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NEW TRENDS IN PENSION BENEFIT AND RETIREMENT PROVISIONS

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ABSTRACT

This study illustrates and interprets changes in pension plan retirement formulas and benefit provisions over the last two decades, using extensive information on private sector pension plans gathered by the U.S. Department of Labor since 1980. Data generated from the Employee Benefits Survey (EBS) of medium and large firms shows that pension provisions have changed a great deal in companies that have traditionally been the most consistent providers of employer-sponsored retirement benefits in the US. In the defined benefit environment, vesting rules were loosened somewhat; plans have eased access to normal retirement; and pension benefit formulas have moved toward final rather than career earnings, with increased weight on straight-time pay. In addition, these plans became more integrated with social security, but the form of this integration has changed substantially. Defined benefit pension replacement rates appear to have fallen over time, though the time series is not complete. In addition, benefit caps remain in place, generally by limiting years of service in the formula; disability benefit provisions have also become more stringent; and it is increasingly possible to take a lump sum from one's defined benefit pension. The defined contribution environment has also seen substantial change, as documented in the BLS series. Participation and vesting rules appear most lenient for workers in 401(k) plans; most employees must contribute to their plans, generally as a function of earnings; and employee access to pension fund assets appears to be on the upswing over time. Participants in these plans have also gained access to diversified stock and bond funds, with fewer permitted to invest in own-employer stock, common stock funds and guaranteed insurance contracts. We conclude with a discussion of how future data collection efforts could be improved.

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New Trends in Pension Benefit and Retirement Provisions

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The last twenty years has brought about a substantial transformation in the US private pension environment. Employee interest in pension programs has grown as a result of the aging of the baby boom, as workers began to demand retirement savings, and as the stock market has made retirement saving an appealing (and a tax-preferred) way to invest in equities. In addition, rising life expectancies and longer worklives made the pension promise more valuable to groups that had traditionally lacked pensions, especially women.[1] Employers, too, were willing and even eager to supply new forms of pensions, responding to the need to downsize their workforces, to changes in the industrial and occupational mix of employment, and to an interest in using pensions to induce particular worker behaviors.[2] The regulatory environment also changed in the last two decades, as tax reform has imposed stricter limits on funding levels, contribution amounts, and benefit payouts (McGill et al, 1996). In sum, the last two decades proved conducive to pension growth and development along some dimensions, but also turned out to be a time of substantial challenge to both those wanting and supplying pensions in America (Sass, 1997).

In the present report, we highlight and evaluate some of the most important changes observed in US private sector pension plan retirement formulas and benefit provisions during the two decades of the 1980s and the 1990s. To learn more about trends in pension provisions and formulas over time, we have gathered, tabulated, and interpreted information provided in a series of reports published by the U.S. Bureau of Labor Statistics (BLS) over the last two

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[1] For a discussion of the role of pensions in women's retirement income see Levine, Mitchell and Phillips (1999).

[2] For a discussion of these and other effects see the studies reviewed in Gustman et al (1994, 1995), Ippolito (1986), and Mitchell (forthcoming).

decades on pensions offered by medium and large firms. Over the period between the early 1980's and the mid-1990's, the BLS tabulated and published individual-year summaries of information from its Employee Benefits Survey (EBS). In the present study we have collected these data as well as additional unpublished tabulations for 1997 generously supplied by the BLS.[3] In doing so we update our previous study (Mitchell, 1992) which explored changes in pension provisions through 1988. In the present report, where possible, we extend the time series by relying on published tables to 1995 along with unpublished reports for 1997. There are no more recent data publicly available for this purpose.

The plan of the paper is as follows. We begin with a discussion of retirement plan features, particularly focusing on benefit formulas. Next, we analyze trends in retirement provisions and benefit formulas found in defined benefit and defined contribution plans over time. We conclude with a summary of findings.

Overview of Pension Type and Pension Features[4]

In the US corporate or private sector pensions may be classified onto two general types: defined contribution and defined benefit plans.[5] In the defined contribution (DC) pension, a covered employee often has a choice as to whether to participate in the plan, and if so, how much to contribute. In addition, the plan sponsor often adds to the pension fund on behalf of participating employees based on some match of employee contributions. Contributed funds are then invested in the capital market; a participant often has choice over investment options into which his own – and sometimes his employer's – funds are deposited.

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[3] We thank Ann Foster of the BLS for assistance obtaining these data.

[4] This discussion builds on Mitchell (1992).

[5] Cash balance plans are sometimes seen as a third type of plan, in that they seem to combine elements of both DB and DC pensions. However they are, strictly speaking, defined benefit plans because the plan sponsor guarantees the promised rate of return on participant assets (Rappaport et al., 1998). In any event, thus far the BLS has not generated special tabulations for cash balance or hybrid plans.

Usually, the contributions and earnings on the investments must be preserved for retirement, but sometimes an active worker may access his funds for hardship or some other purpose. On leaving the firm, the departing worker may receive his accrual in the form of a lump sum (thought receipt of the lump sum may trigger a tax penalty unless he is at least age 59.5); alternatively the departing worker may take his pension benefits in the form of a periodic amount or buy a life annuity. The value of the plan accrual at any given date depends on amounts contributed and investment returns earned on these, over the entire worklife. By contrast, a worker with a defined benefit (DB) plan receives a promise of an eventual pension benefit that is determined by a pre-specified formula. Here the replacement rate (defined benefit as a percent of pre-retirement pay) is typically a function of the covered worker's age, pay, and/or service levels. In most cases the defined benefit is payable as a life annuity though in some cases the benefit may be accessed as a lump sum.

As we shall show below, both pension plan types embody a range of eligibility, contribution, vesting, benefit, withdrawal, and retirement provisions and formulas. In addition, there are myriad special provisions regarding post-retirement benefit increases, provisions for special payouts (e.g. disability or lump sum cashouts), and other features. It is our goal in this investigation to determine how, if at all, pension plans of medium and large firms in the private sector have changed over the last two decades, to determine whether any salient trends deserve attention.

Understanding how pension provisions and benefit entitlements have changed over the last two decades is important for several reasons. It is well known that many pension provisions powerfully affect the nature of the pension promise, and in turn they influence worker and firm behavior (c.f., Gustman and Mitchell 1992; Gustman et al 1994 and 1995). For instance, a pension-covered employee allowed to take a loan or a lump-sum cashout from his plan after a short vesting period gains access to his pension saving early the worklife, a practice that some worry will fail to protect him in old age. The employee prohibited from taking a loan or cashing out the pension accrual lacks access to the accrued pension, and he may end up with a better-funded retirement period than his counterpart. These and other structural features of pensions also influence worker turnover patterns. That is, vesting and benefit formulas can deter mobility for younger employees, and they can also induce workers to remain on the job longer if the plan offers substantial rewards for continued work (c.f., Fields and Mitchell 1984). Other times, as in the case of defined contribution pensions, retirement benefits may depend on amounts contributed and how the worker chose to invest his pension assets. It has been shown that investment decisions depend to a large degree on how successful employers are in communicating benefit plan attributes to employees (Mitchell and Schieber, 1998).

Before turning to a more detailed discussion of pension trends in the EBS, it is useful to briefly review key pension terminology and the importance of specific pension provisions.

<u>Plan Participation and Vesting</u>. Workers covered by a private pension are often not permitted to join their pension plan immediately; rather many plans limit participation to workers who remain at the firm more than one year, and sometimes also limit coverage to those over the age of 21. The Employee Retirement Income Security Act [ERISA] of 1974, as amended, mandated that plan participation requirements could not be more stringent that this, but plans may be more generous. What is meant by '*plan participation'* matters, of course, since some pensions begin to count years of service for benefit purposes from the date that the worker becomes a plan participant. '*Vesting*' in a pension plan is important since it refers to the juncture at which the worker gains a legal claim to an eventual benefit from a pension plan in which he is a participant. Many firms do not offer new workers an immediate right to a benefit; rather, the firm will specify that workers gain this legal claim only when they meet employment criteria specified in the plan's vesting formula. This is often expressed in terms of minimum age and/or years of service required to gain a legal claim over a

retirement benefit. In 1974, ERISA spelled out a series of legally permissible vesting schedules including the very common "10-year cliff vesting rule", which required a worker to be vested after 10 years of service. Vesting standards were subsequently eased under the Tax-Reform Act of 1986, with most plans now using a "5-year rule" for cliff vesting.

Retirement Eligibility Requirements. Most pension plans require that a covered employee must complete a requisite number of years of service and/or attain a specified age, in order to receive a pension annuity payment. Thus, for instance, a worker may be eligible for early retirement at age 55 with 10 years of service, while normal retirement might be defined as leaving at age 65 with at least 10 years of service.

Such plan-based age and service requirements are common in both DB and DC plans, and they are important because these establish conditions under which the worker can claim plan benefits. However eligibility requirements play a crucial role in DB plans, since age and service directly affect the level of benefits a retiree may receive. This is because defined benefit plans often adapt payments based on the retiree's age and/or service at the worker's departure date. For instance, an early retiree might receive a lower annual benefit amount that the one payable at the plan's normal retirement age. The higher benefit for normal retirement is reflective of the fact that at a later age, a worker has more years of service, possibly a higher pay lever, and fewer years of life remaining over which to draw a benefit. In addition, defined benefit plans frequently structure their benefit formulas so as to subsidize early retirement (c.f., Fields and Mitchell 1984). Hence retirement requirements are important insofar as they establish when a worker may begin to receive subsidized early payouts.

For many years, corporate sponsors in the US were permitted to use their pension formulas to induce older workers to leave their jobs, mainly by limiting pension accruals after a specific age (Luzadis and Mitchell 1998). But in an effort to reduce the extent of age discrimination, the Omnibus Reconciliation Act of 1986 required private-sector pensions to continue benefit accruals after normal retirement, a ruling that took effect for most private sector pensions in 1988. (Collectively bargained plans were permitted somewhat longer to come into compliance.) Hence retirement eligibility rules for private sector pension plans have become more liberal over time, somewhat increasing benefit incentives to remain employed at older ages.

Retirement Contribution and Benefit Provisions.

Defined Benefit Plans: Defined benefit plans use many different methods to compute participants' payouts at retirement. Some pension benefit formulas provide for flat dollar amount entitlements, while others base benefits on employee pay, age, and/or service at retirement. If pension benefits depend on earnings, the employer generally specifies what percentage of earnings will be paid per year of service. A related issue is that earnings-based plans differ in terms of which definition of earnings they consider relevant. For instance, straight-time pay alone may be considered, or a plan may add overtime, shift pay, and/or commissions into the formula. In addition, pay-based plans differ in terms of the period of time over which earnings are computed. In a career earnings plan, pay during the entire period of employment is considered; conversely, a terminal earnings plan focuses on compensation just prior to retirement. Even terminal earnings benefit formulas generally include more than the final year's pay in the formula; it is not uncommon to use the worker's highest or last 5 years as the basis fore a final average pay figure.

In some cases pension formulas are *integrated* with social security rules following one of two general patterns.[6] "Offset" formulas typically reduce a pension benefit payment by some fraction of the worker's primary social security amount, while an "excess" plan will apply lower pension benefit accruals to earnings below the social security taxable wage base (or some similar threshold) and higher benefit accumulations to earnings above this amount. Terminal earnings plans tend to use the offset approach when they are integrated, while

[6] For a more complete discussion of integration with Social Security see McGill et al (1996).

career earnings plans tend to sue the excess method. Integration is less common in plans using flat dollar amounts.

Defined benefit pension plans have various other special benefit rules, many of which affect retirement benefits under certain conditions. The BLS has gathered information over time on benefit reduction factors, important in determining the rate at which annual benefit payments are reduced for workers retiring early. These reduction factors often turn out to encourage early retirement, because they reduce early retirement pension payments often to prove to be larger than the normal retirement benefits in present value terms, providing a pension subsidy for early retirement. Trends in these are examined in the next section.

Other aspects of defined benefit plans may also be developed using the BLS tabulations, though unfortunately these have not all been carried out in a continuous way over all years and some important series are no longer provided. One of particular interest is the time series on average replacement rates for employees of varying pay and service levels, indicating how retirement pensions compare to pay levels just prior to retirement. These tabulations indicate the extent to which pensions have risen relative to final pay. In addition benefit maximums are indicated, usually as a function of service and/or pay. Many plans also offer pension increases after retirement, in partial recognition of the declining purchasing power of benefits fixed in nominal terms. Though most private-sector pensions do not formally index benefit payouts, *ad hoc* increases have been implemented in inflationary times, contributing to increased economic security in retirement (Allen et al. 1986).

Another feature of interest to pension experts is data on workers' access to pension accruals for special reasons, including for early receipt of vested benefits and for disability. When workers have access to vested accrued benefits, they sometimes fail to save the accumulations for retirement, a subject of much policy debate (Fernandez, 1992). Disability pensions are another way in which workers can receive benefits prior to becoming qualified for a regular pension, which also plays a role in increasing economic security.

Defined Contribution Plans: The institutional structure of defined contribution plans is as varied as among their defined benefit counterparts, but along different dimensions. Many different types of plans exist, categorized according to various classification schemes. In the past, the BLS distinguished between plans it called "retirement" plans, versus those called "capital accumulation" plans; the former generally prohibited withdrawal of pension accruals prior to retirement, and the later afforded easier access to plan assets. But over time, it has become clear – and the BLS has recognized – that "most defined contribution plans can be used to provide retirement income or to accumulate financial assets" (US DOL, 1989, p.107). In addition, many of these plans allow lump-sum cash-outs rather than a benefit annuity. Of course several new plan types have also gained in importance during the late 1980's and thereafter. For this reason the BLS tabulations now distinguish types of defined contribution plans according to the source of their finances, or to the way in which their assets are held. Examples include savings and thrift plans, profit-sharing programs, money purchase pension plans, employee stock ownership/stock bonus plans, and 401(k) plans. Savings and thrift plans are those where workers contribute a percentage of their pay and employers generally offer some amount of matching contribution (perhaps up to a maximum). The tax treatment of employee contributions depends on both individual plan structure and overall tax code limitations on the amount of compensation that can be tax deferred. Savings and thrift plans often permit workers to borrow from or make taxable withdrawals from their plans in special circumstances (e.g., educational or medical expenses). Profit sharing plans offering deferred income tend to link employer contribution levels to company profits, and then allocate the employer contribution levels to company profits, and then allocate to employer contribution based on workers' pay or other formulas. Early withdrawals or loans are rather less common here than in other plans. In a money purchase plan, employer contributions are fixed, usually as a fraction of earnings, whereas in stock ownership and stock bonus plans the employer contributions are usually in the form of company stock. And from the late 1980's on, 401(k) pensions have grown quite rapidly. The BLS has sought to adapt the EBS by following changes in plan type, tracking not only profit sharing and savings/thrift plans but in more recent years adding series on 401(k) plans as well. Here the time series are necessarily shorter than for defined benefit provisions.

Changes in Pension Plans: 1980-1997

Tabulations of Employee Benefits Survey (EBS) data on pensions by the Bureau of Labor Statistics are presented in two separate segments, one linked to DB plans and the other to DC plans. Each is taken up in turn, with reference to the relevant tables we have collected for our purposes, which appear at the end of the report. We note that the BLS did not present identical tabulations in all years, producing some inconsistencies in the reporting (see the Appendix). In addition some series stop being reported toward the late 1980's, while others were developed for the first time during the early 1990's. This change in format and coverage makes it difficult and in some cases impossible to develop and interpret some interesting hypotheses regarding pension trends.

Defined Benefit Plans. Time series EBS data are available on three important characteristics of defined benefit pension plans: (1) participation, eligibility and vesting; (2) withdrawal and benefit formulas, and (3) special provisions. Trends in each are examined in turn.

Participation, Eligibility and Vesting. Defined benefit pension plans typically specify criteria that covered employees must meet before becoming full-fledged pension participants. Such requirements are justified by the need to reduce administrative costs that would otherwise be incurred for young workers. The effect of these participation requirements is thought to be a reduction in turnover by offering workers an incentive to remain with the company (Gustman and Mitchell, 1992). Under the Employee Retirement Income Security Act (ERISA) of 1974, full-time employees age 25 or older must be granted participant status after completing 1 year of service. Participation rules were subsequently amended by the 1984 Retirement Equity Act (REA), which for most plans lowered the participation requirement to age 21 as of mid-1986.

The EBS information on plan participation requirements (Table 1) indicates that there was a steady increase in the fraction of full-time employees covered by DB plans having a minimum age and/or service requirement, over the period 1981-1997. For the DB plan participants examined in 1981, 59% had minimum age and/or service requirements; the fraction grew to 68% by 1997. About half of the plans require only 1 year service, with the other half covered by the "age 21/service 1" rule imposed by the REA. Virtually no plan has an "age only" criterion. The pattern is therefore consistent with the notion that the law change (REA) was successful in bringing about earlier participation for many workers, but the drop in the fraction of workers permitted to participate in their plans immediately seems to have worked in the opposite direction.

Also appearing in Table 1 is information on a practice permitted by ERISA until 1988, namely the imposition of *participation limits* if a worker joined a firm within 5 years of the pension plan's normal retirement age. During the 1980s this practice permitted firms to hire older workers without incurring large pension obligations, and as of 1981-2, some 60% of covered workers were in plans of this type. But the 1986 Omnibus Reconciliation Act (OBRA) eliminated maximum age restrictions from 1988 onward, by which year the fraction dropped slightly, to 47%. The BLS did not tabulate comparable data thereafter, but the pension change brought about by OBRA likely increased employment costs for firms hiring older workers near the plan's retirement age.

Once a worker becomes a DB plan participant, he must typically satisfy a plan service requirement before gaining a legal vested right to the plan. Economists have argued that these vesting requirements serve to deter worker turnover, inasmuch as vesting guarantees and eventual retirement benefits would otherwise be lost if a worker changed employers (c.f., Gustman and Mitchell 1992; Gustman et al. 1994 and 1995). In 1974 the Employee Retirement

Income Security Act (ERISA) specified a number of permissible vesting formulas including a "10-year cliff" rule requiring an employee to participate in the plan for a decade, before becoming 100% vested. Subsequently, the 1986 Tax Reform Act (TRA) required single-employer plans to convert to a 5-year schedule if using cliff vesting (or 7 years if graded vesting was in place); the 5-year approach was adopted by most plans by 1989. Table 2 shows that the fraction of DB plan participants with cliff vesting rose over time from 89% to 96%, but the modal number of years until vesting fell from 10 to 5 between 1988 and 1989, consistent with the legal requirement. Graduated vesting schedules give an employee a right to a gradually increasing share of accrued benefits, eventually reaching 100% at a specified age and/or service point. Graduated vesting schedules covered about 11% of all DB participants in 1980, rose to 17% in the late 1980's, and then fell to 3% by 1997. Overall, vesting requirements in DB plans have definitely eased over last two decades.

Contributions. Turning to contributions, the evidence shows that most private sector DB plan participants are rarely required to contribute to their pensions out of own salary or earnings. This question has only been tracked since 1993, but the evidence shows that only 3-5% of participants have employee contributions required (Table 3).[7]

Withdrawal and Benefit Formulas. We focus next on conditions under which participants can access the funds in their pension accounts. DB plans generally specify minimum age and/or service criteria that a worker can must satisfy in order to retire and receive "early" benefits. The relevant trends are reported in Table 4, and the data show that early retirement was and has remained the norm in the DB environment, with 95% or more having this in their plans since 1980. But the fact that early retirement is generally available obscures changes in requirements for collecting early benefits. It does appear that earlier retirement has become somewhat more accessible over time: in 1982, 60% of all participants

[7] This pattern is markedly different from the public sector environment where most employees contribute from own pay; see Mitchell, McCarthy, Wisniewski, and Zorn (forthcoming).

could leave at age 55 (in some cases, depending on service), and by 1995 this fraction stood at 66%. But the trends are not uniform: in the late 1980's there was a peak in the fraction of workers permitted to leave at age 55 with 10 years of service, but this practice appeared to fall during the 1990s. Conversely it became much easier to retire with only 5 years of service at age 5,with the fraction in this group rising from 3% to 20% between 1980 and 1997. It is interesting that relatively few participants (5%) were in plans where they had to satisfy only an "age plus service" requirement in 1980; the practice increased slightly (to 10%) by 1985, and then declined again (to 8%) by 1997.

Turning to "normal" retirement requirements, most DB plans require retirees to meet certain age requirements, or alternatively age plus service (Table 5). Only 11% of DB plan participants in 1980 could obtain normal retirement by virtue of service alone, and 30 years was the typical cutoff; by 1997 fewer than half this many (5%) of the participants could take normal benefits based on service alone. Just under half of all participants were subject to normal retirement eligibility rules that only depended on age in 1980, with fraction remaining fairly stable over the entire period. Where age only serves as the criterion for normal retirement, age 65 has traditionally been the modal age. During the late 1980s there was a small increase in early retirement age requirements at 62 and 60, but the trend appeared to have reversed by 1997. Turning to requirements involving both age plus service, it appears there has been an increase in the propensity of participants to have normal retirement available at age 62 with a combination of years of service. In 1981, 17% of the participants were able to retire at 62 with full benefits (4% at 62 with no service plus 13% with some service); by 1997 this fraction had risen to 21% (3% and 18 respectively). In other words there appears to be a continued trend toward permitting workers to before age 65 and receive full (unreduced) benefits. These patterns are in line with findings from other studies indicating that many pension plans have encouraged earlier retirement over time (Luzadis and

Mitchell, 1991; Mitchell and Luzadis, 1988). Whether this pattern will persist into the tight labor markets projected for the next 20 years remains to be seen.

Benefit formulas are described in Table 6 where we see that the fraction of DB plan participants with benefits based on a flat dollar amount fell from 30% in 1980, to 23% by 1997. This decline may be due to the steady drop in the unionization rate of the US workforce, since flat dollar benefits were often associated with collective bargaining agreements. Instead, most DB plans surveyed in the 1990s used workers' earnings to determine benefit amounts. This fraction stood at around 2/3 of all participants in 1997, virtually the same as in 1980. It is not surprising that terminal earnings are by far the most common in benefit formulas, since this approach is believed to protect retirement promises from inflation, at least to the extent that pre-retirement pay tracks inflation. The fraction using this approach varied around the 55-58% level throughout the period. By contrast, only 11% of all DB participants still had benefits computed using career earnings in 1997, down from 15% in 1980. Each of these changes somewhat reduces the risk of inflation that the workers bear in their prospective pension payments, by linking benefits to pay during the final years of the work career. In addition, terminal earnings plans tie retirement benefits more closely to individual performance toward the end of the worklife, as compared to the previously more-popular career average plans.

In addition to knowing what years of earnings are included in the formula, it is of interest to investigate what pay definition is used. Table 7 indicates that there has been a marked increase in the fraction of workers receiving benefits based on straight-time or base pay alone, from 44% to 62% in just the eight years between 1988 and 1995 (data for other years are not available). And fewer DB plans now include other forms of pay including shift differentials, bonuses, and commissions, signaling a reduction in the incentive-based portion of pensions as compared to earlier years. Limiting the full range of compensation used in computing benefits may make it easier for workers to remain employed at older ages, despite possible changes in productivity.

Defined benefit plans generally allocate benefits according to some percent per year of service or pay, and these fractional benefit rules are summarized in Tables 8 and 9. For career earnings plans, only about one-third of all participants in 1991 were covered by a plan with a flat percent per year of service, with the most common percentage being 1.25-1.75% of pay (the data were not tabulated for the more recent years; see Table 8). By contrast, some 60% of participants were in plans paying benefits where the fraction of pay varied by year of service, with the modal pattern being a fraction varying by earnings. For terminal earnings plans, Table 9 shows that most plans used five years' pay, with five consecutive years being the most common approach. Nevertheless, there was a small increase in the prevalence of plans using three instead of five years of pay, rising from 14% to 17% over the period 1983-1997. More confounding is the inverted U-shaped pattern in the fraction of pay used in benefit formulas: early in the 1980s, 47% of the participants had benefits that were a flat percent per year of service (with the norm being in the range of 1.25-1.5%). Then the fraction of participants using a flat percent per year of service in the benefit formula rose slightly, to 54% by the late 1980s, and subsequently it fell to 35% by the late 1990s. By contrast, over time plans were more likely to employ benefit percentages that depended on other factors, with the fraction depending on earnings rising and on service falling. Finally, Table 10 provides tabulations on the prevalence of dollar amount formulas over time. Here it is clear that the plans using dollar amounts tended to increase those amounts over time, with the modal factor now being over $30 per year of service. Of course, it will be recalled that few plans are in this latter group.

Benefits paid by DB plans depend not only on earnings or service-based formulas; in addition, retiree payments are frequently integrated with Social Security benefits. Table 11 shows that 45% of DB plan participants had their benefits integrated with Social Security in 1980, and though the integration fraction crept up to 63% by 1989, it fell back again by 1997 (to 49%). What is interesting is that this overall pattern hides major changes in the way integration has been handled over time. Specifically, between 1980 and 1997, there was a halving of the fraction of workers with benefits offset by Social Security payments where the fraction fell from 30% to 13%; what grew instead was the prevalence of plans with excess formulas. In the latter case, a DB formula might provide 1% of pay up to the Social Security earnings threshold per year of service, for example, with some higher fraction (such as 1.5%) for pay above this level. So while there is no overall change in the degree of Social Security integration in the Employee Benefits Survey, the type of integration used has actually changed substantially. It is of interest to recognize that these changes in pension integration practices coincide with large Social Security payroll tax increases; though a casual relationship cannot be proven in the data, the correlation is striking.

For those who retire early, benefits are often reduced in DB plans in recognition of the fact that early retirees will receive benefits for a longer period of time. Table 12 summarizes trends in early retirement reduction factors, and the evidence indicates that that many plans subsidize early retirement quite substantially. This may be concluded since in both 1982 and 1997, one-quarter of all DB participants were covered by early retirement reduction factors of 6% or smaller; it is often held that a reduction of more than 6 percent is required for actuarial neutrality (McGill 1996).[8] Reduction factors are also applied to vested workers who leave their employers; here too, it appears that vested terminated workers face benefit reductions of 6% or less (but only three years of data are provided making it difficult to confirm the trend). The final panel of Table 12 shows that at least 90% of plans permit vested terminated workers to take their benefits prior to normal retirement, but only about half face the same reduction as applied to early retirees.

Benefit formulas are often quite complex to interpret, and for many years, the BLS provided a useful set of tabulations that could be used to compare

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[8] Early retirement may also be subsidized in other plans using factors that vary with age and service, but this cannot be determined from available tabulations.

retirement benefits for different hypothetical workers in the set of DB pensions under study. The technique adopted involved using plan information to compute "replacement rates", defined here as the ratio of the DB retirement plan benefits to the worker's final year of earnings. These computations were published for the period 1984-1993, calculated at the normal retirement age using six standardized pay levels and three seniority profiles (see Table 13). Unfortunately the agency ceased publishing these computations after 1993, which makes extrapolation beyond that date impossible.

In any event, Table 13 indicates that DB plan replacement rates typically rise with service for a given pay level; they follow this pattern both within a year and also over the period 1984 -1991. In 1993, however, the computed replacement rates fell across the board, and no computations were published in subsequent years. Comparing replacement patterns within service categories, it appears that these DB plan benefit formulas were fairly redistributive: that is, replacement rates were higher for the lower paid, and fell as pay rose for a given level of service. For instance, in 1993, the latest year reported, the replacement rate for a 30-year worker earning $15,000 was 27%, and only 21% for a $65,000 per year worker. We note that the "illustrative" pay levels reflected in the Table are not comparable in real terms, since a constant nominal earnings assumption implies a falling real pay level over time. As a very rough correction, one can compare replacement rates for a $25,000 worker in1984 with those of a $30,000 level in 1989, and these with that of a $35,000 worker in 1993. This simple approach suggests that pension replacement rates have been fairly constant over time; that is, holding constant real pay levels, benefit replacement rates for 10, 20, and 30 years of service changed relatively little over the years with the exception of the final year tabulated (1993).

Special Provisions in DB Plans. In the private sector, few pensions are protected against inflation by formal indexation; as a rule, private pension benefits are usually delivered as fixed nominal annuities. This is not a major concern for many older workers and retirees during low-inflation periods such as the present, but even a low inflation rate can cut a retiree's consumption in half in old age. In any event, Table 14 indicates that pension benefits are rarely tied explicitly to a cost of living index (COLA); indeed in 1995 only 7% of EBS participants had a COLA, and only 3% had an automatic escalator. Quite frequently benefits are not increased at all, as can be seen by the fact that only 4% of the participants had plans with discretionary benefit increases in 1995. This is quite extraordinary given the generally strong equity market performance experienced by most of these plans during the 1980s and 1990s, but it is usually explained by the low inflation rates of the period.

In addition to these other benefit provisions, private pensions frequently impose a ceiling on benefit amounts payable to retirees. The prevalence of this phenomenon has been declining as is evident from Table 15. In 1984, for instance, 42% of the participants faced a benefit maximum; by 1997, only 33% were capped. In plans that did limit benefits, they tended to do so by capping the number of years of service that can be counted for benefit purposes. In 1997, for instance 31% of the DB participants faced a maximum limit on service years. The modal choice for a maximum has generally been between 30 and 39 years of service since 1984.

In addition to early and normal retirement, the vast majority of DB plan participants – three-quarters, in 1997 – is also covered by plans that will pay disability benefits (Table 16). The prevalence of disability pensions seems to have changed however in 1989, where coverage fell from near 90%, to a much lower 81% and dropped further thereafter. It is not entirely clear why this sudden drop occurred, followed by an additional slide, though there were other changes taking place in the market for disability insurance driving employers to contain costs along many fronts. Indeed it appears that many DB plans tightened access to disability benefits over the period, by requiring that employees wait a longer time to qualify for long term disability insurance: only 46% was eligible for immediate disability benefits in 1997, down from a high of 70% in 1980. Other features were also reduced in generosity after a run-up in benefits observed during the late 1980's, with companies being far less likely to credit service to retirement, and less likely to give unreduced normal benefits to the disabled employee.

A final DB payout issue is depicted in Table 17, which describes the prevalence of employer willingness to permit participants to take their benefits as lump sums at retirement. Initially this was unheard of in DB plans, and even in 1991 when these data were first tabulated, only 14% of participants could take any lump sum (about two-thirds of these could take the entire amount). By 1997, 23% of participants was permitted to take a lump sum, with the overwhelming majority entitled to take all of it in a lump sum. This trend underscores other evidence indicating the decline of annuitization among American workers (Mitchell, Poterba, Warshawsky, Brown, forthcoming).

Defined Contribution Plans. In turning to DC pension plans, we can draw on published evidence on (1) coverage and vesting patterns, (2) contributions and withdrawals, and (3) special features of 401(k) plans. We note that defined contribution plans experienced a rapid growth in popularity over the last two decades, and so consequently the BLS tabulations for this set of plans has changed in response to innovations in both plan type and plan design. As a result, BLS published information for DC plans is of more recent vintage and in some cases less continuos over time than the extensive BLS information on DB plans. In most cases, for instance, there is not complete data for the entire period 1980-1997; rather the data tend to be clustered around more recent survey dates.

*Plan Types, Coverage, and Vesting***.** The BLS has traditionally examined data on several types of DC plans including retirement and capital accumulation plans; these encompass money purchase and profit sharing, saving and thrift, and cash and deferred salary reduction plans including 401(k)s. Data are available on many of these only from 1985 on, since previously the BLS did not tabulate plan participation and design features for DC pensions in a comparable format. The time series are also often incomplete, since in many cases they end in 1991 due to changes in BLS reporting.

Statistics on participation in retirement and capital accumulation plans appear in Table 18. The BLS defines “retirement” plans as those where employer contributions are required to remain in the participant’s account until retirement, death, disability, termination, hardship, or attainment of age 59 ½; by contrast “capital accumulation” plans are those where a participant may withdraw the money under other circumstances. The overall decline in coverage is unmistakable over the short period for which data are reported: noncoverage rose from 8% to 21% between 1985 and 1991. While the fraction having only retirement plans dropped slightly, the proportion with both types of plans fell from 20% to under 10% in just six years.

Combinations of DB and DC plans appear in Table 19. One striking change evident in this table is the substantial drop in DB plan coverage, from 89% of the medium and large firm employees in 1985, to half (50%) in 1997. A second fact is that the fraction of DB-covered workers with no other plan type appears to be growing, from 45% in 1985 to 55% by 1997. Of those that have both a DB and a DC plan, the most prevalent DC type is a savings/thrift plan – almost one-third of all DB participants also had a DC benefit plan available to them in 1993 (more recent data are not provided). Another striking change is in the rapid overall growth of savings/thrift plans, where full-time worker coverage rates jumped from only 1% in 1985 to 29% coverage in 1991. Cash or deferred salary plans also grew in prevalence, with 26% of full-time employees having either type in 1985, and 45% by 1995. A slightly longer time series appears in Table 21, where it is clear that relatively few workers now have profit sharing plans; the fraction declined from a high of 22% in 1986 down to 13% in 1997. Stock and stock bonus plans are apparently quite rare, and there has been no long-term growth in profit sharing plans. Overall, the findings reinforce conclusions from other data sources indicating that the US workforce has increased its participation in DC plans but reduced DB plan coverage (Piascentini and Cerino 1990, Turner and Beller, 1989).

Age and service requirements for DC plan participation and vesting are given in Tables 22 and 23. Comparing the three DC plan types for which data are available – savings/thrift plans, profit sharing, and 401(k) plans – it is clear that participation requirements differ substantially. In the first two cases, the plans generally require minimum age and/or service for participation, with only around 15% of the workers were permitted immediate participation. By contrast, 27% of the 401(k) plan participants were allowed immediate participation. In all three instances, if a participation clause was in place, service of up to 1 year was the norm; relatively few plans also have an age requirement.

Vesting rules for all three DC plans are reported in Table 23, and show first a loosening in vesting rules, followed by a tightening thereafter. An inverted U-shaped pattern is evident for savings/thrift and profit shaving plans, with the fraction allowing immediate full vesting rising from the 20-percentile range to the high 30s and even 40% by 1991, then falling back to the 20s by 1997. The time series is shorter for 401(k) plans but indicates that more of the participants – 34% – could vest immediately on joining the plan. This contrasts with data presented earlier on DB plans, where virtually no employees had full and immediate vesting. Among those unable to vest in their DC plans immediately, participants appeared to be evenly split between cliff and graduated vesting. For instance in 401(k) plans, by the 1997 survey, cliff vesting (typically at 5 years) and graduated vesting (with two-thirds vesting at 5 years or later) were the norm for those without immediate full vesting. The trend to shorter cliff vesting is in part a result of the 1986 Tax Reform Act requiring most plans using cliff vesting to convert to a 5-year schedule as of 1989.

Contribution and Pre-retirement Access Patterns. Published tabulations of EBS include data on employee and employer contributions, as well as conditions under which employees can access these contributions prior to retirement.

Rules for employee contributions in savings/thrift and 401(k) plans are summarized in Table 24, with the vast majority of participants having plans that base employee contributions on workers' earnings – almost 90% in 1997 for both plan types. Most employees are now allowed to deposit their funds into the savings/thrift plans pre-tax, a substantial increase from 1985 (similar data for 401(k) plans are not available). Over the period, there appears to have been a gradual decline in the extent of earnings-based contributions – a 10% decline in the case of the former plan type. Additionally the maximum fraction of earnings that can be contributed has been reduced over time, with fewer workers being allowed to deposit more than 15% of their pay over the 1985-1997 timespan.

Evidence on employer matching contributions is summarized in Table 25 for the period 1985-1991 (more recent data are unavailable). Results show that almost no covered employees had firms that provided a specified dollar amount (1% in 1991). Most employers match worker contributions with the modal match being 6% of pay; most plans (86% in 1993) had contributions of 6% or less, and only a minority (15%) of covered employees had match rates of 7% or greater. In general, it appears that employer matching contributions averaged a much smaller fraction of earnings than employee contributions, and the rate of employer match seems to be falling over time. Employer contribution patterns for profit sharing plans appear in Table 26, indicating that around 60% of those with this plan type use fixed formulas – with a most depending on profits (either as a fixed or variable fraction of profits). The remaining 40% use no fixed formula in determining contributions. When it comes to allocation of profits, there has been a decline over time in the practice of allocating profits according to earnings, with "other" formulas rising in importance.

One area that is of substantial interest has to do with time trends in the ways that employees are allowed to access their accounts, either before or after leaving their firms. The practice of allowing loans from employee accounts appears to be on the upswing in profit sharing plans (Table 26), with just a quarter of covered employees having this access in 1986, and almost a third permitted this access by 1997. A very different pattern appears in Table 27A describing conditions under which employees are permitted to withdraw pension assets in the event of hardship or other circumstances in saving/thrift plans (e.g., at termination). The data indicate a sharp cut in the fraction of people allowed to access funds in these plans: for instance in 1985, 80% of the participants could access employer contributions "early" (prior to retirement age), but by 1997 only 52% of the participants were so able. Despite this apparent increase in access restrictiveness, there was almost a doubling in the fraction of workers allowed to take the funds in the event of "hardship".[9] Access provisions for 401(k) plans are described in Table 27B, where it appears that over half of all plan participants in 1997 could obtain funds from their plans via a loan, up from 43% in 1993. Furthermore, the modal participant could obtain a loan for any reason, not just for hardship. Therefore the pattern of employee access to DC accounts is a mixed one across plan types, with access becoming easier in 401(k) plans, but more restrictive in other DC plans over time.

Pension Payout Trends. Distribution of pension assets at retirement may take various forms. Table 28 indicates that savings/thrift plans distribute their funds as cash in the vast majority of cases, and lump sum payouts are very prevalent – some 90% of participants or more have this access. Of more concern to those focused on the adequacy of retirement income is the fact that only about one-quarter of participants with these plans have access to an annuity, and this percent has fallen slightly over time. Installment plans may afford some retirement income security, but here too the practice seems to be declining: only

[9] Exactly what constitutes a hardship according to plan sponsors is somewhat imprecise; the BLS indicates that possible reasons include purchase of repair of primary residence, illness or death in the family, education of an immediate family member, or sudden uninsured loss. More precision about the definition of hardship would be useful in future surveys, particularly since it appears that the ability to withdraw such funds without penalty is increasing.

41% in 1997 could take their funds in installments down from 59% in 1985. A shorter time series on payout options is available for 401(k) plans (Table 29), and here a similar pattern prevailed. In 1993, some 34% of the participants could take their funds as a life annuity, and by 1997 this option was available to only 27%. Installment options were also falling in prevalence, from 49% to 41%. In general, then, workers retiring from a DC plan are less likely to have available to them the traditional annuity payout option that once was identified as the cornerstone of retirement income security.[10]

Investment Choices. One feature contributing to the widespread popularity of DC pension plans in the last 20 years is the fact that they typically offer employees some control over their pension investments. Table 30A illustrates trends in these choices and options for savings/thrift plans for the period 1989-1997, and Table 30B reports available information for 401(k) plans over the period 1993-1997.

One factor worth noting is that different provisions typically apply to employee versus employer contributions. For instance in 1997, rules governing the investment options for employee contributions were more flexible than for employer contributions. That is, in 87% of the cases employees could select their savings/thrift investment options in 1997, but this applied to only 65% of employer contributions. Eight years previously, an even smaller fraction of the employer share, 53%, could be allocated by the participant. This compares to a virtually identical range of investment flexibility and investment choices for 401(k) plans in 1997 (Table 30B) in which 87% of the employees could elect among investment choices for their own contributions and 65% of employer contributions. It is also interesting that the modal number of investment choices available for both employee and employer contributions was 3 in 1989 for

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[10] In most cases, the retiree could probably roll DC pension assets into an Individual Retirement Account and then purchase an individual life annuity. In so doing, however, the retiree would then lose access to the group risk pooling and would be forced to pay for adverse selection costs as well as possibly higher loadings in the individual retail market (see Mitchell, Poterba, Warshawsky, and Brown forthcoming).

savings/thrift plans, and 4 in 1993 for 401(k) plans; by 1997 the modal number was at least 5 choices for both plan types.

The evidence also indicates that the range of investment choices has changed over time, at least for savings/thrift plans (comparable data are unavailable for 401(k) plans). As the fraction of workers covered by savings/thrift plans increased from 18% in 1985 to 37% in to 1993 (Table 20) there were also changes in investment design features. For instance, the fraction of covered employees permitted to invest their own contributions in common stock fell from 83% in 1989 to 69% in 1997, but this decline was partly offset by an increase in employee access to diversified stock and bond funds (from 31% to 54%). In 1989, half of the savings/thrift plan participants were permitted to invest their own contributions in company stock; by 1997, the fraction permitted to invest in company stock had fallen to 42%. The prevalence of workers allowed to deposit their own contributions in guaranteed insurance contracts fell from 59% to 20%, while those allowed to invest in bonds rose from 31% to 54% over the same period. Somewhat similar patterns appear to have applied to employer contributions in these plans, with employer stock and common stock funds declining in importance and diversified portfolios grew. Thus, while employees were offered more investment options in 1997 than they were earlier, the types of investments they could elect in their savings/thrift plans tended toward diversified stock and bond portfolios rather than the less diversified options available during the 1980s.

Finally there is modest evidence on the periodicity with which employees in savings/thrift plans are permitted to change their investment allocations in their DC plans. The data in Table 30A cover only 1993 on but they suggest that employees are more likely to be able to exert choice over their own contributions of late. That is, in 1993 only 29% of the covered employees could change their investment options anytime, and only five years later the fraction was 47%. Similarly the fraction allowed to alter the investments made with employer contributions grew from 19% to 36% in a very short time. Conversely, the number restricted to switching their own investments to four times a year or less fell from 48% to 24% in just five years' time (and a similar pattern applies to employer contributed assets).

Conclusions

Since the survey covers only pension plans offered by medium and large firms, the results cannot be generalized to the entire US pension environment. Nevertheless, the EBS reveals new trends in plan features, trends that are indicative of what has happened to pensions in companies that have traditionally been the most consistent providers of employer-sponsored retirement benefits in the US.

Our research has identified several key changes in the **defined benefit** environment. These include changes in participation and vesting rules; increased access to early retirement; declines in normal retirement ages; and the movement of pension benefit formulas toward final rather than career earnings. Benefit integration with social security also grew, but the type of integration changed substantially. Pension replacement rates appear to have fallen over time, benefit ceilings remain in place, and disability benefit provisions have become more stringent. Specific findings are summarized as follows:

· Participation rules in DB plans have become more stringent over time. In 1981, minimum age/service requirements were the norm for 59% of the participants while by 1997 some 68% had these limitations. Most plans required that a participant have either 1 year of service or attain at least age 21 with 1 year. Early in the 1980s, some firms precluded older workers from becoming plan participants if they were close to retirement age at hire, but this was outlawed in 1988.

• Vesting rules in DB plans have eased over time. Most participants now have cliff vesting (96% in 1997) but the modal number of years required has fallen from 10 to 5, consistent with the change in the TRA tax law.

• Virtually no private DB pension participants are required to contribute to their own pensions out of salary.

• With regard to benefit formulas, early retirement is permitted by virtually all DB plans and has been since 1980. Normal retirement ages have declined somewhat with more have access to unreduced benefits younger than age 65. Early retirement has long been heavily subsidized in DB plans by virtue of the fact that they use actuarially subsidized reduction factors. No substantial change in the extent of early retirement subsidies over time could be ascertained in these tabulations, though more precise information on reduction factors might reveal additional changes.

• There is a striking trend toward DB plans excluding anything other than straight-time earnings in the benefit formulas, signaling a reduction in the incentive-based portion of pensions as compared to earlier years. Fewer DB plan participants were covered by flat dollar benefit formulas by the end of the 1990s as compared to previously. Social Security integration has changed markedly in DB plans: many fewer workers have benefits offset by Social Security payments, and more workers today are covered by excess formulas that provide higher proportional benefits to those with higher earners. In plans that cap benefit payouts, they generally do so by limiting the number of years of service counted in the formula.

• DB pension payments in the private sector are vulnerable to inflation since benefits are not generally indexed to inflation. The low inflation rates of the last dozen years probably have permitted the decline in indexation.

• DB replacement rates in the past have a positive link between replacement rates and service for a given pay level, and a negative link between earnings and benefits, for a given level of service. Replacement rates in 1993 were lower than prior years, a factor that is not well explained; unfortunately the BLS did not continue the time series in subsequent years to determine if these changes in benefit provisions were permanent.

• DB plans are increasingly permitting participants to take their benefits as a lump sum at retirement, which suggests a decline in the degree of annuitization among American workers. By 1997, almost one-fifth of participants were permitted to take a lump sum, with the overwhelming majority entitled to take their entire benefit in this form.

• Disability benefit provisions have become more stringent in DB plans over time. Fewer plans offer disability benefits, and those that do have tightened access. This may be due to increases in costs for disability benefits over time.

Turning now to a summary of findings for defined contribution plans, we are somewhat hampered by the fact that the EBS time series is not as complete over time on these plans as for the DB pensions. This is mainly because most of the series started later, but it is also because similar tabulations have not always been maintained consistently over the years. In any event, here too there are major changes in plan coverage and features over time. Most striking is an overall decline in coverage, particularly DB plan coverage among those with DC plans. Among DC participants the main plan growth was among savings/thrift pensions as well as cash/deferred salary plans; very few participants have stock or profit sharing plans. Other specific findings include the following:

• Participation and vesting requirements differ across DC plan type. Participation barriers are lower in 401(k) plans as compared to savings/thrift and profit shaving plans, though only 1 year service is the most common requirement. Vesting data suggest that here too, rules are less stringent for 401(k) plans than virtually any other plan type (DB and DC).

• Employee contributions are the norm in DC plans, with most participants required to take employee contributions as a function of earnings – where the fraction of pay that can be contributed is usually capped at 15%. Employers often match employee contributions with the modal match being 6% of pay, but the rate of employer match seems to be falling over time.

• Employee access to pension fund assets prior to retirement is a topic of substantial interest to policymakers. The EBS data suggest that employees are increasingly permitted to use loans to access their profit-sharing accounts and take hardship withdrawals, with 401(k) plans allowing the most liberal access under a wide range of circumstances (not just for hardship). Turning to retirement benefits, there has a decline in the fraction of participants that have access to a life annuity as a payout option, particularly from 401(k) pensions where only 27% have this option.

• DC plans generally offer participants some choice over investing both their own and their employer's contributions. Over time, participants have gained additional investment choices in their DC plans. Participants have also gained access to diversified stock and bond funds, with fewer permitted to invest in own-employer stock, common stock funds and guaranteed insurance contracts.

Discussion and Outlook

The pension trends found in our tabulations of EBS pension data over time bring into focus several critical questions that will certainly drive discussion of pension design and function in the next several years. For example, small employers have moved away from DB and toward DC plans, and now our analysis confirms this trend for medium and large firms as well. In many ways, the movement toward the DC plan type is a logical, market-driven, response to workforce demography, new employer personnel needs, and probably most important, employee interest in investing in a healthy US stockmarket. Nevertheless, some plan features appear to contradict others, and these countervailing messages will no doubt require plan redesign in the future. For instance, the fact that many pension plans have lower hurdles for vesting and participation may help induce an aging workforce to remain on the job longer; on the other hand, employers may need to reduce the benefit subsidy for early retirement if they hope to boost DB rewards from remaining employed at older ages. Policymakers can also learn from the data on pension integration with Social Security, since those charged with solving the Social Security system's insolvency problems should recognize how pension costs might change in response.

These issues and others make it clear that it is important to continue the substantial data collection and tabulation effort that the EBS represents in the future. The EBS is the only employer-based nationally representative survey in the US that collates extensive data on provisions of company-provided benefits, and pensions in particular. For this reason it would be invaluable to have the identical ('core' set) tabulations carried out from the EBS for each future (and past) year of the survey.[11]

Some improvements could also be suggested for the EBS; inevitably, future surveys will need to adopt new questions and eliminate some old topics that are no longer relevant. It is likely that such changes would benefit from researcher and policymaker input. It would also be valuable to design tabulations that can answer parallel questions across plan types. For instance, future reports could investigate the extent to which 401(k) participants can switch investment options, a tabulation currently provided for savings/thrift plan participants. And some series seem to have been dropped despite the fact that they are of substantial interest. Our incomplete tabulations provide several such examples, but perhaps the most notable is the (incomplete) replacement rate series for DB plans.

Going further, it would be most valuable to structure future Employee Benefits Survey data so that one benefit plan could be linked with another – for instance, a health and a pension plan for a given firm could be related. This would permit analysis of potential substitution across benefit offerings. Of course researchers would also welcome the linking of information on benefit provisions and benefit costs, as well as possible labor force or other

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[11] It would be useful to permit researchers to access the firm-level data collected over time, so as to devise additional tabulations and exploratory studies. If it were necessary for confidentiality reasons, this could probably be accomplished under restricted conditions such as those developed for restricted data users of the Health and Retirement Study (HRS); for details see http://www.umich.edu/~hrswww.

consequences.[12] Pension research in the 21st century would be immeasurably benefited by such additions.

[12] A more complete discussion of this approach is provided in Gustman and Mitchell (1991).

Data Appendix: The Employee Benefit Survey

Those seeking a greater understanding of trends in pension formulas and provisions must understand how the BLS develops its Employee Benefits Survey data, on which we rely in the present report. The Employee Benefits Survey (EBS) includes information on a wide range of employee benefits provided by US employers, from health to insurance to pension plans. In the early days, these data were collected annually and only for medium and large firms. More recently, the BLS has used an alternating year format to track benefits in medium and large firms (small establishments as well as public sector employers are surveyed in other years). While the BLS does not make available to researchers the underlying firm-level reports, it does publish a set of tabulations that is more or less consistent through time. For the present purpose, we have therefore collected and examined BLS tabulations on the pension plans offered by medium and large private employers, focusing on the incidence and characteristics of pension plans described in a series of publications appearing between 1980 and 1995.[13] In addition we were provided prepublication copies of the 1997 report by the BLS to round out the series. No more recent information on pension offerings by medium and large firms is available from this source today.[14]

Users of the data series should be aware that the BLS changed its sampling design slightly in 1998. Until that year, the Employee Benefit Survey used a sampling frame that included only firms employing at least 50,100, or 250 workers, depending on the industry in question. This in the mining, construction, retail trade, and some manufacturing and transportation sectors,

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[13] See BLS (various years).

[14] The BLS also collects data on only three major occupation groups: professional and administrative, technical and clerical, and production and service. Not included in any surveys are data for executive management workers and part-time, seasonal, temporary, and traveling employees. Hence the figures reported below cover only these key occupational categories.

the survey approached establishments employing only 250 workers or more. In accounting, auditing, and bookkeeping, the minimum firm size was 50 employees. From 1988 forward, however, the BLS elected to focus on all firms employing at least 100 workers. As a result, the survey sample size increased in 1988 from about 1,300 to about 2,100 firms by virtue of this change in scope (US DOL, 1989). In addition, the BLS extended its industrial coverage in this year. Industries analyzed prior to the change included mining; construction; manufacturing; transportation; communications; electric, gas, and sanitary services; wholesale and retail trade; finance, insurance, and real estate; and selected services. Beginning on 1988, coverage for the service sector became more extensive; in particular, health and educational services had previously been underrepresented and were thereafter included in the sample.

As a result of the sampling changes in EBS scope and coverage, we acknowledge that the pension information collected before and after 1988 is not strictly comparable. Thus in 1988 and thereafter, the BLS tabulations include more small firms and offer slightly broader industrial coverage. For the purposes of examining series overlap, the BLS did prepare some tabulations in 1988 both ways, to show how the design changes might have altered reported pension statistics. The BLS did not, however, indicate whether differences in reported tabulations due to coverage format changes are statistically significant. Where available, we provide both tabulations (for the "old" and the "new" scope) in the tables. It appears that along many of the important pension dimensions of interest here, the "old" and "new" scopes appear similar. Some differences do emerge: because the larger sample in 1988 and thereafter included smaller firms, benefit coverage as well as benefit generosity was somewhat less. Hence with the new format, in 1998 pension coverage appeared to have fallen, requirements for normal retirement appeared to have suddenly become more stringent, and plans appeared to have dropped post-retirement benefit increases among defined benefit plan participants. In the defined contribution area, more changes are evident because such plans were more prevalent among smaller firms. For this reason, the reader should be alert to the fact some of the differences in levels observed between 1985 and 1998 are due to the change in sampling frame.

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Table 1

Age and Length of Service Requirements for Pension Participation: Defined Benefit Pension Plans, 1981-97

	Percent of full-time participants												
Type of requirements	1981	1982	1983	1984	1985	1986	1988†	1988	1989	1991	1993	1995	1997
No minimum age and/or service requirements	41	39	37	37	40	40	37	33	35	29	34	31	31
With minimum age and/or service requirements	59	61	63	63	59	59	63	66	66	71	66	69	68
Service only	20	23	20	22	23	21	27	28	26	26	26	27	28
1 year or less	NA	NA	18	20	21	17	23	24	22	26	26	25	27
Age only	4	4	3	3	3	3	3	3	4	4	4	3	1
Age and service	35	34	39	39	32	35	33	34	34	39	37	36	36
Age 25 and 1 year*	NA	NA	35	34	NA	NA	NA	NA	NA	NA	NA	NA	NA
Age 21 and 1 year*	NA	NA	NA	NA	13	18	31	33	31	36	30	34	34
With maximum age limitation**	58	61	55	61	61	58	47	47	NA	NA	NA	NA	NA

* The Employee Retirement Income Security Act (ERISA) of 1974 required that pension plans allow full-time employees age 25+ with at least 1 year of service to participate. The Retirement Equity Act of 1984 required that nearly all plans allow participation to full-time employees age 21+ with at least 1 year of service by June 1986. The 1986 data surveyed plans prior to the law change.

** ERISA permitted plans to impose a maximum age for participation within 5 years of the plan's normal retirement date. The Omnibus Reconciliation Act of 1986 eliminated such maximums for plan years beginning in January 1988, with slightly later dates for collectively bargained plans.

† In a few cases the Bureau of Labor Statistics tabulated 1988 results using a sampling frame similar to that employed in previous years. For comparability purposes these figures have been presented, where available, under columns headed "1988†," whereas tabulations from 1988 and 1989 otherwise employ the new, larger survey sampling frame.

Note: Data exclude supplemental / pension plans. Sums may not equal totals because of rounding. NA means data not available, and "---" means less than 0.5 percent.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1981-1997" and unpublished data from the BLS for 1988† figures. A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBS sampling frame changed in 1988 to include smaller firms and more industries than before, so data in 1988 and later are not precisely comparable with previous years' tabulations.

Table 2

Vesting Schedules: Defined Benefit Pension Plans, 1980-97

	Percent of full-time participants												
Vesting formula	1980	1981	1982	1983	1984	1985	1986	1988	1989	1991	1993	1995	1997
Cliff Vesting: *	89	91	90	89	89	88	89	82	89	92	96	96	96
Full vesting after:													
10 years at any age	70	67	66	65	66	69	69	62	29	16	12	6	6
10 years after given age	19	21	22	22	19	17	18	15	9	---	---	NA	---
5 years at any age	NA	NA	NA	NA	NA	NA	NA	45	44	69	79	87	85
Graduated Vesting: **	11	13	12	13	14	13	13	17	11	8	4	3	3
Full vesting after:													
<10 years of service	NA	NA	NA	NA	NA	NA	6	9	9	5	NA	NA	3
15 years of service	5	4	4	4	4	3	3	5	2	NA	NA	NA	---

*A cliff vesting schedule requires an employee to satisfy specific service conditions in order to become 100% vested. ERISA defined 10 years as the maximum requirement for this form of vesting. The Tax Reform Act of 1986 required single-employer plans to convert to a 5-year schedule if using cliff vesting: this provision was to be adopted by most plans during 1989, with slightly later dates for collectively bargained plans. ** Graduated vesting schedules give an employee rights to a gradually increasing share of accrued pension benefits, eventually reaching 100% at specified age and/or service points.

Note: Data exclude supplemental pension plans. Sums may not equal totals because of rounding. NA means data not available, and "---" means less than 0.5 percent.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1980-1997." A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBS sampling frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later comparable with previous years' tabulations.

Table 3

Defined Benefit Plans: Employee Contribution Requirements 1993-1997

	Percent of full-time participants		
	1993	1995	1997
% with Employee contribution required	3	3	5
% pre-tax allowed	1	1	NA

Note: NA = not available

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1993-1997".

Table 4

Minimum Age and Service Requirements for Early Retirement: Defined Benefit Pension Plans, 1980-97

	Percent of full-time participants												
Type of requirement	1980	1982	1982	1983	1984	1985	1986	1988	1989	1991	1993	1995	1997
Plans permitting early retirement *	98	98	97	97	97	97	98	98	97	98	95	96	95
Service requirements alone	10	5	5	6	5	4	5	7	6	7	5	NA	8
30 years required	9	5	5	6	5	4	5	6	5	6	4	NA	8
Age requirements alone	9	10	9	10	10	9	10	10	6	6	2	NA	3
Age 55	8	9	9	10	9	9	10	10	6	5	2	NA	3
Age and service requirements:													
Age 55 and 5 years	3	4	4	3	4	3	3	4	9	17	20	NA	20
Age 55 and 10 years	NA	36	35	35	39	43	41	44	43	32	32	NA	30
Age 55 and 15 years	NA	11	10	9	7	8	7	10	8	10	12	NA	9
Age 60 and 10 years	NA	4	4	5	5	4	4	5	4	4	3	1	2
Age 62 and 10 years	NA	---	---	---	---	---	---	---	2	2	2	--	1
Age plus service sum	5	9	10	9	10	10	9	4	4	6	3	4	8
Sum equals 80 or less	NA	NA	NA	6	6	5	5	2	1	2	2	3	6
Sum equals 85 or more	3	6	5	5	5	4	4	1	---	1	---	---	1
Plans not permitting early retirement	2	2	3	3	3	3	2	2	3	2	5	4	5

* Early retirement is defined as the point when a worker can retire and immediately receive accrued benefits based on service and earnings; benefits are reduced for years prior to the normal age.

Note: Data exclude supplemental pension plans. Sums may not equal totals because of rounding: NA means data not available, and "---" means less than 0.5 percent.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1980-1997." A comparable Employee Benefits (EBS) was not conducted in 1987. The EBS sampling frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 5

Minimum Age and Service Requirements for Normal Retirement:* Defined Benefit Pension Plans, 1980-97

	Percent of full-time participants													
Type of requirement	1980	1981	1982	1983	1984	1985	1986	1988†	1988	1989	1991	1993	1995	1997
Service requirements alone	11	14	13	17	17	14	13	9	7	8	8	5	6	5
30 years required	11	14	13	16	16	14	13	9	7	7	7	4	5	4
Age requirements alone	45	46	43	38	40	37	40	35	42	43	39	33	48	41
Age 60	2	2	2	4	3	4	4	4	3	4	2	3	1	3
Age 62	4	4	4	2	4	4	4	4	6	6	6	3	3	3
Age 65	39	39	36	31	33	29	32	27	33	33	30	26	36	29
Age & service reqs.	37	33	36	36	34	39	36	41	39	37	46	55	48	54
Age 55 and 20 years	NA	2	2	2	2	1	2	1	1	1	1	---	---	---
Age 55 and 30 years	NA	2	2	2	2	2	1	1	1	1	1	3	3	---
Age 60 and 1-5 years	NA	---	---	---	2	---	3	2	2	2	---	3	1	1
Age 60 and 10 years	NA	2	2	2	2	4	3	3	2	2	2	1	3	2
Age 60 and 15-20 years	NA	**1	**2	**3	2	1	1	3	3	1	1	---	---	1
Age 60 and 30 years	NA	2	2	4	3	3	3	2	1	3	2	4	2	2
Age 62 and 1-5 years	NA	1	1	1	1	1	1	4	---	2	2	5	4	3
Age 62 and 10 years	NA	8	9	6	7	11	7	13	11	10	7	7	9	11
Age 62 and 15-20 years	NA	**2	**2	**2	2	4	4	2	2	2	4	3	7	3
Age 62 and 30 years	NA	2	2	3	1	2	1	3	2	2	---	1	2	1
Age 65 and 5 years	2	1	1	1	1	1	2	1	1	2	10	15	9	15
Age 65 and 10 years	NA	3	5	5	3	2	2	2	5	2	4	2	2	3
Age plus service sum	6	7	8	9	9	10	11	15	12	12	6	8	9	8
Equals 80	1	---	1	1	1	1	1	1	1	1	1	1	1	1
Equals 85	3	3	3	4	4	4	5	6	5	6	3	NA	NA	NA
Equals 90 +	1	1	2	2	2	3	4	5	4	4	---	2	1	---

*At normal retirement a participant can retire and receive unreduced benefits immediately.

**Data available for 15 years' service only instead of 15-20.

†In a few cases, the Bureau of Labor Statistics tabulated 1988 results using a sampling frame similar to that employed in previous years. For comparability purposes, these figures have been presented, where available, under columns headed "1988†", whereas tabulations from 1988 and 1989 otherwise employ the new, larger survey sampling frame.

Note: Data exclude supplemental pension plans. Sums may not equal totals because of rounding. NA means data not available, and "---" means less than 0.5 percent.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1980-97." A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBC sample frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 6

Benefit Formulas in Defined Benefit Pension Plans, 1980-97

	Percent of full-time participants													
Formula based on	1980	1981	1982	1983	1984	1985	1986	1988†	1988	1989	1991	1993	1995	1999
Dollar amount	30	32	30	28	28	29	26	27	26	22	23	22	23	23
No alternative	27	29	28	27	27	28	25	26	25	19	21	21	23	23
Earnings	68	66	67	70	68	70	72	71	72	75	70	72	69	67
Terminal earnings	53	50	52	54	54	57	57	54	55	64	56	61	58	56
No alternative	21	26	27	24	24	27	29	26	30	35	38	40	40	37
Career earnings	15	16	15	16	14	13	15	17	17	11	14	11	11	11
No alternative	8	10	9	10	8	7	8	10	11	6	10	8	6	8
Cash account or money purchase	---	---	---	1	2	---	---	1	1	2	3	3	3	6
Percent of contributions	---	2	2	1	2	1	---	---	1	1	4	2	2	3

*Alternative formulas are generally designed to provide a minimum benefit for employees with short service or low earnings.

†In a few cases, the Bureau of Labor Statistics tabulated 1988 results using a sampling frame similar to that employed in previous years. For comparability purposes, these figures have been presented, where available, under columns headed "1988†", whereas tabulations from 1988 and 1989 otherwise employ the new, larger survey sampling frame.

Note: Data exclude supplemental pension plans. Sums may not equal totals because of rounding. NA means data not available, and "---" means less than 0.5 percent.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1980-97." A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBC sample frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 7

Definition of Earnings Used in Earnings-Based Benefit Formulas:*
Defined Benefit Pension Plans, 1988-97

Type of formula	Percent of full-time participants					
	Total 1988	1989	1991	1993	1995	1997
Basic or straight-time earnings only	44	53	56	67	62	NA
Plus overtime	43	37	35	32	32	NA
Shift differentials	35	30	19	23	24	NA
Bonuses	32	29	30	NA	NA	NA
Commissions	32	28	20	19	18	NA

*Tabulations exclude supplemental pension payments.

Note: Data exclude supplemental pension plans. Sums may not equal totals because of rounding.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1988-97." Comparable Employee Benefits Survey (EBS) tabulations are not available for earlier years.

Table 8

Career Earnings Benefit Formulas by Type: Defined Benefit Pension Plans, 1983-91

Type of formula	Percent of full-time participants									
	1983	1984	1985	1986	1988	1989	1991	1993	1995	1997
Flat percent per year of service	37	36	31	40	35	40	36	NA	NA	NA
Less than 1.25 percent	7	5	6	5	3	8	6	NA	NA	NA
1.25_1.74	26	27	18	29	24	23	21	NA	NA	NA
1.75-2.00	1	3	1	---	2	2	1	NA	NA	NA
2.00 or more	2	1	6	4	5	8	7	NA	NA	NA
Percent per year of service	63	64	68	60	63	59	60	NA	NA	NA
By earnings	60	62	63	56	57	43	51	NA	NA	NA
By service	3	2	4	4	5	4	4	NA	NA	NA
Other	---	---	1	---	1	12	9	NA	NA	NA

Note: Data exclude supplemental pension plans. Sums may not equal totals because of rounding. NA means data not avail and "---" means less than 0.5 percent.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1983-97." A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBS sampling frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 9

Terminal Earnings Benefit Formulas by Type: Defined Benefit Pension Plans, 1983-97

Type of formula	Percent of full-time participants									
	1983	1984	1985	1986	1988	1989	1991	1993	1995	1997
Definition of terminal earnings:										
Five years	83	86	84	84	82	81	82	83	78	78
Last 5	5	2	5	4	4	3	6	3	3	1
High 5	8	9	11	10	12	12	10	16	11	13
High consecutive 5	70	75	70	69	67	65	67	65	64	65
Three years	14	11	12	13	13	16	15	14	17	17
Last 3	---	1	1	1	1	1	2	1	---	1
High 3	2	1	3	1	1	3	1	3	5	5
High consecutive 3	12	9	7	11	11	12	11	9	12	12
Other	3	3	4	3	5	3	3	2	3	3
Fraction of pay used in benefit formulas:										
Flat percent per year of service	47	49	50	57	54	54	42	48	37	35
Loss than 1.25 percent	8	5	6	7	6	12	9	9	12	11
1.25-1.74	23	26	29	32	34	25	24	30	18	14
1.75-2.00	4	5	5	5	4	5	3	4	3	9
2.00 or more	11	14	9	13	10	12	5	5	4	5
Other percent per year of service	53	51	50	43	46	46	57	51	62	65
By earnings	23	24	25	20	23	24	36	36	41	39
By service	24	22	18	16	16	16	9	7	8	11
Other	6	5	7	7	7	6	13	8	13	16

Note: Data exclude supplemental pension plans. Sums may not equal totals because of rounding. NA means data not available, and "---" means less than 0.5 percent.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1983-97." A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBS sampling frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 10

Dollar Amount Benefit Formulas by Type: Defined Benefit Pension Plans, 1983-97

	Percent of full-time participants									
Amount per year of service	1983	1984	1985	1986	1988	1989	1991	1993	1995	1997
Flat monthly amount	71	75	66	59	73	81	95	97	94	97
<$5.00	3	---	3	4	---	2	1	2	4	8
$5.00-9.99	16	19	10	10	8	7	5	6	2	4
$10.00-14.99	16	18	16	10	16	12	8	6	4	3
$15.00-19.99	27	30	28	21	20	18	26	12	9	10
$20.00-24.99	4	4	4	10	19	23	23	29	15	12
$25.00-29.99	1	2	2	3	5	16	17	18	9	11
$30.00 +	3	2	2	2	5	3	15	25	51	50
Amount varies	29	25	34	40	27	19	5	3	6	3
With service	3	5	8	6	8	4	3	1	6	3
With earnings	28	20	26	34	19	15	2	2	---	---

Note: Data exclude supplemental pension plans. Sums may not equal totals because of rounding. NA means data not available, and "---" means less than 0.5 percent.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1983-97." A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBS sampling frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 11

Integration of Benefit Payments With Social Security: Defined Benefit Pension Plans, 1980-97

Type of formula	Percent of full-time participants												
	1980	1981	1982	1983	1984	1985	1986	1988	1989	1991	1993	1995	1997
Without integrated formula	55	57	55	45	44	39	38	38	37	46	52	49	51
With integrated formula	45	43	45	55	56	61	62	62	63	54	48	51	49
Benefit offset by SS payment*	30	33	35	35	36	40	43	39	41	19	17	14	13
Excess formula**	16	10	10	20	20	27	24	26	24	36	31	37	36

*Pension benefit calculated is reduced by a portion of primary social security payment.

**Pension formula applies lower benefit ratio to earnings subject to social security taxes below a specified dollar threshold.

Note: Data exclude supplemental pension plans. Sums may not equal totals because of rounding.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1980-97." A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBS sampling frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 12

Reduction Factors for Early Retirement and Early Receipt of Deferred Vested Benefits: Defined Benefit Pension Plans, 1982-97

Type of formula	Percent of full-time participants 1982	1983	1984	1985	1986	1988	1989	1991	1993	1995	1997
(1) Early retirement reduction factor where applied:											
Uniform percentage* per year	46	45	41	49	46	50	49	47	36	40	43
Less than 3.0 percent	2	1	1	2	2	3	3	3	2	4	3
3.0	7	7	7	10	10	8	8	6	4	3	6
3.01 to 4.9	9	8	10	12	9	9	10	10	10	7	6
5.0 to 5.9	7	9	6	7	9	10	12	8	8	7	9
6.0	16	16	15	14	13	14	11	15	11	14	17
6.1 and over	5	3	2	3	3	6	4	4	2	5	4
Percent varies with:											
Age	30	35	56	49	51	49	49	49	54	57	57
Service	3	3	3	2	2	2	1	3	10	3	4
(2) Deferred vested reduction factor where applied:											
Uniform percentage* per year	NA	NA	NA	NA	NA	34	34	34	NA	NA	NA
Less than 3.0 percent	NA	NA	NA	NA	NA	1	1	1	NA	NA	NA
3.0	NA	NA	NA	NA	NA	4	5	5	NA	NA	NA
3.1 to 4.9	NA	NA	NA	NA	NA	4	7	6	NA	NA	NA
5.0 to 5.9	NA	NA	NA	NA	NA	6	9	4	NA	NA	NA
6.0	NA	NA	NA	NA	NA	12	8	13	NA	NA	NA
6.1 and over	NA	NA	NA	NA	NA	5	4	5	NA	NA	NA
Percent varies with:											
Age	NA	NA	NA	NA	NA	65	65	65	NA	NA	NA
Service	NA	NA	NA	NA	NA	1	1	1	NA	NA	NA
(3) Def. Vested available prior to normal age								NA	98	93	90
Reduction same as early								49	46	60	52

*Uniform percentage early retirement factors may approximate actuarial reductions.

Note: Data exclude supplemental pension plans. Sums may not equal totals because of rounding. NA means data not available, and "---" means less than 0.5 percent.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1981-97." A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBS sampling frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 13

Average Pension Replacement Rates for Specified Illustrative Workers: Defined Benefit Pension Plans, 1984-97

	Retirement annuity as percent of final earnings*								
Illustrative worker with	1984	1985	1986	1988	1989	1991	1993	1995	1997
10 years of service and final annual earnings of:									
$15,000	11.0	10.9	11.1	11.9	12.1	14.2	8.1	NA	NA
20,000	9.9	9.8	10.0	10.5	10.9	NA	NA	NA	NA
25,000	9.7	9.5	9.7	10.0	10.4	12.0	6.9	NA	NA
30,000	9.7	9.5	9.7	9.8	9.9	NA	NA	NA	NA
35,000	9.7	9.6	9.7	9.8	9.8	11.2	6.6	NA	NA
45,000	---	---	---	---	---	10.8	6.4	NA	NA
55,000	---	---	---	---	---	10.8	6.3	NA	NA
65,000	---	---	---	---	---	10.8	6.3	NA	NA
20 years of service and final annual earnings of:									
$15,000	21.0	21.2	21.6	23.1	23.4	27.4	17.0	NA	NA
20,000	18.8	19.1	19.5	20.4	21.1	NA	NA	NA	NA
25,000	18.4	18.6	18.9	19.3	20.0	22.9	15.0	NA	NA
30,000	18.5	18.6	18.9	19.0	19.8	NA	NA	NA	NA
35,000	18.6	18.7	19.1	19.1	19.9	21.4	14.1	NA	NA
45,000	---	---	---	---	---	20.9	13.5	NA	NA
55,000	---	---	---	---	---	20.8	13.3	NA	NA
65,000	---	---	---	---	---	20.1	13.3	NA	NA
30 years of service and final annual earnings of:									
$15,000	30.8	31.4	31.5	33.5	34.6	39.3	27.0	NA	NA
20,000	27.4	28.3	28.5	29.6	31.3	NA	NA	NA	NA
25,000	26.6	27.6	27.6	28.0	29.7	32.5	23.6	NA	NA
30,000	26.5	27.3	27.4	27.3	29.4	NA	NA	NA	NA
35,000	26.5	27.3	27.4	27.3	29.5	30.8	22.2	NA	NA
45,000	---	---	---	---	---	30.2	21.5	NA	NA
55,000	---	---	---	---	---	29.0	21.0	NA	NA
65,000	---	---	---	---	---	29.1	21.0	NA	NA

*The maximum private pension was calculated using the earnings and service shown, not reduced for early retirement or joint-and-survivor annuities. Replacment rates refer to the ratio of the retirement pension to the final year's earnings.

Note: Data exclude supplemental pension plans. Sums may not equal totals because of rounding. NA means data not available, and "---" means less than 0.5 percent.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1984-97." A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBS sampling frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 14

Prevalence of Ad hoc Postretirement Benefit Annuity Increases:*
Defined Benefit Pension Plans, 1983-97

Benefit increases	Percent of full-time participants									
	1983	1984	1985	1986	1988	1989	1991	1993	1995	1997
At least one postretirement increase in last 5 years	51	47	41	35	27	24	---	10	7	NA
Automatic COLA	---	---	---	---	---	---	---	4	3	---
Discretionary in last 5 years	---	---	---	---	---	---	---	6	4	---

*Unscheduled increases in pension payments for already-retired employees.
**Figures exclude one-time lump-sum payments.
Note: Data exclude supplemental pension plans. Sums may not equal totals because of rounding.
Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1983-97." A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBS sampling frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 15

Maximum Benefit Provisions: Defined Benefit Pension Plans, 1984-97

Type of formula	Percent of full-time participants								
	1984	1985	1986	1988	1989	1991	1993	1995	1997
Not subject to maximum	58	60	59	60	59	61	63	65	67
Subject to maximum*	42	40	41	40	41	39	37	35	33
Limit on service years	34	34	36	37	37	37	37	33	31
Less than 20	2	2	2	1	1	1	5	5	--
20-29	5	3	6	6	5	5	5	5	6
30-39	32	24	22	23	24	25	25	29	19
40 or more	4	5	7	9	9	8	7	5	6
Other limit	11	8	7	6	6	4	1	1	2

*Sums of individual items do not equal totals because more than one maximum may apply.

Note: Data exclude supplemental pension plans. Sums may not equal totals because of rounding.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1984-97." A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBS sampling frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 16

Disability Retirement Provisions: Defined Benefit Pension Plans, 1980-97

	Percent of full-time participants												
Plan characteristics	1980	1981	1982	1983	1984	1985	1986	1988	1989	1991	1993	1995	1997
Disability retirement available	87	88	89	91	90	85	89	92	81	79	69	73	75
Minimum requirements for disability retirement where available:													
No age or service	16	15	16	14	17	16	13	13	12	20	11	11	NA
Service only	61	57	56	57	52	54	50	57	56	54	36	28	NA
Age only	1	1	---	---	---	---	---	1	---	---	1	---	NA
Qualifies for LTD*	11	18	20	21	22	20	25	31	31	18	16	17	NA
Benefit provisions for disability retirement where available:													
Immediate	70	67	66	66	62	60	55	52	57	63	41	45	46
Unreduced normal	55	51	51	50	48	47	41	39	42	46	32	29	30
Other	15	16	15	16	14	13	14	13	15	17	9	16	17
Deferred	30	33	34	34	38	40	45	48	43	37	23	28	28
Service credit to retirement	24	27	30	29	31	32	37	39	37	28	24	24	24
Other	6	6	4	5	7	8	8	9	6	9	4	4	4

*Long term disability insurance.

Note: Data exclude supplemental pension plans. Sums may not equal totals because of rounding. NA means data not available, and "---" means less than 0.5 percent.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1980-97." A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBS sampling frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 17

Defined Benefit Plans: Lump Sum Available at Retirement, 1991-97

	Percent of full time participants			
	1991	1993	1995	1997
% with Lump Sum	14	10	15	23
Full Amount	9	9	15	22
Amount Limited	5	3	5	1

Note: Sums may not add up due to rounding.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1991-1997."

Table 18

Participation in Retirement and Capital Accumulation Plans, 1985-97

Plan participation	Percent of full-time employees								
	1985	1986	1988†	1988	1989	1991	1993	1995	1997
Not covered by a plan	8	9	12	18	17	21	NA	NA	NA
Covered by a plan	92	91	88	82	83	79	NA	NA	NA
Retirement only*	71	67	69	68	69	69	NA	NA	NA
Capital accumulation only**	1	1	2	2	1	1	NA	NA	NA
Both	20	22	17	12	12	9	NA	NA	NA

*Includes defined benefit and defined contribution plans such as money purchase pensions, profit sharing, and savings and thrift plans when employer contributions must remain in the participant's account until retirement, death, disability, separation from service, age 59 1/2, or hardship.

**Includes plan in which employer contributions may be withdrawn from participant's account prior to retirement, death, disability, separation from service, age 59 1/2, or hardship.

†In a few cases the Bureau of Labor Statistics tabulated 1988 results using a sampling frame similar to that employed in previous years. For comparability purposes these figures have been presented, where available, under columns headed "1988†," whereas tabulations from 1988 and 1989 otherwise employ the new, larger survey sampling frame.

Note: Data exclude supplemental / pension plans. Sums may not equal totals because of rounding.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1980-1997." A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBS sampling frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 19

Combinations of Retirement and Capital Accumulation Plans, 1985-97

Combinations covering participants	Percent of full-time participants							
	1985	1986	1988	1989	1991	1993	1995	1997
Defined benefit plan with:	89	85	76	76	59	56	52	50
No other plan	45	35	45	42	35	61	NA	NA
Profit sharing*	5	13	9	7	5	3	NA	NA
Savings/thrift	15	15	21	24	15	17	NA	NA
Stock plan	23	22	1	2	1	NA	NA	NA
Money purchase	---	---	1	1	1	2	NA	NA
Profit sharing plan with:	9	11	12	10	16	13	13	13
No other plan	7	8	10	8	8	6	NA	NA
Savings/thrift	1	1	1	1	1	2	NA	--
Stock plan	1	1	1	1	---	NA	NA	NA
Money purchase plan with:	---	---	5	5	7	8	7	8
No other plan	---	---	5	4	5	NA	NA	NA
Savings/thrift	---	---	1	1	1	NA	NA	NA
Savings/thrift plan with:	1	3	5	8	29	29	41	39
No other plan	1	2	5	8	15	5	NA	NA
Stock plan with:	---	1	1	1	2	---	2	1
No other plan	---	1	1	1	NA	NA	NA	NA

*Includes profit sharing and saving/stock combination plans; excludes pure cash profit sharing plans.

Note: Data exclude supplemental pension plans. Sums may not equal totals because of rounding. NA means data not available, and "---" means less than 0.5 percent.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1985-97." A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBS sampling frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 20

Participation In Cash or Deferred Plans Including Salary Reduction Plans, 1985-97

Type of plan	Percent of full-time employees								
	1985	1986	1988†	1988	1989	1991	1993	1995	1997
Cash or deferred plan*	26	33	42	36	41	44	36	45	NA
Salary reduction plan	26	31	40	34	38	40	35	44	NA
Salary and thrift	18	21	27	22	28	28	29	37	NA
Profit sharing	4	6	9	7	4	4	4	5	NA
Money purchase	1	1	---	---	1	1	NA	NA	NA
Other	3	3	5	6	5	4	3	2	NA

*Cash or deferred plans are included only if they allow income to be deferred; data include employee contributions to various retirement plans but exclude cases where employee contributions may be required to a defined benefit pension plan.

†In a few cases the Bureau of Labor Statistics tabulated 1988 results using a sampling frame similar to that employed in previous years. For comparability purposes these figures have been presented, where available, under columns headed "1988†," whereas tabulations from 1988 and 1989 otherwise employ the new, larger survey sampling frame.

Note: Data exclude supplemental / pension plans. Sums may not equal totals because of rounding. NA means data not available, and "---" means less than 0.5 percent.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1985-1997" and unpublished data from the BLS for 1988? Figures. A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBS sampling frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 21

Participation in Defined Contribution Plans, 1985-97

Type of plan	Percent of full-time employees 1985	1986	1988†	1988	1989	1991	1993	1995	1997
Savings and thrift	27	28	32	25	30	29	29	41	39
Profit sharing	18	22	21	18	16	16	13	13	13
Stock ownership	24	30	2	2	3	3	3	5	4
Stock bonus	1	---	---	---	---	---	---	2	NA
Money purchase	4	2	3	6	5	7	8	7	8

†In a few cases the Bureau of Labor Statistics tabulated 1988 results using a sampling frame similar to that employed in previous years. For comparability purposes these figures have been presented, where available, under columns headed "1988†," whereas tabulations from 1988 and 1989 otherwise employ the new, larger survey sampling frame.

Note: Data exclude supplemental / pension plans. Sums may not equal totals because of rounding. NA means data not available, and "---" means less than 0.5 percent.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1985-1997" and unpublished data from the BLS for 1988† figures. A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBS sampling frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 22

Age and Length of Service Requirements for Participation, Savings and Thrift, Deferred Sharing Plans and 401(k) Plans, 1985-97

Type of requirement	Percent of full-time participants							
Savings and Thrift Plans	1985	1986	1988	1989	1991	1993	1995	1997
No minimum age & service requirements	14	10	14	15	18	17	NA	NA
With minimum age and/or								
service requirements*	86	90	86	85	82	81	NA	NA
Service only	70	73	64	62	57	55	68	76
< 1 year	16	15	11	12	13	14	11	22
1 year	48	50	43	45	39	38	55	52
2+ years	6	7	10	5	4	2	2	2
Age requirements								
Age 20 or less	4	6	6	5	4	8	NA	NA
and 1 year service	2	2	2	1	2	5	NA	NA
Age 21	11	10	16	19	21	18	NA	NA
and 1 year service	6	8	13	15	18	14	NA	NA
Deferred Profit Sharing Plans	1985	1986	1988	1989	1991	1993	1995	1997
No minimum age & service requirements	NA	14	9	6	5	16	24	NA
With minimum age and/or								
service requirements*	NA	86	91	94	95	82	76	NA
Service only	NA	69	66	65	60	55	76	68
< 1 year	NA	11	15	4	6	14	9	13
1 year	NA	49	44	54	52	37	59	54
2+ years	NA	9	6	6	2	3	8	1
Age requirements								
Age 20 or less	NA	3	4	4	6	11	NA	NA
and 1 year service	NA	2	1	1	5	6	NA	NA
Age 21	NA	12	21	25	29	16	NA	NA
and 1 year service	NA	7	19	23	---	12	NA	NA
401(k) Plans	1993	1995	1997					
No minimum age & service requirements	17	27	27					
With minimum age/seniority	81	NA	NA					
Service only	53	67	NA					
< 1 year	14	11	13					
1 year	35	52	54					
2+ years	3	4	1					

*The Retirement Equity Act of 1984 required that nearly all plans allow participation to full-time empployees who have reached age 21 and have completed 1 year of service. Plans may impose a service requirement of up to 3 years if vesting is then immediate on participation. The compliance date for most plans was June 1986, but collectively bargained plus had slightly longer to comply.

Note: Data exclude supplemental / pension plans. Sums may not equal totals because of rounding. NA means data not available.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1985-1997" and unpublished data from the BLS for 1988† figures. A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBS sampling frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 23

Vesting Schedules: Savings and Thrift, Deferred Profit Sharing, and 401(k) Plans, 1985-97

	Percent of full-time participants							
Savings and Thrift Plans	1985	1986	1988	1989	1991	1993	1995	1997
Type of formula								
Immediate full vesting	25	26	27	30	31	34	33	29
Cliff vesting* with full								
vesting after	12	20	20	24	31	29	25	30
1-2 years	3	5	3	2	2	2	1	3
3-4	2	7	7	11	9	9	5	6
5+	7	8	10	12	19	18	18	21
Graduated vesting** with								
full vesting after	28	25	32	30	35	33	24	33
<4 years	4	2	4	4	3	5	3	10
5	16	15	21	19	21	18	12	15
6-9	4	4	3	5	10	10	8	9
10+	4	4	4	2	---	---	---	---
Other	35	29	21	16	---	---	---	---
Deferred Profit Sharing Plan	1985	1986	1988	1989	1991	1993	1995	1997
Immediate full vesting	NA	29	22	37	40	18	37	29
Cliff vesting* with full								
vesting after	NA	2	2	12	18	21	22	30
1-2 years	NA	2	---	---	---	---	2	3
3-4	NA	1	---	4	1	6	2	6
5+	NA	1	2	8	16	15	17	21
Graduated vesting** with								
full vesting after	NA	66	73	50	41	55	34	33
<4 years	NA	---	1	2	2	2	1	10
5	NA	3	7	6	4	16	4	15
6-9	NA	14	29	28	37	37	28	9
10+	NA	49	35	15	---	1	1	---
Other	NA	4	2	1	---	---	---	---

Table 23 (continued)

401(k) Plans	1993	1995	1997
Immediate full vesting	34	39	34
Cliff vesting* with full vesting after	26	24	27
1-2 years	2	1	3
3-4	8	5	5
5+	16	18	19
Graduated vesting** with full vesting after	37	27	32
<4 years	4	3	11
5	18	13	13
6-9	14	10	9
10+	---	---	---
Other	---	---	---

*A cliff vesting schedule requires an employee to satisfy specific service conditions in order to become 100% vested. ERISA defined 10 years as the maximum requirement for this form of vesting. The Tax Reform Act of 1986 required single-employer plans to convert to a 5-year schedule is using cliff vesting; this provision was to be adopted by most plans during 1989, with slightly later dates for collectively bargained plans.

**Graduated vesting schedules give an employee rights to a gradually increasing share of accrued pension benefits, eventually reaching 100% at specified age and/or service points.

Note: Data exclude supplemental / pension plans. Sums may not equal totals because of rounding. NA means data not available, and "---" means less than 0.5 percent.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1985-1997" and unpublished data from the BLS for 1988† figures. A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBS sampling frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 24

Employee Contributions in Savings and Thrift and 401(k) Plans, 1985-97

Savings and Thrift Plans	Percent of participants 1985	1986	1988	1989	1991	1993	1995	1997
Type of formula								
Basis of maximum contribution, if allowed/required:								
Specified dollar amount	2	2	2	1	1	2	1	1
Fraction of earnings	97	98	95	97	93	91	83	89
<5%	---	1	1	2	5	5	2	2
6-9	5	10	8	9	7	10	5	4
10	17	13	13	12	12	19	10	7
11-14	21	20	19	20	11	15	13	15
15	8	9	14	17	20	19	21	33
16	32	29	24	21	22	16	18	17
17-19	8	8	9	9	10	4	7	8
20+	6	7	6	7	5	2	6	3
Other	1	---	3	2	5	7	16	10
Tax status of contribution, if allowed/required:								
Pretax contribution								
Not allowed	35	25	15	8	2	NA	NA	NA
Allowed	65	75	85	92	98	NA	NA	NA

401(k) Plans	Percent of participants 1985	1986	1988	1989	1991	1993	1995	1997
Basis of maximum contribution, if allowed/required:								
Specified dollar amount	NA	NA	NA	NA	NA	2	1	1
Fraction of earnings	NA	NA	NA	NA	NA	91	83	87
<5%	NA	NA	NA	NA	NA	5	4	4
6-9	NA	NA	NA	NA	NA	8	10	5
10	NA	NA	NA	NA	NA	19	12	11
11-14	NA	NA	NA	NA	NA	15	13	11
15	NA	NA	NA	NA	NA	19	20	31
16	NA	NA	NA	NA	NA	16	12	11
17-19	NA	NA	NA	NA	NA	4	7	7
20+	NA	NA	NA	NA	NA	2	5	3
Other	NA	NA	NA	NA	NA	7	16	12
Tax status of contribution, if allowed/required:								
Pretax contribution								
Not allowed	NA	NA	NA	NA	NA	NA	NA	NA
Allowed	NA	NA	NA	NA	NA	NA	NA	NA

Note: Data exclude supplemental / pension plans. Sums may not equal totals because of rounding. NA means data not available, and "---" means less than 0.5 percent.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1985-1997" and unpublished data from the BLS for 1988? Figures. A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBS sampling frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 25

Employer Contributions in Savings and Thrift Plans, 1985-97

	Percent of full-time participants							
Employer matching* contributions	1985	1986	1988	1989	1991	1993	1995	1997
Specified dollar amount	9	7	5	4	1	NA	NA	NA
Fraction of salary up to:								
<5%	12	28	35	36	39	40	NA	NA
6%	52	54	47	47	43	46	NA	NA
>7%	14	11	11	12	14	15	NA	NA

*Employees may contribute a percentage of salary up to a maximum; ceilings on employer matching contributions are generally lower.

Note: Data exclude supplemental / pension plans. Sums may not equal totals because of rounding. NA means data not available, and "---" means less than 0.5 percent.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1985-1997" and unpublished data from the BLS for 1988† figures. A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBS sampling frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 26

Provisions of Deferred Profit Sharing Plans, 1986-97

Type of formula	Percent of full-time participants 1986	1988	1989	1991	1993	1995	1997
Employer contributions:							
(1) Based on stated formula	59	55	60	52	40	62	62
Fixed % of profits	NA	16	10	10	11	28	20
Variable % of profits	NA	12	18	24	15	25	27
Other formulas	NA	27	33	17	15	12	15
(2) No formula	41	45	40	48	60	38	38
Allocation of profits to employees:							
Equally to all	1	1	1	2	7	6	18
Based on earnings	61	74	64	52	52	56	49
Based on earnings and service	10	12	9	13	11	7	8
Other	8	13	26	33	30	31	24
Loans from employee's accounts:							
Permitted	25	32	19	27	23	33	32
Not permitted	75	68	81	73	77	67	68

Note: Data exclude supplemental / pension plans. Sums may not equal totals because of rounding. NA means data not available, and "---" means less than 0.5 percent.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1985-1997" and unpublished data from the BLS for 1988? Figures. A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBS sampling frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 27A

Provisions for Withdrawal of Employer Contributions Prior to Retirement, Disability or Termination of Employment: Savings and Thrift Plans, 1985-97

Type of formula	Percent of full-time participants								
	1985	1986	1988†	1988	1989	1991	1993	1995	1997
No withdrawals permitted	20	18	29	28	29	50	51	43	48
Withdrawals permitted	80	82	71	72	71	50	47	43	52
For any reason	61	56	42	41	37	24	29	16	18
No penalty	30	19	15	14	17	16	NA	NA	NA
Some penalty	30	37	26	25	18	8	NA	NA	NA
For hardship reason*	19	26	29	30	34	26	18	28	35
No penalty	14	21	21	22	27	17	NA	NA	NA
Some penalty	3	5	6	7	7	9	NA	NA	NA

*Commonly expressed hardship reasons include purchase or repair of primary residence, death or illness in the family, education of an immediately family member, or suddent uninsured loss.

†In a few cases, the Bureau of Labor Statistics tabulated 1988 results using a sampling frame similar to that employed in previous years. For comparability purposes, these figures have been presented, where available, under columns headed "1988†", whereas tabulations from 1988 and 1989 otherwise employ the new, larger survey sampling frame.

Note: Data exclude supplemental pension plans. Sums may not equal totals because of rounding. NA means data not available, and "---" means less than 0.5 percent.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1981-97." A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBC sample frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 27B

Loan Provisions of 401(k) Plans: 1993-97

	Percent of full-time participants		
	1993	1995	1997
Loans Permitted	43	49	51
Hardship only	3	4	4
Any reason	39	44	44
Not permitted	56	46	40
Not determinable	1	15	9

*Many plants offer more than one form of cash distribution so sums of individual items exceed total.

Note: Data exclude supplemental pension plans. Sums may not equal totals because of rounding. NA means data not available, and "---" means less than 0.5 percent.

Source: U.S. Department of Labor, Bureau of Labor Statistics, Employee Benefits in Medium and Large Firms, 1985-97." A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBC sample frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 28

Method of Distribution of Account at Retirement: Savings and Thrift Plans, 1985-97

	Percent of full-time participants							
Type of distribution	1985	1986	1988	1989	1991	1993	1995	1997
Cash distribution*	99	99	97	97	99	NA	NA	NA
Lifetime annuity	29	25	25	28	30	30	17	25
Installments	59	52	49	52	52	48	30	41
Lump sum	99	98	95	96	99	98	85	91

*Many plants offer more than one form of cash distribution so sums of individual items exceed total.

Note: Data exclude supplemental pension plans. Sums may not equal totals because of rounding. NA means data not available, and "---" means less than 0.5 percent.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1985-97." A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBC sample frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 29

Method of Distribution of Account at Retirement: 401(k) Plans: 1993-97

Type of distribution	Percent of full-time participants 1993	1995	1997
Cash distribution			
Lifetime Annuity	34	21	27
Installments	49	34	41
Lump Sum	98	92	91

*Many plants offer more than one form of cash distribution so sums of individual items exceed total.

Note: Data exclude supplemental pension plans. Sums may not equal totals because of rounding. NA means data not available, and "---" means less than 0.5 percent.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1985-97." A comparable Employee Benefits Survey (EBS) was not conducted in 1987. The EBC sample frame changed in 1988 to include smaller firms and more industries than before, so data for 1988 and later are not precisely comparable with previous years' tabulations.

Table 30A

401(k) Plans: Investment Choices: 1993-97

	Percent of full-time participants					
	1993		1995		1997	
	Ee	Er	Ee	Er	Ee	Er
Investment Choices						
Employee permitted to choose investments:	86	58	83	64	86	65
1-2 choices	11	8	4	3	3	2
3 choices	23	13	15	11	11	8
4 choices	28	16	26	16	21	14
> 5 choices	25	22	37	35	31	24

Note: Because of rounding, sums may not equal totals.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1993-97."

Table 30B

Saving and Thrift Plans: Investment Choices, Investment Types, and Frequency of Investment Changes: 1989-97

Investment Choices	1989		1991		1993		1995		1997	
	Ee	Er	Ee	Er	Ee	Er	Ee	Er	Ee	Er
Employee permitted to:										
Choose Investments	90	53	91	62	86	58	74	58	87	65
1-2 choices	25	22	15	16	12	7	3	3	2	2
3 choices	36	40	32	33	21	13	13	10	11	3
4 choices	23	20	29	25	30	17	21	13	21	14
>5 choices	15	16	20	22	24	21	28	26	47	34
Types of Investment Choices										
Company stock	60	50	50	36	43	49	40	27	42	25
Common stock	79	83	87	90	68	49	59	48	69	50
LT interest-bearing sec.	32	37	44	46	42	28	48	36	59	43
Diversified stock/bond	26	31	26	27	42	33	41	31	54	40
Guaranteed Investment	64	59	71	70	43	30	25	20	20	15
Money market	35	41	38	43	26	20	30	25	35	28
CD	3	4	2	2	1	1	4	2	3	2
Frequency of Investment Changes										
Total with choice allowed	NA	NA	NA	NA	86	58	74	58	87	65
- Anytime	NA	NA	NA	NA	25	19	38	32	47	36
- Specified No.	NA	NA	NA	NA	56	37	31	21	32	22
1/yr	NA	NA	NA	NA	4	2	3	2	2	1
2-4/yr	NA	NA	NA	NA	44	28	20	15	22	17
>5/yr	NA	NA	NA	NA	8	6	8	4	8	4
- Other	NA	NA	NA	NA	19	2	6	5	7	6

Note: Because of rounding, sums may not equal totals.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Firms, 1993-97."

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