

**United States House of Representatives**  
**Committee on Education and the Workforce**

February 7, 2002

10:00 am

Written Testimony:

**The National Erosion of Private Pensions**

Teresa Ghilarducci, Ph.D.  
Associate Professor  
Department of Economics  
University of Notre Dame  
Notre Dame, Indiana 46556  
574 -631-7581: email: ghilarducci.1@nd.edu

## **National Compensation Trends**

It is a familiar narrative that unlike previous expansions, inequality between the nation's rich and poor families widened considerably in the 1990s – by the end of the decade average incomes in the top one-fifth of families were ten times larger than for the poorest families (Mishel et. al. 2001). Fortunately wages at the bottom of the distribution grew in the last four years. However, wages are only a part of workers' total compensation. What is happening to health insurance and pensions is bad news; coverage and quality in both types of insurance plans have fallen. The erosion in health insurance has created much more disparity than earnings alone (Medoff and Calabrese, 2001). In contrast, the pension coverage gap closed; but not because the bottom was raised but because the top had fallen – pension coverage for the top 40% of the wage distribution dropped significantly.

- Pension coverage rates for earners in the top 40% of the wage distribution fell significantly between 1978 and 1998. Pension coverage for the top 20% dropped from 78% in 1978 to 72% in 1998. For the next quintile the decline was a bit smaller, from 73% to 69%. The decline was all due to declines in male pension coverage rates – which are nearly twice that of women. (Medoff and Calabrese 2001: 117).
- Overall, employer expenditures for pensions, a good proxy for quality, fell by a whopping 22% between 1978 and 1998 (Medoff and Calabrese 2001: 134).

## **The Surprising and Unintended Effect of Tax Cuts Eroding Pensions**

Pension policy is tax policy. Most pension plans exist because of the favorable tax consequences. Tax favoritism for pensions, Keogh, and 401(k) plans etc. represents the U.S.'s largest tax expenditure (taxes not collected). That means the \$87 billion (in 1999) (Slemrod and Bakija 2000: 281) of tax expenditures for pension is larger than that for health insurance and mortgage deductions.

Therefore, an unintended consequence of the tax cuts is a reduction in the incentives for employers to provide pensions as a source of pay and reduce incentives for individuals to divert their earnings into tax-favored pension accounts. It is estimated that a 1% drop in the tax rate causes a .4% decline in pension coverage (Hinz and Turner 1998).

Below, I explore the connection between pension erosion and the expansion of 401(k)s. Enron's 401(k) pension plan collapse is not idiosyncratic; it reveals the gradual erosion of the entire private pension system. The decline is especially curious because workers were aging and presumably wanting more retirement security and flush times made pensions more affordable. Pensions did not improve in the roaring 1990s when both the economic and demographic environments were most favorable for growth. If not in the 1990s, when would pensions improve?

## Pension Erosion and 401(k)s

Pension erosion took the form of 401(k) – type retirement plans out-shadowing traditional defined benefit pensions. The new plans are worth less (especially on a risk-adjusted basis) which will force people to stay longer in the work force. Working longer is not compensated for in longer lives. To maintain the same standard of living as retirees had in the late 1970s workers will have to work over 4 years longer. But, on average, we live only one year longer. The life expectancy improvement for those who are 65 years old does not outweigh the decline in private sector pension benefits.<sup>i</sup>

## 401(k)s and Pension Erosion

Most analysts examine how many workers are covered by 401(k)s and, perhaps, average account size. I, however, examine 401(k)s from the point of view of employer costs. The stark and surprising finding was that the menu of plan types offered by the firm did not explain the level of employers' pension contributions; it was how their pension options changed over the 1980s and mid 1990s that determined if employers improved pensions or not. **We find that 401(k)s allowed employers to reduce pension costs by almost one third. And, if a firm adopted a DC or 401(k) plan between 1981 and 1995 lowered their pension costs per person by about 20%.**

(Statistical analysis shows that a firm's pension contributions are lower than average when it sponsors a 401(k) after controlling for other factors that would affect pension costs [Ghilarducci, Nyce, and Sun, 2001]).<sup>ii</sup> The 827 firms in our sample dramatically reduced their tendency to provide only a DB plan for their workers over the 14-year period. See Appendix Table 1. In 1981, 45% of firms in the sample sponsored only DB plans and that share dropped to 11% in 1995. The share of firms that sponsored both DC and DB plans increased from 41% in 1981, to a whopping 73%, in 1995.<sup>iii</sup> The share of firms that provide only DC plans increased slightly from 14% to 16%. This is superficial evidence firms did not substitute DCs for DBs.

Furthermore, it may be surprising that the overall percentage of firms that are just offering 401(k)s plans has not changed much in recent years: firms with only 401(k) plans in 1988 was 30.2% of the sample and, in 1996, was 35.7% (see Appendix Table 2). However, firms that sponsored 401(k) plans as the sole pension plan had the lowest contribution per participant, \$1,192 in 1996 compared to firms that never sponsored a 401(k) or sponsored a 401(k) and other plans (see Appendix Table 3).

In sum, there are many reasons for the shift in DC plans (though it is not the rapid decline in job turnover – for minorities and women job tenure has actually increased); however, I find support for the hypothesis that a primary and plausible reason for the shift to individual based plans is that they are cheaper.

Workers' desire for DC and 401(k) plans certainly contribute to their growth especially in the face of job insecurity. The markets can look more secure than jobs. Human psychology and spectacular equity growth work together to cause people to "over value" the equity market and expect returns to keep growing. 401(k)s also give employees desired some control. But, 401(k)-type plans have fatal flaws and high costs; some Congress can fix, others Congress cannot.

Congress can't fix the inherent flaw that in individual – based plans workers risk they were born in the wrong year. Financial markets cycle and if the low cycle is during your later working years you will do worse than if you were older or younger. Employers smooth out payments over a large group and birth date effects become irrelevant.

Congress also can't change human nature. Good humans are notoriously bad investors. Human charming traits include overconfidence (we rank our appearance higher than those around us), saliency (to think what just happened will happen with a higher probability) and we want instant gratification (Shiller 2000). Increasingly, middle-class workers are using their so-called retirement accounts as liquid savings to buy housing, finance periods of unemployment and fund children's education. **In short, human nature is such that we buy high, sell low, and trade too often.**

### **Several Pension Reform Ideas**

I emphasize four pension reforms below: The first two are designed to increase transparency and accountability, as well as secure more pension adequacy. The second two recommendations focus on reducing risks workers face in owning a 401(k) and thereby increasing the risk-adjusted rate of return.

#### **Increase Transparency which enhances the Ability to improve Benefits**

- I urge Congress to require employers to pay administrative fees for 401(k)s so employers are induced to find the most the efficient provider. At the very least Congress should require employers to reveal the pension administrative costs borne by workers in a uniform and understandable way.

Employers obtain a tax break for providing pensions (more later) and thereby a duty to fiduciary principles and public interest are implied. Employers who serve as quasi- fiduciaries should assess whether the "bells and whistles" of a high profile, high service 401(k) plan are worth the high fees.<sup>iv</sup> Also, of course, there could be a great deal of self-dealing in the choice of vendors that would be mitigated if these transactions were exposed.

Fees are terribly important – they are a hidden source of pension erosion in 401(k)s because the 401(k) structure allows employers to shift administrative costs to workers without detection. The Department of Labor, alarmed about the shift, has

stepped up efforts to prosecute employers who charge unreasonable fees and has a proactive public education campaign: the web site is impressive (<http://www.dol.gov/dol/pwba/public/pubs/401kfe~1.htm>). High service fees in individual accounts can lower lifetime accumulations by 20 – 40%. The average annual fee was over \$144 per participant (retired and active) for the largest companies that report fees in 1996 (see Appendix Table 4.)

- I urge Congress to increase the transparency of 401(k) and pension administration by requiring worker representation on pension boards.

Employee representation and access to information can mitigate self-dealing problems and conflict of interests inherent when a firm must both manage a trust fund and maximize profit – sometimes the goals are not mutually compatible. The over fifty years of successful joint labor-management administration of union-negotiated multi-employer plans (covering 20% of defined benefit participants) provides support for the proposal. In addition, the United States stands apart from most industrialized nations by not requiring worker representation on pension boards. There is also evidence that when trustees represent labor and management constituencies they scrutinize each other, which results in the plans more likely being actuarially balanced and for excess pension fund earnings to be paid in the form of benefits, not in profits. (Ghilarducci 2000).

### **Reduce Risk**

- I urge Congress to restrict the amount of sponsor equities in individual, tax-favored retirement accounts. (This is a non-controversial recommendation among academic pension economists.)

Professional standards recommend investing no more than two to ten percent of a plan's assets in any one financial vehicle. However, employees seem to have considerable loyalty or faith in their own employer's success. Also, among some of the largest U.S. company 401(k) plans, Enron's was more diversified than that of others, such as Coca-Cola, for instance, which holds about 85% of assets in company stock compared to 64% at Enron (Chen 2002). Also, Appendix Table 5 and Appendix 6 displays the weighted average of sponsor holdings as a percentage of a companies total pension assets for some companies in 1996. These arguments are not relevant for Employee Stock Ownership Plans (ESOPS) because they are not retirement funds.

- As an Advisory Board Member of the PBGC I urge Congress to in turn urge or require the PBGC to investigate ways to reduce the risk in defined contribution plans.

How would the PBGC go about reducing risk? Currently, the Pension Benefit Guaranty Corporation (PBGC) insures payment of defined benefit payments in the case of employer bankruptcy. The derivative and underlying work of the PBGC is that because they are exposed to the expense of having to pay pensions they do monitor and minimize

exposure just like any insurance company. In 1998, the PBGC began using an highly complex (and award-winning) model to assess the probability a weak firm will present claims to the PBGC. The PBGC also has a sophisticated staff of lawyers and financial analysts who identify corporate mergers, acquisitions, borrowing, and other financial transactions that might put pension funds at risk. The PBGC could use the same kind of early warning system for DC plans.

## **Boosting Coverage**

Reforms to improve pension coverage for workers include:

- Require immediate vesting, or nearly immediate, for newly hired employees to help them develop the habit of retirement saving and to accumulate funds and require “reverse matching” – employers contribute to all employees 401(k) plans regardless of employees’ match behavior.

401(k)s have a fatal flaw that will prevent them from ever being a good retirement income security device. They require the employee to contribute before the employer’s contribution is forthcoming. Research shows that lower income workers do not participate in voluntary pension plans or they withdraw the funds before retirement because their tax rates are lower and they are more often to perceive they do not earn enough. (In surveys 30 – 60% of people underestimate how much they need to save for retirement.) A full 20% of workers who could contribute to the DC plan offered at work don’t and the median 401(k) balance is less than \$5,000 for women and less than \$11,000 for men (EBRI,1997). In fact, in 1998 for the first time, the rate of increase in assets in DB plans was greater that in DC plans. Federal Reserve officials suspect that workers are drawing down their DC accounts before retirement (Anad, 1999).

- Mandate a defined contribution, individual account supplement to Social Security and subsidize the supplement for low and lower middle income workers with tax credits deposited directly into their account.

Besides raising tax rates, an effective way to boost coverage would be to mandate individual accounts and fund it with tax credits – e.g. the earned income tax credit – for lower income workers. Mandating coverage with government seed money is analogous to the existing tax carrot though it is updated and more effective for low and middle-income employees. Also, to reiterate the point above, a different tax carrot is needed when tax rates are low.

## **Conclusion**

The idea of individual responsibility in all areas of social insurance has momentum in the employer and employee relationship; therefore, new forms of regulation are needed. Some fear that regulating 401(k)s will induce employers to not provide pensions. However, pensions are not merely agreements between employers and

employees. Taxpayer subsidies are important reasons retirement plans exist and government has a role in making them serve a public interest.

ERISA reform must address the coverage, protection, and adequacy gaps in the growing voluntary individual pensions sectors. ERISA regulators should construct clever and employer-responsive ways to reverse the erosion in pension coverage. Individual control of pension accounts comes at a high probability of failure—professionals make better investment decisions than individuals and the risk is minimized when distributed over a large group plan. In addition, much of the administrative expense for individual accounts are not subsidized by the employer (as they are in traditional plans) and they are higher because workers lose economies of scale, smoothing possibilities, and the advice of professionals.

Resources:

2001 Statistical Abstract of the United States: Table 96: Expectations of Life”  
<http://www.census.gov/statab/www/> 2000 U.S. Statistical Abstract, Table 253.  
Educational Attainment by State. U.S. Government Printing Office. P. 159.

Anad, Vineeta, “Defined Benefit Assets surge by 20.3%” Pensions and Investment Age, March 22, 1999: 1).

Bureau of Labor Statistics, various years, “Employer Costs for Employee Compensation.” <http://stats.bls.gov/news.release/ecec.nws.htm>

Burtless, Gary and Joseph Quinn. 2001. “Retirement Trends and Policies to Encourage Older Work Among Older Americans.” In Alan Hunt editor. Editor. *Health and Income Security of an Aging Workforce*. Kalamazoo, Michigan: UpJohn Institute

Chen, Kathy. 2002. “Fight Looms Over Changes to Pension Laws” Wall Street Journal January 22. . P. 1

Department of Labor. 1998. Final Report, Pension and Welfare Benefits Administration, “Study Of 401(K) Plan Fees And Expenses, Contract No. J-P-7-0046, Task Order 1.” April 13. <http://www.dol.gov/dol/pwba/public/pubs/401kfe~1.htm>

EBRI (Employee Benefit Research Institute). 1997. “ EBRI Data Book: 4th edition Washington D.C. Table 7.3: “Median Income of the Older Population From Major Sources.” p. 59,

Ghilarducci, Teresa, Steve Nyce and Wei Sun. 2001. “The Effects of Defined Contribution Pension Plans and 401(k)s on Employer Pension Costs” Working Paper, University of Notre Dame.

Ghilarducci, Teresa. 2000. “Small Benefits Large Funds: How Governance Affects Pension Plans.” 2000. In Tessa Hebb, et. al. Editors., *Working Capital: The Power of Labor’s Pensions*. Ithaca: Cornell University Press. 2000. pp: 44-66.

Harless, David W. and Steven P. Peterson. 1998. “Investor Behavior and the Persistence of Poorly Performing Mutual Funds” *Journal of Economic Behavior and Organization* 37:3 November.

Hinz, Richard P. and John A. Turner. 1998. “Pension Coverage Initiatives: Why Don’t Workers Participate?” in *Living with Defined Contribution Plans* edited by Olive S. Mitchell and Sylvester J. Schieber, Philadelphia, PA. The Pension Research Council, The Wharton School of the University of Pennsylvania and University of Pennsylvania Press. pp: 17-37.

Medoff, James and Michael Calabrese. 2001. "The Impact of Labor Market Trends on Health and Benefit coverage and Inequality". For the Pension & Welfare Benefit Agency. U.S. Dept. of Labor, Feb. 28.

Mishel, Lawrence, et. Al. 2000. State of Working American Ithaca, Cornell University Press.

Pension Benefit Guaranty Corporation, Pension Insurance Data Book: 1998 PBGC, 1200 K Street N.W., Washington D.C: 1998.

Slemrod Joel, and Jon Bakija. 2000. Taxing Ourselves. Cambridge: MIT Press. P. 281.

## Appendix

Table 1

Changes in Pension Choices and Employer Contributions of 827 Firms during 1981-1995

1981-1995		Average contribution
12 Possibilities(case numbers in Parenthesis)	Number of Firms	
1. Were DB only in 1981 and stayed DB through 1995	48	\$1,344
Were DB only in 1981 and changed during 1981-1995	327	
(2.) Keep DB and adopted DC during 1981-1995	264	\$1,849
(3.) Dropped DB and adopted DC during 1981-1995	39	\$1,077
(4.) Switched back to DB only after changes	24	\$1,628
5. Were DB&DC in 1981 and stayed DB&DC through 1995	158	\$3,777
Were DB&DC in 1981 and changed during 1981-1995	180	
(6.) Dropped DC and keep DB during 1981-1995	18	\$1,342
(7.) Dropped DB and keep DC during 1981-1995	22	\$1,185
(8.) Switched back to DB&DC after changes	140	\$3,009
(9.) Were DC only in 1981 and stayed through 1995	66	\$1,870
Were DC only in 1981 and changed during 1981-1995	48	
(10.) Adopted DB during 1981-1995	40	\$2,321
(11.) Adopted DB and dropped DC during 1981-1995	0	
(12.) Switched back to DC only after changes	8	\$1,213
Total	827	
Source: Ghilarducci et. al. 2001		

**Table 2**

## Number of Firms by 401(k) Status

	Total number of firms*	401(k) only	401(k) and others	Do not have a 401(k)
1988	693	30.2%	52.7%	17.2%
1989	702	35.0%	48.7%	16.2%
1990	753	19.4%	59.6%	21.0%
1991	759	17.7%	60.3%	22.0%
1992	724	35.1%	51.1%	13.8%
1993	724	27.8%	52.9%	21.7%
1994	749	27.9%	51.4%	20.7%
1995	759	29.4%	52.7%	17.9%
1996	742	35.7%	42.5%	21.8%

Source: Ghilarducci et. al. 2001 (\*There are some plans that have “plan feature” information missing. Therefore, the total number of observations in each year is different.)

**Table 3**

## Selected 1996 Characteristics of Firms by 401(k) Status

Characteristics Firms that are in the sample	1. Adopted 401(k) sometime during 1988-1996	2. Never had a 401(k) during 1988-1996	3. Always had a 401(k) and other plans
Contributions per participant in 1996	\$1,192.03	\$1,272.27	\$1,223.99
Average number of plan participants	8,662	8,153	20,082
Unionization rate	49.8%	39.2%	57.2%
Percentage of firms in manufacturing	60.6%	39.2%	53.6%

Source: Ghilarducci et. al. 2001

**Table 4****Stock Concentration and 401(K) Fees For Large Companies: 1996  
(weighted average)**

Company with at least one plan that has assets over \$1,000,000,000		
Company Name	Weighted average Concentration of Sponsor Equities in 401(k)	weighted average administrative fees per total participant for 401(K) plans
BAYER CORPORATION	nr	nr
BELLSOUTH CORPORATION	nr	nr
SIEMENS CORPORATION & CONSOLIDATED SUBSI	nr	nr
UNISYS CORPORATION	nr	nr
MERCK & CO INC	nr	nr
UNITED TECHNOLOGIES CORP	nr	nr
BRISTOL-MYERS SQUIBB CO	nr	nr
XPEDX	nr	nr
KRAFT FOODS INC	nr	nr
CONSOLIDATED RAIL CORPORATION	nr	nr
ELI LILLY & CO	nr	nr
PACIFIC GAS & ELECTRIC CO	nr	nr
SMITH KLINE BEECHAM CORP	nr	4.9
NATIONWIDE MUTUAL INSURANCE COMPANY	nr	11.7
METROPOLITAN LIFE INSURANCE CO	nr	14.0
LOCKHEED MARTIN CORPORATION	nr	23.0
AMERICAN AIRLINES INC	nr	25.9
UNITED PARCEL SERVICE OF AMERICA INC	nr	3nr
TRAVELERS GROUP INC	nr	39.5
GOODYEAR TIRE & RUBBER COMPANY	nr	61.1
BELL ATLANTIC CORPORATION	nr	95.4
PHILIP MORRIS COMPANIES INC	nr	97.9
NATIONAL RURAL ELECTRIC COOPERATIVE ASSO	nr	132.8
RJR NABISCO INC	nr	135.2
HARTFORD FIRE INS CO	nr	178.0
ALLIEDSIGNAL INC	nr	196.7
EQUITABLE LIFE ASSURANCE SOCIETY OF US	nr	235.7
NORTHROP GRUMMAN CORPORATION	nr	563.4
AT&T CORP	4.70%	6.2
LUCENT TECHNOLOGIES INC	6.64%	2.5
CIGNA CORP	7.79%	0.8
BOEING CO & CONSOLIDATED SUBSIDIARIES	9.65%	91.9
EASTMAN KODAK COMPANY	11.43%	129.7
FIRST UNION CORP & SUBS	11.49%	19.1
CHRYSLER CORPORATION	13.04%	50.6

AETNA SERVICES INC	16.03%	nr
MORGAN GUARANTY TRUST CO OF NY	18.94%	26.9
DOW CHEMICAL CO	25.53%	127.7
AMERICAN ELECTRIC POWER SERVICE CORP	29.81%	58.5
PACIFIC TELESIS GROUP	30.72%	92.4
MINNESOTA MINNING AND MANUFACTURING	31.80%	4.1
CITIBANK N A	35.47%	nr
SEARS ROEBUCK AND CO	39.59%	38.6
BANKAMERICA CORPORATION	44.10%	4.3
SPRINT CORPORATION	47.12%	9.4
FIRST CHICAGO NBD CORPORATION	47.45%	nr
U S WEST INC	49.10%	115.9
MONSANTO CO	50.59%	175.5
FORD MOTOR COMPANY	51.89%	nr
FLORIDA POWER & LIGHT COMPANY	52.24%	11.6
AMOCO CORPORATION	53.29%	41.2
MOBILE OIL CORPORATION	56.45%	142.5
EATON CORPORATION	58.78%	nr
GENERAL ELECTRIC COMPANY	59.66%	nr
J C PENNY COMPANY INC	60.10%	24.2
SBC COMMUNICATIONS INC	60.10%	2326.6
AMERITECH CORPORATION	60.82%	84.3
PPG INDUSTRIES & SUBSIDIARIES	70.19%	197.8
SOUTHERN COMPANY SERVICES INC	74.12%	nr

Nr = not reported or reported as zero.

Source: Form 5500 (1996)

**Table 5**

**Companies with a weighted average of Sponsor  
Equities and Assets in their 401(k) plans above 50%  
(weighted by assets for all the 401(k)s the company sponsors)**

Name of Company	Concentration of Sponsor Equities in the 401(k)s	Weighted Average Fees per participant
WEST MARINE PRODUCTS	10nr%	nr
WWOR TV INC	10nr%	78.7
HAVERFIELD CORP	10nr%	182.3
BUREAU OF NATIONAL AFFAIRS INC	99.3%	0.3
MODINE MANUFACTURING CO	99.3%	7.4
JELD-WEN INC	99.3%	12.0
TALLEY INDUSTRIES INC	99.3%	5.7
TCF BANK MINNESOTA FSB	99.2%	1.4
FFY FINANCIAL CORP	99.0%	2.3
AMIGO TV RENTALS INC	98.9%	nr
GRANITE STATE BANKSHARES INC	98.7%	2.1
BANK OF LANCASTER COUNTY NA	98.5%	nr
ACCESS STAFFING INC	97.9%	nr
MICHIGAN FINANCIAL CORP	97.9%	nr
FIRST VALLEY BANK GROUP INC	97.8%	nr
HUNTINGTON BANCSHARES INCORPORATED	97.8%	nr
G R HERBERGERS INC	97.5%	56.9
ROSEVILLE TELEPHONE COMPANY	97.3%	nr
NFC INTERNATIONAL HOLDING USA INC	97.3%	nr
EXCEL TELECOMMUNICATIONS INC	97.2%	3.5
STANLEY WORKS	97.2%	43.0
INTERRA FINANCIAL INCORPORATED & SUNSIDI	96.9%	26.4
CARE HEALTH SERVICES INC	95.8%	43.1
BAILEY COMPANY INC	95.8%	nr
FOREIGN MOTORS WEST INC	95.4%	0.6
TRUE NORTH COMMUNICATIONS INC	95.4%	35.6
MANAGEMENT SYSTEMS ASSOCIATES INC	95.2%	nr
TELE-COMMUNICATIONS INC	95.1%	nr
BICKNELL & FULLER PAPER BOX CO	94.8%	nr
WILLIAMS-SONOMA INC	94.7%	nr
PROVIDENT BANCORP INC	94.7%	nr
BARNES GROUP INC	94.6%	nr
NEW BRISTOL FARMS INC	94.2%	82.8
TEXAS REGIONAL BANCSHARES INC	94.1%	nr
CORRECTIONS CORP OF AMERICA	93.8%	0.1
HORIZON BANCORP INC	93.4%	106.0
GENERAL COMMUNICATION INC	93.0%	nr
UNITED CAROLINA BANCSHARES CORPORATION	93.0%	nr
SCANA CORP	93.0%	nr
NANTAHALA OUTDOOR CENTER INC	92.6%	0.1
MINUTE MAID COMPANY A DIVISION OF THE CO	92.5%	12.4
HEICO CORP	92.0%	nr

LAKELAND FINANCIAL CORP	91.5%	nr
UNITED ARTISTS ENTERTAINMENT COMPANY	91.5%	nr
L S STARRETT COMPANY	91.0%	nr
LENAWEE BANCORP INC	90.6%	158.6
FIRST BANK OF ILLINOIS CO	89.8%	33.0
VARIABLE ANNUITY LIFE INSURANCE CO	89.5%	nr
SIGN OF THE BEEFCARVER INC	89.0%	21.2
QUESTAR CORPORATION AND SUBS	89.0%	7.4
UNION PLANTERS CORPORATION	88.9%	12.4
ATMOS ENERGY CORPORATION	88.8%	nr
U S B HOLDING CO INC	88.7%	196.8
GULF TELEPHONE CO	88.4%	17.9
ROPER CORPORATION	88.4%	nr
ALLEN D EVERITT KNITTING CO	88.4%	477.8
CAROLINA POWER & LIGHT COMPANY	88.0%	74.8
WEST SUBURBAN CURRENCY EXCHANGES INC	88.0%	35.2
MAY DEPARTMENT STORES CO-DELEW CORP 05209	87.9%	61.2
BANCPLUS CORPORATION AND SUBSIDIARIES	87.9%	32.2
ARCHER DANIELS MIDLAND CO	86.8%	nr
COLLINS INDUSTRIES INC	86.5%	nr
ANTIOCH PUBLISHING CO	86.4%	nr
MDU RESOURCES GROUP INC	86.2%	61.7
BANK ONE INDIANAPOLIS	86.0%	nr
BANCORPSOUTH	85.7%	nr
MID-CONTINENTAL RESTORATION CO INC	85.1%	0.4
JUSTIN INDUSTRIES INC	85.1%	nr
AGL RESOURCES INC	85.0%	nr
ABBOTT CHEMICALS INC	84.9%	23.2
SOUTHSIDE BANCSHARES CORP	84.8%	nr
FARMERS NATIONAL BANCSHARES INC	84.7%	nr
FIRST AMERICAN CORP & SUBSIDIARIES	84.7%	nr
BRANCH BANKING AND TRUST COMPANY ACCOUNT	84.4%	17.8
NATIONAL HMO CORPORATION	84.3%	nr
PEOPLES FINANCIAL CORPORATION	84.3%	nr
UNITED NATIONAL BANK AND TRUST COMPANY	83.9%	nr
DUKE POWER COMPANY AND SUBSIDIARIES MAIL	83.9%	nr
COMPASS BANCSHARES INC AND SUBSIDIARIES	83.6%	nr
EGREMONT HEALTHCARE ASSOCIATES	83.6%	5.2
HOME DEPOT USA INC	83.5%	41.3
UNITED BANKSHARES INC	83.5%	nr
GSC ENTERPRISES INC	82.3%	17.2
DILLARD DEPARTMENT STORES INC	82.2%	
SOUTHEAST SERVICE CORPORATION	82.0%	nr
PFIZER INC	81.8%	2.1
UNITED STATES BEEF CORP	81.7%	53.5
HEALTH CARE REALTY OF OSAGE BEACH LTD	80.8%	4.4
TEXTRON INC	80.5%	42.5
KENT ELECTRONICS CORPORATION	80.4%	101.7
MOXHAM BANK CORPORATION	80.4%	0.3

PHILLIPS PETROLEUM CO	80.3%	15.9
INGRAM INDUSTRIES INC	80.2%	13.6
WM WRIGLEY JR CO	80.2%	nr
UNION OIL CO OF CALIFORNIA	79.8%	5.5
WILLIAMS COMPANIES INC	79.6%	3.1
WESTAMERICA BANCORPORATION	79.3%	nr
WESBANCO INC	79.3%	6.2
TOMPKINS COUNTY TRUST CO	79.3%	nr
BARNETT BANKS INC	79.2%	nr
SUNTRUST BANKS INC	79.0%	nr
SECURITY BANK S B	79.0%	nr
KIRKHILL RUBBER COMPANY	78.5%	nr
FLORIDA CONVALESCENT ASSOCIATES	78.5%	23.9
FIRST WAUKEGAN CORPORATION	78.2%	nr
STANDARD FEDERAL BANK	78.2%	nr
TRUSTMARK NATIONAL BANK	78.1%	nr
KANKAKEE FEDERAL SAVINGS & LOAN ASSOCIAT	77.9%	nr
ROADWAY EXPRESS INC	77.4%	nr
SOURCE ONE MORTGAGE SERVICES CORPORATION	77.2%	nr
POGO PRODUCING CO	77.1%	nr
HAWTHORNE SAVINGS & LOAN ASSOC	77.1%	91.2
INTER-CITY PRODUCTS CORPORATION USA	77.1%	nr
JAMES RIVER CORPORATION OF VIRGINIA	76.7%	12.7
TREDEGAR INDUSTRIES INC	76.4%	54.2
SONAT INC	76.3%	nr
SOUTHERN MEDICAL ASSOCIATES INC	76.2%	9.1
FIRST FINANCIAL CORPORATION	76.1%	4.6
INDIANA FEDERAL CORPORATION	76.0%	232.7
SCB COMPUTER TECHNOLOGY INC	75.6%	nr
ALLIED PRODUCTS CORPORATION	75.5%	nr
CINCINNATI GAS & ELECTRIC CO	75.1%	nr
CULLEN-FROST BANKERS INC	74.9%	nr
AES CORPORATION	74.8%	nr
NCI BUILDING SYSTEMS INC	74.8%	50.1
AMERICAN FEDERAL BANK FSB	74.4%	nr
SOUTHERN COMPANY SERVICES INC	74.1%	nr
NEW MEXICO BANQUEST CORP	73.8%	54.9
OSCEOLA HEALTH CARE CORPORATION	73.8%	9.3
PAYCHEX INC	73.8%	nr
JAMAICA SAVINGS BANK FSB	73.7%	nr
PROTECTIVE LIFE CORPORATION	73.6%	nr
UNITED COMPANIES FINANCIAL CORP 4041 ESS	73.4%	47.0
AURA SYSTEMS INC	73.3%	5.0
MAGNOLIA FEDERAL BANK FOR SAVINGS	73.0%	nr
SIMULATION SCIENCES INC TRUST ACCOUNTING	73.0%	318.6
MEDICAL MANAGEMENT OF MACON INC	72.7%	4.1
RALSTON PURINA CO	72.7%	22.8
PANENERGY CORP	72.7%	116.6
MERCHANTS BANK	72.5%	2.5

TANDY CORPORATION	72.4%	nr
CHARLES SCHWAB CORPORATION	72.3%	nr
FALLEYS INC	72.1%	77.5
IKON OFFICE SOLUTIONS INC	72.1%	101.4
MACKLANBURG-DUNCAN COMPANY	72.0%	nr
FIRST LIBERTY FINANCIAL CORP	72.0%	46.6
J SMITH LANIER & COMPANY INC	71.7%	19.1
PERFORMANCE FOOD GROUP INC	71.5%	nr
S & T BANK	71.5%	nr
COLONIAL PROPERTIES TRUST	71.4%	nr
KROGER CO	71.4%	35.2
HOUSTON INDUSTRIES INCORPORATED	71.3%	22.3
IDAHO POWER CO	71.2%	nr
B & R STORES INC	71.0%	nr
MARK TWAIN BANCSHARES INC	70.9%	38.7
CENTURA BANKS INC	70.7%	nr
ROYAL CREST DAIRY INC	70.3%	55.7
GREAT FINANCIAL BANK FSB	70.2%	3.7
PPG INDUSTRIES & SUBSIDIARIES	70.2%	197.8
MATTHEWS BOOK COMPANY	7nr%	66.3
COUSINS PROPERTIES INCORPORATED	7nr%	nr
MAGNA GROUP INC	69.9%	nr
NATURES SUNSHINE PRODUCTS INC	69.6%	1.3
BATH NATIONAL BANK	69.4%	nr
UNITED STATES TRUST CO OF NEW YORK	69.4%	nr
WEST MEADE PLACE LP	69.4%	4.2
GENERAL RE CORP	69.4%	8.7
EQUIFAX INC	69.3%	nr
WILLCOX & GIBBS INC	69.2%	nr
IONICS INCORPORATED	69.1%	nr
CLUB CORPORATION INTERNATIONAL	69.0%	13.0
BILLING INFORMATION CONCEPTS CORP	68.9%	nr
FIRST COMMERCIAL CORPORATION	68.6%	5.5
COMMERCIAL BANCSHARES	68.6%	nr
WESTCORP INC	68.3%	nr
BUILDING MATERIAL DISTRIBUTORS INC	68.1%	0.1
SAFEGUARD SCIENTIFICS INC	67.5%	nr
ANCHORBANK S B	67.4%	nr
PIONEER BANCSHARES INC	67.3%	81.6
APPLIED MATERIALS INC	67.1%	nr
AMERICAN HEALTH CARE INC	67.0%	7.0
OCOE HEALTH CARE PARTNERS LTD	66.9%	8.7
FINA INC	66.7%	107.6
FIRSTAR CORPORATION	66.6%	nr
UST INC	66.5%	159.3
PARK COMMUNICATIONS INC	66.4%	nr
DILLON COMPANIES INC	66.2%	2.6
AMERADA HESS CORPORATION	66.1%	0.2
FIRSTMERIT CORPORATION	66.0%	nr
CENTURY SOUTH BANKS INC	65.9%	nr

ALBERTSONS INC	65.8%	23.7
STAR BANC CORPORATION	65.7%	nr
GRANDPREMIER FINANCIAL INC	65.6%	nr
BETZDEARBORN INC	65.6%	9.0
FIRSTBANK CORP	65.4%	nr
SCHULTZ SAV-O-STORES INC	65.4%	139.3
INTERCHANGE STATE BANK	65.2%	-123.8
HOME FEDERAL SAVINGS BANK	65.2%	nr
FLORIDA CONVALESCENT CENTERS INC	65.0%	8.0
AMERCO	65.0%	0.9
ROCHESTER COMMUNITY SAVINGS BANK	64.9%	nr
TRITON ENERGY CORPORATION	64.9%	nr
DEAN WITTER REYNOLDS INC	64.4%	0.1
H B FULLER COMPANY	64.2%	nr
GAINSCO INC	64.2%	nr
ENOVA CORPORATION	63.8%	104.0
CHEMUNG CANAL TRUST CO	63.7%	nr
NATIONAL HEALTH CORP	63.3%	15.5
CAMPBELL SOUP CO	63.3%	9.9
ENGINEERED AIR SYSTEMS INC	62.8%	nr
PARISH NATIONAL CORPORATION	62.6%	176.8
FIRST-KNOX BANC CORP	62.5%	nr
SUCCESS BANCSHARES INC	62.5%	22.0
ENRON CORP	62.4%	5nr
BANK OF NEW YORK COMPANY INC	62.3%	nr
KEYCORP	62.0%	1nr
PENNSYLVANIA ENTERPRISES INC	61.8%	nr
MCDONALDS CORPORATION AND SUBSIDIARIES	61.7%	30.6
ROOSEVELT SAVINGS BANK	61.7%	nr
NEW JERSEY RESOURCES CORPORATION	61.7%	43.5
PEGASUS MEDIA & COMMUNICATIONS INC	61.6%	nr
FRINGE BENEFITS MANAGEMENT COMPANY	61.5%	0.8
CLIFFS DRILLING COMPANY	61.3%	nr
WALT DISNEY COMPANY	61.3%	nr
FHP INTERNATIONAL CORPORATION	61.1%	135.4
AMERITECH CORPORATION	60.8%	84.3
BOATMENS BANCSHARES INC	60.7%	nr
BARR LUMBER CO INC	60.5%	76.8
VIRGINIA ELECTRIC & POWER CO CORP	60.4%	59.2
COMERICA BANK	60.3%	nr
STANDARD FEDERAL BANK	60.3%	nr
CERNER CORPORATION	60.3%	1.0
UNIT CORP	60.2%	nr
WOHLSEN CONSTRUCTION COMPANY	60.2%	95.4
SBC COMMUNICATIONS INC	60.1%	2326.6
J C PENNY COMPANY INC	60.1%	24.2
PLEXUS CORP	59.8%	0.5
GENERAL ELECTRIC COMPANY	59.7%	nr
BANC ONE CORPORATION & SUBS	59.7%	38.6
PROVIDENT BANK OF MARYLAND	59.6%	11.9

B FRANK JOY CO INC	59.5%	16.7
CITY BANK	59.3%	nr
OHIO EDISON COMPANY	59.2%	69.0
PRIME BANCORP INC	58.7%	nr
CPC INTERNATIONAL INC	58.7%	nr
SECURITY NATIONAL BANK & TRUST CO	58.6%	nr
AWC INC	58.5%	8.4
STERLING BANCORP	58.3%	0.6
SECOND NATIONAL BANK OF WARREN	58.3%	nr
EVEREN CAPITAL CORPORATION	58.3%	48.5
COMPUWARE CORPORATION	57.9%	28.0
VOLVO CARS OF NORTH AMERICA INC	57.8%	nr
ANADARKO PETROLEUM CORPORATION	57.8%	22.3
ST PAUL FEDERAL BANK FOR SAVINGS	57.8%	89.6
OREGON METALLURGICAL CORPORATION	57.8%	nr
CIRCUS ENTERPRISES INC	57.7%	nr
PEOPLES BANCORP INC	57.4%	nr
HARSCO CORP	57.3%	nr
ADT SECURITY SYSTEMS INC	57.3%	59.7
SAFEWAY INC	57.3%	1.3
DIEBOLD INC	57.2%	2.6
ACXIOM CORPORATION	57.2%	nr
DELL COMPUTER CORPORATION	57.1%	119.7
WESTERN WASTE INDUSTRIES	57.0%	14.8
KANSAS CITY POWER & LIGHT CO	57.0%	nr
PAPER PAK PRODUCTS INC	56.8%	nr
EATON CORPORATION	56.8%	nr
MANUFACTURERS & TRADERS TRUST CO	56.7%	nr
MAPCO INC	56.6%	15.1
JLG INDUSTRIES INC	56.5%	13.3
BUSH INDUSTRIES INC	56.5%	48.9
MOBILE OIL CORPORATION	56.4%	142.5
CITY HOLDING COMPANY	56.2%	7.5
IMPERIAL CREDIT INDUSTRIES INC	56.2%	nr
PUBLIX SUPER MARKETS INC	56.2%	0.4
FIRST COMMERCE CORPORATION ET AL	56.1%	nr
OLD KENT FINANCIAL CORPORATION	56.0%	nr
TEJAS GAS CORPORATION	55.9%	nr
PHH CORP	55.8%	27.2
TEXAS INSTRUMENTS INCORPORATED	55.7%	67.4
MICROSOFT CORPORATION	55.5%	nr
PIKEVILLE NATIONAL CORPORATION	55.5%	nr
USI AMERICAN HOLDINGS INC	55.2%	1254.9
OGE ENERGY CORP	55.1%	25.1
SARASOTA HEALTH CARE CENTER	55.0%	6.2
SUBURBAN FEDERAL SAVINGS	54.9%	nr
ASTRA MERCK INC	54.8%	nr
CHARTER ONE BANK F S B	54.7%	35.1
BOLLINGER INDUSTRIES INC	54.5%	nr
MERCHANTS & FARMERS BANK	54.5%	35.8

KAYDON CORP	54.4%	10.2
HUBBARD FARMS INC	54.3%	nr
HEIDRICK & STRUGGLES INC	54.2%	463.7
BARGE WAGGONER SUMNER & CANNON INC	54.2%	112.9
MID AMERICA FEDERAL SAVINGS BANK	54.0%	nr
HEALTH MANAGEMENT ASSOC INC	54.0%	1.3
FIRST MICHIGAN BANK CORP	53.9%	nr
SYNCOR INTERNATIONAL CORPORATION	53.8%	5.0
ENERGEN CORP	53.8%	1.4
FIDUCIARY TRUST CO INTERNATIONAL	53.7%	nr
PNC BANK CORP	53.7%	nr
VTS TRAVEL ENTERPRISES INC	53.6%	38.1
FLORIDA POWER & LIGHT COMPANY	53.6%	11.6
SOVEREIGN BANCORP INC	53.5%	nr
BALTIMORE GAS AND ELECTRIC COMPANY	53.4%	nr
AMOCO CORPORATION	53.3%	41.2
GENERAL BANK	53.2%	70.2
CENTRAL ILLINOIES LIGHT CO	53.1%	22.1
TDINDUSTRIES INC	53.0%	nr
MARINE DRILLING MANAGEMENT COMPANY	52.9%	nr
ELMIRA SAVINGS BANK FSB	52.9%	nr
TECO ENERGY INC	52.7%	nr
CALLAWAY GOLF	52.5%	0.1
HUBCO INC	52.4%	nr
COMMERCIAL INTERTECH CORP	52.4%	0.1
SKILLED HEALTH FACILITIES INC	52.2%	3.7
1ST SOURCE CORPORATION	52.2%	nr
UTILICORP UNITED INC	52.0%	197.7
VINTAGE PETROLEUM INC	51.9%	nr
FORD MOTOR COMPANY	51.9%	nr
NORRELL CORPORATION	51.8%	nr
SOUTHWEST GAS CORPORATION	51.7%	nr
NATIONAL GAS & OIL COMPANY	51.7%	nr
MAY LOGISTICS SERVICES INC	51.6%	42.4
KITCHELL CORP	51.5%	63.4
PLY GEM INDUSTRIES INC	51.5%	68.6
BONNE BELL INC	51.4%	2.5
JACK HENRY & ASSOCIATES INC	51.3%	5.1
TRIANGLE BANK	51.3%	3.2
AIRGAS INC	51.2%	nr
COMMONWEALTH SAVINGS BANK	51.1%	9.1
THOMAS NELSON INC	51.1%	20.6
IROQUOIS BANCORP INC	51.0%	174.8
NATIONAL FUEL GAS COMPANY	51.0%	nr
YORK HANOVER NURSING CENTERS INC	51.0%	4.9
PANAMA CITY HEALTH CARE CTR	50.9%	8.1
NATIONSBANK CORPORATION	50.7%	70.7
APACHE CORPORATION	50.7%	120.6
PENNZOIL COMPANY	50.7%	6.2
EQUITABLE OF IOWA COMPANIES	50.5%	nr

---

CRESTAR FINANCIAL CORPORATION	50.2%	nr
FIRST WESTERN BANCORP INC	50.2%	nr
LOUISIANA LAND & EXPLORATION CO	50.2%	nr
FIRST PATRIOT BANKSHARES CORP	50.1%	11.2
GUARANTY BANCSHARES INC	5nr%	nr

---

Nr = not reported or reported as zero

Source; Form 5500 (1996)

## Endnotes

---

<sup>i</sup> The calculations are based changes in vital statistics data and the average private pension benefit for retirees receiving pensions (EBRI 1997; 2001 U.S. Statistical Abstract). The decline in private sector pensions is due to many factors: declines in employer contributions, leakages (workers withdrawing when losing or change jobs) from defined contribution accounts, employers not providing inflation adjustments. Since the form of pension income is no longer a guaranteed benefit, insured by the Pension Benefit Guaranty Corporation, and subject to occasional inflation adjustments the risk-adjusted value of a pension benefit declined even more than 7% during 1978 – 1994.

<sup>ii</sup> We investigate the pension choices of over 857 firms between 1981 and 1996 by using the data on pension plan finances from the IRS Form 5500, required annually pension sponsors, and firm financial data from Compustat to study DB and DC choices. We have 723 firms for 1988 and 1996 in our 401(k) analysis.

<sup>iii</sup> The firms in our sample had the following pension choices from 1981 and 1995. In 1981, 375 had only DB plans, 338 sponsored both types, 114 had only a DC plan. By 1995, just 90 firms had only a DB plan, a much larger share of firms 602 firms out of 827 sponsored both DB and DC plans, and about the same share 135 out of 827 sponsored only a DC plan.

<sup>iv</sup> “The market offers 401(k) plans a full range of financial products, and plan sponsors have, over time, tended to expand the number of investment choices available to participants. .... Over the years, services have become more elaborate in response to the demand of participants and sponsors (DOL, Final Report 1998.)