



A HISTORY, MARKET OVERVIEW, AND COMPARATIVE ANALYSIS
OF
DEFINED BENEFIT AND DEFINED CONTRIBUTION PLANS

For many Americans, retirement income is likely to come from three main sources: social security, personal savings, and employer-sponsored retirement savings plans. Personal savings rates in our economy are at historically low levels and social security will soon face a growing strain, as we will have fewer workers contributing to the pay-as-you-go system supporting a growing number of beneficiaries. These two trends would seem to stress the importance of employer-sponsored retirement plans as a means for providing vital retirement income for many Americans.

For most of the twentieth century, employer-sponsored retirement plans took the form of defined benefit plans. However, in the early 1980s, legislation from the U.S. government cleared the way for the 401(k) plan, a style of defined contribution plan attractive to many employees and employers. Since then, 401(k) plans have become the dominant type of retirement plan being introduced by companies.

This paper describes the historical evolution of defined benefit and defined contribution plans, discusses the current utilization of employer-sponsored defined benefit and defined contribution plans, and investigates the efficacy of the two types of retirement plans. Finally, the paper highlights some potential risks in the current trends of our employer-sponsored retirement plans.

Definitions

Defined benefit and defined contribution pension plans both come in many different forms. However, a single difference distinguishes the two. Under a defined benefit plan, the employer takes on the risk that assets may not produce sufficient investment returns to support a promised level of retirement benefits. Under a defined contribution plan, the employee accepts the risk that the investment result may yield lower-than-expected retirement income. Apart this salient difference, defined benefit and defined contribution plans can be structured in an endless variety of ways.

History of Defined Benefit and Defined Contribution Plans

The first pensions in the U.S. were sponsored by colonial militias and the U.S. military, many of which predated our country's independence. The history of the private defined benefit plan in America stretches back 125 years. American Express Company, a railroad freight forwarder, introduced in 1875 the very first U.S. private-sector pension plan in an effort to promote a stable,



career-oriented workforce¹. For the remainder of the twentieth century, many of the major railroad concerns in America introduced pension plans. Following on the heels of the railroads, many of the country's largest private employers introduced pension plans during the first two decades of the twentieth century. For example, AT&T introduced a pension plan to its employees in 1906². By 1920, pension plans had become a fairly normal part of an employment contract with a large employer.

The 1930s and 1940s helped shape the structure of the modern defined benefit plan. Ironically, the Great Depression had an overall positive impact on private pension plans. While the disastrous economic conditions of the era led to many corporate pension plan failures, the government's reaction to the depression resulted in much higher tax rates, particularly among the highest earners in the country. Consequently, the tax benefit enjoyed by corporations that contributed to pension plans was enhanced. Further, the adoption of Social Security reduced the demand for high benefits from labor, facilitating the payment of modest benefits. As a result, the number of pension plans grew significantly, particularly among smaller employers.

Resulting from the legislative foundation laid during the Great Depression, between 1945 and 1970 participation in pension plans by the private workforce increased from 19% to 45%³. While the pension plan had become much more institutionalized during these decades, several well-publicized failures (e.g., Studebaker) resulted in increased pension legislation throughout the period, culminating in the adoption of the Employee Retirement Security Income Act (ERISA) in 1974.

The history of defined contribution plans is more recent. Prior to 1978, many companies offered profit sharing plans or various other types of deferred compensation plans to employees, where employees could defer a portion of their non-salaried compensation into a plan. In 1981, Johnson Cos. designed the first 401(k) plan whereby employees could defer a portion of their own salary pre-tax. A couple of months after this first salary reduction 401(k) plan, the IRS issued proposed regulations on 401(k) plans that sanctioned the use of employee salary reductions as a source of 401(k) plan contributions. With the IRS' approval, most companies with pre-existing deferred compensation plans added 401(k) components to the plans, turning their defined contribution plans overnight into viable, tax-advantaged retirement vehicles.

Over the course of the next twenty years, the popularity of 401(k) plans grew rapidly, particularly among smaller employers who were increasingly burdened by the increasing liability and costs associated with sponsoring a defined benefit plan. Generally speaking, many firms with existing defined benefit plans adopted 401(k) plans to supplement retirement benefits, or "froze" their defined benefit plans and offered new employees only a 401(k) plan as a primary retirement savings vehicle. Most new firms, or those without a defined benefit plan previous to the 401(k) regulations, chose only to offer a 401(k) plan to employees as a primary retirement savings vehicle.

¹ Sass, Stephen A., *The Promise of Private Pensions: The First Hundred Years*, Cambridge, MA: Harvard University Press, 1997, page 23.

² Sass, page 44.

³ Sass, page 179.

**Current State of Defined Benefit and Defined Contribution Plans**

From 1985 to 2002, total retirement assets in the U.S. increased fourfold, from \$2.4 trillion to \$10.0 trillion. This dramatic increase in America's savings is unsurprising, given the expected retirement income needs of the baby boomer generation, which is approaching retirement, and the strong economic and capital market growth experienced over this period. As a percentage of the country's gross domestic product, total retirement assets have increased from approximately 67% in 1985 to approximately 95% in 2002.

Sources of Assets for the Retirement Market⁴

	1985	1994	2002
IRA and Keogh	\$0.2 trillion	\$1.1 trillion	\$2.3 trillion
State and Local Governments	0.4	1.1	2.0
Federal Government	0.2	0.5	0.9
Private Defined Contribution Plans	0.4	1.1	1.9
Private Defined Benefit Plans	0.8	1.2	1.6
Private Life Insurance	0.4	0.8	1.3
Total	\$2.4 trillion	\$5.7 trillion	\$10.0 trillion

While all retirement savings vehicles shown above have experienced growth over the seventeen-year period, it is noteworthy that the assets of private defined contribution plans have increased nearly fivefold over the period, while the assets of private defined benefit plans have increased only twofold.

**Changes in the Number of Private and Public Pension Plans⁵
1975 - 1999**

Number of Plans	1975	1985	1995	1999
Private Defined Benefit	103,000	170,000	69,000	50,000
Private Defined Contribution	208,000	462,000	624,000	630,000
State and Local	NA	2,589	2,284	2,209
Federal	NA	8,591	8,630	8,615

The table above displays the trends in private and public defined contribution and defined benefit plans from 1975 to 1999. For private employers, there has been a significant increase in the number of retirement plans for employees. However, the overall increase has stemmed from a large increase in the number of defined contribution plans (largely 401(k) plans), overwhelming a significant decline in the number of defined benefit plans sponsored. State and local and federal government plans have remained fairly constant over the period, and today still provide largely defined benefit plans as a primary retirement vehicle.

⁴ Employee Benefit Research Institute, "Facts from EBRI," Washington DC, EBRI, December 2003.

⁵ Rajnes, David, "An Evolving Pension System: Trends in Defined Benefit and Defined Contribution Plans," *EBRI Issue Brief*, number 249, EBRI, September 2002; U.S. Department of Labor Employee Benefits Security Administration, *Private Pension Plan Bulletin: Abstract of 1999 Form 5500 Annual Reports*, number 12, November 2004.



**Changes in Assets of Private and Public Pension Plans⁶
1975 - 1999**

Market Value of Assets	1975	1985	1995	1999
Private Defined Benefit	\$186 billion	\$814 billion	\$1,402 billion	\$2,058 billion
Private Defined Contribution	74	417	1,322	2,350
State and Local	NA	399	1,088 ⁷	2,290 ⁸
Federal	NA	172	512 ⁷	799 ⁸

Assets have increased substantially across all types of plans over the period, though the highest growth rate has been seen among privately sponsored defined contribution plans, largely a result of the significant increase in 401(k) plans introduced over the period.

**Single and Multiple Employer Plan Trends⁹
1980 - 1999**

	1980	1990	1995	1999
Number of Plans				
Single Employer DB Plans	145,764	111,251	67,682	48,168
Single Employer DC Plans	340,378	598,153	622,584	681,815
Number of Plans				
Multi Employer DB Plans	2,332	1,812	1,810	1,727
Multi Employer DC Plans	427	1,092	1,328	1,285
Market Value of Assets				
Single Employer DB Assets	\$354 billion	\$798 billion	\$1,163 billion	\$1,697 billion
Single Employer DC Assets	161	698	1,295	2,311
Market Value of Assets				
Multi Employer DB Assets	\$47 billion	\$164 billion	\$239 billion	\$360 billion
Multi Employer DC Assets	1	14	27	39

From 1980 through 1999, the number of defined benefit plans sponsored by single employers fell dramatically from roughly 150,000 to 50,000. However, this single number obscures two additional characteristics of this trend. First, the vast majority of the decline in the number of single-employer defined benefit plans resulted from terminated plans from the very smallest employers. Of the 100,596 fewer single-employer defined benefit plans in 1999 than in 1980, 87,766 fewer resulted from terminations of plans with fewer than 100 participants¹⁰. Second, these figures include “frozen” defined benefit plans, i.e., those that exist but are no longer

⁶ Rajnes, David, “An Evolving Pension System: Trends in Defined Benefit and Defined Contribution Plans”; U.S. Department of Labor Employee Benefits Security Administration, *Private Pension Plan Bulletin: Abstract of 1999 Form 5500 Annual Reports*.

⁷ Figures as of 1994.

⁸ Figures as of 2000.

⁹ U.S. Department of Labor Employee Benefits Security Administration, *Private Pension Plan Bulletin: Abstract of 1999 Form 5500 Annual Reports*.

¹⁰ U.S. Department of Labor Employee Benefits Security Administration, *Private Pension Plan Bulletin: Abstract of 1999 Form 5500 Annual Reports*.



adding active members or allowing new accruals. Over this period, many defined benefit plans became “frozen” as employers introduced 401(k) plans as primary retirement vehicles.

Among multi-employer plans, defined contribution plans have become more prevalent over the period, though defined benefit plans remained the *de facto* primary retirement vehicle at the end of the period.

While aggregated data on state and local government plans is not as readily available over this whole period, these plans are clearly closer to multi-employer plans than to single employer plans in their composition of defined benefit versus defined contribution plans. As of 1998, 90% of full time state and local government workers participated in a defined benefit plan, while only 14% actively participated in a defined contribution plan¹¹. However, there is a growing push from states to shift away from the defined benefit plan model, led by Michigan, which no longer offers a defined benefit plan to new employees. In 2005, the governor of California proposed to close the state’s defined benefit plan to new employees hired after January 1, 2007.

Comparative Analysis of Retirement Plans

The first, and probably most important, constituent of a retirement plan is the employee. From an employee’s perspective, a retirement plan serves the primary purpose of enabling him or her to save and invest effectively for retirement. In determining the efficacy of a retirement plan, one has to evaluate the plan’s ability to maximize the amount of savings that the employee can set aside, the tax advantages of saving and investing, and the efficacy of the investment of the employees’ savings.

Defined benefit plans appear to have a distinct advantage over defined contribution plans in maximizing retirement savings. This advantage stems from the fact that defined contribution plans (largely 401(k) plans), for the most part, require employees to *voluntarily* set assets aside. Also, defined contribution plans often allow the participant to borrow money from the plan under certain situations and to cash out the plan, provided a tax penalty is paid. Because many participants do take advantage of the liquidation provisions of defined contribution plans, the plans ultimately do not fulfill their purpose of providing retirement savings for many.

401(k) plans, which make up the bulk of defined contribution assets, require employees to invest their own retirement assets. As one might expect, many participants produce very strong results, while others will ultimately produce very weak investment results. On the whole, most evidence shows that the average investor in 401(k) plans produces investment results worse than the average return generated by defined benefit plans.

Retirement plans also serve a valuable purpose for employers. First, employers utilize retirement plans as a valued benefit with which to attract and retain personnel. Retirement plans also enable profitable companies to set aside money without paying taxes on it. Thus, retirement plans can be a tax-advantaged benefit.

¹¹ Rajnes, David, page 19.



It is unclear whether employees value more a defined benefit plan or a defined contribution plan. Anecdotally, younger employees tend to prefer 401(k) plans, which are portable, often have liquidity provisions, create personal accounts that make the benefit more tangible, and allow participants to control the investment of their assets. Older employees, by contrast, often prefer defined benefit plans, which are frequently structured to provide better benefits to older workers with longer tenures.

Retirement plans also serve a valuable economic purpose, by providing a significant source of domestic savings for our economy, and by reducing the burden on the government of providing retirement income for seniors.

While there are thousands of defined benefit plans in America, many cover thousands of employees. And, as a consequence, when a very large plan fails, it impacts a very large number of participants. This concentration adds a degree of risk for the government, which could be called to support a large plan if its failure became imminent. 401(k) defined contribution plans allow each individual participant to invest their retirement assets. Thus, some employees will enjoy strong investment results and others weak investment results. Depending on the degree of latitude given to plan participants to direct their investments, a population depending largely on 401(k) plans to fulfill one-third of their three-legged stool could find themselves well short of their retirement need, potentially calling for even larger government involvement.

Defined benefit plans also provide a somewhat more stable pool of savings for the aggregate economy. As shown above, U.S. retirement plans, in aggregate, supplied \$10 trillion in stable, long-term savings to the U.S. economy in 2002. To put this figure in context, in 2002, the aggregate outstanding amount of U.S. government debt was only approximately \$7 trillion and the total capitalization of the U.S. stock market was roughly \$9.5 trillion. Clearly, without this stable pool of long term savings, U.S. interest rates would be substantially higher, the cost of capital for all companies in the U.S. substantially higher, overall investment substantially lower, and economic growth substantially diminished.

Defined benefit plans require employers to invest assets for decades, to support the promised benefits for employees. 401(k) plans, by contrast, generally allow participants to remove their assets before retirement, or to borrow money from their plans under certain conditions. Thus, 401(k) plans do not provide the same degree of stability in the country's retirement savings pool. Assuming that the bulk of federal, state, and local pension plan assets are in defined benefit plans, approximately 45% of this \$10 trillion total comprised defined benefit plan assets in 2002. In 1985, defined benefit plans comprised 58% of total retirement plan assets in America. The decline in the prominence of defined benefit plan assets was partly due to the rise of defined contribution plans, IRAs, and Keogh plans.



Empirical Evidence on the Efficacy of Defined Benefit and Defined Contribution Plans

There have been several empirical studies that have attempted to compare the investment returns of defined benefit plans to the average return generated by 401(k) participants. The bulk of these studies have shown that defined benefit plans generally produce higher returns than 401(k) plans. This result likely stems from the fact that defined benefit plans, as perpetual investment pools, can truly be managed for the long-term, with higher allocations to long-term assets like equities. Further, defined benefit plans are generally directed by trustees who hire professional advisors that are better able to make prudent investment decisions than the average 401(k) participant. Finally, they usually have lower operating costs, which detract from returns.

Economist Alicia Munnell estimates that between 1985 and 2001, the average defined benefit plan outperformed the average defined contribution plan by 0.8% per year¹². Over a thirty-year span, this difference results in approximately a 25% difference in total return.

In perhaps the most telling data regarding the ability of average investors to invest wisely, research firm Dalbar found that between 1984 and 2002 the average equity mutual fund investor earned only 2.6% per year, on average, compared to a 12.2% annual return for the S&P 500 index. The average fixed income mutual fund investor earned only 4.2% annually, compared to a long-term government bond return of 11.7%¹³.

Another important aspect of retirement plans is the amount of savings that actually go into the plans. One of the common arguments against the use of 401(k) plans as primary retirement vehicles is that 401(k) contributions are largely voluntary on the part of the employee. Consequently, lower-income employees contribute less to their 401(k) plan than higher-income employees. Further, these workers are more likely to cash out their 401(k) assets before even reaching retirement. One study shows that 26% of all employees eligible to participate in 401(k) plans choose not to participate. Only 10% of all eligible participants choose to contribute the maximum amount¹⁴.

By contrast, defined benefit plans require employers to contribute to the plan based on the benefits contractually promised to all employees. Thus, defined benefit plans are better vehicles to enhance savings among lower-income employees, who, unlike higher-income employees, would likely not save on their own. This characteristic increases the country's savings rate. One study has estimated that only approximately one-third of 401(k) savings is additive to what would have been saved anyway by participants¹⁵.

¹² Munnell, Alicia; Sunden, Annika, *Coming Up Short: The Challenge of 401(k) Plan*, Washington D.C.: Brookings Institution Press, 2004, pages 137 - 142; and Gale, David, "The Effects of Pensions on Household Wealth: A reevaluation of Theory and Evidence," *Journal of Political Economy*, 1998, vol. 106, no. 4, pages 706 - 723.

¹³ Dalbar, Inc., "Market Chasing Mutual Fund Investors Earn Less Than Inflation - DALBAR Study Shows," *Dalbar*, July 15, 2003; and Clements, Jonathan, "Maybe Investors Aren't Stupid After All: Oft-Cited Study is Revised," *Wall Street Journal*, March 31, 2004.

¹⁴ Munnell and Sunden, pages 10 - 14.

¹⁵ Munnell and Sunden, pages 137 - 142; and Gale, pages 706 - 723.



Combining all costs, investment advisory and administrative, The Investment Company Institute found that the total operating expense ratio of defined benefit plans was 40 basis points less than that of the average 401(k) plan option, 0.31% versus 0.71%, excluding the 12-b1 fees that generally add 0.25% or more to the expense ratios of mutual funds within 401(k) plans¹⁶.

Thus, there is some compelling evidence that defined benefit plans are more effective retirement tools for most employees and for the economy as a whole. It should be noted that we are still relatively early in the 401(k) experiment, as the first plans introduced are now only just over twenty years old. Most workers will work for forty or more years before retiring. Further, many 401(k) plans are being used as supplemental retirement plans, and not primary ones. This distinction does blur many of the results from the studies that compare the efficacy of defined benefit and defined contribution plans.

CONCLUSIONS

The U.S. employer-sponsored retirement system has evolved significantly over the past 125 years. Today, it is a vital component of America's \$10 trillion retirement market. The salient trend in the retirement system is the increase in defined contribution 401(k) plans, at the expense of defined benefit plans. As more workers are relying on 401(k) plans to provide a significant portion of their retirement income, several risks begin to creep into the system. However, changes can be made to moderate these risks.

The state of America's employer-sponsored retirement system is strong, both in relation to history and to global peers. With roughly \$10 trillion in assets, the size of U.S. retirement assets has increased fourfold in the past twenty years, a result of strong growth in the U.S. economy, significant appreciation in world capital markets, and the need for the baby boom generation to save for retirement. Compared to most other developed countries, America's pool of retirement savings is the largest in absolute terms, and is among the largest as a proportion of gross national output.

While the trend towards more retirement assets is extremely positive for the aggregate economy and for the individuals that are saving, the trend away from defined benefit plans toward defined contribution 401(k) plans is not as positive. While 401(k) plans have certainly led to more employers offering retirement plans for employees, some of the growth has come at the expense of terminating smaller defined benefit plans and "freezing" larger ones. As a consequence, a larger fraction of workers today will be relying on retirement income primarily from 401(k) plans, as opposed to from defined benefit plans.

¹⁶ Collins, Sean, "The Expenses of Defined Benefit Pension Plans and Mutual Funds," *Perspective*, vol. 9, No. 6, December 2003, Investment Company Institute.



There are three main risks with concentrating more retirement assets in 401(k) plans.

- First, 401(k) plans do not provide the same amount of stable, long-term savings as do defined benefit plans.
- Second, on average, 401(k) plans have not delivered investment returns as high as defined benefit plans.
- Third, 401(k) plans result in a much broader distribution of investment outcomes than defined benefit plans, creating a wide spectrum of winners and losers.

While America's total stock of retirement savings has increased significantly in the last thirty years, defined contribution 401(k) plans now comprise a larger fraction of this total pool. 401(k) plans require voluntary contributions from employees and, as a consequence, lower- and middle-income employees do not contribute assets to a 401(k) plan at the same rate as upper-income employees, many of whom would save income for retirement without the incentives of 401(k) plans. Consequently, America's pool of retirement savings does not increase at the same rate when 401(k) plans are the primary retirement vehicles as it would if defined benefit plans were the preferred mechanism. Defined benefit plans allow employers to save assets for employees, regardless of their economic standing. Further, significant "seepage" occurs in 401(k) plans, as participants are often allowed to borrow money from their 401(k) plans and many liquidate their 401(k) plans before they retire.

401(k) plans, on average, appear to produce lower returns than defined benefit plans. There may be several reasons for this. First, 401(k) plans often have significantly higher operating costs than defined benefit plan. Second, 401(k) plan investment decisions are directed by individuals, who are not as experienced or knowledgeable as the professionals who regularly direct the assets of defined benefit plans. Third, as stable pools of assets, defined benefit plans are usually truly invested for the long-term, taking advantage of a higher allocation to long-term assets, like equities. Finally, 401(k) plans usually offer participants shares in retail mutual funds as investment options, where many larger defined benefit plans can utilize institutional investment strategies that have lower costs and often produce higher returns.

While these risks are to some extent inevitable as the trend from defined benefit plans to defined contribution plans continues, there are ways to moderate these risks.

- **Increase Incentives and Decrease Disincentives for Employers to Sponsor Defined Benefit Plans**

Better incentives could include reducing the legal and financial liability of sponsoring a defined benefit plan, educating employees on the benefits of defined benefit plans, or changing the structure of defined benefit plans to include provisions preferred by employees, including portability and individual account valuation.



• **Constrain Liquidity Provisions in 401(k) Plans**

401(k) plans could be improved as retirement vehicles by limiting loans against 401(k) balances, prohibiting liquidation before retirement, and creating incentives for employees, particularly those with lower incomes, to contribute more significantly to 401(k) plans.

• **Better Investment Education**

The investment deficiency of 401(k) plans could be partially resolved through better education of participants and by creating incentives for participants to invest with a clearer focus on their retirement. This might include limiting the number of investment changes that could be made periodically, or including more “lifecycle” fund options that effectively take the asset allocation decision out of the hands of participants.

On the whole, the development of 401(k) plans has been a positive development for employers, employees, and the American economy. The increased use of defined contribution plans has allowed more employees to save for retirement, and has, thus, contributed to the increase in retirement assets in America over the past generation. While our society should continue to promote the continued growth of retirement savings, we should also be cognizant of the possible risks that become heightened as many citizens are now primarily reliant on defined contribution plans to provide the third leg of their retirement savings.

**Comparison of
Traditional Defined Benefit Plan
and
Traditional Defined Contribution Plan**

Strategic Considerations	Defined Benefit Plans	Defined Contribution Plans
Employee Retention	Attracts longer tenured/ older employees	Attracts shorter tenured/ younger employees
Financial Liabilities	Placed on the corporate sponsor	Placed on the participant
Responsibility Placed on Employee	Very little	Significant - voluntary contributions, necessary investment decisions
Responsibility Placed on Employer	Significant - investment decisions, financial liability	Less significant
Employer Fiduciary Responsibility	Significant	Significant
Investment Results	Average returns are higher/ narrower distribution of returns	Average returns are lower/ broader distribution of returns
Economic Savings	Significantly increases savings rate and the available pool of national savings	Less significantly increases savings rate and the available pool of national savings
Personal Retirement Savings	Maximizes savings for retirement	Allows withdrawals and loans before retirement, depleting retirement savings
Fees	Lower overall fees	Higher overall fees
Administrative Complexity	Generally high	Generally high
Portability	Not typical	Yes



SOURCES

- Aaronson, Stephanie; Coronado, Julia, "Are Firms Behind the Shift Away from DB Pension Plans?," Washington DC, Federal Reserve Board of Governors, July 2004.
- Bank for International Settlements, *The Macroeconomic and Financial Implications of Ageing Populations*, April 1998.
- Byrnes, Nanette; Tashiro, Hiroko, "Comparing Pensions Around the World," Global Action on Aging (www.globalaging.org), July 12, 2004.
- Clark, Robert L.; Lee, Craig A.; Wilson, Jack W., *A History of Public Sector Pensions in the United States*, Philadelphia, University of Pennsylvania Press, 2003.
- Clements, Jonathan, "Maybe Investors Aren't Stupid After All: Oft-Cited Study is Revised," *Wall Street Journal*, March 31, 2004.
- Collins, Sean, "The Expenses of Defined Benefit Pension Plans and Mutual Funds," *Perspective*, vol. 9, No. 6, December 2003, Investment Company Institute.
- Council of Institutional Investors, *Protecting the Nest Egg: A Primer on Defined Benefit and Defined Contribution Retirement Plans*, Washington DC, Council of Institutional Investors.
- Dalbar, Inc., "Market Chasing Mutual Fund Investors Earn Less Than Inflation - DALBAR Study Shows," *Dalbar*, July 15, 2003.
- Employee Benefit Research Institute, "Facts from EBRI," Washington DC, EBRI, December 2003.
- Employee Benefit Research Institute, "Facts from EBRI," Washington DC, EBRI, September 2004.
- Employee Benefit Research Institute, "Facts from EBRI," Washington DC, EBRI, February 2005.
- Freeman, John; Brown, Stewart, "Mutual Fund Advisory Fees: The Costs of Conflicts of Interest," *Journal of Corporate Law*, Spring 2001, pages 609 - 673.
- Gale, David, "The Effects of Pensions on Household Wealth: A reevaluation of Theory and Evidence," *Journal of Political Economy*, 1998, vol. 106, no. 4.
- Hustead, Edwin, "Retirement Income Plan Administrative Expenses, 1981 through 1996," Presentation to the Pension Research Council Conference, May 1996.
- Johnston, Mark, "Does Reform Ask Too Much of Sponsors," *Pension & Investments*, March 21, 2005.
- Munnell, Alicia; Sunden, Annika, *Coming Up Short: The Challenge of 401(k) Plan*, Washington D.C.: Brookings Institution Press, 2004.
- National Association of State Retirement Administrators, "Myths and Misperceptions of Defined Benefit and Defined Contribution Plans," NASRA White Paper, November 2002 updated February 2005.
- Payden & Rygel, *Payden & Rygel Quarterly Review*, April 2005.
- Porter, Eduardo, "When It Comes to Managing Retirement, Many People Simply Can't," *The New York Times*, March 18, 2005.
- Rajnes, David, "An Evolving Pension System: Trends in Defined Benefit and Defined Contribution Plans," *EBRI Issue Brief*, number 249, EBRI, September 2002.
- Sass, Steven A., *The Promise of Private Pensions: The First Hundred Years*, Cambridge, MA: Harvard University Press, 1997.



Service Employees International Union, "DB Plans vs. DC Plans," SEIU, (www.seiu.org/resources/capital_stewardship_program/db_vs_dc.cfm).

Swanson, K.C., "Retirees Who Cash Out Could Take Their Lumps," TheStreet.com, March 19, 2002.

U.S. Department of Labor, Advisory Counsel on Employee Welfare and Pension Benefits, "Report on the Working Group on Retirement Plan Leakage: Are we Cashing Out Our Future?" Nov. 13, 1998.

U.S. Department of Labor Employee Benefits Security Administration, "Working Group on the Merits of Defined Contribution vs Defined Benefit Plans with an Emphasis on Small Business Concerns," (www.dol.gov/ebsa/publications/dbvsdc.htm), November 13, 1997.

U.S. Department of Labor Bureau of Labor Statistics, "National Compensation Survey: Employee Benefits in Private Industry in the United States, March 2004," November 2004.

U.S. Department of Labor Employee Benefits Security Administration, *Private Pension Plan Bulletin: Abstract of 1999 Form 5500 Annual Reports*, number 12, November 2004.

Watson Wyatt, "Defined Benefit vs. 401(k) Returns: An Updated Analysis," Watson Wyatt Worldwide, *Insider*, September 2003.

Watson Wyatt, "Trend Toward Hybrid Pensions Among Largest U.S. Companies Slows Considerably," Watson Wyatt, May 3, 2002.