Cash Balance Pension Plans: The New Wave

A number of larger employers have recently restructured their defined benefit pension plan offerings by switching from a typical pension plan based on terminal earnings formulas to a cash balance plan based on average career earnings. Many questions as to who benefits from such transitions, as well as to how such transitions should be governed, remain unanswered.

Historically, defined benefit pension plans have been vehicles geared towards rewarding longevity. The individuals building sizable “nest eggs” in a defined benefit pension plan were those working for the same employer for their entire career.

For many years, such defined benefit pension plans have been widely used by employers to provide retirement income to employees. However, since 1985, the number of defined benefit pension plans insured by the Pension Benefit Guaranty Corporation (PBGC) has dropped from 112,000 to 42,000. Conversely, the total number of participants in these plans has recorded modest growth. Between 1980 and 1996, participation increased from 27.6 million participants to 33 million. However, like the total number of defined benefit plans, “active participation” declined 4.1 million between 1988 and 1996, dropping from 22.2 million to 18.1 million. (See glossary of terms, p. 6.)

More recently, employee participation in defined contribution retirement plans has been on the rise. In addition to giving employees more autonomy in building their retirement benefits, defined contribution retirement plans provide employees with increased flexibility in determining how their retirement contributions will be invested, but at the cost of incurring more risk. In addition, defined contribution retirement plans typically provide a benefit that employees can take with them should they change jobs, a feature that is not traditionally found in defined benefit pension plans. Is it possible that there exists an intersection between these two distinct types of retirement plans? The intersection might be the “cash balance” pension plan.

Cash balance versus defined benefit

A cash balance plan, a type of defined benefit pension plan, promises an employee an employer contribution equal to a percent of each year’s earnings and a rate of return on that contribution. The benefit is always expressed as a total account balance. This is in contrast to a traditional defined benefit plan, which typically promises an employee a flat dollar amount based on years of service or an annuity—a periodic benefit usually based on years of service and an employee’s earnings in the years closest to retirement.

Cash balance plans build value steadily and often at the same pace for all employees—whether they’ve
worked for the employer for 1 or 30 years. The focus of these plans is on wealth building and “portability.” On the other hand, traditional defined benefit plans are designed to encourage career employment with one employer. Instead of focusing on wealth, they focus on providing retirement security; the design of these plans does not reward employees who choose to change jobs.

Cash balance plans provide more uniform benefit accrual throughout the employee’s career. Conversely, under a traditional defined benefit plan, the value of a dollar of promised future retirement income is directly related to the employee’s career. Hypothetical retirement accounts define an employee’s accrued benefit at any point in time. The account is merely a record-keeping feature. Cash balance plans are funded on an actuarial basis, in the same manner that traditional defined benefit plans are funded. The amount the employer contributes to the plan each year is based on actuarial assumptions. In addition, employers can invest the cash balance plan funds just like they can invest other defined benefit plan funds. Participants’ retirement accounts grow by earning annual credits that typically are based on a flat percentage of pay and may or may not be integrated with Social Security benefits. In addition, accounts earn an interest credit each year that is tied to some external index, such as the Consumer Price Index or the rate on U.S. Treasury bills. For example: employer XYZ provides a cash balance plan that credits all employees’ accounts with 6 percent of their annual salary. In addition, these accounts are credited with 5 percent interest, which is paid by the employer on an annual basis. This method of benefit accrual allows cash balance benefits to grow more evenly over an employee’s career than would occur under a final average pay plan—in which the majority of benefit accrual takes place in the final few years prior to retirement. In other words, benefits for cash balance plans are determined by an employee’s pay averaged over his or her total years of service. Benefit accrual formulas based on an employee’s career average earnings tend to be more beneficial to employees just beginning their careers than to employees who are close to retirement and have worked most of their career under a more traditional defined benefit plan.

Cash balance versus defined contribution
Although cash balance plans may appear similar to 401(k) plans, there are numerous differences between them; some are critical from a policy perspective. First, in cash balance plans, the investment decisions and the investment risks associated with those decisions generally are the responsibility of the employer, not the employee. Even though the benefits are expressed in the form of individual accounts, assets are managed in the aggregate by the plan trustee. Second, cash balance plans, unlike 401(k) plans, are covered by the PBGC’s insurance program, meaning participants’ benefits are protected even if the plan or the company runs into financial difficulty. Finally, cash balance plans must offer employees the ability, within the plan, to convert their account balances to lifetime annuities at no additional cost.

Are cash balance plans gaining in popularity?
As mentioned, traditional defined benefit pension plans typically base the accrued benefit on a multiple of an employee’s salary level and years of service. These plans are back-loaded—meaning much of the value of the benefit is earned in the final years just prior to retirement—and, as such, are ideal for employees who spend their entire career with a single employer. The assumption that employees experience their highest earnings toward the end of their careers implies that the pension benefit due to them would accrue much faster at a later stage of their employment. If workers leave the firm before qualifying for retirement, they suffer a pension “capital loss” by giving up the opportunity for a substantial graduated increase in pension benefits. Thus, the benefit in remaining with the same employer for a number of years is established.

Plans based on final earnings can produce little benefits for employees who switch jobs several times during their careers. The back-loading of traditional defined benefit plans makes it costly for employees to leave, thereby reducing the likelihood of mobility. On the other hand, cash balance plans may be more responsive to a mobile workforce and may be more attractive to employees prone to change jobs throughout their careers. For mobile workers, cash balance plans may provide meaningful benefits sooner and more evenly over a career, so that shorter job tenure need not mean reduced retirement benefits. The design of cash balance plans responds to workers who want to transfer accumulated pension benefits when changing jobs. This portability provision affords workers who switch jobs the opportunity to leave their assets in the plan (where they will continue to receive interest credits), elect an annuity, or roll over their account balance to their next employer’s retirement plan or into an IRA. Portability provisions are rarely offered in traditional defined benefit pensions—fewer than 1 in 10 covered workers had such a feature in 1997.

Although cash balance pensions have been in existence for a number of years, they have recently begun to receive much attention as new plans are surfacing and, in some cases, replacing traditional defined benefit plans. Data from the BLS Employee Benefits Survey (EBS) indicate that...
participation in cash balance pension plans among employees in medium and large private establishments doubled between 1995 and 1997, from 3 to 6 percent of all defined benefit plan participants.\textsuperscript{8} These data are supported by the fact that, overall, cash balance plans have increased from 5 percent to 12 percent in just the last 2 years, according to a survey conducted by Hewitt Associates. Furthermore, in 1998, 16 percent of Fortune 100 companies offered their employees a cash balance plan. (See chart 1.)\textsuperscript{9}

Traditional defined benefit plan formulas are often complex and are not expressed in the form of an account balance. Cash balance plans—with their account balance and understandable benefit accrual—seem to provide benefits that are easier for employees to comprehend. Employers are under the impression that very few employees understand, or even appreciate, traditional defined benefit plans because of the difficulty in determining the benefit to which they are entitled:

\begin{quote}
...[It] is perceived that some employees have little understanding of or appreciation for traditional pension plans.... Plan participants tend to appreciate cash balance plans because they can actually see their pension ‘benefit’ accruing throughout their years of service with an employer, and because they can take that accrued benefit with them when they leave, even if that is years in advance of retirement age.\textsuperscript{10}
\end{quote}

According to data from the 1998 Current Population Survey, the median number of years workers were with their current employer was 3.6, 1.4 years less than the 5-year vesting requirement of most defined benefit plans.\textsuperscript{11} (This measure of tenure fluctuated between 1983 and 1998, decreasing from 3.8 to 3.6 years.)\textsuperscript{12} Vesting requirements in cash balance plans are similar (5 years for cliff vesting and 7 years for graduated vesting—see glossary of terms). Therefore, cash balance plans may be more attractive to younger workers (workers more likely to change employers) because, once vested, they are guaranteed an unreduced benefit if they change employers. On the other hand, workers closer to retirement may be disenchanted with the cash balance plan because they tend to receive smaller payouts at retirement by converting to this type of plan than they would have if they had remained with their more traditional defined benefit plan. The payout received under the cash balance plan would probably be smaller because the benefit would be calculated using a career average of earnings as opposed to an average of earnings over the worker’s final few years of employment. The career average method tends to bring employees’ overall average down because it accounts for lower earnings levels early in their careers.

**Why do cash balance plans appeal to employers?**

Conversion from a traditional defined benefit plan to a cash balance plan may be the result of: (1) a comprehensive redesign of an employer’s compensation package as a means for easily ascertaining future liability; (2) a need to attract and retain workers in a mobile environment; and (3) a desire to avoid the complexities involved in explaining traditional defined benefit plan annuity benefits and their often-complex formulas.

Conversion to a cash balance plan may be accompanied by improvements to other benefit plans. When some employers institute a conversion, they increase their nonelective or matching contributions to their current employees’ 401(k) plans to offset any reduction in benefits that would occur otherwise.

A recent study by Watson Wyatt Worldwide, a benefits consulting firm, suggests that “employers with cash balance plans...are more likely than employers with traditional defined benefit plans to make both non-elective (12 and 10.8 percent, respectively) and matching (88.9 and 77.5 percent) contributions to employee 401(k) plans.”\textsuperscript{13} Watson Wyatt also has completed another study indicating that “45 percent of employers realized some cost savings, while 37 percent saw costs increase, and 18 percent experienced a minimal effect on costs.”\textsuperscript{14}

From another perspective, according to a recent Society of Actuaries study, if costs were held constant, about two-thirds of employees would...
### Glossary of Terms

**Active participation** refers to plan participants who are actively employed and still accruing plan benefits.

**Annuity** is an investment on which one receives fixed payments for a lifetime or for a specific number of years.

**Career earnings formulas** are based on a percentage of average career earnings for every year of service recognized by the plan.

**Cash balance pension plans** are defined benefit pension plans in which each participant has a hypothetical account that is credited with a dollar amount. The account earns interest based on an employer contribution usually calculated as a percentage of pay.

**Defined benefit pension plans** provide employees with guaranteed retirement benefits based on predetermined benefit formulas. A participant’s retirement age, length of service, and preretirement earnings also may affect the benefits received.

**Defined contribution retirement plans** specify the level of employer contributions and require those contributions to be placed in individual employee accounts.

**Discounting period** is the length of time used to calculate the present value of dollars (annuity) due in the future.

**Dollar amount formulas** are used to calculate benefits based on a flat dollar amount for each year of service recognized by the plan.

**Early retirement age** is the age or combination of age and service at which an individual can retire and receive full benefits less a reduction for each year of retirement prior to reaching normal retirement age.

**Nonelective contributions** are employer contributions (other than matching funds) that an employee may not elect to have paid in cash in lieu of being contributed to their retirement account. They are nonforfeitable and ineligible for withdrawal prior to the attainment of certain conditions.

**Normal retirement age** is the age at which an individual can retire and receive full accrued benefits.

**Pension equity plans** credit employees with a certain number of points for each year of service. When the participant terminates employment or retires, the benefit is determined by multiplying the participant’s average level of pay over his or her career by the total number of points earned. The benefit is expressed as an account balance, much like the benefit of a cash balance defined benefit plan.

**Portability** allows participants to transfer accumulated pension benefits when changing jobs.

**Terminal earnings formulas** are based on a percentage of average earnings during a specified number of years at the end of a worker’s career (or when earnings are their highest), multiplied by the number of years of service recognized by the plan.

**Vesting** refers to the number of years an individual must work for a particular employer before earning a nonforfeitable retirement benefit.

**Cliff vesting** is a form of vesting in which vesting occurs after an employee satisfies the service requirements for 100-percent vesting, for example, after 5 years. There also may be an age requirement combined with the service requirement.

**Graduated vesting** is a form of vesting in which vesting occurs gradually over a predetermined period until the employee is fully vested (100 percent).

**Wearaway** occurs when, as a result of a plan conversion, participants’ previously earned benefits do not accrue additional value until the new plan value equals the old plan value.

Employers find that the cash balance plan provides additional funding flexibility, thereby easing the burden of budgeting for future pension plan costs. The cash balance plan does not define the employer’s contributions, but instead defines the future pension benefits that will accrue in each individual account. The employer’s contributions are based on actuarial valuations, as is the case with traditional defined benefit plans. These actuarial valuations describe an amount that must be present in the plan to fund all employees’ pension benefits. The employer contributions to the plan in any given year may be more or less than the sum of the additions to all participants’ accounts. The employer or plan sponsor, or both, determine how the assets from the plan will be invested and assume all risks. Investment gains and losses affect the employer’s future contributions. If the fund earns a rate of return equal to or greater than the rate of return promised to employees, the plan can become fully funded without additional employer contributions.

There are other reasons why cash balance plans may appeal to employers. As with traditional defined benefit plans, employers still bear the risk and receive the reward from plan investment strategy. But cash balance plans may not subject employers to the same degree of risk of preretirement inflation that can occur with terminal earnings formulas. Benefits are expressed in terms of a lump-sum payment, and at any point in time the employer knows the value of an individual’s account. Large wage increases just prior to retirement must be funded, but they do not have the same influence on employees’ final benefits that they would in traditional defined benefit plans.
Transition issues
When a company converts to a cash balance plan, all employees are legally entitled to the benefit they accrued in the prior plan as of the conversion date. Among the biggest issues that arise in the transition from a traditional defined benefit plan to a cash balance plan is that younger employees will typically fare better than they would have under the original plan because the accrual pattern under a cash balance plan will provide them with a larger benefit if they leave their current employer. Workers with more years of service and a traditional defined benefit plan may not do as well. Chart 2 shows how cash balance plan benefits accrue in relationship to traditional defined benefit plan benefits.17

The extent of any difference in benefits will depend on the design of the old and new plans and the nature of the transition provisions that may accompany the conversion. Employers may offer an array of transition arrangements. One of the arrangements could be the imposition of a “grandfather clause,” whereby some or even all employees may remain in the prior pension plan either until retirement or for a period of years. Other arrangements may include providing some, or all, workers with additional amounts in their opening cash balance plan accounts, or providing additional pay or interest credits to employee accounts for a predetermined number of years or until retirement.

Wearaway
According to Dr. Jack VanDerhei of Temple University, wearaway can occur when a defined benefit plan based on final average salary is converted to a cash balance plan. According to VanDerhei, at the time of conversion, the initial value of a participant’s cash balance account may be set at less than the value of benefits accrued under the previous plan. It is important to note that this does not reduce or take away previously earned benefits; the accrued value under the previous plan is guaranteed. What may happen, however, is that some workers will not accrue additional benefits until pay and interest credits under the new plan bring their cash account balance up to the value already earned under the old plan.18 This period of no additional benefit accrual is the wearaway period.

Benefit formulas that result in periods of no new accruals for some employees have been approved by the Internal Revenue Service (IRS) for many years. Current law requires employers to notify plan participants of any amendment that will result in a significant reduction in the rate of future benefit accruals. However, employers are not required to provide individual notices for each plan participant; nor do they have to explain the effect that plan amendments will have on individual participants. This is a concern for some participants. They argue that the wearaway period during a conversion should be explained, and a meaningful comparison between projected benefits under the amended plan and the benefits that would have been earned under the previous plan formula should be provided to each worker.19

Regulatory requirements
From a legal standpoint, cash balance plans are currently governed by the same rules that govern traditional defined benefit plans under the Employee Retirement Income Security Act of 1974 (ERISA). ERISA requires private employers to fully fund their pension plans. A pension plan that is considered fully funded is one with assets equal to or greater than the amount needed to provide each plan participant with the pension benefit to which he or she is entitled. Generally, cash balance plans require no contributions from employees.

In 1999, the IRS imposed a freeze on new approvals of cash balance plans. The IRS was able to do this because the agency has jurisdiction over the finances of such plans because company contributions are tax deductible. The manner in which some companies moved to a cash balance arrangement has resulted in much controversy. The first companies to make the switch were doing so without offering older employees any choice. Employees within a few years of retirement could possibly experience significant reductions in the level of their benefits under the new arrangement. Some employees have instituted class-action lawsuits against employers and filed Equal Employment Opportunity complaints alleging illegal reduction of pension benefits. They have argued that they were not
receiving adequate information about the new plans. The initial response by employers was to offer older, career employees an option of remaining in the original plan or “grandfathering” their accrued benefit in the original plan to the new cash balance plan. This required adjusting their pattern of benefit accrual under the new plan so that benefits at retirement would be similar to those they would have received under the old plan. These issues have led to the introduction of legislation in Congress that would give plan participants a legal right to know when a change in determining pension benefits will result in a reduction of future benefits. (See box on relevant legislation.)

On another front, the Pension Benefit Guaranty Corporation (PBGC), the agency charged with insuring qualified defined benefit plans and administering seriously underfunded plans when necessary, is experiencing difficulty determining how to insure cash balance plans. These plans present the PBGC with a challenge because the benefits are not expressed in terms of an actuarially computed future monthly benefit expected from the plan. Instead, the benefit is expressed as a lump sum to be paid immediately—not at some future date. Another problem the PBGC faces is determining the amount the organization can afford to guarantee. Guarantee limits are set based on the number of workers eligible to retire at any given time. Cash balance pension plans make setting guarantee limits impossible because all plan participants are technically eligible for retirement once they have met any vesting requirements imposed by the plan.

### Data analysis

An examination of 1997 EBS data suggests some of the similarities and differences between cash balance plans and traditional defined benefit plans. Provisions common to defined benefit plans include, among others, vesting requirements, eligibility requirements for plan participation, normal and early retirement requirements, methods of benefit distribution, and benefit formulas.

**Vesting.** Vesting refers to the amount of time a participant must work before earning a nonforfeitable right to a pension benefit. Once the worker is vested, the accrued benefit is retained even if the worker leaves the establishment before reaching retirement age. A common practice among defined benefit plans is “cliff vesting.” This method of vesting is predominant in traditional defined benefit plans, with 96 percent of participants in these plans having a cliff vesting schedule (usually the employee becomes 100-percent vested after 5 years). Similarly, 91 percent of participants in cash balance plans also had this type of vesting schedule.

**Graduated vesting.** Graduated vesting, on the other hand, is not as prevalent in defined benefit pension plans as it is among defined contribution retirement plans. With graduated vesting, participants earn a portion of their accrued balance sooner than they would under a cliff vesting schedule.
The fact that graduated vesting is used more often in cash balance plans may lend some credence to the notion that these plans have features similar to those of defined contribution plans. Data show that 3 percent of participants in traditional defined benefit pension plans had a graduated vesting schedule as opposed to 33 percent of participants in defined contribution plans. Within defined benefit pension plans, a higher percentage (9 percent) of cash balance plan participants than of traditional pension plan participants had a graduated vesting schedule.

**Contributions.** The practice of contributing to a cash balance plan at a higher rate than is customary with traditional plans must be based on the level of earnings to be considered in the calculation of the benefit. Because cash balance arrangements take into account earnings over the career of an employee, employers must contribute at a higher rate to account for early years of employment during which earnings are typically lower. Terminal earnings formulas, on the other hand, cover a period during which earnings are theoretically highest (during the last few years just prior to retirement). Among participants in cash balance plans, 31 percent had a benefit that was determined at a rate ranging from 7.00 to 7.99 percent of earnings (3 percent of participants were receiving less than 2 percent of earnings). (See table 1.) The average annual employer contribution to cash balance plan accounts was 5.91 percent.21 In addition, table 2 shows that a significant number of participants in cash balance pension plans (44 percent) earned annual interest credit between 6.00 and 6.99 percent. The average rate of interest earned by all cash balance plan participants in 1997 was 6.58 percent.

**Earnings formulas.** In defined benefit plans, the benefit formula describes the method of determining a participant’s benefit at retirement. Typical benefit formulas include terminal earnings formulas, career earnings formulas, and dollar amount formulas. The terminal earnings formula is the most prevalent means of determining retirement benefits; more than half of defined benefit plan participants have a plan that uses this type of formula.23 According to the EBS, in 1997, 35 percent of participants in plans with a terminal earnings formula received a flat percentage per year of service, which averaged 1.48 percent.24 As mentioned earlier, this percentage is applied to a much higher level of earnings than is seen under a cash balance format.

**Retirement age.** Based on the structure of cash balance plans, the notion of normal and early retirement is not relevant. This is due to the fact that participants in cash balance plans may terminate employment and take their unreduced accrued benefit with them once they have met any vesting requirements imposed by the plan, or they may leave the benefit in the plan allowing it to earn interest credits. In contrast, traditional defined benefit plans specify retirement requirements. The most prevalent normal retirement requirement for defined benefit plans is age 65, regardless of the number of years of service. “Normal retirement” refers to the age at which an individual may retire without a reduction in benefits. In 1997, 48 percent of all participants in defined benefit plans had a normal retirement requirement of age 65. Of this 48 percent, more than half (29 percent) had no additional service requirement attached to the age requirement. The predominant early retirement requirement was age 55 with 10 years of service. Early retirement provisions describe the earliest time at which an individual may terminate employment and receive a retirement benefit, albeit reduced in some manner.25

**Portability and distribution.** Differences between traditional defined benefit plans and cash balance plans also exist in the portability and distribution provisions. As discussed earlier, distributions from cash balance plans usually are offered in the form of a lump-sum payment, although these plans are legally required (as defined benefit plans) to offer an annuity option. Conversely, the distributions from a traditional defined benefit plan usually are offered in the form of a lifetime annuity, with options of purchasing some level of survivor annuity. In 1997, 22 percent of all defined benefit plan participants had an option to take their entire accrued benefit in the form of a lump sum, compared with 80 percent of all cash balance plan participants.26 (See table 3.)

In terms of portability, traditional defined benefit plans tend to express portability provisions as transfer of service credits from one employer-sponsored plan to another, and not as a withdrawal or transfer of the accrued benefit. Eight percent of defined benefit plans provided this concept of portability in 1997.27 Cash balance plans, on the other hand, speak of portability as a withdrawal or rollover of the accrued benefit into another qualified plan or into an IRA. It is, in fact, the portability and distribution provisions that cause cash balance plans to look like defined contribution retirement plans.

**Summary**

Cash balance defined benefit plans (as well as other types of hybrid defined benefit plans) are beginning to receive increased attention. Available literature indicates that transitions appear to be largely aimed at making employers more attractive to workers who do not plan to remain with the same employer for their entire career. A cash balance defined benefit plan promises these workers a larger benefit than they would receive under a traditional defined benefit pension plan, as well as a benefit accrual pattern that may be better understood.

The following are some of the features of cash balance defined benefit pension plans.

- The employer bears the investment risk.
• In most cases, the employer makes all of the contributions to the plan.
• Participants’ benefits are determined utilizing a defined formula.
• Plans are governed by ERISA, and are insured by the PBGC.
• Plans include many of the same features offered in traditional defined benefit plans.

Vesting requirements must be met.
• Both lifetime and survivor annuity options must be offered.
• In most cases, the employee can opt to take the entire accrued benefit in the form of a lump-sum payment.

A few fundamental questions remain to be answered regarding cash balance plans. Among these is how the PBGC will insure these plans given that all vested participants (regardless of age) are “eligible to retire.” Transition issues continue to prompt congressional legislative proposals to govern both these plans and the transition from more traditional defined benefit plans. Finally, uncertainty still exists regarding the issues of disclosure and wearaway. These concerns must be addressed by employers planning a transition to a cash balance defined benefit pension plan.

1 The Pension Benefit Guaranty Corporation (PBGC) protects the retirement income of about 43 million American workers in more than 40,000 defined benefit pension plans. PBGC is a Federal Government corporation established by Title IV of the Employee Retirement Income Security Act (ERISA) of 1974 to encourage the growth of defined benefit pension plans, provide timely and uninterrupted payment of benefits, and maintain pension insurance premiums at the lowest level necessary to carry out the Corporation’s obligations.
2 These numbers include not only active workers but also retirees (or their surviving spouses) and separated vested participants.
5 Ibid., pp.40-41.
8 The Bureau’s Employee Benefits Survey (EBS) covers the incidence and characteristics of employee benefit plans, and is conducted jointly with the Bureau’s Employment Cost Index Survey. The two surveys cover all private sector establishments (except farms and private households) and State and local governments.

The EBS covers full- and part-time employees in the 50 States and the District of Columbia. However, industrial and establishment-size coverage varies on a rotating basis. In even-numbered reference years, EBS data were collected for small private establishments (those employing fewer than 100 workers) and State and local governments (regardless of employment size). In odd-numbered reference years, data were collected for medium and large private establishments (those employing 100 or more workers).
12 Current Population Survey (CPS) tenure data suggest how long workers have been with their current employer. They say nothing about how long workers eventually will be with their current employer. Information on eventual tenure is far more relevant for assessing mobility than is information on current tenure. Unfortunately, no direct measure of eventual tenure exists. Because no satisfactory measure exists to quantify worker mobility directly, CPS data on workers’ tenure with current employers often have been used to make inferences about worker mobility. However, using CPS tenure data to assess mobility may lead to incorrect conclusions.
According to the Bureau’s 1998 Current Population Survey, average job tenure for women 16 years of age and older is 3.5 years versus 4.0 years for men in the same age group.
17 Ibid., p. 5.
19 Ibid., p. 13.
21 Employee Benefits in Medium and Large Private Establishments, 1997, p.112.
23 Employee Benefits in Medium and Large Private Establishments, 1997, p. 103.
24 Ibid., p. 104.
26 Ibid., p. 106.
27 Ibid., p. 113.
### TABLE 1. Contribution rate of employers offering cash balance defined benefit plans for full-time employees in medium and large private establishments, selected occupational groups, 1997

<table>
<thead>
<tr>
<th>Employer contribution</th>
<th>All employees</th>
<th>Occupational group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Professional, technical, and related</td>
</tr>
<tr>
<td>Number of workers (in thousands)</td>
<td>1,091</td>
<td>502</td>
</tr>
<tr>
<td>Percent of workers with a cash balance plan</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Percent contributed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 2.00</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>2.00 – 2.99</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>3.00 – 3.99</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>4.00 – 4.99</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>5.00 – 5.99</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>6.00 – 6.99</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>7.00 – 7.99</td>
<td>31</td>
<td>39</td>
</tr>
<tr>
<td>8.00 – 8.99</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>9.00 – 9.99</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>10.00 or more</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Not available</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Average percent contributed per year of service</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

1 Less than 0.5 percent.
2 The average includes all covered workers; workers without the plan provision are excluded.

NOTE: Because of rounding, sums of individual items may not equal totals. A dash indicates no employees in the category.

### TABLE 2. Interest earned on accounts in cash balance defined benefit plans for full-time employees in medium and large private establishments, selected occupational groups, 1997

<table>
<thead>
<tr>
<th>Earned interest rate</th>
<th>All employees</th>
<th>Occupational group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Professional, technical, and related</td>
</tr>
<tr>
<td>Number of workers (in thousands)</td>
<td>1,091</td>
<td>502</td>
</tr>
<tr>
<td>Percent of workers with a cash balance plan</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Interest rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.00 – 5.99</td>
<td>24</td>
<td>18</td>
</tr>
<tr>
<td>6.00 – 6.99</td>
<td>44</td>
<td>57</td>
</tr>
<tr>
<td>7.00 – 7.99</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>8.00 – 8.99</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>9.00 – 9.99</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>10.00 or more</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Not available</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>Average earned interest rate</td>
<td>7</td>
<td>6</td>
</tr>
</tbody>
</table>

1 The average includes all covered workers; workers without the plan provision are excluded.

NOTE: Because of rounding, sums of individual items may not equal totals. A dash indicates no employees in the category.

### TABLE 3. Percent of cash balance defined benefit plan participants with lump-sum benefit options, full-time employees in medium and large private establishments, selected occupational groups, 1997

<table>
<thead>
<tr>
<th>Lump-sum availability</th>
<th>All employees</th>
<th>Occupational group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Professional, technical, and related</td>
</tr>
<tr>
<td>Number of workers (in thousands)</td>
<td>1,091</td>
<td>502</td>
</tr>
<tr>
<td>Percent of workers with a cash balance plan</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Lump sum available</td>
<td>80</td>
<td>85</td>
</tr>
<tr>
<td>Limited to specified amount</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>No limited amount</td>
<td>74</td>
<td>81</td>
</tr>
<tr>
<td>No lump sum available</td>
<td>20</td>
<td>15</td>
</tr>
</tbody>
</table>