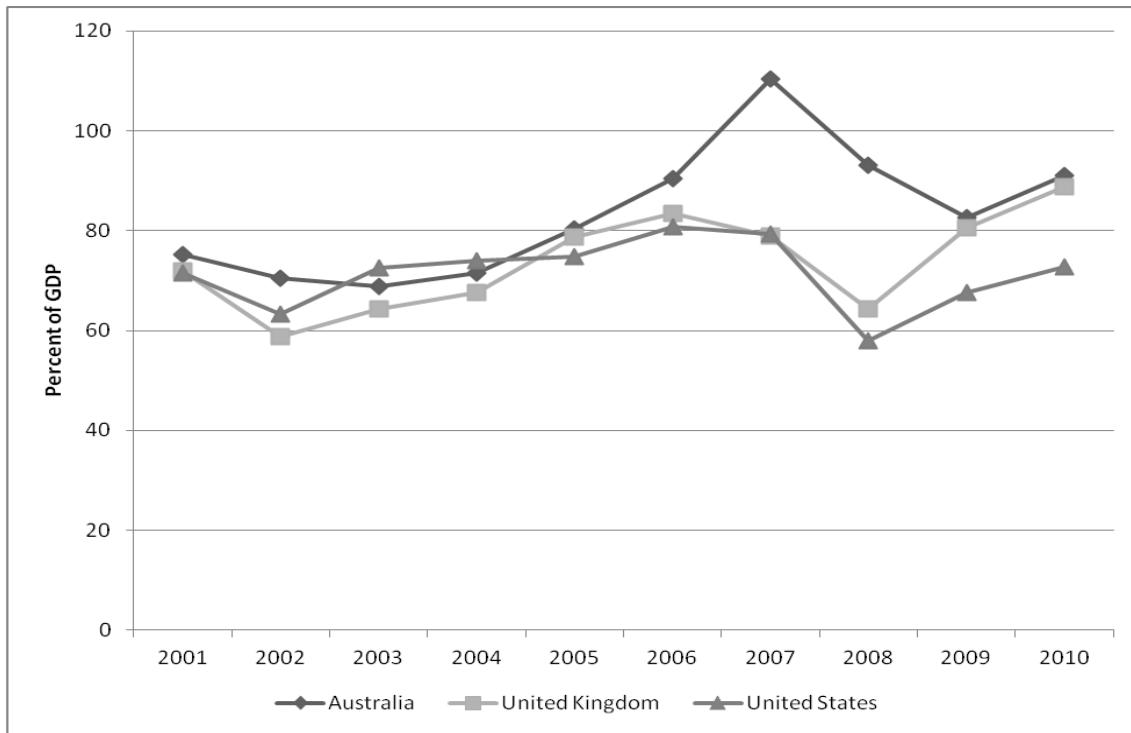
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CONCLUSION: WHERE DO WE GO FROM HERE?

INTRODUCTION

Pensions have played an important role in the financial sectors of Australia, the United Kingdom and the United States. Assets held in pensions were roughly equivalent to two-thirds or more of the annual gross domestic product (GDP) of each nation as illustrated in Figure 1.¹ In addition, Australia, the United Kingdom, and the United States held over 80 percent of the total financial assets invested in funded pensions amongst the OECD countries.²

Figure 1: Financial Assets Held in Pensions as a Percent of GDP from 2001 to 2010³



Pensions in these countries generally fit within the three pillar framework that the World Bank articulated in 1994 when it published *Averting the Old Age Crisis: Policies to Protect the Old and Promote Growth*. The pillars discussed in that publication are: Pillar I - a publicly managed pension system that requires mandatory participation from all members of society but is only aimed at alleviating poverty, not providing a comfortable retirement; Pillar II - a privately managed pension system that ideally would cover all members of society; and Pillar III - voluntary savings by individuals.

Private pensions fit within Pillar II of this scheme and rose in importance in the economies of these nations over the past 150 years. For much of that period, however, the defined benefit plan was the dominate type of private pension. Within the last thirty years, however, defined contribution plans have risen in importance and are displacing defined benefit plans. This shift in the types of private pensions offered is having dramatic impact on the workers and the financial sectors in each of these nations.⁴

The growth of defined contribution plans in all three countries has significant implications for the financial markets in these nations. Due to the increasing importance of defined contribution plans, a larger percentage of the populations of Australia, the United Kingdom, and the United States are investing in financial products, either directly or indirectly, than they previously did and than people in many other OECD nations do. This means that investment risk is being shifted from business firms onto households.⁵ This shift is problematic for several reasons. First, households lack the financial literacy of institutional investors and are subject to certain behavioral biases to which institutional investors are not prone.⁶ Many employees suffer from inertia and leave their funds in the default option in their plans, even when these options are not appropriate for their investment goals.⁷ Employees also have a

tendency to overinvest in the stock of their employer.⁸ Second, defined contribution plans do not currently have access to many of the long-term assets in which defined benefits plans invest, which hinders market efficiency.⁹ Third, defined contribution plans also tend to be subject to higher administrative fees than defined benefits plans, which also impairs their efficiency.¹⁰ As a result, consumer protection considerations should play a greater role in the regulatory structures of Australia, the United Kingdom, and the United States than they do in nations where only sophisticated investors are buying complex financial products.

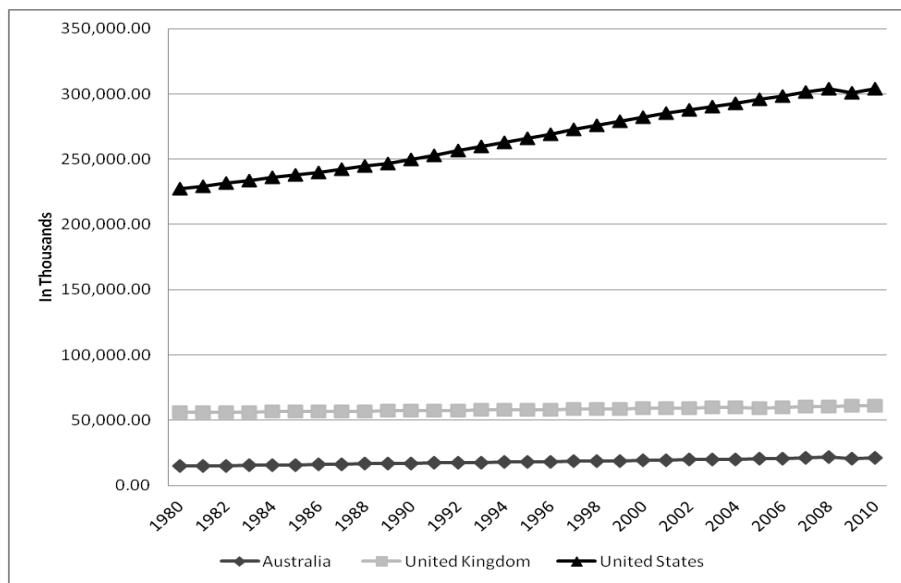
Part I explains why a comparison of Australia, the United Kingdom, and the United States might be useful. Part II provides a brief history of the rise of pensions in Australia, the United Kingdom, and the United States and the shift away from defined benefit plans to defined contributions that is occurring in each country. Part III then describes the regulatory regimes in each nation that have contributed to this shift. Part IV then discusses the impact that this shift is having on workers, the financial industry, and the economies of these nations. Finally, the Conclusion discusses what lessons might be drawn from the experiences of all three nations and what steps might be taken to mitigate the negative effects of the shift to defined contribution plans.

I. Why Compare Australia, the United Kingdom and the United States?

Limiting the comparison to just the United States, the United Kingdom, and Australia makes sense for several reasons. First, all three nations are common law countries. Common law countries enjoy greater similarities with each other with regard to the treatment of property, contracts, and the regulation of financial services than they enjoy with civil law jurisdictions.¹¹

Second, even though the population sizes of all three nations are vastly different, their economies are comparable when one looks at gross domestic product (GDP) per capita, unemployment rates, the portion of GDP derived from financial services, the growth in their housing markets, and homeownership rates.¹² As Figure 2 illustrates, the population of the United States is about fourteen times as large the population of Australia and five times as large as the population of the United Kingdom.¹³

Figure 2: Population
(Mid-year, in thousands)¹⁴



The average effective age of retirement for both men and women in all three countries, however, was roughly comparable in recent years as shown in Figures 3 and 4. Between the early 1980s until roughly 2003, the average effective age of retirement for men, was about two to three years higher in the United States than in Australia and the United Kingdom while the average effective age for women was between three to eight years higher in the United States than in Australia and the United Kingdom.

Figure 3: Average Effective Age of Retirement for Men¹⁵

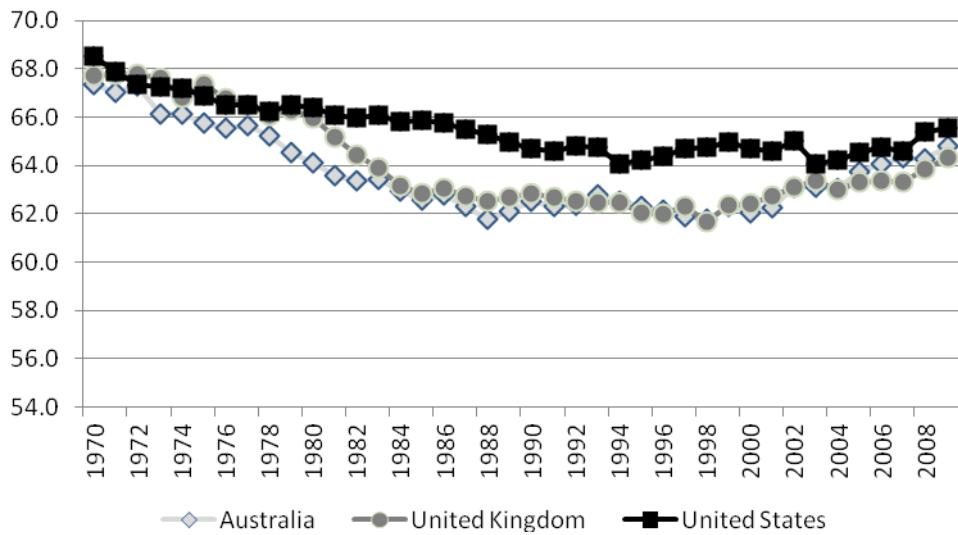
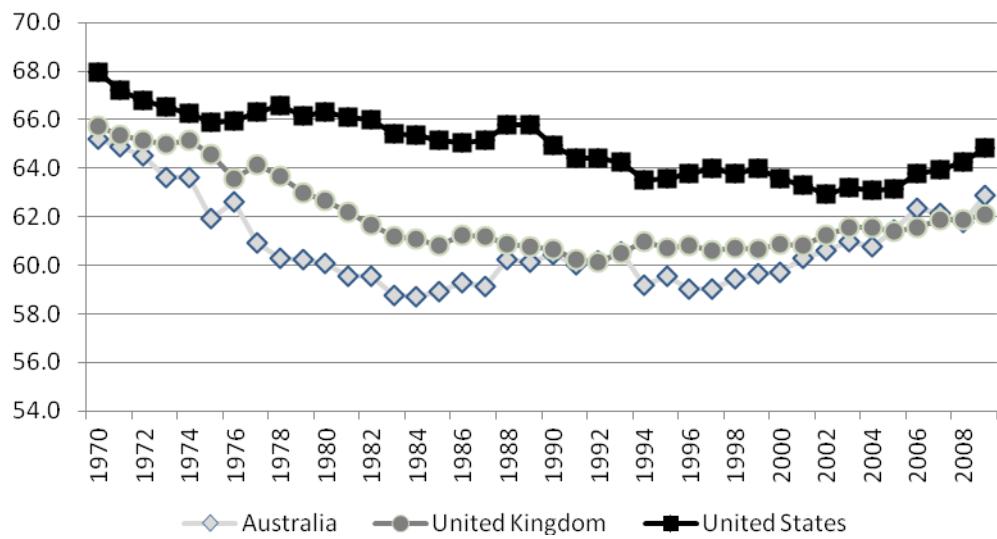


Figure 4: Average Effective Retirement Age for Women¹⁶



In addition, the life expectancies for men and women at age 65 are also comparable and are projected to increase at roughly similar rates between 2005 and 2045-2050 as shown in Figures 5 and 6.

Figure 5: Life Expectancies for Men at Age 65¹⁷

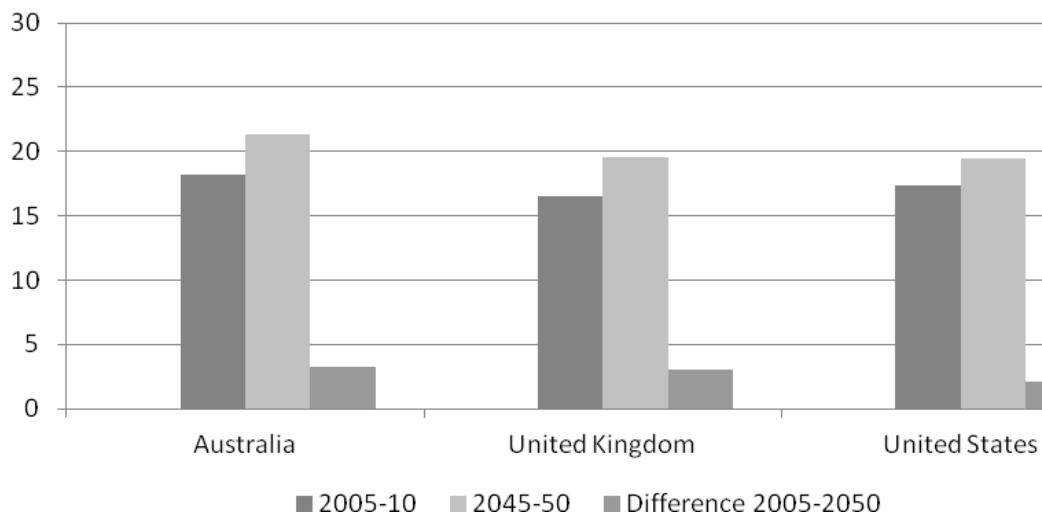
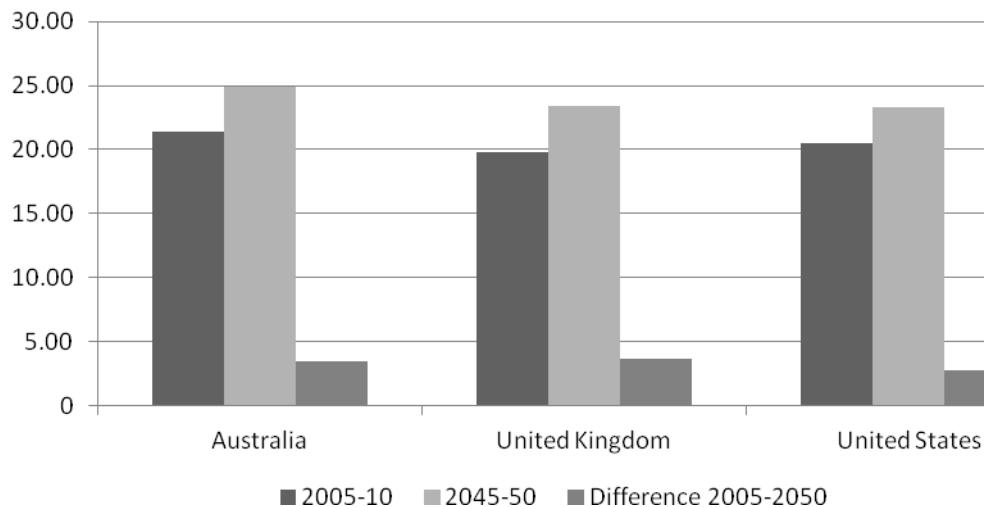
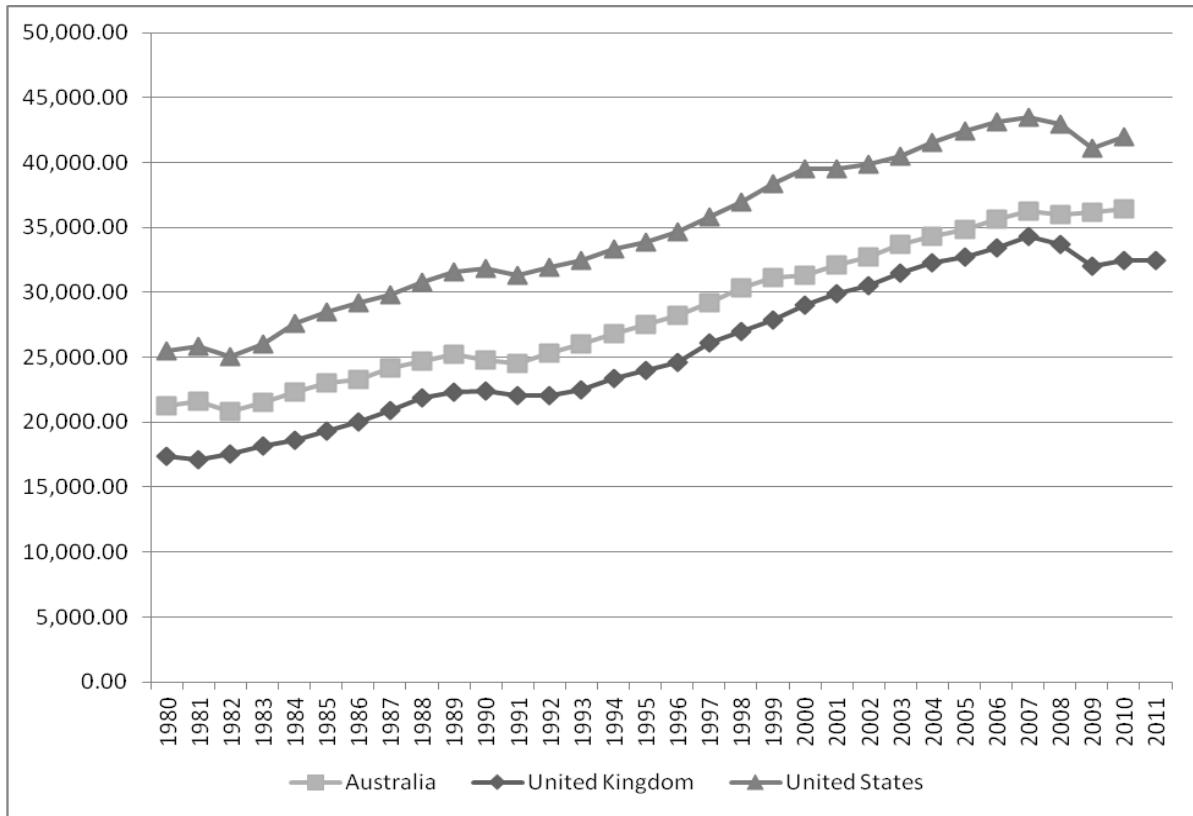


Figure 6: Life Expectancies for Women at Age 65¹⁸



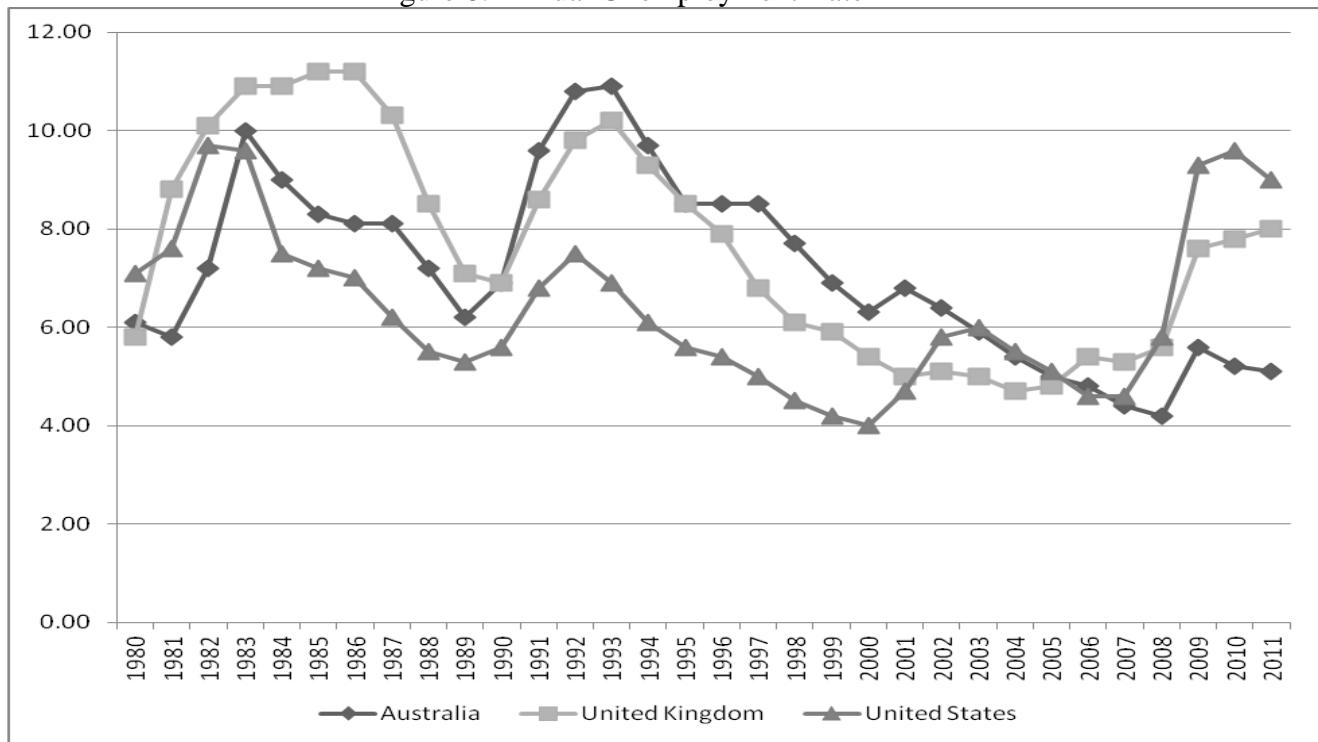
Secondly, the economies of Australia, the United Kingdom, and the United States share many similarities. The GDP per capita within the United States, the United Kingdom, and Australia are roughly similar to each other and have experienced similar fluctuations for almost thirty years as shown in Figure 7 below.¹⁹

Figure 7: GDP per Capita
(U.S. dollars, constant prices, reference year 2005)²⁰



These countries also have generally had similar level of unemployment in recent years. The unemployment rates within these countries have converged within the past decade as illustrated in Figure 8. In addition, they have tended to experience comparable cycles of unemployment.

Figure 8: Annual Unemployment Rate²¹



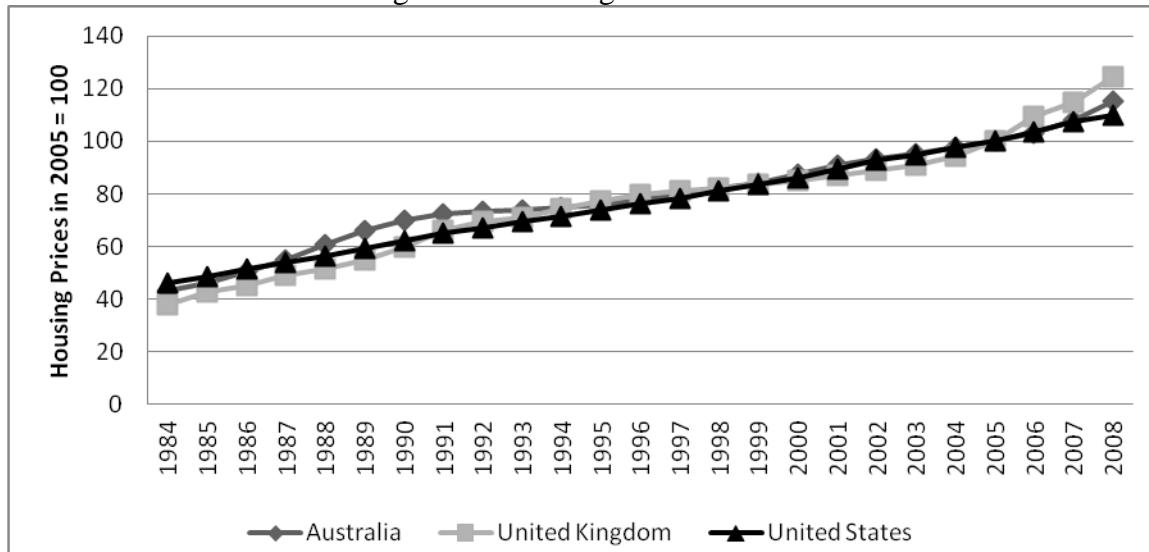
Further, the financial sectors in Australia, the United Kingdom, and the United States comprise about the same portion of their countries' GDP and they have similar levels of development. The financial services sector makes up about 7% of the U.K.'s GDP,²² about 7-8% of the U.S.'s GDP,²³ and about 9-10% of Australia's GDP.²⁴ The World Economic Forum ranked these three nations as the top three countries in terms of financial development in its 2009 Financial Development Report.²⁵ In addition, all three nations undertook significant deregulation of their financial services sectors beginning in the late 1970s and early 1980s, which ultimately led to the adoption of legislation to significantly restructure how each nation regulated financial services in the late 1990s.²⁶

The housing markets in Australia, the United Kingdom, and the United States also share some common features. All three nations have had relatively similar home owner occupancy rates for more than twenty-five years as shown in Figure 9. They have experienced significant growth in their housing prices over the last twenty-five years as illustrated in Figure 10. Having comparable housing markets is important because of the prominent role that the housing plays in individuals' asset portfolios. For example, in the United States, the equity value of an individual's primary residence comprises the largest share of his asset portfolio for any single asset class.²⁷

Figure 9: Owner-Occupancy Rates²⁸

Country	1980	1990	2002-2004
Australia	71	72	72
United Kingdom	58	65	69
United States	65	64	68

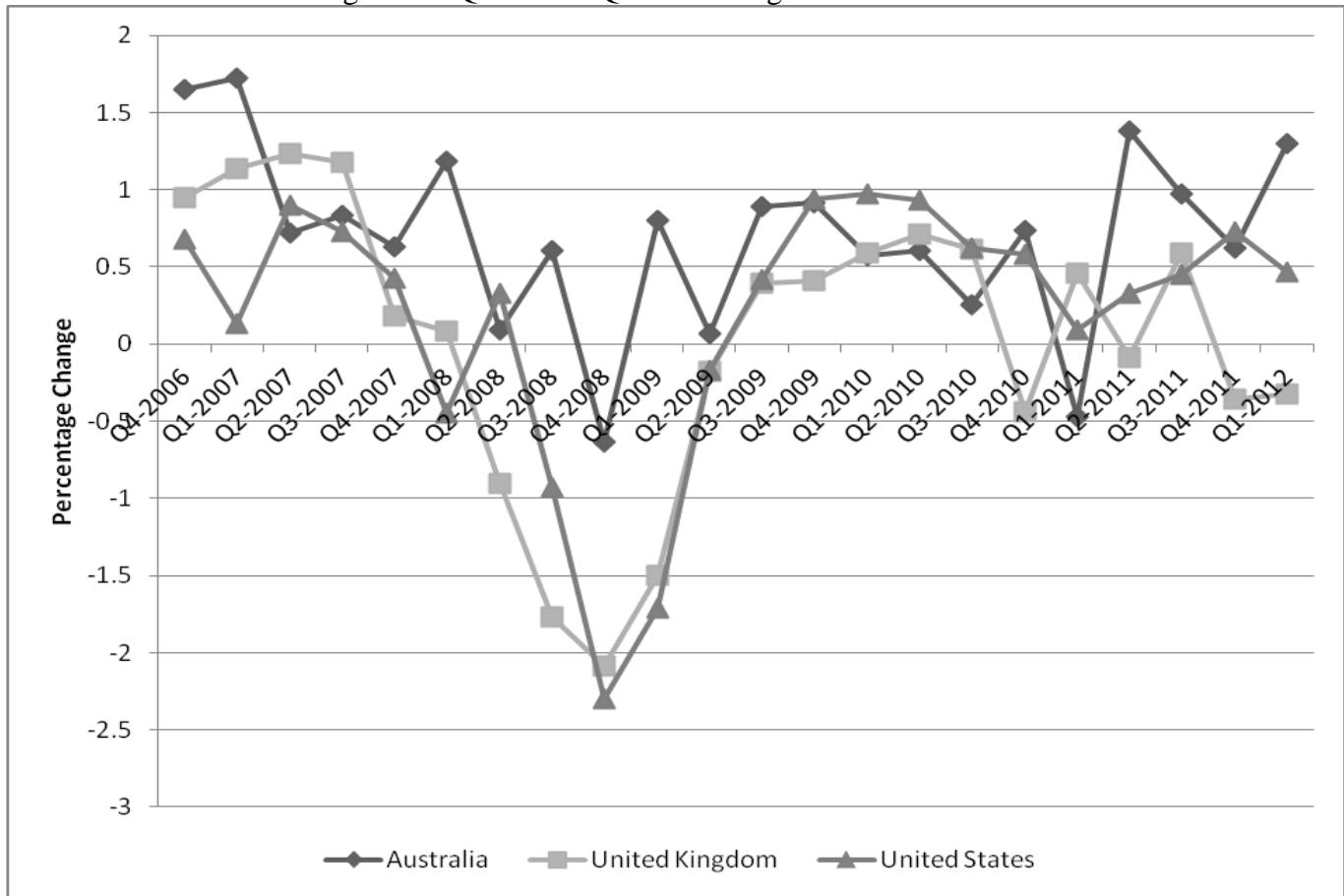
Figure 10: Housing Prices Index²⁹



Thirdly, the regulatory structure to supervise the financial services industry and pensions differs significantly in each of these countries. The United States employs a mixture of institutional and functional regulation

Finally, these nations provide an interesting point of comparison because Australia has had a very different experience during the recent financial crisis than the United States and the United Kingdom. For example, Australia did not lapse into a recession as a result of the recent financial crisis as illustrated in Figure 11 below.³⁰ The United Kingdom's recession was longer than the United States' recession. The United Kingdom's recession began in second quarter of 2008 and did not end until the fourth quarter of 2009.³¹ The United States did not go into recession until the third quarter of 2008 and exited it in the third quarter of 2009.³² The differences in pension regulation may have contributed to these different outcomes.

Figure 11: Quarter-to-Quarter Change in GDP³³



II. A BRIEF HISTORY OF PRIVATE PENSIONS AND THE SHIFT TO DEFINED CONTRIBUTION PLANS

Prior to the mid-19th century, most workers continued to work until they chose to stop or were no longer capable of working.³⁴ Pensions generally did not exist, except for certain types of government workers.³⁵ While the first pension plan in the United States was created in 1759, the first corporate pension plan was not created until 1875.³⁶ The rise in the concept of pensions is dramatically illustrated in Figure 12, which shows the frequency of the use of the word "pension" in the 5.2 million books found in Google Labs N-gram Viewer database.³⁷

Figure 12: Use of the Word "Pension" in Books From 1700 to 2000³⁸



In the late 1800s, corporations began to limit the number of older workers on their staffs by restricting the hiring of older workers and instituting mandatory retirement schemes that forced workers who had reached a given age to retire.³⁹ Corporations wanted younger and more efficient workers due to the increase competition brought about by industrialization and the increasing national markets created by railroads.⁴⁰ Some corporations provided pensions as a means of encouraging workers to voluntarily retire at a given age and to mitigate any feelings of guilt that owners or managers might feel about firing older workers who lack adequate resources to live on.⁴¹ Seebohm Rowntree, one of the heirs and directors of Rowntree's, a British chocolate manufacturer, captured these sentiments in the statement that he made when his family's business introduced a pension plan. He noted:

Many firms may hesitate to adopt a Pension Scheme . . . but it is probable that these very firms carry heavy costs in 'hidden pensions' without realising the fact. If a firm establishes a liberal pension scheme it will doubtless at the same time fix a definite retiring age and will thus never find itself with a number of older workers of low working capacity drawing full pay . . . such employees are very costly, not only does the firm lose on them individually but their presence tends to lower the pace and lessen the output of the whole shop . . . But they are kept on because they have worked faithfully for a great number of years and the management does not care to dismiss them.⁴²

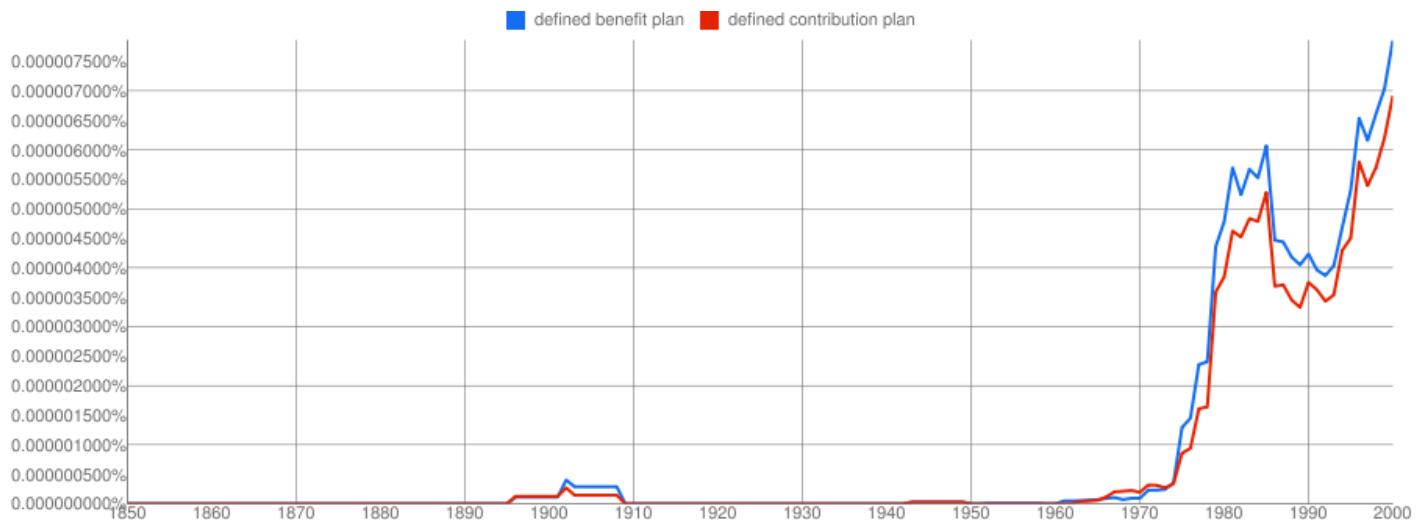
In addition, corporations provided pensions to reduce turnover by providing an incentive for productive workers to remain with the same employer for long periods of time in order to collect their pensions.⁴³

Pressure for more corporations to offer pensions arose from unions, who viewed the state pensions offered in Australia, the United Kingdom, and the United States as being too paltry to provide a comfortable retirement.⁴⁴ The fact that businesses in these nations were allowed to deduct the costs of providing pensions to their workers from their taxes as a business expense also aided the growth of private pensions.⁴⁵ The provision of private pensions in the United States also received a significant boost from World War II and the wage controls that the U.S. government instituted during the war.⁴⁶ Pensions, like other fringe benefits including healthcare,

were exempt from these wage controls.⁴⁷ As a result, providing employees with pensions offered employers a means of getting around those controls and enable them to attract better workers. At the beginning of U.S. involvement in World War II in 1940, private pensions covered 4.1 million workers but by the end of the war, the number of workers covered by private pensions had increased 50% to 6.4 million.⁴⁸ In the postwar years, employers continued to offer fringe benefits, including pensions as a means of attracting workers. Between 1945 and 1950, the number of workers covered by private pensions had again increased by roughly 50% from 6.4 million in 1945 to 9.8 million in 1950.⁴⁹

Prior to the 1980s, most government and corporate pensions consisted of defined benefit plans, under which the government or the business paid a fixed amount per annum to a retired worker until his death.⁵⁰ Corporate defined benefit plans usually calculated the amount paid based on the years of service and the salary earned while working for the firm.⁵¹ Defined contribution plans, in contrast, allowed an employee or his employer or both to set aside certain funds in an account for the benefit of the employee at retirement.⁵² Defined contribution plans usually contain limitations on the amounts that the employee or employer can place in these accounts, when the funds can be withdrawn without penalty, what types of financial instruments the funds could be invested in while in the account, and, in some countries, what types of financial instruments the funds could be invested when withdrawn from the account.⁵³ The rise in this distinction between pension plans that are defined benefit plans and those that are defined contribution plans is reflected in the use of these terms, as illustrated in Figure 13.

Figure 13: Use of "Defined Benefit Plan" and "Defined Contribution Plan" in Books From 1850 to 2000⁵⁴



All three nations are increasing relying on defined contribution pension schemes or individual retirement account-type plans rather than defined benefit plans.⁵⁵ Australia has gone the farthest in this regard. In 1992, Australia enacted the Superannuation Guarantee (Administration) Act 1992⁵⁶ and the Superannuation Guarantee Charge Act 1992⁵⁷, which required all employers to make a tax deductible contribution equal to a fixed percentage of an employee's salary into a superannuation plan on behalf of their employees or pay a charge equal

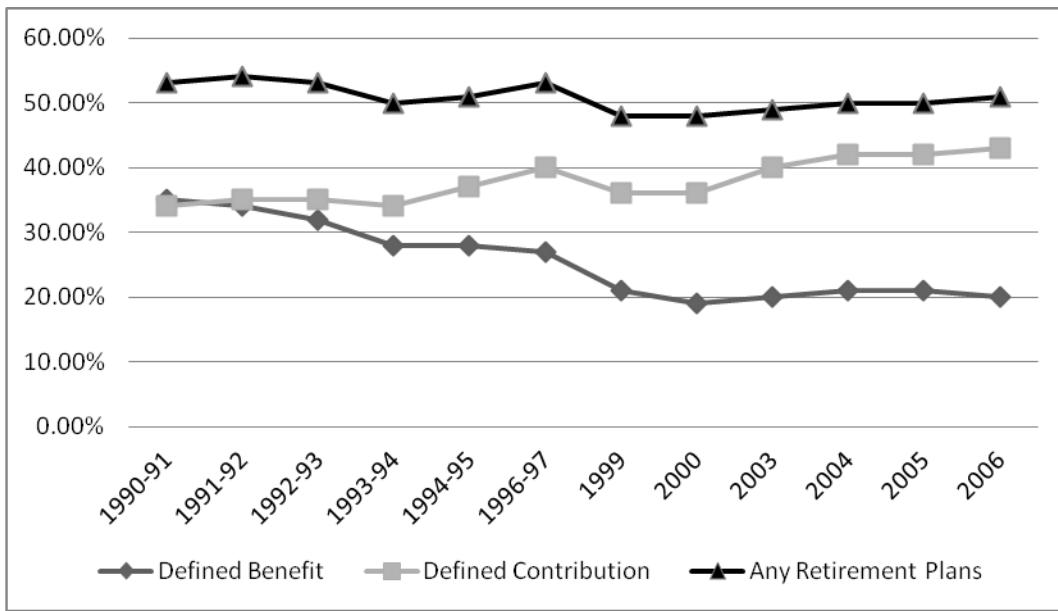
to the shortfall in contributions for individual employees, an interest fee, and an administration fee.⁵⁸ The law covers all employees earning AUS\$450 or more per month.⁵⁹ The mandatory contribution rate has been 9 percent since 2002-03.⁶⁰ In 2005, Australia's parliament amended the superannuation laws to allow an employee to designate any complying superannuation fund under the law into which the employer's contributions must go on behalf of the employee.⁶¹

As a result of this mandatory pension scheme, approximately 90 percent of Australia's workforce was covered by a pension by 2002.⁶² Most employers in Australia elected to make their required contributions to defined contribution plans because it was easier to meet their superannuation obligations using such plans than it was using defined benefit plans and defined contribution plans were less expensive than defined benefit plans.⁶³

The shift to defined contributions has been dramatic. In the early 1980s, defined benefit plans comprised over 80 percent of all of the pension plans in Australia.⁶⁴ By 2005/2006, only a small minority of employees were covered solely by defined benefit plans in Australia, while 97 percent of the employees with pension plans had assets in defined contribution plans, either alone or in combination with a defined benefits plan.⁶⁵ In addition, Australian superannuation funds held only AUS\$183 billion in 1993 but, by 2010, they held over AUS\$1 trillion and they are projected to hold AUS\$6.1 trillion by 2035.⁶⁶

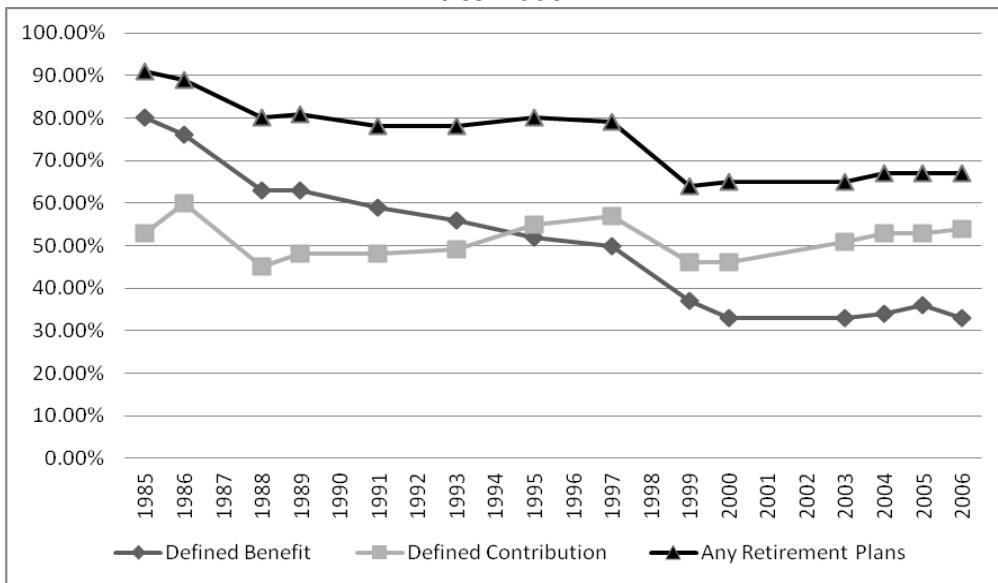
In the United States, the percentage of employees with some sort of pension plan has remained relatively constant over the past two decades while the percentage that have defined benefit plans has declined and the percentage that have defined contribution plans has risen. Figure 14 illustrates this. In 1990-91, the percentage of all workers with some sort of pension plan was 53%.⁶⁷ In 2006, 51 percent of private sector employees participated in some form of pension plan in the United States.⁶⁸ In 1990-91, slightly more of those with pension plans had a defined benefit plan rather than a defined contribution plan.⁶⁹ Only 20 percent of private sector employees in the United States participated in a defined benefits plan in 2006 while 43 percent of all private sector employees participated in a defined contribution plan in 2006.⁷⁰

Figure 14: Percentage of All Workers in the United States
with Private Pension Plans⁷¹



Most employees with retirement plans work for medium and large size private firms.⁷² When looks at just medium and large private establishments, the shift from defined benefit plans to defined contribution plans is even more apparent. The percentage of full-time employees in U.S. medium and large firms that participated in any pension plan declined from 91 percent in 1985 to 67 percent in 2006.⁷³ During this period the percentage participating in defined benefit pension plans at these types of firms declined from 80 percent in 1985 to 36 percent in 2000 while the percentage participating in defined contribution plans grew from 41 percent in 1985 to 50 percent in 2000.⁷⁴

Figure 15: Percent of full-time employees in medium and large private establishments participating in defined benefit and defined contribution retirement plans, selected years, 1985-2006⁷⁵



Of the three nations, the United Kingdom has shifted the least towards defined contribution plans. Like the United States, only about half of the employees in the United Kingdom belonged to a private pension scheme in 2006.⁷⁶ The United Kingdom has three categories of defined contribution plans: occupational money purchase plans, group personal pension plans, and individual personal pension plans.⁷⁷ While the numbers of active members of defined contribution plans has not grown substantially in the past decade, their share of the number of active members of any private pension plan has.⁷⁸ The reason for this is the steady decline in the number of active members of defined benefit plans.⁷⁹ This is illustrated in Figures 16 and 17. This trend is unlikely to reverse as most of the active members of UK defined benefit plans belong to closed plans, which are not admitting any new members.⁸⁰

Figure 16: Millions of Active Members of U.K. Private Pension Plans⁸¹

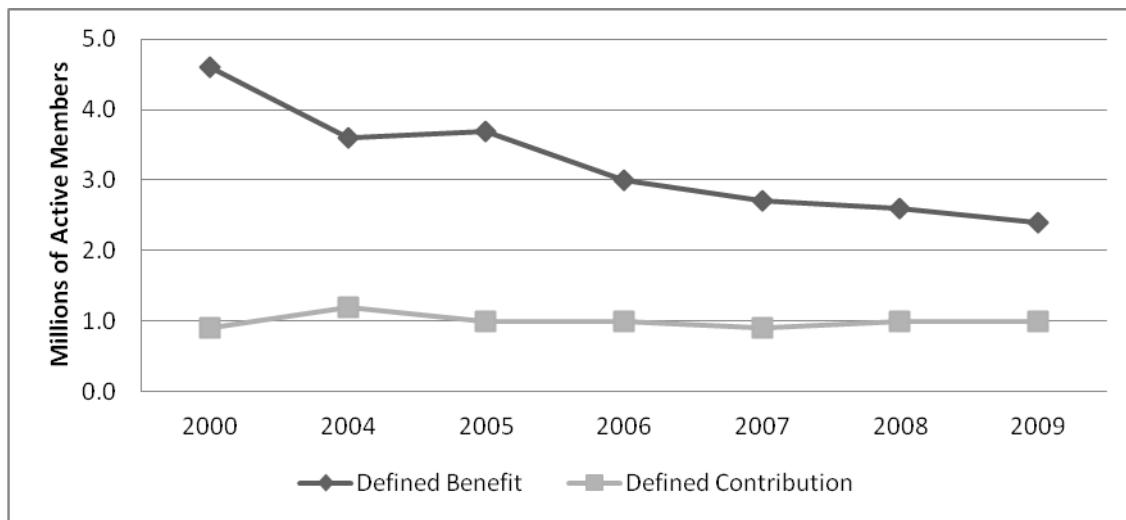
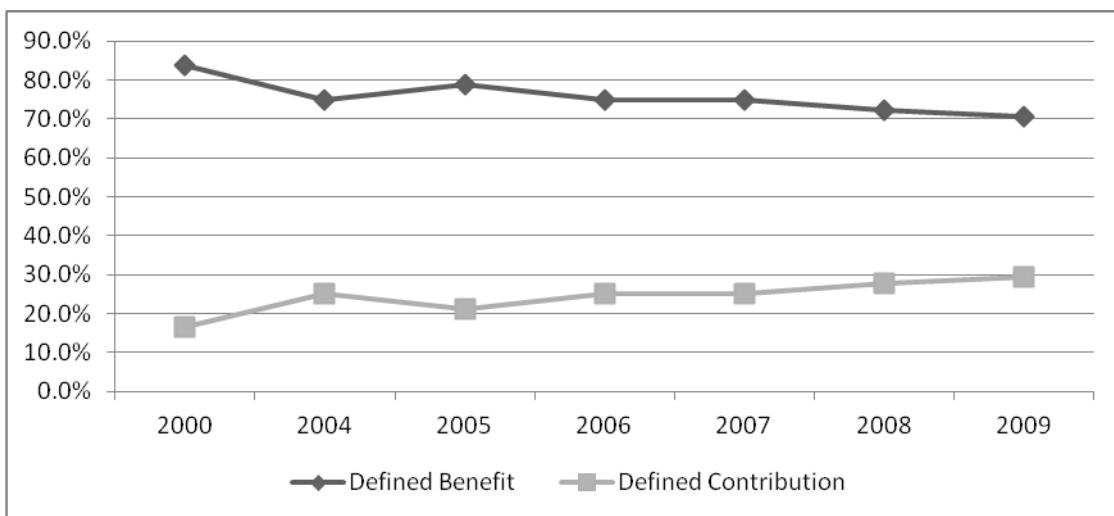


Figure 17: Percentage of Active Members Participating in Private Defined Benefit Plans and Defined Contribution Plans⁸²



III. Overview of the Regulatory Structures for Financial Services and Pensions

To understand why all three nations have shifted to defined contribution schemes, one needs to understand the different regulatory regimes for defined benefit plans and defined contribution plans in each nation and the costs and risks associated with each type of plan as a result. While the regulatory regimes have some similarities, their differences are striking and at least some of the negative effects of the shift from defined benefit plans to defined contribution plans in the United States might be mitigated if the United States were to adopt some of the procedures used by Australia and the United Kingdom. This does not mean that the Australian and UK regimes are trouble-free. Both have undergone major reviews within the past six years that have highlighted their deficiencies. Nevertheless, the United States would be foolish not to learn from their experiences.

The regulatory structures of Australia, the United Kingdom, and the United States represent several different regulatory schemes. Regulation in the United States and, at times, the United Kingdom operates as a mixture of functional and institutional regulation. Functional regulation focuses on regulating based on the function (or classification) of the type of product or service rather than the institution that provided it.⁸³ For example, state insurance commissions regulate the sales of insurance, the U.S. Securities and Exchange Commission (SEC) and the state securities regulators regulate the sale of securities, the Commodities Futures Trading Commission (CFTC) regulates options and futures, and the federal and state banking regulators regulate banking services and products. Institutional regulation, by contrast, focuses on regulating based on the classification of the institution providing the product or service and not based on the classification of the product or service being offered. Bank and thrift regulators, instead of the SEC, continue to regulate some of the securities activities of banks and thrifts, such as commercial paper and exempted securities, private placements, asset-backed securities, derivatives, third-party networking arrangements, trust activities, employee and shareholder benefit plans, sweep accounts, affiliate transactions, and safekeeping and custody services.⁸⁴ In addition, prudential regulation, which focuses on the maintaining the financial soundness of a particular business, is done on an institutional basis. As a result, the banking regulators set the capital adequacy standards for banks, the insurance regulators set the capital adequacy standards for insurance companies, and the securities regulators set the capital adequacy standards for securities broker-dealers.

Another way of organizing regulatory structures is by objective or by the risks that the regulator is seeking to control. This method is employed by Australia, which has set up one regulatory agency to regulate the prudential risk posed by all financial institutions and another regulatory agency to regulate the market conduct risks posed by all financial institutions. The United Kingdom has also used this approach at times over the past decade. The United States, however, generally does not use this approach, although the creation of the Consumer Financial Protection Bureau and the concentration of prudential regulation for systemically important financial conglomerates in the hands of the Federal Reserve have moved the United States slightly in this direction. Usually, however, each U.S. agency has the power to regulate all of the risks posed by the particular type of products or institutions that it supervises. As a result, a financial services firm can be subject to overlapping and conflicting regulations in the United States when it offers hybrid products that are regulated by multiple agencies or when it offers a range of products that are regulated by different agencies. For example, variable annuities are hybrid products that are classified as both insurance and as securities.⁸⁵ As a result, they are subject to regulation by both insurance regulators and securities regulators.

These philosophical differences over how to organize the regulatory bodies also translate into differences in pension and financial services regulation in each nation. The descriptions below provide a very general overview of how pensions are regulated in all three nations. An extremely detailed description of pension regulation in any one of these nations would require at least one very long book, or possibly several books, to do justice.

A. The United States

The primary law governing pension funds in the United States is the Employee Retirement Income Security Act of 1974 (ERISA).⁸⁶ Three agencies are tasked with enforcing

this law: the Employee Benefits Security Administration (EBSA) within the U.S. Department of Labor,⁸⁷ the Internal Revenue Service (IRS) within the U.S. Department of the Treasury, and the Pension Benefits Guaranty Corporation (PBGC).⁸⁸ The Board of Directors for PBGC is comprised of the Secretary of Labor, the Secretary of the Treasury, and the Secretary of Commerce.⁸⁹

ERISA requires that a business offering a defined benefit plan to its employees must establish a trust to manage the plan.⁹⁰ The trustees are to manage the plan in the best interests of the beneficiaries, not the business sponsoring the plan.⁹¹ While the business and the defined benefit plan trust are separate legal entities and the sponsoring firm is not supposed to influence the trust's investment decisions, evidence exists that the sponsoring businesses do influence trustees' investment decisions.⁹² EBSA enforces these fiduciary standards and the disclosure requirements set forth under ERISA. EBSA may investigate plans and seek both criminal and civil penalties for violations of the law.⁹³ It may resort to litigation, if necessary, to enforce ERISA.

PBGC insures that the workers covered by defined benefit plans receive at least a portion of the benefits that they were promised under those plans.⁹⁴ PBGC does not cover other types of retirement benefits, such as healthcare plans or defined contribution plans.⁹⁵

PBGC maintains four funds on the books of the Treasury from which it pays out benefits - one for the basic benefits guaranteed to single-employer plans, one for the basic benefits guaranteed to the multiple-employer plans, one for the nonbasic benefits guaranteed to single-employer plans, and one for the nonbasic benefits guaranteed to the multiple-employer plans.⁹⁶ In order to support these funds, PBGC charges premiums for the insurance that it provides to the plans covered by it.⁹⁷ The Deficit Reduction Act of 2005 (DRA)⁹⁸ raised the levels of the premiums that PBGC charges in order to reduce its deficit, which is the difference between PBGC's total assets and the present value of future benefits it must pay out. Today a single-employer plan must pay \$30 per participant covered by it and a multiple-employer plan must pay \$8 per participant covered by it.⁹⁹ The PBGC can also collect additional premiums from underfunded single-employer pension plans at a rate "\$9.00 for each \$1,000 (or fraction thereof) of unfunded vested benefits under the plan as of the close of the preceding plan year."¹⁰⁰

The higher premiums initially helped reduce PBGC's deficit. PBGC's deficit has grown in the wake of the financial crisis and the wave of new single-employer and multiple-employer plans trusted to PBGC. For example, between Aug. 1, 2007 and March 31, 2011, PBGC took control of over 440 single-employer pensions covering over 355,700 participants.¹⁰¹

Figure 18: Summary of PBGC's Financial Position
For FY2001-2010¹⁰²
(in millions of US dollars)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total Assets	21,768	25,430	34,016	38,993	56,470	59,972	57,241	64,612	68,736	77,827
Present Value of Future Benefits	13,497	28,619	44,641	60,836	69,737	69,143	69,235	59,996	83,035	90,022
Net Position	7,732	(3,638)	(11,238)	(23,305)	(22,776)	(18,142)	(13,111)	(10,678)	(21,077)	(21,594)

The Pension Protection Act of 2006 ("PPA")¹⁰³ was billed by its proponents as the most sweeping pension reform in the United States since ERISA was enacted in 1974. It changed the

definition of when a pension fund would be considered fully funded single-employer defined benefit plans, single employer money purchase plans, and multiple employer defined benefit plans.¹⁰⁴ For example, a single-employer defined benefit plans would no longer be considered fully funded if it possessed 90 percent of the funds needed to cover the present value of future benefits but now needs to possess 100 percent of the funds needed to cover the present value of future benefits owed by the fund.¹⁰⁵

In addition, the PPA changed the interest rate used to calculate the present value of vested benefits.¹⁰⁶ Instead of the interest rate for 30-year Treasury securities, a corporate bond yield curve would be used.¹⁰⁷ The corporate bond yield curve is defined as "a yield curve which is prescribed by the Secretary of the Treasury for such month and which reflects the average, for the 24-month period ending with the month preceding such month, of monthly yields on investment grade corporate bonds with varying maturities and that are in the top 3 quality levels available."¹⁰⁸

The PPA also changed several of the tax rules governing defined contribution plans. It amended section 401(a) of the Internal Revenue Code (IRC) to allow an employee to sell any investments in his employer's securities held in his defined contribution plan and to reinvest the funds in one of the other investment options provided by the plan.¹⁰⁹ It also required employers to offer at least three investment options other than the employer's securities.¹¹⁰ Section 904 of the PPA allows the employer matching contributions into an employee's defined contribution plan to vest within five years or for some portion of them to vest during a three to seven year period.¹¹¹ This provision permits faster vesting of employer contributions than the previously allowed.

In addition, the PPA amended ERISA to make it easier for employees with defined contribution plans to obtain investment advice. Section 601 of the PPA allows fiduciaries of the defined contribution plan, including the entity sponsoring the plan, to provide investment advice to plan participants under certain conditions.¹¹² Previously such advice was prohibited because of the potential for the investment advice to be tainted by conflicts of interest. Prior to this change, employers and the firms managing the funds offered within the defined contribution plan were reluctant to do more than provide employees with the basic details about the offered funds. Previously, they would not, for example, suggest how an employee might diversify his holding among the plan's funds in order to achieve his investment goals. Following this change, employers and firms managing the funds can provide such advice. For employees who cannot afford to hire independent investment advisors, this change enables them to become better informed prior to making decisions about how to invest the funds in their account.

In addition to the PWBA and the PBGC, pension funds may also have to comply with regulations from other federal and state financial services regulators depending upon the types of products that they offer or invest in. For example, defined contribution plans offer mutual funds which are regulated by the Securities and Exchange Commission (SEC). If they offer commodities funds, futures or options, then the Commodities Futures Trading Commission (CFTC), which regulates those products, will also affect their operations. If they offer annuities, then they will have to comply with the regulations of the state insurance commissioners in the states in which they sell those products. As there are over 115 federal and state agencies that regulate some aspect of financial services, pension funds may have to comply with a wide range of laws and regulations if they have plan participants in all fifty states.¹¹³

B. Australia

The Australian twin peaks approach organizes its regulatory agencies based on their risks that are designed to control.¹¹⁴ Australia created the Australian Securities and Investment Commission ("ASIC") to regulate market conduct risks, such as market integrity and consumer protection issues, and the Australian Prudential Regulation Authority ("APRA") to regulate prudential risks.¹¹⁵ These two agencies are responsible for regulating these risks for the entire financial services sector in Australia, including most pension schemes.¹¹⁶ Any pension scheme that is classified as an "excluded scheme" does not fall within the ambit of ASIC and APRA and is instead covered by the Australian Taxation Office ("ATO"). An "excluded scheme" is one with less than five employees and because they are so small are granted certain exemptions and concessions from the standard pension regulations.

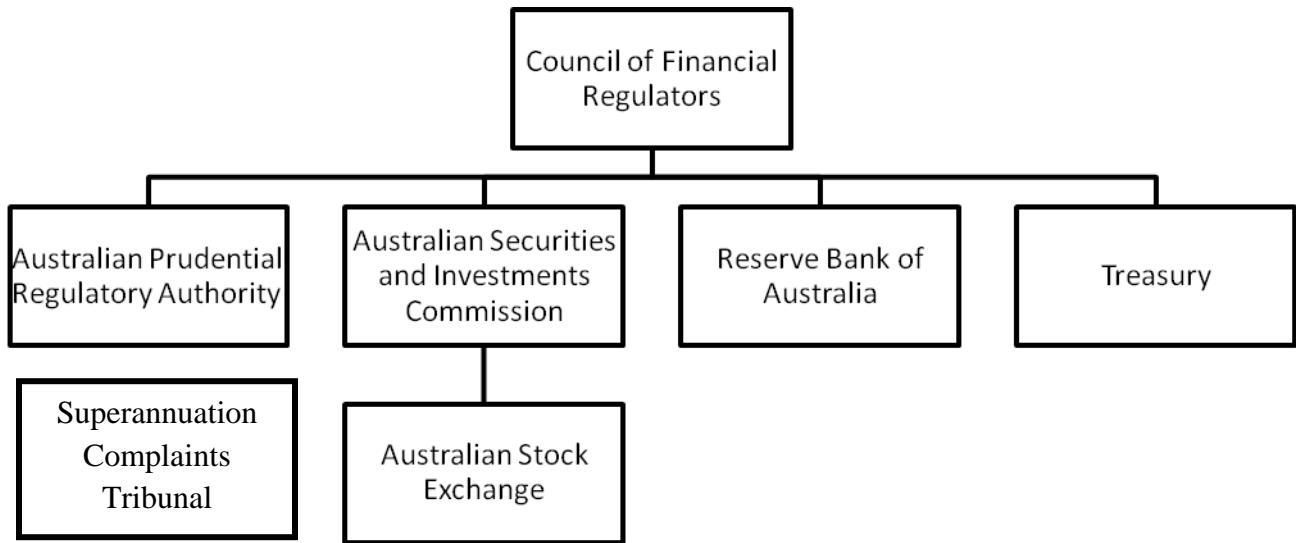
Like the prudential regulators in the United States, APRA conducts on-site visits and examinations to assess the financial stability of the entities under its supervision.¹¹⁷ APRA uses PAIRS, which stands for Probability and Impact Rating System.¹¹⁸ It assesses the likelihood that a financial firm will be able to meet its obligations as they come due and the impact that a financial firm will have on the Australian financial system if it fails.¹¹⁹

ASIC operates as Australia's financial services, market, and corporate regulator. It combines not only the consumer protection function of the banking, securities, and insurance regulators in the United States but it also encompasses many of the corporate law elements that are relegated to the states within the United States.¹²⁰ ASIC also regulates all of Australia's financial markets, including the Australia Stock Exchange ("ASX").¹²¹ ASIC licenses and regulates financial services, including superannuation funds, insurance, securities, derivatives, and managed funds, to protect consumers against fraudulent and deceptive practices.¹²² As part of receiving a license from ASIC, a financial services firm agrees to: (1) operate in a manner to ensure that it provides its products and services "efficiently, honestly and fairly," (2) take steps to employ "adequately trained" and "competent" staff, and (3) to have sufficient resources to operate.¹²³ The third requirement, however, is waived for firms that are subject to prudential regulation by APRA in order to avoid conflicts and duplication between the regulatory requirement imposed by ASIC and APRA.¹²⁴ ASIC has a Consumer Advisory Panel to provide feedback on ASIC's regulations and performance and to provide advice on consumer protection issues.¹²⁵

While the Australian system is called a twin peaks model, the ASIC and the APRA are not the only agencies which regulate the financial system. The Reserve Bank of Australia ("RBA") regulates systemic risks to the financial system, primarily by setting monetary policy.¹²⁶ The Australian Treasury also plays a key role by advocating policy reforms to enhance financial services regulation.¹²⁷ In addition, the Australian Competition and Consumer Commission ("ACCC") affects financial services regulation through its management of Australia's anti-competition laws, which are equivalent to the antitrust laws in the United States.¹²⁸ In addition, some specialist financial firms are regulated by the governments of the provinces and territories, not ASIC.

In order to coordinate the major regulators of financial services, the Australian Government established the Council of Financial Regulators, which consists of APRA, ASIC, RBA, and the Treasury.¹²⁹ The Council was not created through legislation and has no regulatory powers independent from those possessed by its members.¹³⁰

Figure 19: Australian Regulatory Structure
for Pensions and Financial Services



Australia's Superannuation Industry (Supervision) Act of 1993 ("SISA")¹³¹ and its Superannuation Guarantee Charge Act ("SGCA")¹³² are the two main laws that regulate Australia's pension system, although there are many others. The SGCA requires employers to contribute 9 percent of an employee into a superannuation fund, which can either be a defined benefit plan or a defined contribution plan.¹³³ In practice, almost all Australian employers have opted for payments into defined contribution plans. These defined contribution plans are set up as trusts, with half of the trustees appointed to represent the employer and half of the trustees appointed to represent the employees.

The employer must make these payments for all of its employees, except for those that fall within certain parameters. Employers do not have to pay for employees who earn less than AUS\$450 per month, who are over age 70, who are under 18, or work less than 30 hours a week.¹³⁴ An employer may deduct these costs when calculating its taxes. If the employer, however, chooses not to make such contributions, the Australian government will levy a superannuation guarantee charge ("SGC") on employer.¹³⁵ The amounts paid to cover the SGC are not tax deductible. Employers subject to an SGC must also pay administration fees and interest on any arrears payment. The SGC is administered by the ATO. The ATO will immediately transfer large SGC payments into the employees' superannuation funds but may retain small SGC payments in the ATO's Superannuation Holding Accounts Reserve ("SHAR"). Employees who have very low incomes (between AUS\$450 and AUS\$900 per month) can opt out of the superannuation fund system and elect to receive the funds that would have been paid into the fund.¹³⁶

Self-employed Australians can voluntarily choose to contribute to a superannuation fund and may deduct up to AUS\$3000 from their taxes if they do so.

The Superannuation (Resolution of Complaints) Act 1993 created the Superannuation Complaints Tribunal ("SCT"), which investigates most complaints involving regulated superannuation funds, annuities, and retirement savings accounts ("RSAs").¹³⁷ The SCT has twenty members.¹³⁸ When a complaint is brought, three members will be selected to deal with it -- first through conciliation and if that fails, then through a formal review process.¹³⁹ If the

person bringing the complaint is unsatisfied with how the SCT has handled it, they may file a complaint with the Commonwealth Ombudsman.¹⁴⁰ The Commonwealth Ombudsman investigates complaints about any of Australia's administrative agencies as well as performing audits and inspections of these agencies.¹⁴¹

C. United Kingdom

Although the United Kingdom was frequently referred to a Single Regulator Model between 1998 and 2010, it, in fact, had three government entities with primary regulatory authority over the financial services system (the Financial Services Authority, the Bank of England, and the Treasury) as well as several special agencies to regulate pensions (the Pensions Regulator, the Pensions Protection Fund, and the Fraud Protection Fund). In 2010, the UK government announced that it was restructuring the way that financial services are regulated and will move some of the powers of the Financial Services Authority to the Bank of England. The statute formalizing these changes came into force in 2012.

Regulatory authority for most financial services, including pensions, was concentrated in the Financial Services Authority ("UK FSA") until April 1, 2013 when the Financial Services Act 2012 took effect.¹⁴² The UK FSA provided both prudential and market conduct supervision for financial services. Under the Financial Services Act 2012, the UK FSA was renamed the Financial Conduct Authority ("UK FCA"). The UK FCA is only responsible for market conduct regulations. On April 1, 2013, the Bank of England took over the UK FSA's prudential supervision functions. Between 1998 and 2013, the Bank of England was only responsible for monetary policy while the Treasury Department was responsible for "the overall institutional structure of financial regulation and the legislation which governs it, including the negotiation of EC directives" and for accounting to Parliament and the government for serious disruptions to the financial system, and for the financial sector's resilience to such disruptions.¹⁴³ In order to coordinate the activities of the UK FSA, the Bank of England, and the Treasury between 1998 and 2013, the United Kingdom formed the Tripartite Standing Committee on Financial Stability comprised of representatives of all three agencies.¹⁴⁴

Between 2004 and 2013, the UK FSA shared authority to regulate pensions with the Pensions Regulator. After April 1, 2013, the UK FCA shares authority with the Pension Regulator. The Pensions Regulator was created by the Pensions Act 2004.¹⁴⁵ The objectives of the Pensions Regulator are:

- (a) to protect the benefits under occupational pension schemes of, or in respect of, members of such schemes,
- (b) to protect the benefits under personal pension schemes of, or in respect of, members of such schemes within subsection (2),
- (c) to reduce the risk of situations arising which may lead to compensation being payable from the Pension Protection Fund (see Part 2), and
- (d) to promote, and to improve understanding of, the good administration of work-based pension schemes.¹⁴⁶

In order to protect defined benefit plan participants in the event that a plan became insolvent, the Pensions Act 2004 created the Pensions Protection Fund ("PPF"), which operates in ways that are similar to the U.S. PBGC. Prior to the Pensions Act 2004, the United Kingdom did not have any government agency that provided the type of insurance against the insolvency

of a defined benefit plan. The PPF is funded by a levy on all defined benefit plans covered by the PPF, the recovery of assets from the insolvent employers of pension plans that it takes over, the assets transfer to it when it takes over a pension plan, and the returns on its investments. Unlike in the United States where the amount charged to plans is set forth in the statute, the Board of the PPF is required every year to set the levy that will be charged to the covered plans.¹⁴⁷ The PPF does not have free reign to set any amount it wants. The Secretary of State sets the levy ceiling for each, which places a cap on the amounts that the PPF can charge.¹⁴⁸

When the PPF takes over a pension plan, the amounts that participants will receive depends upon whether they were already receiving benefits at the time of the insolvency. If they were, then the PPF will continue to pay the 100% of the amounts owed to them under the plan. If they were not, then the PPF will only pay 90% of the amounts owed to them under the plan from the date when they are eligible to begin collecting their benefits under the plan's terms.

The Pensions Act 2004 also created the Fraud Compensation Fund ("FCF") to protect pension plans that have lost money due to fraud. The FCF took over the functions of the Pensions Compensation Fund. Unlike the PPF, the FCF covers both defined contribution plans and defined benefit plans. The FCF is fund from a levy charged on all defined contribution and defined benefit plans. The rate is 25p per participant in the plans. The FCF will pay compensation if the following four conditions are met: (1) the pension plan is an eligible pension plan, (2) it is doubtful that the employer sponsoring the plan will be able to continue as a "going concern", (3) it is no possibility of the pension plan being rescued, and (4) the value of the plan's assets was reduced by a fraudulent act.¹⁴⁹

Figure 20: UK Regulatory Structure prior to April 1, 2013¹⁵⁰

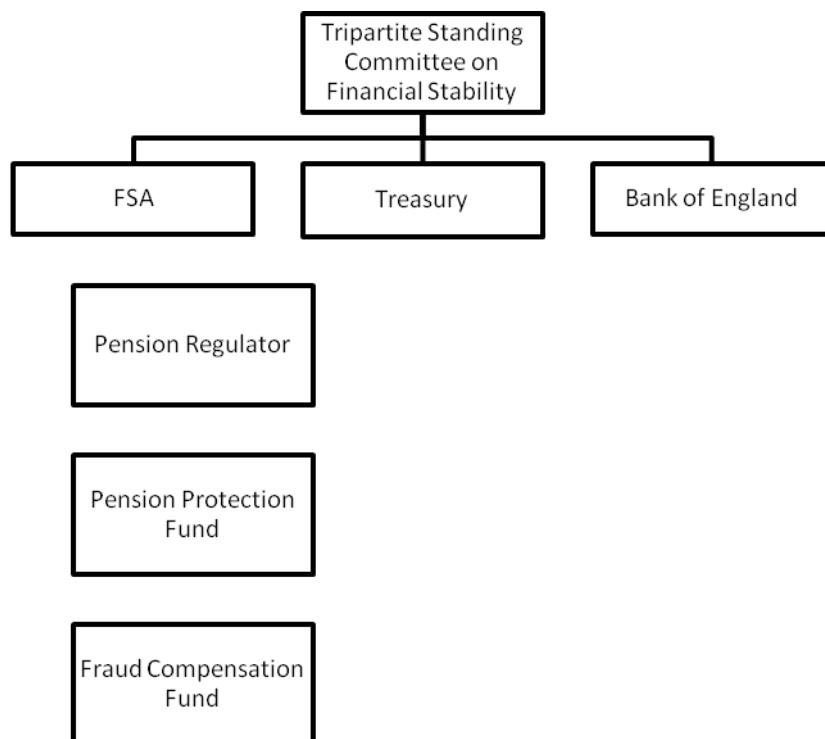
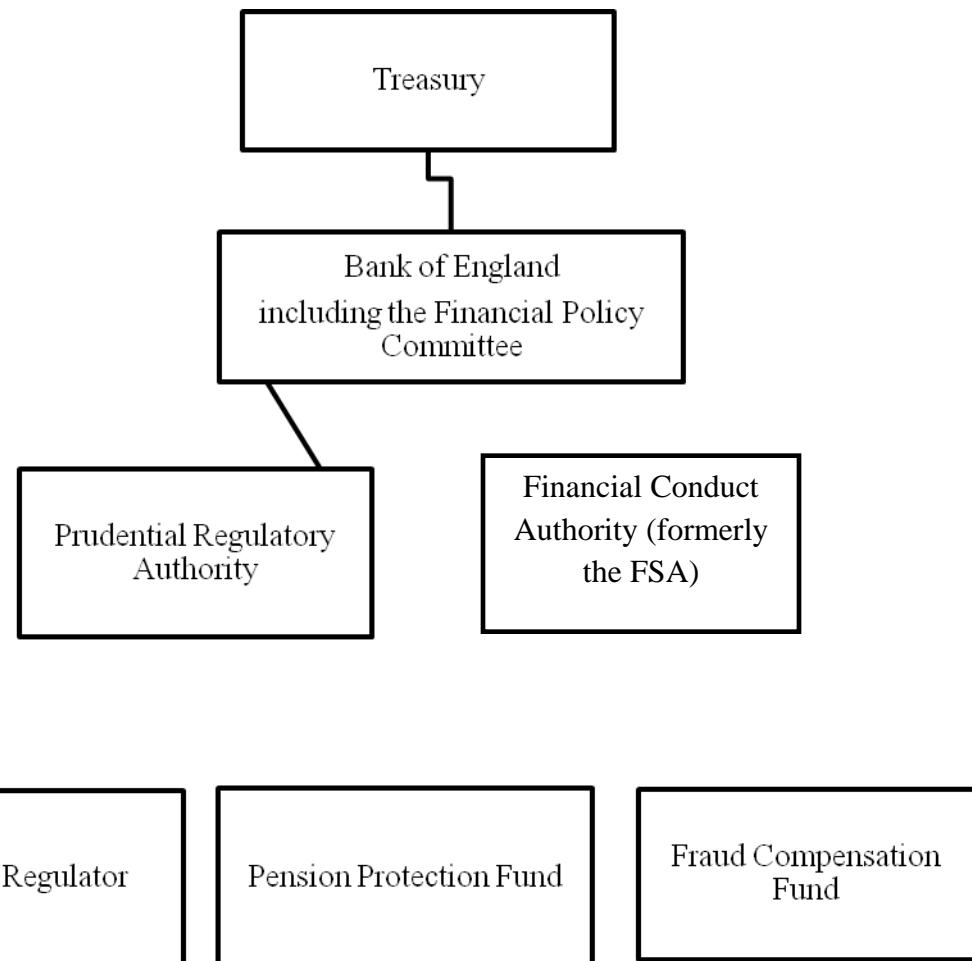


Figure 21: New UK Structure as of April 1, 2013¹⁵¹



IV. Impact of the Shift from Defined Benefit Plans to Defined Contribution Plans

The growth of defined contribution plans in all three countries has significant implications not only for workers but for the financial markets as well. Due to these plans, a larger percentage of the populations of Australia, the United Kingdom, and the United States are investing in financial products, either directly or indirectly, than they previously did and than people in many other OECD nations do. In order to assess what changes, if any, need to be made in light of this shift, the benefits and risks posed to workers and the financial markets need to be analyzed.

The benefits for workers of defined contribution plans include increased portability, quicker vesting of benefits, and a greater degree of personal autonomy over one's retirement future. The main risk for workers of defined contribution plans is that they will reach retirement with insufficient assets to live comfortably for the remainder of their lives and as a result, will spend some portion of their later years in poverty.

The primary benefit for the financial services industry of defined contribution plans is the chance to make significantly larger profits from managing the funds that flow through these plans and from taking advantage of the plans' participants who are relatively ignorant concerning financial markets. The risks posed to financial markets from these plans are increased likelihood of bubbles in the assets in which plan participants are allowed to invest and increased pressure on the remaining defined benefit plans to seek higher returns through alternative investments in order to keep the contributions from the establishments sponsoring the plans to a minimum. These risks potentially fed some of the trends that led to the recent financial crisis and could help fuel future financial crises if not addressed.

A. Impacts on Workers - Benefits

The benefits for workers of defined contribution plans include increased portability, quicker vesting of benefits, and a greater degree of personal autonomy over one's retirement future. The importance of these benefits should not be undersold.

The advantages of most defined benefit plans only accrued to workers who were willing or able to stay employed with the same employer for long periods of time. In addition, it usually took between 5-10 years for an employee to be deemed vested in his employer's defined benefit plan and thus, eligible to receive at least some benefits either when he left the enterprise to work elsewhere or retired. Beginning in the 1970s, worker mobility in all three nations increased dramatically. Today, the average worker in the United States changes jobs every 4.1 years.¹⁵² As a result, fewer workers became eligible to receive funds from a defined benefit plan.

Under the defined contribution schemes in all three nations, the participant is immediately vested in the funds that he contributes to the plan. In addition, an employee is able to roll these funds over into another defined contribution plan or receive a lump sum payment when he change jobs.

In addition, defined contribution plans avoid the risk that the employer sponsoring the plan will underfund the plan causing it to become insolvent and unable to pay the promised benefits. Bankruptcies and the threat of more bankruptcies of defined benefit plans led to the creation of the PBGC and the PPF. The insurance provided by PBGC and PPF is better than no insurance at all but neither will pay most workers 100 percent of what they were promised by their employers if the employers' pension plan becomes insolvent and is taken over by PBGC or PPF.

B. Impacts on Workers – Risks

1. Individuals fail to participate.

This risk applies more to the United States and the United Kingdom than it does to Australia because in Australia, only the self-employed and the very poor can opt out of its mandatory defined contribution scheme. In both the United States and in the United Kingdom, significant numbers of employees who are eligible to participate do not do so. In the United States, studies have shown that more than 25 percent of those who are eligible to participate do not.¹⁵³ For some, inertia or procrastination plays a role because most of the defined contribution plans offered are structured as "opt in" plans under which the employee has to take some action

in order to be covered, such as filing a form indicating which funds he would like his contributions invested. Some companies in these countries have adopted "opt out" defined contribution schemes, under which the employee is automatically enrolled in a default fund until he either takes the necessary steps to completely opt out of the plan or takes the steps necessary to select which funds he would like his contributions invested in.¹⁵⁴ Under these plans, the percentage of employees participating in the defined contribution plans offered substantially increased.

For some employees, however, the decision to not participate is completely rationale. They are simply too poor to afford to contribute to a defined contribution plan and to cover their daily needs at the same time.¹⁵⁵ Not surprisingly, younger employees, women, and minorities are found in higher numbers among low-income employees and as result, they are also less likely to participate in their employers' defined contribution plans.¹⁵⁶

2. Individuals who do participate fail to contribute enough.

One of the major problems with the defined contribution schemes in all three nations is the contributions into the system simply are too small. In the United States many individuals simply do not earn enough to meet current needs for food, housing, and other necessities and make contributions into a defined contribution plan.¹⁵⁷ Even when individuals do make enough, many of them fail to do so for long periods of time either due to their own procrastination or because their employer will not allow them to do so because they fit within one of the categories of employees that the employer has decided to exclude from being able to participate in its defined contribution scheme.¹⁵⁸

Even when they have been making contributions into a defined contribution plan, some workers will withdraw some or all of these funds or take out a loan against the funds in the plan in order to cover their debts (mortgage, credit cards, etc.) or some financial emergency because they have not set aside funds to cover such expenses as they arise. As a result, they deplete the funds in their defined contribution plans so that the funds are insufficient when they normally would be scheduled to retire. Another way that employees undermine their savings in their defined benefit accounts is by not rolling them over when they change jobs. When employees change jobs, they frequently take any contributions that they have made into their former employer's defined contribution scheme as a lump sum payment, even though they will have to pay a tax penalty on these funds, rather than rolling the money over into their new employer's defined contribution plan, assuming it has one, or rolling it over into an IRA.

Finally, it is worth noting that the fees charged to manage the funds offered within the defined contribution plan are frequent much higher than the administrative fees paid by defined benefits plans. These higher fees cut into the participant's funds for retirement and impair the efficiency of defined contribution plans as a retirement vehicle.

Some of the same problems arise for Australian workers. First, very poor Australians may opt out of the superannuation fund scheme and elect to have the moneys that their employer would have paid into the scheme paid directly to them. In addition, self-employed Australians can choose to not participate in the superannuation fund system.

Second, some commentators have questioned whether 9 percent is the right level of contributions that employers should be making into the system, particularly for those who are poor. These commentators believe that it should be higher, perhaps as much as double or 18

percent of an employee's income, in order for these individuals to have accrued enough by retirement to live on. The Australian government has considered raising the level to 12 percent but has not yet taken the necessary steps to do so. The Labor Government in the 1990s considered instituting a matching program for Australians whose income fell below a certain threshold amount. Under the proposed program, the Australian government would match each dollar that low income individuals contributed or was contributed on their behalf by their employers.

Third, Australians can request that the trustee for the superannuation account or RSA provide release the funds in those accounts early if they qualify on compassionate grounds, which generally means that they can show that they are suffering an extraordinary hardship.¹⁵⁹ The regulations allow the release of funds on compassionate grounds under the following circumstances:

1. To pay for medical or dental treatment for the participant or one of his dependents and transportation to such treatment when the treatment is for a life-threatening illness or injury, alleviate acute or chronic physical pain, or improve an acute or chronic mental condition and the treatment is not covered by the public medical system or covered by the participant's private health insurance;
2. To provide mortgage assistance to prevent the foreclosure and sale of the participant's home;
3. To pay for modifications to a house or vehicle to accommodate the needs of the participant or one of his dependents with a severe disability;
4. To pay for care for a terminal medical condition; and
5. To pay for the expenses associated with the death of one of the participant's dependents, including his funeral, burial, or cremation.¹⁶⁰

If their trustee or RSA provider refuses to do so, they can petition APRA to order the release of the funds.¹⁶¹ Except under these circumstances, Australians cannot pull the funds out of their superannuation accounts before they reach age 55.¹⁶²

3. More Businesses are Suspending or Eliminating Their DC Matches

Employers in the United Kingdom and Australia do not offer matching contributions to their employees' defined contribution plans. So this problem is a unique feature of American defined contribution plans.

Originally employers offered matching contributions as a means attracting better workers or to help convince existing employees that switching from a defined benefits to a defined contribution plans was not such a bad deal. Matching contributions give workers an added incentive to participate in the defined contribution plan because it effectively gives each worker who does a slight salary increase over what they otherwise would have gotten.

In the recent financial crisis, however, many employers that had provided matching funds suspended or eliminated their programs as a cost-cutting measure. According to the Pension Rights Center, since June 2008 until May 2010, over 325 firms suspended or eliminated their matching contributions to their employees' 401(k) plans.¹⁶³ As the economy has picked up, some of these businesses have reinstated their matching programs. Over 65 of these businesses have reinstated all or part of the 401(k) matching contributions program.¹⁶⁴ Nevertheless, workers in

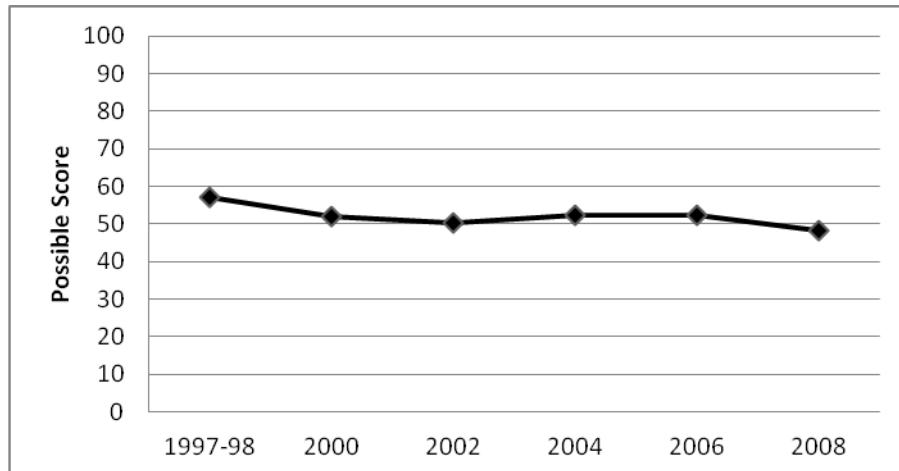
those plans have been put on notice that the matching program is expendable and may be cancelled in the future if management decides that it needs to save money.

4. Risks shifted from employers to individuals who are less qualified to bear the risk.

a. Individuals lack the financial skills to invest wisely. Most people learn their financial skills from their parents, not from formal classes in secondary school, university, or elsewhere. Unfortunately, many parents do not have well developed financial skills to pass along to their children.

One of the reasons that most people learn their financial skills from their parents or from experience is because such skills usually are not taught in secondary school or most university programs. Approximately 60 percent of Americans do not receive a college education.¹⁶⁵ High school, therefore, provides the one primary formal venue for teaching financial skills. Unfortunately, almost three-fourths of recent high school students are financially illiterate according to surveys conducted by the Jump\$tart Coalition.¹⁶⁶ In 2008, 73.9 percent of the high school students who took this test failed it.¹⁶⁷ Only 4.7 percent got a score that would have equaled a grade of C or better.¹⁶⁸ Figure 22 shows the average scores of high school seniors on a financial literacy test administered biannually by the Jump\$tart Coalition over the past decade.

Figure 22: Average Scores of American High School Seniors
on the Jump\$tart Financial Literacy Test
(Maximum Possible Score = 100)¹⁶⁹



Of those taking this financial literacy test between 1998 and 2006, roughly 32-43 percent indicated that they had no plans to obtain any college education.¹⁷⁰ In 2008, however, only 2.2 percent of the high school students who take the test, indicated that they had no plans to obtain any college education.¹⁷¹ No explanation was given for this sudden and dramatic change. It is possible that the recent financial crisis and the high levels of unemployment for those who only have a high school diploma or less has convinced some students that they need to obtain additional education following high school.

In 2008, the Jump\$tart Coalition administered the same financial literacy test that it administered to high school students to a sample of college students.¹⁷² Fortunately, college seniors did do significantly better than the high school students but were, on average, barely literate. The average score for the college seniors who took the test was a 64.5, or a D.¹⁷³

Perhaps these results are not surprising. After all most college students do not take courses in personal finance. Of those that do receive a college education, only about 18 percent major in business, although another 15 percent minor in business.¹⁷⁴ Business, however, is includes a wide range of disciplines. It is unclear what percentage of these business majors also majored or minored in finance.

The average Australian is not significantly more financially literate than the average American. When Australia set up its Twin Peaks system, one of the underlying assumptions was that its citizens "should be treated as rational and informed investors, with disclosure and market conduct controls being the main regulatory instruments with which to oversee the industry."¹⁷⁵ Unfortunately, the Cooper Review found that a majority of Australians were not financially literate.¹⁷⁶ It cited the 2006 Adult Literacy and Life Skills Survey of Australians conducted by the Australian Bureau of Statistics that found that on a practical numeracy test 53 percent of the 15-74 years surveyed could only reach the second of five levels and that on a problem-solving test 70 percent could only reach the second of five levels.¹⁷⁷ The administrators of the survey consider Level 3, or the next higher level above Level 2, as the "minimum required for individuals to meet the complex demands of everyday life and work in the emerging knowledge-based economy."¹⁷⁸

A survey on financial literacy in the United Kingdom found:

- low level of financial understanding among consumers;
- financial understanding is correlated with education and income levels;
- respondents often feel they know more about financial matters than is actually the case;
- consumers feel financial information is difficult to find and understand.¹⁷⁹

In 2004, the UK FSA considered as one of its main concerns the fact that "consumers are making financial decisions based on [an] inadequate understanding" of the financial products and services involved.¹⁸⁰

Even when formal financial skills classes are offered, little empirical evidence exists that such programs work. Financial literacy is a favorite solution proposed by politicians and academics to solve the lack of financial skills amongst most Americans. Currently, twenty different federal agencies are running fifty-six different financial literacy programs.¹⁸¹ A recent U.S. Government Accountability Office (GAO) report noted:

Federally funded financial literacy programs cover a number of topics (such as saving for retirement and avoiding fraudulent practices), target a range of audiences (such as schoolchildren, prospective homeowners, and investors), and include a variety of delivery mechanisms (such as classroom curricula, print materials, Web sites, broadcast media, and individual counseling).¹⁸²

In 2003, Congress attempted to get these programs to coordinate their efforts by creating the Financial Literacy and Education Commission.¹⁸³ In 2006, this commission issued the National Strategy for Financial Literacy, which the GAO criticized for primarily describing the existing programs and did not establish a strategic vision.¹⁸⁴ The commission issued a new national strategy in 2010 and has promised to issue a plan to implement this strategy in 2011.¹⁸⁵ The commission, however, has no independent staff or budget and cannot compel the agencies implementing the financial literacy programs to comply with its national strategy.¹⁸⁶ As a result, coordination and duplication problems persist.¹⁸⁷

Even if these coordination and duplication problems are fixed, however, little evidence exists that financial literacy programs actually improve people's financial skills. Politicians and others who support financial literacy programs, however, rely on a limited number of studies that purport to show that financial literacy works.¹⁸⁸ Unfortunately, all of these studies have serious flaws that undermine their ability to support the proposition that financial literacy programs work.¹⁸⁹

Without any empirical data to show that financial literacy programs work, the repeated calls for more financial educational programs becomes merely an expression, at best, of a hope that they will work or, at worst, an ideological view that allows some to continue to advocate the deregulation of the financial markets without having to deal with the market imperfections caused by the substantial portion of the public who lack the skills to successfully operate in such an environment.

While Australia recognizes the need for financial literacy programs, it does not believe that it is reasonable to rely on them as the sole solution to the lack of financial skills of a substantial portion of its population. The Cooper Review articulated as one of its Ten Policy Principles that:

Financial literacy is an important long term goal, but a compulsory superannuation system cannot depend on all its participants having the skills necessary to comprehend complex financial information or being investment experts.¹⁹⁰

With this principle in mind, the Cooper Review attempted to build into the superannuation system default options that would work for people who do not have the financial skills to select their own investment options from the range of choices offered.

b. Individuals are restricted in their choice of investments and thus, cannot adopt some of the strategies that large pension fund managers may use to safe guard their investments. In the United States, the employer sponsoring the 401(k) plan or similar plan heavily influences who will manage the plan and the range of options that it will offer. As long as the plan offers at least three reasonable options, other than the employer's stock, it is considered a valid plan under ERISA and the PPA. Initially, the average U.S. employee had a very limited number of funds from which to choose.¹⁹¹ Today the average defined contribution plan offers eighteen funds.¹⁹² This is still a far cry from the much wider range of investment options open to the defined benefit plan fund managers for any medium or large pension fund.

Even when they have a range of options, employees have a tendency to overinvest in the stock of their employer. This practice continues to routinely occur, despite the debacle that such investments had for the Enron employees. The PPA does require that employers allow

employees to sell off any of their employer's stock that they are holding in their defined contribution. This change is an improvement over what occurred with Enron, which severely restricted when employees could sell the Enron shares held in their defined benefit plans.

In Australia, a worker's employer enjoys some control over where the superannuation contributions go because they can choose to pay them into a defined benefit plan or a defined contribution plan. In practice, almost all employers pay these contributions into a defined contribution plan.

5. Individuals who receive lump sum payments or who have control over the withdrawals from their defined benefit accounts frequently do not manage their funds well.

All of the hard work that plan participants have engaged in to save and grow their defined contribution accounts can be undone if they do not manage the funds in a way to ensure that they do not outlive their funds. Some participants use lump sum payments to pay off debts or to go on a spending spree and as a result, they burn through their retirement savings too quickly.

This problem exists in both the United States and Australia. It was less of a problem in the United Kingdom prior to 2011 because the law required that bulk of the funds in a defined contribution plan be used to purchase an annuity between the time that the funds can first be withdrawn and age 75.¹⁹³ An annuity is an insurance policy that usually pays a fixed amount each month to the beneficiary for the remainder of their life. It ensures that the beneficiary will not outlive his funds. The size of the payments, however, depends on how much money is invested in the annuity and the life expectancy of the purchaser.

The current U.K. government passed a law to eliminate the compulsory annuitization requirement, which took effect on April 6, 2011.¹⁹⁴ The government promoted this measure as a way of providing individuals with greater flexibility to manage their own retirement funds.¹⁹⁵ It will also aid the government in reducing the U.K. deficit because the government will likely receive higher tax revenues as U.K. pensioners choose less tax efficient investment vehicles.

C. Impact on Financial Markets – Benefits

Obviously the major benefit for the financial markets from defined contribution plans are the revenues that they generate for the firms who manage the mutual funds and other products sold to plan participants. The mutual fund industry has been one of the greatest beneficiaries of this shift from defined benefit plans to defined contribution plans. In the 1950s and 1960s, mutual funds struggled to get individual investors interested in their products. Beginning in the 1970s with the creation of the individual retirement accounts in the United States and similar products in Australia and the United Kingdom, mutual funds began to grow. They took off in the 1980s with the growth of defined contribution plans. In 1980, only 5.2 percent of U.S. households owned mutual funds but by 2009, 43.0 percent did.

Figure 23: IRA Assets by Source
(billions of US dollars)

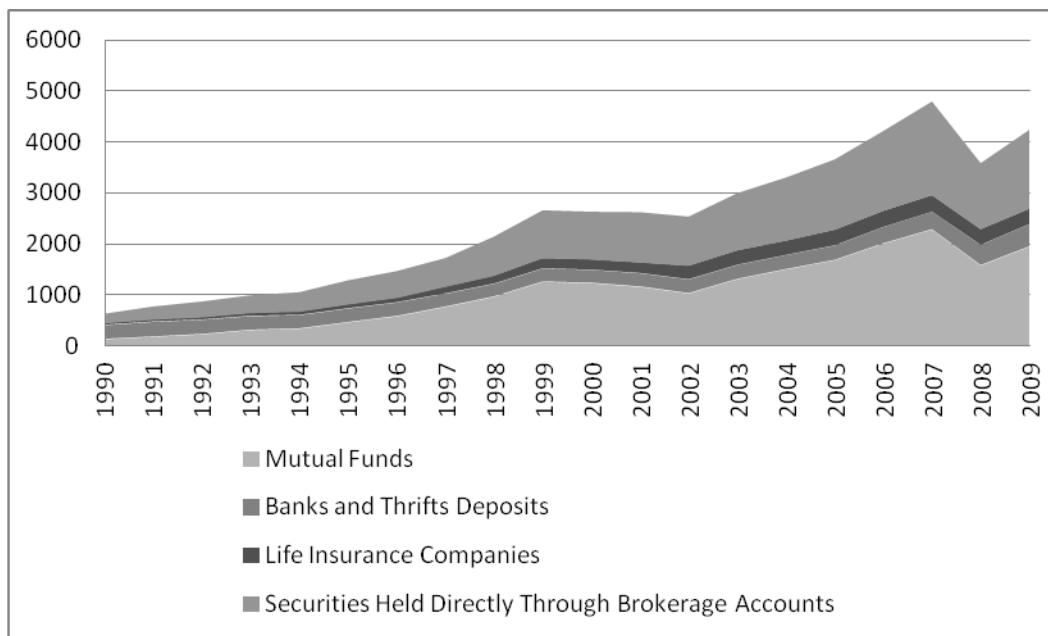
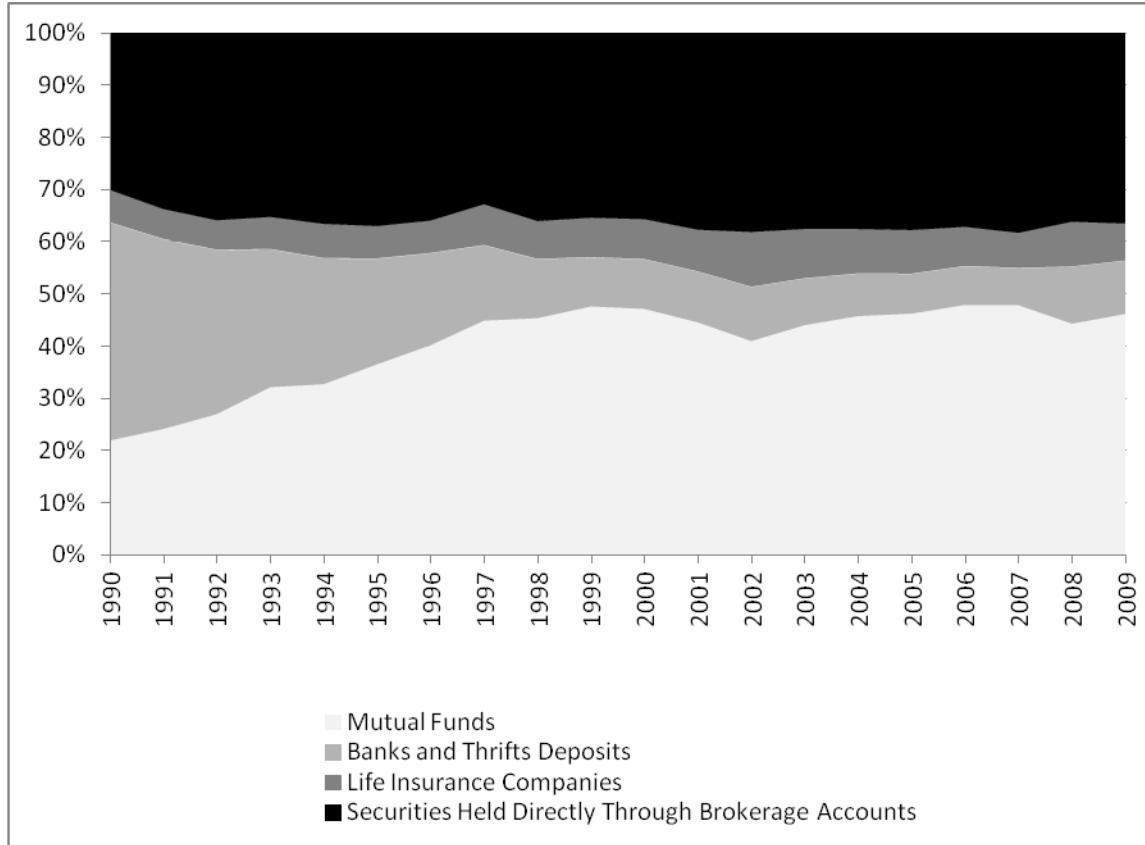


Figure 24: Percentage of Certain Assets Held In IRAs



Mutual funds can invest in a relatively wide range of products - stocks, bonds, commodities, real estate, options, futures, and many more. As a result, all of the providers of those products have benefitted from the increased demand for their products. Mutual funds and money market funds, which are also a frequent investment option in defined contribution plans, even invested in many of the riskier products that have been blamed for contributing to the recent financial crisis, including securitized subprime loans and collateralized debt obligations. As a result, large swathes of the financial services industry has a vested interest in promoting the shift to defined contribution plans and lobbying against any restrictions that might limit where the funds of those plans can be invested.

D. Impact on Financial Markets – Risks

The shift to defined contribution plans carries substantial risks for the financial markets. Poorly informed individuals do not always invest wisely. Their poor investment decisions lead to financial products being mispriced, bubbles being created, and riskier products being sold to those seeking higher returns. In addition, the creation and growth of defined contribution plans has put pressure on the remaining defined benefit plans to allocate larger portions of their portfolios to riskier alternative investments in order to obtain the returns necessary to keep the sponsoring firms' contributions to a minimum. All of these factors may have contributed to recent financial crisis.

1. The shift decreases market efficiency.

Defined contribution plans do not currently have access to many of the long-term assets in which defined benefits plans invest. This hinders market efficiency. For example, defined benefit plans, like Calpers, invest as much as 10 percent of their portfolios in private equity investments with venture capital firms and similar entities. Those firms invest the funds in small or entrepreneurial businesses that use the funds to grow and develop new products. Defined contribution plans do not offer this as an option for its investors. The mutual funds that they offer might offer one or two funds that claim to invest in small or medium businesses but frequently these are small or medium-size publicly traded firms, which are not the same type of private start-up firms that the venture capitalists are investing in.

In addition, participants investing in a fund for small or medium-size firms must have a high risk tolerance as these firms go bankrupt with a greater frequency than do large firms. Most defined contribution plan participants have tended to pick conservative investments in order to reduce the risk of loss. In addition, many of them follow the same investment advice - "keep your fees low, invest in index funds", "more than half of all mutual funds perform worse than the S&P 500, invest in an S&P500 index fund", etc. In this scenario, funds that a defined benefit plan might have invested to help grow small and entrepreneurial businesses mostly likely will be diverted into an S&P500 index fund (most 401(k) plans offer this as an option).

2. The shift encourages the development of asset bubbles.

As already noted above, defined contribution plans offer their participants a limited range of investment options. Across employers the menu of investment options tends to be very similar. Defined contribution plans frequently offer a conservative bond fund, a money market fund, an S&P500 fund, a small companies fund, and an international fund. Plan participants are essentially chasing investing in the same assets and driving up the demand for those assets. If demand exceeds supplies, then asset bubbles form as prices exceed the actual values of the assets being traded. The dot.com bubble in the late 1990s is an example of this phenomenon.

Thus, defined contribution plans pose a serious risk of creating asset bubbles in those products (stocks, gold, etc.) that plan participants have been advised to invest in. An investment strategy that works if one person follows it or if a small group follow it, may not work when millions of people are doing the exact same thing.

3. The shift encourages some individuals to invest in risky financial products in an effort to obtain the returns needed to grow their accounts enough to comfortably retire.

Many employees in defined contribution plans have listened to the dire warnings that most people with such plans will outlive their funds. At least some of these employees have adopted very aggressive investment strategies in an effort to maximize their returns, such as investing 100 percent of their portfolios in stocks because the "experts" say that, in the long run, stocks outperform bonds. If enough plan participants are following this strategy, this can lead to a mispricing of the affected assets and bubbles in the prices of those assets.

In addition, the financial services industry might be tempted to create new financial products that promise higher returns. Mortgage-backed securities and other asset-backed securities are examples of instruments that offered a fixed rate of return, like bonds, but usually at higher interest rates. The demand for these products surged in the late 1990s when the interest rates on Treasury bonds and similar government bonds were very low. The investors who purchased these instruments thought that they were buying a relatively conservative investment with a high rate of return.

The demand for these instruments was so great that the banks and mortgage brokers weakened the lending requirements for home loans because they knew that they could easily securitize the mortgages and pass any risks along to the ultimate holders of those securities. Thus, participants in defined contribution plans may have played a role in the financial crisis through their participation in the securitization markets.

4. The shift increases the pressure on defined benefit plans to achieve higher rates of return.

Institutional investors, including pension funds, comprise the largest source for private equity investments. Private equity includes venture capital, angel investors, and corporate investments. Generally, pension funds prefer to use a fund to invest in private equity rather than to make such investments directly.¹⁹⁶

Defined benefit plans need high rates of return in order to meet their actuarial targets and remain fully funded without additional infusions of capital from the businesses sponsoring them. In order to achieve those high rates of return in the years leading up to the financial crisis,

pension funds increasingly turned to hedge funds.¹⁹⁷ One article quoting Herbert Kaufman, a finance professor at W.P. Carey School of Business, Arizona State University, noted:

"Pension fund managers are in sort of a desperate situation right now," Kaufman said. These managers need returns on investments based on an actuarial assumption to their pension obligations -- frequently about 8 percent. "And those equity and bond returns, their traditional portfolio holdings, have evaporated in this environment," he said. "So they looked for alternative investments to raise their overall returns to their assumed 8 percent, which they hadn't been able to achieve."¹⁹⁸

Prior to the financial crisis, pension funds typically invested 10 percent or less of their investment portfolio in hedge funds.¹⁹⁹ Some commentators did concede that if the amounts invested in hedge funds or other alternative investment instruments increased significantly that this would be "very worrisome."²⁰⁰ One of the reasons for this concern is that hedge fund investments require a lock-up commitment of between one and twelve years, during which the investors cannot withdraw the funds that they invested in the hedge fund.²⁰¹ In addition, it is harder for hedge funds to deliver the exceptionally high returns that they originally touted, as much as 30 percent or more, when more money is attempting to pursue the same strategies.²⁰² In 2006, before the financial crisis began, hedge funds were struggling to meet their investors' expectations. David Friedland, the then President of the Hedge Fund Association, noted in 2006 that the hedge fund industry was experiencing deteriorating market conditions due to the substantial sums being invested in hedge funds and commented:

What I mean by [deteriorating market conditions] is it's a lack of market investment opportunity, coupled with increased monies facing those investing opportunities that lead to a reduction in overall returns in that particular area. When you've got more and more dollars chasing fewer and fewer deals, the spread tends to narrow and the risks tend to increase. You'll find that there will be a lowering of return expectations in some of those strategies, because of that.²⁰³

In all three nations, the trustees for the firm sponsored defined benefit plans are not supposed to be managing the plans for the benefit of the sponsoring firm. Instead, the trustees are legally required to manage the defined benefit trust for the beneficiaries. Unfortunately, many studies have found that the many of the managers and trustees of defined benefit plans are influenced by what the sponsoring enterprise wants.

One study found that defined benefit plans with a high proportion of insider-trustees and with heavily indebted sponsoring firms tend to invest a larger portion their assets in risky equity investments.²⁰⁴ The study also found that the pension plans with a high proportion of insider-trustees also results in the sponsoring firms making smaller contributions to the pension plan.²⁰⁵ Other studies have found that extremely underfunded pension plans tend invest in more conservative fixed income securities while pension plans that are only moderately underfunded or overfunded will invest in riskier equity securities.²⁰⁶ The sponsoring firm for an extremely underfunded pension plan may have decided that it will declare bankruptcy or take other actions to close the defined benefit plan and turn it over to the PBGC. As a result, it does not want to take any actions that might put that process in jeopardy or potentially give rise to claims that the firm should have made additional contributions to the pension plan. Sponsoring

firms for moderately underfunded pension plans might encourage risky investments in order to decrease the likelihood that the firms will have to make larger minimum contributions in the future to correct the underfunding problem.²⁰⁷

CONCLUSION: WHERE DO WE GO FROM HERE?

What the above analysis highlights is that the shift to defined contribution plans has created significant risks and costs both for works and for the financial markets. Certainly, some of the risks posed by these plans could be mitigated if certain minor legal changes were enacted. For example, U.S. defined contribution plan participants would be less likely to outlive their savings if ERISA was amended to prevent early withdrawals except in cases of undue hardship, required participants to always rollover the funds in their plans to another defined contribution plan or an IRA when participants changed jobs, and required participants to use the funds to annuitize at least a majority of the funds when they reach retirement age. In addition, if the United States adopted a mandatory employer contribution program like Australia's a much larger percentage of the U.S. population would be covered by some type of private pension. Right now barely half of U.S. employees are covered.

Getting these changes will be politically difficult, particularly any move to a mandatory employer contribution system. All of these changes would reduce the flexibility of participants to use their money as they see fit. Significant numbers of Americans who participate in these plans would prefer to keep the system as it is, even if it means that they end up in poverty in their later years.

One thing that could be done would be to establish more clearly what the linkages are between the defined contribution and defined benefit pension plans and the wider financial services industry. Such linkages could potentially pose systemic risks to the financial markets. The Dodd-Frank Act created the Office of Financial Research to investigate systemic risks. Congress or the Financial Stability Oversight Council could task this office with investigating such issues and formulating recommendations about how to address them.

¹ Organization for Economic Cooperation and Development, OECD.StatExtracts, Funded Pension Indicators, http://stats.oecd.org/Index.aspx?DatasetCode=PNNI_NEW (last visited on July 15, 2012). [hereinafter, OECD Funded Pension Indicators].

² John Broadbent, Michael Palumbo, and Elizabeth Woodman, *The Shift from Defined Benefit to Defined Contribution Pension Plans - Implications for Asset Allocation and Risk Management*, Prepared for a Working Group on Institutional Investors, Global Savings and Asset Allocation established by the Committee on the Global Financial System 49 (Dec. 2006), available at: <http://www.bis.org/publ/wgpapers/cgfs27broadbent3.pdf>.

³ OECD Funded Pension Indicators, *supra* note 1.

⁴ In some countries, public pension plans also include both defined benefit and defined contribution plans. This Article will not be discussing these plans, although some of the private plans' effects would also arise in the case of the public plans.

⁵ Broadbent, Palumbo, and Woodman, *supra* note 2, at ii.

⁶ *Id.* at 42-43.

⁷ *Id.* at iii.

⁸ *Id.*

⁹ *Id.* at 43.

¹⁰ *Id.*

¹¹ See Howell E. Jackson, *Variation in the Intensity of Financial Regulation: Preliminary Evidence and Potential Implications*, 24 YALE J. ON REG. 253, 274-77 (2007) [hereinafter Jackson, *Variation in Intensity Article*].

¹² For a comparison of the economies in these countries, see *infra* notes 19-46 and accompanying text.

¹³ See OECD, Stat Extracts, <http://stats.oecd.org/index.aspx?r=955030> (last visited July 15, 2012) (under "Demography and Population", follow the "Population and Vital Statistics" hyperlink; then view Australia webpage, United Kingdom webpage, and United States webpage) [hereinafter OECD, Stat Extracts, Population and Vital Statistics].

¹⁴ OECD, Stat Extracts, Population and Vital Statistics, *supra* note 13.

¹⁵ OECD, Stat Extracts, Average Effective Age of Retirement for Men.

¹⁶ OECD, Stat Extracts, Average Effective Age of Retirement for Women.

¹⁷ See OECD, Stat Extracts, Population and Vital Statistics, *supra* note 13.

¹⁸ OECD, Stat Extracts, Population and Vital Statistics, *supra* note 13.

¹⁹ See OECD, Stat Extracts, <http://stats.oecd.org/Index.aspx> (last visited June 18, 2010) (follow "National Accounts" hyperlink under "Browse Themes"; then follow "Annual National Accounts" hyperlink; then follow "Main Aggregates" hyperlink; then follow "Gross domestic product" hyperlink; then follow "GDP per head, US \$, constant prices, constant PPPs, reference year 2005" hyperlink) [hereinafter OECD, Stat Extracts, Gross Domestic Product].

²⁰ OECD, Stat Extracts, Gross Domestic Product, *supra* note 19.

²¹ OECD, Stat Extracts, Annual Labour Force Statistics, Summary Tables, Rate of Unemployment as a % of Civilian Labour Force, http://stats.oecd.org/Index.aspx?DatasetCode=MEI_CLI (last visited July 15, 2012).

²² See Barry Williams, Valerie Fisher, & Steve Drew, *Output and Unemployment in the Financial Sector*, 3 ECON & LAB. MARKET REV. 18 (2009), available at

http://www.statistics.gov.uk/elmr/07_09/downloads/ELMR_Jul09_Fender.pdf. The percentage of the U.K.'s GDP comprised by financial intermediation between 2000 and 2008 ranged from a low of 5.2 % in 2000 to a high of 7.6% in 2007. See U.K. OFFICE FOR NAT'L STATISTICS, ANNUAL ABSTRACT OF STATISTICS 254 (Ian Macrory ed., 2009), available at http://www.statistics.gov.uk/downloads/theme_compendia/AA2009/AA09Webversion.pdf. If one included real estate along with financial intermediation, these sectors comprise about 25% of U.K. GDP. *See id.*

²³ See U.S. Bureau of Econ. Analysis, Gross-Domestic-Product-by-Industry Accounts, Value Added Basis, 1998-2008 (April 28, 2009), http://www.bea.gov/industry/gpotables/gpo_action.cfm (follow "Value Added by Industry" hyperlink) (using Line 51 Finance and Insurance as percentage of Line 1 Gross Domestic Product). The percentages range from a low of 7.33% in 1998 to a high of 8.05% in 2006. *See id.* If one included the real estate sector along with finance and insurance, which might make sense given the extent to which real estate financing played a role in the current crisis in the United States, the finance, insurance, and real estate sectors make up about 20% of U.S. GDP. *See id.* (using line 50 as percentage of Line 1 Gross Domestic Product).

²⁴ See Australian Bureau of Statistics, 5206.0 Australian National Accounts: National Income, Expenditure and Product, Sept. 2009,

<http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/5206.0Sep%202009?OpenDocument> (download "Table 6, Gross Value Added by Industry, Chain volume measures").

²⁵ See WORLD ECONOMIC FORUM, FINANCIAL DEVELOPMENT REPORT xiii (2009) [hereinafter WORLD ECONOMIC FORUM REPORT], available at <http://www.weforum.org/pdf/FinancialDevelopmentReport/Report2009.pdf>. The report defines "financial development" as "the factors, policies, and institutions that lead to effective financial intermediation and markets, as well as deep and broad access to capital and financial services." *Id.* The World Economic Forum ranks countries' financial development based on seven factors: (1) institutional environment, (2) business environment, (3) financial stability, (4) banking financial services, (5) non-banking financial services, (6) financial markets, and (7) financial access. *Id.*

²⁶ See JEREMY COOPER, DEPUTY CHAIRMAN, ASIC, THE INTEGRATION OF FINANCIAL REGULATORY AUTHORITIES--THE AUSTRALIAN EXPERIENCE AT THE COMISSÃO DE VALORES MOBILIÁRIOS 30TH ANNIVERSARY CONFERENCE, 2 (Sept. 4-5, 2006), available at [http://www.asic.gov.au/asic/pdflib.nsf/lookupbyfilename/integration-financial-regulatory-authorities.pdf/\\$file/integration-financial-regulatory-authorities.pdf](http://www.asic.gov.au/asic/pdflib.nsf/lookupbyfilename/integration-financial-regulatory-authorities.pdf/$file/integration-financial-regulatory-authorities.pdf).

²⁷ Brian Bucks, Brian K. Bucks, Arthur B. Kennickell, Traci L. Mach, and Kevin B. Moore, *Changes in U.S. Family Finances from 2004 to 2007: Evidence from the Survey of Consumer Finances*, 95 FED. RES. BULL. A28 (Feb. 2009), available at <http://www.federalreserve.gov/pubs/bulletin/2009/default.htm#articles>.

²⁸ COMM. ON THE GLOBAL FIN. SYS., BANK FOR INT'L SETTLEMENTS, HOUSING FINANCE IN THE GLOBAL MARKET 40 (2006), available at http://www.ecb.europa.eu/system/files/53+Housing_finance_global_fin_markets.pdf. The data for Australia in the 2002-2004 column is from 2001. *Id.* at 40 n.5.

²⁹ OECD, Stat Extracts, <http://stats.oecd.org/index.aspx?r=955030> (last visited June 18, 2010) (follow "Prices and Purchasing Power Parities" hyperlink under "Browse Themes"; then follow "Prices and Price Indices" hyperlink; then follow "Price indices (MEI)" hyperlink; then follow "prices indices (MEI)" hyperlink; then select "Consumer Prices – Housing" from "Subject" drop-down menu).

³⁰ OECD, Stat Extracts, Quarterly National Accounts: Quarterly Growth Rates of Real GDP (2010), <http://stats.oecd.org/index.aspx?queryid=350> (last visited July 15, 2012)[hereinafter OECD, Stat Extracts, Quarterly Growth Rates]. One definition of a recession is when a country experiences two consecutive quarters of declining GDP. BARRON'S DICTIONARY OF FINANCE AND INVESTMENT TERMS 493 (John Downes and Jordan Elliot Goodman eds., 5th ed. 1998).

³¹ See OECD, Stat Extracts, Quarterly Growth Rates, *supra* note 30.

³² *Id.*

³³ *Id.*

³⁴ Robin Blackburn, BANKING ON DEATH 33 (Verso, 2002); William Graebner, A HISTORY OF RETIREMENT 10-12 (Yale U. Press, 1980).

³⁵ Blackburn, *supra* note 34, at 36-49.

³⁶ PENSION SYSTEMS AND RETIREMENT INCOMES ACROSS OECD COUNTRIES 346 (Richard Disney and Paul Johnson, eds., 2001).

³⁷ See Google Labs N-gram Viewer, <http://ngrams.googlelabs.com/> (type in "pension" following the phrase " Graph these **case-sensitive** comma-separated phrases", type in "1700" following "between" and "2000" following "and", select "English" as the "corpus" and select a smoothing of "3"). For information about Google Labs N-gram Viewer, see Culturomics, <http://www.culturomics.org/Resources/A-users-guide-to-culturomics>. The 5.2 million books in the Google Labs N-gram Viewer database represent only about 4% of the books ever published. *Id.*

³⁸ See Google Labs N-gram Viewer, <http://ngrams.googlelabs.com/> (type in "pension" following the phrase " Graph these **case-sensitive** comma-separated phrases", type in "1700" following "between" and "2000" following "and", select "English" as the "corpus" and select a smoothing of "3"). The data from 1800 to 2000 is more reliable than the data before 1800 because few books were published prior to 1800. See About Google Labs NGram Viewer, <http://ngrams.googlelabs.com/info> (noting that only 500,000 books in English were published prior to the 19th century); Culturomics, <http://www.culturomics.org/Resources/A-users-guide-to-culturomics>. As a result, a spike in years prior to 1800 can be caused by as little as one book containing the term being searched. See About Google Labs NGram Viewer, <http://ngrams.googlelabs.com/info>

³⁹ Blackburn, *supra* note 34, at 48; Graebner, *supra* note 34, at 13-15.

⁴⁰ Blackburn, *supra* note 34, at 48; Graebner, *supra* note 34, at 13-15.

⁴¹ Blackburn, *supra* note 34, at 48; Graebner, *supra* note 34, at 13-15.

⁴² Blackburn, *supra* note 34, at 48 (citing quote from Seebohm Rowntree taken from John Macnicol, THE POLITICS OF RETIREMENT IN BRITAIN, 1878-1948 12(Cambridge, 1998)).

⁴³ Graebner, *supra* note 34, at 127-128.

⁴⁴ See Blackburn, *supra* note 34, at 62, 270.

⁴⁵ Blackburn, *supra* note 34, at 63-64.

⁴⁶ Graebner, *supra* note 34, at 216-217.

⁴⁷ *Id.* at 216.

⁴⁸ *Id.*

⁴⁹ *Id.*

⁵⁰ Blackburn, *supra* note 34, at 79.

⁵¹ *Id.* at 48, 79.

⁵² *Id.* at 79.

⁵³ Blackburn, *supra* note 34, at 79

⁵⁴ Google Labs N-gram Viewer, <http://ngrams.googlelabs.com/> (type in "defined benefit plan, defined contribution plan" following the phrase " Graph these **case-sensitive** comma-separated phrases", type in "1850" following "between" and "2000" following "and", select "English" as the "corpus" and select a smoothing of "3")

⁵⁵ Broadbent, Palumbo, and Woodman, *supra* note 2, at 13-17.

⁵⁶ Superannuation Guarantee (Administration) Act 1992, Commonwealth Consolidated Acts (2010), available at: http://www.austlii.edu.au/au/legis/cth/consol_act/sga1992430/

⁵⁷ Superannuation Guarantee Charge Act 1992, Commonwealth Consolidated Acts (2010), available at: http://www.austlii.edu.au/au/legis/cth/consol_act/sgca1992314/

⁵⁸ Superannuation Guarantee (Administration) Act 1992, *supra* note 56, at §§16-17; Superannuation Guarantee Charge Act 1992, *supra* note 57, at §§5-6.

⁵⁹ OECD, PENSIONS AT A GLANCE 2011 193 (OECD, 2011).

⁶⁰ *Id.*

⁶¹ *A recent history of superannuation in Australia*, APRA INSIGHT 3, 4-5 (2007), available at:

<http://www.apra.gov.au/Insight/APRA-Insight-Issue-2-2007.cfm> [hereinafter, *Superannuation History*]

⁶² Broadbent, Palumbo, and Woodman, *supra* note 2, at 14 n.30.

⁶³ *Superannuation History* at 5.

⁶⁴ *Id..*

⁶⁵ *Id.*

⁶⁶ SUPER SYSTEM REVIEW FINAL REPORT Pt. 1, 5 (Commonwealth of Australia, 2010) [hereinafter COOPER REVIEW].

⁶⁷ Jordon Pfuntner, *Percentage of Private Industry Workers Participating in Retirement Plans, Select Periods 1990-2003*, Bureau of Labor Statistics (originally posted July 28, 2004), available at:

<http://www.bls.gov/opub/cwc/print/cm20040720ch01.htm#1>; See Bureau of Labor Statistics, Top Picks, Employee Benefits Survey, <http://data.bls.gov/cgi-bin/surveymost?eb> (select defined benefit and defined contribution); Bureau of Labor Statistics, Multiple Page Search, Employee Benefits Survey, <http://data.bls.gov/cgi-bin/surveymost?eb> (select "AP All Private Industry", then select ""ALLRET00000 Percent of Employees Participating in All Retirement Plans").

⁶⁸ U.S. Bureau of Labor Statistics, *Employee Benefits in Private Industry, 2006*, U.S. Department of Labor News Release, No. 06-1482, (Aug. 24, 2006), available at: <http://www.bls.gov/ncs/ehs/sp/ebnr0011.pdf>; Bureau of Labor Statistics, Top Picks, Employee Benefits Survey, <http://data.bls.gov/cgi-bin/surveymost?eb> (select defined benefit and defined contribution); Bureau of Labor Statistics, Multiple Page Search, Employee Benefits Survey, <http://data.bls.gov/cgi-bin/surveymost?eb> (select "AP All Private Industry", then select "ALLRET00000 Percent of Employees Participating in All Retirement Plans").

⁶⁹ See Pfuntner, *supra* note 67.

⁷⁰ See U.S. Bureau of Labor Statistics, *Employee Benefits in Private Industry, 2006*, *supra* note 68. Some employees were allowed to participate in more than one type of plan. Thus, some employees participated in both a defined benefits plan and a defined contribution plan.

⁷¹ See Bureau of Labor Statistics, Top Picks, Employee Benefits Survey, <http://data.bls.gov/cgi-bin/surveymost?eb> (select defined benefit and defined contribution); Bureau of Labor Statistics, Multiple Page Search, Employee Benefits Survey, <http://data.bls.gov/cgi-bin/surveymost?eb> (select "AP All Private Industry", then select ""ALLRET00000 Percent of Employees Participating in All Retirement Plans").

⁷² In 2006, only 37 percent of workers in establishments with 1-99 workers had any type of retirement plan, down almost 12 percent from the 42 percent that had a retirement plan in small private establishments in 1990. Bureau of Labor Statistics, Multiple Page Search, Employee Benefits Survey, <http://data.bls.gov/cgi-bin/surveymost?eb> (For data from 1990, select "SM Small Private Establishments", then select "ALLRET00000 Percent of Employees Participating in All Retirement Plans", "DBINC00000 Percent of All Workers Participating in Defined Benefit Pension" and "DCINC00000 Percent of All Workers Participating in Defined Contribution Pension" and for data from 2006, select "AP All Private Industry", then select "ALLRET10000 Percent of Employees In Establishments With 1-99 Workers Participating in All Retirement Plans", "DBINC10000 Percent of Workers In Establishments With 1-99 Workers Participating in Defined Benefit Pension" and "DCINC10000 Percent of Workers In Establishments With 1-99 Workers Participating in Defined Contribution Pension"). In 2006, only 9 percent of such workers had a defined benefit plan, which was less than half of the 20 percent who worked in small private establishments and had a defined benefit plan in 1990. *Id.* In 2006, 33 percent had a defined contribution plan, which was not substantially higher than the 31 percent that worked in small private establishments and had a defined contribution plan in 1990. *Id.* The percentage of workers in small private enterprises with a defined contribution plan peaked in 1996 at 38 percent. Bureau of Labor Statistics, Multiple Page Search, Employee Benefits Survey, <http://data.bls.gov/cgi-bin/surveymost?eb> (For data from 1990 to 1996, select "SM Small Private Establishments",

then select "DCINC00000 Percent of All Workers Participating in Defined Contribution Pension" and for data from 2000 to 2006, select "AP All Private Industry", then select "DCINC10000 Percent of Workers In Establishments With 1-99 Workers Participating in Defined Contribution Pension").

⁷³ Prior to 1988, data included establishments with 50, 100, or 250 or more workers, depending on industry, and coverage in the service industries was limited. Beginning in 1988, data included establishments with 100 or more workers in all private industries. "Private industry" excludes agriculture and private households. Bryandt Rose Dickerson, *Employee Participation in Defined Benefit and Defined Contribution Plans, 1985-2000*, Bureau of Labor Statistics, U.S. Dept. of Labor (June 16, 2004), available at: <http://www.bls.gov/opub/cwc/cm20030325tb01.htm>; Bureau of Labor Statistics, Multiple Page Search, Employee Benefits Survey, <http://data.bls.gov/cgi-bin/surveymost?eb> (For data from 1985 to 1997, select "ML Medium and Large Private Establishments", then select "'ALLRET00000 Percent of Employees Participating in All Retirement Plans" and for data from 1999 to 2006, select "AP All Private Industry", then select "ALLRET20000 Percent of Workers In Establishments With 100 Or More Workers Participating in All Retirement Plans").

⁷⁴ Bureau of Labor Statistics, Multiple Page Search, Employee Benefits Survey, <http://data.bls.gov/cgi-bin/surveymost?eb> (For data from 1985 to 1997, select "ML Medium and Large Private Establishments", then select "DBINC00000 Percent of All Workers Participating in Defined Benefit Pension" and "DCINC00000 Percent of All Workers Participating in Defined Contribution Pension" and for data from 1999 to 2006, for data from 1999 to 2006, select "AP All Private Industry", then select "DBINC20000 Percent of Workers In Establishments With 100 Or More Workers Participating in Defined Benefit Pension" and "DCINC20000 Percent of Workers In Establishments With 100 Or More Workers Participating in Defined Contribution Pension").

⁷⁵ Prior to 1988, data included establishments with 50, 100, or 250 or more workers, depending on industry, and coverage in the service industries was limited. Beginning in 1988, data included establishments with 100 or more workers in all private industries. "Private industry" excludes agriculture and private households. Dickerson, *supra* note 73; Bureau of Labor Statistics, Multiple Page Search, Employee Benefits Survey, <http://data.bls.gov/cgi-bin/surveymost?eb> (For data from 1985 to 1997, select "ML Medium and Large Private Establishments", then select "'ALLRET00000 Percent of Employees Participating in All Retirement Plans", "DBINC00000 Percent of All Workers Participating in Defined Benefit Pension" and "DCINC00000 Percent of All Workers Participating in Defined Contribution Pension" and for data from 1999 to 2006, select "AP All Private Industry", then select "'ALLRET20000 Percent of Employees In Establishments With 100 or More Workers Participating in All Retirement Plans", "DBINC20000 Percent of Workers In Establishments With 100 Or More Workers Participating in Defined Benefit Pension" and "DCINC20000 Percent of Workers In Establishments With 100 Or More Workers Participating in Defined Contribution Pension").

⁷⁶ United Kingdom Office for National Statistics, PENSION TRENDS 7-4 (May 28, 2009), available at: <http://www.statistics.gov.uk/pensiontrends/>. (Data from Figure 7.4 - quoting data from Annual Survey of Hours and Earnings, Office for National Statistics).

⁷⁷ U.K. Off. of Nat'l Statistics, PENSION TRENDS 6-3 (23 June 2009), available at:

http://www.statistics.gov.uk/downloads/theme_compendia/pensiontrends/Pension_Trends_ch06.pdf.

⁷⁸ Govt. Actuary's Dept., Occupational Pension Schemes 2000 16 (April 2003), Off. Of Nat'l Statistics, Fewer Employees in Private Sector DB Pension Schemes (28 Oct. 2010); Off. Of Nat'l Statistics, Occupational Pension Schemes Survey 2008, 9 (11 May 2010); Govt. Actuary's Dept., Occupational Pension Schemes 2000 16 (April 2003).

⁷⁹ UK Off. Of Nat'l Statistics, Fewer Employees in Private Sector DB Pension Schemes (28 Oct. 2010); UK Off. Of Nat'l Statistics, Occupational Pension Schemes Survey 2008, 9 (11 May 2010); UK Govt. Actuary's Dept., Occupational Pension Schemes 2000 16 (April 2003).

⁸⁰ UK Off. Of Nat'l Statistics, Fewer Employees in Private Sector DB Pension Schemes (28 Oct. 2010). Only 44% of active members of defined benefit plans are in open plans while 92% of active members of defined contribution plans are in open plans. *Id.*

⁸¹ UK Off. Of Nat'l Statistics, Fewer Employees in Private Sector DB Pension Schemes (28 Oct. 2010); UK Off. Of Nat'l Statistics, Occupational Pension Schemes Survey 2008, 9 (11 May 2010); UK Govt. Actuary's Dept., Occupational Pension Schemes 2000 16 (April 2003).

⁸²UK Off. Of Nat'l Statistics, Fewer Employees in Private Sector DB Pension Schemes (28 Oct. 2010); UK Off. Of Nat'l Statistics, Occupational Pension Schemes Survey 2008, 9 (11 May 2010); UK Govt. Actuary's Dept., Occupational Pension Schemes 2000 16 (April 2003).

⁸³ GLBA, Title II; Michael P. Malloy, *Functional Regulation: Premise or Pretext?* in PATRICIA A. MCCOY, ED., FINANCIAL MODERNIZATION AFTER GRAMM-LEACH-BLILEY (LexisNexis: 2002) at 180.

⁸⁴ GLBA § 201 (codified at 15 U.S.C.S. §78c(a)(4)(B) (2009)); Regulation R: Exceptions for Banks from the Definition of Broker in the Securities Exchange Act of 1934, 12 CFR §218 and 17 CFR 247 (2009).

⁸⁵ An annuity offers the buyer the right to receive a stream of payments in the future until the death of the annuitant. An annuity can guarantee a fixed rate of return on the underlying investment or a variable rate of return. Annuities with fixed rates of return are called fixed annuities and those with variable rates of return are called variable annuities. For variable annuities, the variable rates of return depends on the performance of the assets in which it invests. Variable annuities invest in stocks, bonds, and other investments. As a result, variable annuities are classified as securities because they are investments of money in a common enterprise with the expectation of profits from the efforts of others.

The primary purpose of the annuity can be to accumulate wealth or to provide a guaranteed pay out for a certain period of time. The pay-out commitment can be either for a fixed period, a fixed amount, or the lifetime of the owner. Annuity can serve as a tax deferral vehicle, similar to a 401(k) plan or an individual retirement account (IRA), but without the limits on contributions that those investment vehicles entail. Annuities are marketed as investment vehicles, particularly for those concerned about retirement. Annuities are pushed by the insurance industry as an alternative to or a supplement to more traditional investment vehicles, such as mutual funds, IRAs and 401(k) plans.

⁸⁶ 29 U.S.C. §§1001 et. al.

⁸⁷ From January 1986 to February 2003, EBSA was known as the Pension and Welfare Benefits Administration (PWBA). Secretary of Labor's Order No. 1-2003 (68 FR 5374). Before January 1986, it was known as the Pension and Welfare Benefits Program.

⁸⁸ 29 U.S.C. §§1201-1202, 1302.

⁸⁹ 29 U.S.C. §1302(d).

⁹⁰ 29 U.S.C. §1103(a).

⁹¹ 29 U.S.C. §1103(c).

⁹² M. Frank, *The Impact of Taxes on Corporate Defined Benefit Plan Asset Allocation*, 40 J. OF ACCTG RESEARCH 1163 (2002); Mitchell Petersen, *Allocating Assets and Discounting Cash Flows: Pension Plan Finance*, in PENSIONS, SAVINGS, AND CAPITAL MARKETS, (Phyllis A Fernandez, John A. Turner, and Richard P. Hinz, eds., U.S. Dept. of Labor, 1996).

⁹³ 29 U.S.C. §§1131-1135.

⁹⁴ 29 U.S.C. §§1321-1322b.

⁹⁵ See 29 U.S.C. §1321.

⁹⁶ 29 U.S.C. §1305.

⁹⁷ 29 U.S.C. §1306.

⁹⁸ Pub. L. 109-171 (Feb. 8, 2006).

⁹⁹ 29 U.S.C. §1306(a)(3)(i), (iv).

¹⁰⁰ 29 U.S.C. §1306(a)(3)(i), (E)(ii).

¹⁰¹ PBGC, About PBGC, Open Government, <http://www.pbgc.gov/open/index.html> (select "Single-employer Plans Trusted by PBGC").

¹⁰² PBGC, 2010 ANNUAL REPORT 19 (2010).

¹⁰³ Pub. L. 109-280 (Aug. 17, 2006)(codified as an amendment to 29 U.S.C. ch. 18)

¹⁰⁴ PPA §101 (codified as an amendment to 29 U.S.C. §§1082-1086)

¹⁰⁵ PPA §101 (codified as an amendment to 29 U.S.C. §§1082-1086).

¹⁰⁶ PPA §401 (codified as 29U.S.C. §1306(a)(3)(E)).

¹⁰⁷ 29 U.S.C. §1083(h)(2)(C).

¹⁰⁸ 29 U.S.C. §1083(h)(2)(D). Investment grade corporate bonds are ones that have received one of the top four ratings from a credit rating agency, such as Standard & Poor's, Moody's, or Fitch.

¹⁰⁹ PPA §901

¹¹⁰ *Id.*

¹¹¹ PPA §904 (codified as an amendment to IRC §411).

¹¹² PPA §601.

¹¹³ Elizabeth F. Brown, *E Pluribus Unum—Out of Many, One: Why the United States Needs a Single Financial Services Agency*, XIV U. MIAMI BUS. L. R. 1, 6 (Fall/Winter 2005).

¹¹⁴ Australia's current regulatory structure resulted from the Financial System Inquiry, also known as the Wallis Inquiry, which was conducted by the Australian Government in 1996. Cooper, *supra* note 66, at 2. This inquiry was also known as the Wallis Inquiry because it was chaired by Stan Wallis, a noted Australian businessman. *Id.* Unlike the Dodd-Frank Act, it took place during a period of relative calm in Australia's financial markets and was not a reaction to any particular financial crisis. *Id.* The Wallis Inquiry proposed three possible regulatory structures: a single mega regulator model, a lead regulator model, and the twin peaks model. *Id.* at 2-3. The single mega regulatory model was similar to the single regulator structure that the United Kingdom ultimately adopted. *Id.* at 3. The lead regulator model consisted of a single regulator that would be responsible for regulating financial conglomerates and would coordinate information gathering and regulation of such entities by the existing regulators. *Id.* Ultimately, the Wallis Inquiry recommended the adoption of the twin peaks model out of concern that a single regulator would be too powerful, that a single regulator would be too large to operate efficiently, that a single regulator would be premature given the existing structure of the Australian financial services sector, and that existing agencies would operate best if allowed to use their own unique cultures. *Id.* at 4.

¹¹⁵ *Id.*

¹¹⁶ SISA, Part 2A (authorizes APRA to license and supervise superannuation funds);

¹¹⁷ *Id.* at 6.

¹¹⁸ *Id.*

¹¹⁹ *Id.* at 5-6.

¹²⁰ *Id.* at 7. For example, ASIC registers all companies in Australia, ensures that their directors are complying with their fiduciary duties, and regulates corporate disclosures, fundraising, mergers and acquisitions, and windings up.

Id.

¹²¹ *Id.*

¹²² *Id.*

¹²³ *Id.* at 10.

¹²⁴ *Id.* at 10-11.

¹²⁵ *Id.* at 8.

¹²⁶ Cooper, *supra* note 66, at 4.

¹²⁷ Australian Government, The Treasury, WHO WE ARE AND WHAT WE DO 7 (2009-10), available at:

http://www.treasury.gov.au/documents/1308/PDF/Who%20We%20Are%202009_W.pdf

¹²⁸ *Id.*

¹²⁹ THE COUNCIL OF FINANCIAL REGULATORS' CHARTER (Jan. 13, 2004), available at: <http://www.rba.gov.au/fin-stability/reg-framework/cfr-charter.html>

¹³⁰ The Council of Financial Regulators, ANNUAL REPORT 5 (2002), available at:

<http://www.rba.gov.au/publications/annual-reports/cfr/2002.pdf>

¹³¹ SISA, available at http://www.austlii.edu.au/au/legis/cth/consol_act/sia1993473/

¹³² Superannuation Guarantee Charge Act 1992, Act. No. 93 of 1992; Superannuation Guarantee (Administration) Act 1992, Act. No. 111 of 1992 (which was incorporated into the SGCA); Superannuation Guarantee Charge Amendment Act 2002, Act. No. 52 of 2002.

¹³³ Superannuation Guarantee (Administration) Act 1992, §19.

¹³⁴ Superannuation Guarantee (Administration) Act 1992, §§27, 28.

¹³⁵ SGCA, §5.

¹³⁶ Rod Kemp, Assistant Treasurer, Address to the Superannuation and Opt Out Summit Conference (29 January 1998), available at

<http://assistant.treasurer.gov.au/DisplayDocs.aspx?pageID=&doc=speeches/1998/001.htm&min=crk>

¹³⁷ Superannuation Complaints Tribunal, Overview, <http://www.sct.gov.au/Page.aspx?pid=2>; Superannuation Complaints Tribunal, What We Do, <http://www.sct.gov.au/Page.aspx?pid=8>.

¹³⁸ Superannuation Complaints Tribunal, Overview, *supra* note 137.

¹³⁹ *Id.*

¹⁴⁰ Superannuation Complaints Tribunal, Tribunal Charter, <http://www.sct.gov.au/Page.aspx?pid=22>; Commonwealth Ombudsman, <http://www.ombudsman.gov.au/>.

¹⁴¹ Commonwealth Ombudsman, *supra* note 140.

¹⁴² Financial Services Act 2012. One of the factors leading to the creation of the UK FSA was the pension mis-selling scandal that occurred between 1988 and 1994. The Financial Services Act 1986 allowed workers to opt out of their employer's pension scheme and to invest in personal pensions. During the pension mis-selling scandal, individuals who would have been better off remaining in their employer's pension scheme were convinced to opt out and invest in a personal pension instead. The scandal also included the mis-selling of free standing alternative voluntary contributions ("FSAVC") schemes to individuals who would have done better to have contributed to their employer's alternative voluntary contributions ("AVC") plans. The UK FSA was created to prevent such frauds from occurring in the future and to prosecute anyone who attempted to commit such frauds.

¹⁴³ United Kingdom Memorandum of Understanding between HM Treasury, the Bank of England and the Financial Services Authority at 3, available at: <http://www.bankofengland.co.uk/financialstability/mou.pdf> [hereinafter, UK Financial Stability MOU].

¹⁴⁴ UK Financial Stability MOU at 4.

¹⁴⁵ Pensions Act 2004, §1. It took over the functions of the Occupational Pensions Review Authority that the Pensions Act 1995 had created.

¹⁴⁶ Pensions Act 2004, §5.

¹⁴⁷ Pensions Act 2004, §175

¹⁴⁸ Pension Act 2004, §178.

¹⁴⁹ FAQ Answer, When may compensation from the FCF be paid?, <http://www.pensionprotectionfund.org.uk/FAQs/Pages/details.aspx?itemid=189&search=t&subjectid=9>

¹⁵⁰ H.M. Treasury, A New Approach to Financial Regulation: A Blueprint for Reform (June 2011), available at: http://www.hm-treasury.gov.uk/d/consult_finreg_new_approach_blueprint.pdf

¹⁵¹ *Id.* at 8, 48, & 394.

¹⁵² Robert Pozen and Theresa Hamacher, THE FUND INDUSTRY 287 (John Wiley & Sons, Inc., 2011).

¹⁵³ Susan Stabile, *Is It Time To Admit the Failure of an Employer-Based Pension System?* 11 LEWIS & CLARK L. REV. 305, 311 (Summer 2007).

¹⁵⁴ U.K. Pensions Commission, PENSIONS CHALLENGES AND CHOICES 209 (The Stationary Office, 2004).

¹⁵⁵ Stabile, *supra* note 153, at 311.

¹⁵⁶ *Id.* at 311, 316.

¹⁵⁷ *Id.*

¹⁵⁸ U.K. Pensions Commission, PENSIONS CHALLENGES AND CHOICES 208 (The Stationary Office, 2004).

¹⁵⁹ Regulation 6.19A of the Superannuation Industry (Supervision) Regulations 1994.

¹⁶⁰ *Id.*

¹⁶¹ *Id.*

¹⁶² *Id.*

¹⁶³ Pension Rights Center, *Companies That Have Changed or Temporarily Suspended Their 401(k) Match Contributions*, <http://www.pensionrights.org/publications/fact-sheet/companies-have-changed-or-temporarily-suspended-their-401k-matching-contribu>

¹⁶⁴ *Id.*

¹⁶⁵ Tamar Levin, *Once a Leader, U.S. Lags in College Degrees*, NY TIMES (2010) at A11, available at <http://www.nytimes.com/2010/07/23/education/23college.html>

¹⁶⁶ Lewis Mandell, THE FINANCIAL LITERACY OF YOUNG ADULTS 14 (Jump\$tart Coalition, 2008), available at <http://www.jumpstart.org/assets/files/2008SurveyBook.pdf>. The survey covers four areas of financial literacy: (1) income, (2) money management, (3) savings and investment, and (4) spending and credit. *Id.* at 10.

¹⁶⁷ *Id.*

¹⁶⁸ *Id.*

¹⁶⁹ *Id.* The number of high school students who took the test varied from year to year. The following are the number of students who took the test in each of the indicated years: a) 1997-98 - 1,532; b) 2000 - 723; c) 2002 - 4,024; d) 2004 - 4,074; e) 2006 - 5,775; and f) 2008 - 6,856. *Id.* at 7-8.

¹⁷⁰ *Id.* at 16.

¹⁷¹ *Id.*

¹⁷² *Id.* at 8, 10. The Jump\$tart Coalition administered the test 1,030 college students. *Id.*

¹⁷³ *Id.*

¹⁷⁴ Ray Franke, Sylvia Ruiz, Jessica Sharkness, Linda DeAngelo, and John Pryor, COLLEGE SENIOR SURVEY: NATIONAL AGGREGATES 52 (Higher Education Research Institute, 2010).

¹⁷⁵ Cooper Review, *supra* note 66, at 8 (quoting the Wallis Report from 1997 that recommended creating a Twin Peaks system).

¹⁷⁶ *Id.*

¹⁷⁷ *Id.*

¹⁷⁸ *Id.*

¹⁷⁹ OECD, IMPROVING FINANCIAL EDUCATIONAL AWARENESS ON INSURANCE AND PRIVATE PENSIONS 106 (2008).

¹⁸⁰ *Id.* at 107 (citing Wheatcroft study in 2004)

¹⁸¹ U.S. Gov't. Accountability Off., OPPORTUNITIES TO REDUCE POTENTIAL DUPLICATION IN GOVERNMENT PROGRAMS, SAVE TAX DOLLARS, AND ENHANCE REVENUE 7 (March 2011).

¹⁸² *Id.* at 151.

¹⁸³ *Id.*

¹⁸⁴ *Id.* at 152.

¹⁸⁵ *Id.*

¹⁸⁶ *Id.*

¹⁸⁷ *Id.* at 152-153.

¹⁸⁸ These studies include, but are not limited to, Sharon M. Danes, Evaluation of the National Endowment for Financial Education High School Financial Planning Program 5 (2003-2004) *available at* http://hsfpp.nefe.org/loadFile.cfm?cont_entid=273; Abdighani Hirad & Peter Zorn, *Prepurchase Homeownership Counseling: A Little Knowledge is a Good Thing*, in Low-income Homeownership: Examining the Unexamined Goal 146, 146 (Nicholas Retsinas & Eric S. Belsky eds., 2002); Marsha Courchane & Peter Zorn, Consumer Literacy and Creditworthiness 23, 25 (Apr. 7-8, 2005) *available at* http://www.chicagofed.org/cedric/files/2005_conf_paper_session3courchane.pdf; Kimberly Gartner & Richard M. Todd, Effectiveness of Online "Early Intervention" Financial Education for Credit Cardholders 8, 15 (July 2005) *available at* http://www.chicagofed.org/cedric/files/2005_conf_aper_session3_todd.pdf; Gregory Elliehausen et al., The Impact of Credit Counseling on Subsequent Borrower Credit Usage and Payment Behavior 49-50 (Jan. 2003), *available at* http://www.chicagofed.org/cedric/files/2003_confpaper_session_1_staten.pdf; *Improving Financial Literacy in the United States: Hearing Before the S. Comm. on Banking, Housing, and Urban Affairs*, 109th Cong. (May 23, 2006) (statement of Ben S.

Bernanke, Chairman, Federal Reserve Board), *available at* <http://banking.senate.gov/public/files/bernakel.pdf>.

¹⁸⁹ For a detail analysis of the problems which of the studies listed in n. 188, see Lauren Willis, Evidence and Ideology in Assessing the Effectiveness of Financial Literacy Education, 46 San Diego L. R. 415 (2009).

¹⁹⁰ Cooper Review, *supra* note 66, at 4.

¹⁹¹ Robert Pozen and Theresa Hamacher, THE FUND INDUSTRY 287 (John Wiley & Sons, Inc., 2011).

¹⁹² *Id.*

¹⁹³ David Blake, Edmund Cannon, and Ian Tonks, ENDING COMPULSORY ANNUITISATION (Pensions Institute, 2010). An annuity is an insurance policy that usually pays a fixed amount each month to the beneficiary for the remainder of their life.

¹⁹⁴ H.M. Treasury, Removing the Requirement to Annuitise by Age 75, http://www.hm-treasury.gov.uk/d/pensions_annuitisation.pdf

¹⁹⁵ *Id.*

¹⁹⁶ J. Lerner, A. Schoar, and W. Wong, *Smart Institutions, Foolish Choices? The Limited Partner Performance Puzzle*, J. OF FIN. (2007)

¹⁹⁷ *Institutional Investors Making a Big Splash in the Hedge Fund Pool*, KNOWLEDGE@W.P.CAREY (April 12, 2006), *available at* <http://knowledge.wpcarey.asu.edu/article.cfm?articleid=1227#>

¹⁹⁸ *Id.*

¹⁹⁹ *Id.* Not all institutional investors are as conservatives as pension funds. Harvard and some other universities invest 30-40 percent of their endowments in hedge funds and other alternative investment allocations. *Id.* (quoting David Friedland, president of the Hedge Fund Association).

²⁰⁰ *Id.*

²⁰¹ *Id.*

²⁰² *Id.*

²⁰³ *Id.*

²⁰⁴ J. Cocco and P. Volpin, *The Corporate Governance of Defined Benefit Pension Plans: Evidence from the United Kingdom*, 63 FINANCIAL ANALYSTS JOURNAL 70 (2007). An insider-trustee is a trustee of the pension plan trust who also works as a manager in the business that is sponsoring the pension plan.

²⁰⁵ *Id.*

²⁰⁶ L.N. Bader, THE FINANCIAL EXECUTIVE'S GUIDE TO PENSION PLANS, (Salomon Brothers, Inc., 1991); J. Rauh, *Risk Shifting versus Risk Management: Investment Policy in Corporate Pension Plans*, 22 REV. OF FIN. STUDIES 2687 (2009); D. Lucas and S. Zeldes, *Valuing and Hedging Defined Benefit Pension Obligations: The Role of Stocks Revisited*, Working Paper, Columbia University Graduate School of Business (2007); J. Comprix and K. Muller, *Pension Funding Rules and Sponsor Firms' Risk Taking with Defined Benefit Pension Plan Assets*, Working Paper (2006).

²⁰⁷ Comprix & Muller (2006).