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Can Cash Balance Pension Plans Improve Retirement Security for Today's Workers?

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In recent years, several large employers have replaced their traditional defined benefit plans with cash balance plans. Like traditional pensions, cash balance plans guarantee workers set retirement benefits, but they allow workers to build up savings more steadily over their careers.[1] Employers offering cash balance plans set aside a percentage of each employee's salary and guarantee a fixed interest rate return on these contributions.

Cash balance plans share some features of defined contribution plans, the type of retirement plan the majority of Americans now participate in. The two types of plans, however, differ fundamentally. Defined contribution plans offer employees tax-deferred savings accounts, such as 401(k)s, which typically allow participants to choose how to invest their money. Workers generally invest their contributions in stocks and bonds, leaving their savings vulnerable to financial market volatility. In the past year, stock market declines have cost U.S. workers billions of retirement dollars (Board of Governors of the Federal Reserve System 2002). Workers who did not adequately diversify their pension assets were hit especially hard, as became apparent after the Enron and WorldCom bankruptcies (Kadlec 2002; Wysocki 2002). By contrast, cash balance plans guarantee workers' retirement benefits. Because the employer promises to pay a certain return on plan contributions, benefits do not fluctuate with market interest rates or stock market outcomes.

Some employers have switched from traditional defined benefit plans to cash balance plans to better attract and retain workers. Typically, traditional pension plans have provided generous guaranteed retirement income to workers who spend most of their careers at one company, an increasingly rare occurrence among today's highly mobile workforce. Indeed, because pensions depend on years of service and final salary, job changers fail to accumulate substantial retirement benefits under traditional defined benefit plans. In cash balance plans, by contrast, even workers who change jobs frequently can accumulate sizable pension wealth.

So far, the cash balance debate has centered mostly on the merits of converting from defined benefit plans to the newer plans. Some critics argue that midcareer changeovers discriminate against older workers who have spent many years working for the same employer.
Most analysts agree that without special provisions for long-term employees, late-career conversions would result in lower benefits for many older workers. Few researchers, however, have considered whether cash balance pensions can improve retirement outcomes for the next generation of workers who could participate in these plans for their entire careers. Although we cannot predict precise outcomes for future workers, we can simulate how those with defined benefit pensions now completing their working lives would have fared if they had instead participated in cash balance plans for their entire careers.

This brief compares outcomes in traditional defined benefit plans and hypothetical cash balance plans for a sample of Americans near retirement with pension coverage.[2] We compare the pension benefits workers can expect to receive from their employers under each plan. Our analysis examines how cash balance plans might affect the distribution of pension wealth across different groups, assuming that workers participated in cash balance plans instead of defined benefit plans during their entire period of covered employment.

We find that replacing traditional pension plans with cash balance plans would redistribute pension wealth from those who held long-term jobs to those with a series of short-term jobs. Individuals with limited pension wealth, especially those in the bottom quartile, would also benefit. Surprisingly, we find that many women now approaching retirement age would lose pension wealth under cash balance plans, because few held pension jobs at young ages. However, future cohorts of older women may fare better, since women now work longer and earn more than in the past.

Employer-Sponsored Retirement Plans

Fewer and fewer employers are offering workers defined benefit pensions. These traditional plans typically pay annual retirement annuities equal to a specified fraction (such as 1 percent) of annual earnings received near the end of a worker's career (often averaged over the last three to five years of employment) multiplied by years of service. With each added year of service, both the multiplier and the earnings base (assuming salary rises with tenure) typically increase. The annual increment to pension wealth often turns negative after workers reach the plan's normal retirement age, because the modest increase in the size of the annuity from an additional year of work does not offset the loss of a year's worth of benefits.

Overall, defined benefit pension wealth—the present value of the expected future stream of pension benefits—grows slowly early on in an individual's career, increases rapidly near the end, and then declines at older ages. The worker begins receiving payments once he or she leaves the employer and reaches the plan's retirement age.[3] But workers who quit before reaching retirement age forfeit substantial pension wealth.

Over the past decade, as employers have aimed to give workers greater control over their retirement assets and to accommodate worker mobility, defined contribution plans have become the retirement plan of choice. In 1998, nearly two-thirds of workers with pension coverage secured primary coverage through defined contribution plans, up from just one-third a decade earlier (Copeland 2002).

But not all companies looking to make a change have joined the legions of firms offering 401(k)s and other savings vehicles. Instead, some companies have converted to cash balance plans, a new type of defined benefit pension. In 1999, 19 percent of Fortune 1000 firms sponsored cash balance plans; more than half of these plans had been established within the previous five years (U.S. General Accounting Office 2000).

In cash balance plans, employers set aside a given percentage of salary for each employee and credit interest on these contributions at a predetermined rate. As in defined contribution plans, cash balance plans express benefits as an account balance, but participants hold individual accounts on the books only. They actually receive benefits from commingled funds invested in a pension trust on behalf of all participants. Those who leave their jobs before retiring can generally reinvest their plan assets elsewhere, instead of having to wait until they retire to access their money (as in most defined benefit plans).

Compared with traditional pensions, cash balance plans generate retirement wealth more evenly over time for a couple of reasons: Contributions made early on earn interest for many years, and lifetime earnings rather than final earnings determine benefits. Consequently, a worker changing jobs incurs only a small penalty. For women, who tend to have higher turnover rates than men, the ability to change jobs without jeopardizing pension wealth may be particularly important.

Cash balance plans also better protect the retirement security of workers who are laid off or whose firms go bankrupt. The federal government guarantees vested benefits in both defined benefit and cash balance plans but does not insure future expected benefits. Workers depending on traditional pensions build most of their wealth late in their careers, and they can end up with limited retirement benefits if they lose their jobs before their pension wealth can grow sufficiently. By contrast, participants in cash balance plans accumulate more pension wealth at younger ages. Thus, workers in cash balance plans let go in midcareer or forced into early retirement will not lose as much in expected benefits as defined benefit participants.

Cash balance plans also have an advantage over defined contribution plans—they protect workers from downturns in the stock market. Defined contribution plans can pay high returns, but they also expose workers to substantial risk.

Dips in the stock market, or prolonged periods of unusually low interest rates, can substantially reduce defined contribution wealth. Employers are better able to bear this risk than workers because, in general, they have greater access to credit markets and broader diversification opportunities.

Despite some of the advantages, the switch from traditional pension plans to cash balance plans has sparked controversy. According to some critics, employers that convert to cash balance plans discriminate against older workers who put many years into the former plan and will not have time to gain significant benefits under the new plan. By this rationale, these workers will miss out on the large late-career increases that occur in traditional plans. Some older workers, fearing for their retirement security, have sued employers, claiming age discrimination. At least one federal court, however, has ruled that cash balance plans do not violate federal age discrimination laws.[4] Workers have also brought lawsuits about the proper interest rate to use when calculating lump-sum payments in cash balance plans for workers who leave their jobs before retirement.

Estimating the Effects of Cash Balance Plans

To examine the potential impact of cash balance plans on the distribution of pension benefits, we use a two-step methodology. First, we estimate lifetime pension wealth for a nationally representative sample of 51- to 61-year-olds who had defined benefit pension coverage in 1992.[5] The analysis focuses on older individuals because retirement income depends on pension wealth accumulated over an entire lifetime. We then simulate the group's overall pension wealth as if the members had participated in cash balance plans instead of defined benefit plans for their entire period of coverage. In addition, because the impact of the changeover can vary by age, we compare the wealth for past jobs (held at relatively young ages) and for current jobs.

As in all simulations, we must make certain assumptions. Admittedly, our boldest is that all workers would behave the same way under both types of plans. Because participants in cash balance plans do not have to wait until they reach their 50s to accumulate substantial pension wealth, few may end up staying with a single employer until they retire. Still, our somewhat stylized scenario gives a general sense of how these new plans might play out. Further analysis will need to answer questions about how the two types of plans might affect worker behavior.

Constructing the plans also requires some speculation. According to recent studies, the majority of employers that have converted to cash balance plans did not cut pension costs (Brown et al. 2000; Copeland and Coronado 2002). Rather, companies tend to offer cash balance plans equal in generosity to their defined benefit plans. Thus, for the purposes of our cash balance simulations, we set the pay credit rate (percentage of pay set aside for future pension benefits) for each worker to equalize aggregate benefits paid by employers in both types of plans. For a full description of the methodology and analytical assumptions, see Johnson and Uccello (forthcoming).

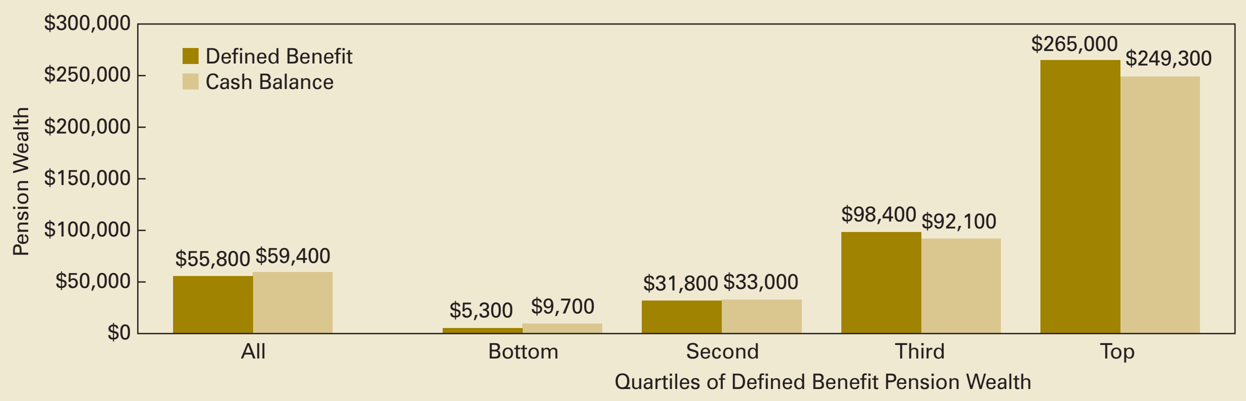
Pension Wealth Comparison

According to our estimates, typical participants would have slightly higher lifetime pension wealth if they had participated in cash balance plans. The estimated median lifetime pension wealth in the defined benefit plans totals $55,800 (figure 1). If all defined benefit plans in our sample were replaced by cash balance plans, median lifetime pension wealth would increase by 7 percent, to $59,400.

Median lifetime pension wealth would increase under cash balance plans because these newer plans distribute pension wealth more equally across the covered population. Thus, even though we hold overall defined benefit pension wealth constant, the distribution of that wealth changes. In particular, people at the bottom half of the distribution would see their pension wealth rise, while those at the top half would see their benefits decrease. The individuals with the least defined benefit wealth would gain the most: At the bottom quartile, cash balance plans would boost median pension wealth 81 percent.

This overall shift, however, only tells part of the story. The age at which workers accumulate pension benefits also determines how certain groups would fare under cash benefit plans. We consider age differences in our sample by comparing pension wealth from past jobs (held at relatively young ages) with current-job wealth for workers in their 50s.

FIGURE 1. Median Lifetime Pension Wealth in Defined Benefit and Cash Balance Plans



Source: Johnson and Uccello forthcoming.
Note: Estimates are based on a sample of 3,228 individuals age 51 to 61 in the 1992 Health and Retirement Study who participated in defined benefit pension plans. Parameters of the cash balance plans were set to equalize expected aggregate pension benefits paid by the employer under the cash balance plan and defined benefit plan.

Employment Patterns and Pension Outcomes

Regardless of plan type, pension wealth tends to increase with the number of years of service. However, as noted, traditional pensions result in particularly large gains late in a person's work life, just before the specified early and normal retirement ages. At young ages, the annual increments to pension wealth are generally modest. In most cash balance plans, pension wealth grows more evenly over the course of an individual's career. As a result, for plans from past jobs that workers generally began at relatively young ages, median pension wealth for those with many years of service would be higher in defined benefit plans than in cash balance plans, but median wealth for those with fewer years of service would be lower in defined benefit plans (figure 2).

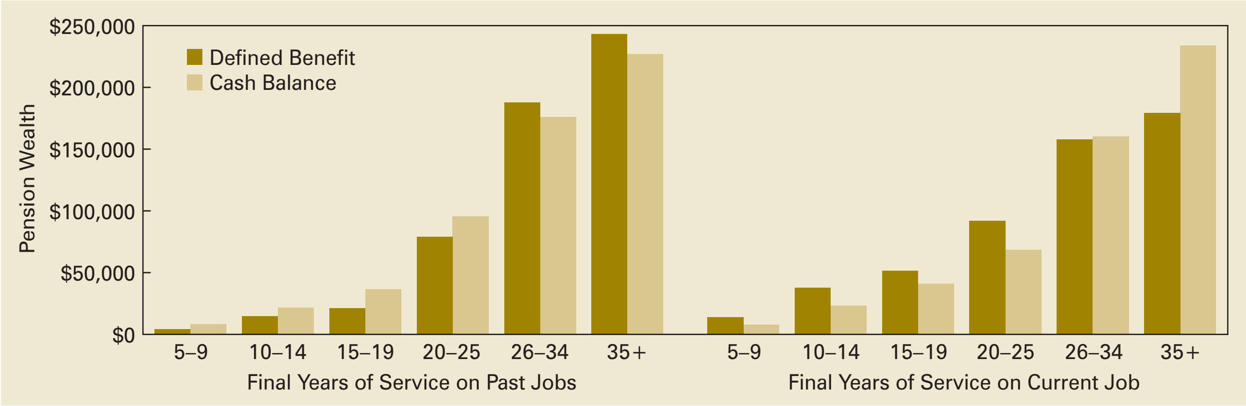
The pattern differs on the current job—with traditional pension plans favoring workers in their 50s with limited seniority. Median pension wealth for workers with few current-job years (fewer than 10) would be 45 percent lower in cash balance plans than in defined benefit plans, but wealth for those with many years of service (35 or more) would be 31 percent higher in cash balance plans. Workers at midlife with relatively few years of service would lose wealth in cash balance plans, as defined benefit pension wealth accrues rapidly just before retirement, even for workers with limited tenure. As a result, workers at midlife with limited job tenure would, on average, accumulate less pension wealth in cash balance plans than in defined benefit plans. However, workers in their 50s and 60s who worked at their current jobs for virtually their entire careers would tend to fare better in cash balance plans than in defined benefit plans, because wealth in defined benefit plans often grows slowly (and even sometimes declines) once workers become eligible to receive retirement benefits.

Gender Differences

Participation in cash balance plans would affect the pension wealth of men and women approaching retirement differently, because the sexes have generally exhibited different employment patterns. For men, median lifetime pension wealth would be 22 percent higher in cash balance plans than in defined benefit plans. For women, pension wealth would be 15 percent *lower* (figure 3). As a result, in our sample, the gender gap in median pension wealth would increase from $42,900 in defined benefit plans to $65,000 in cash balance plans.

Women's employment patterns partly explain the wider gap. The female cohort examined was less likely than the male's to have participated in pension plans at young ages, when cash balance plans can generate relatively greater returns. Because these women accumulated so

FIGURE 2. Median Pension Wealth on the Current Job and Past Jobs, by Final Years of Service



Source: Johnson and Uccello forthcoming.
Note: Estimates are based on a sample of 3,228 individuals age 51 to 61 in the 1992 Health and Retirement Study who participated in defined benefit pension plans. Parameters of the cash balance plans were set to equalize expected aggregate pension benefits paid by the employer under the cash balance plan and defined benefit plan.

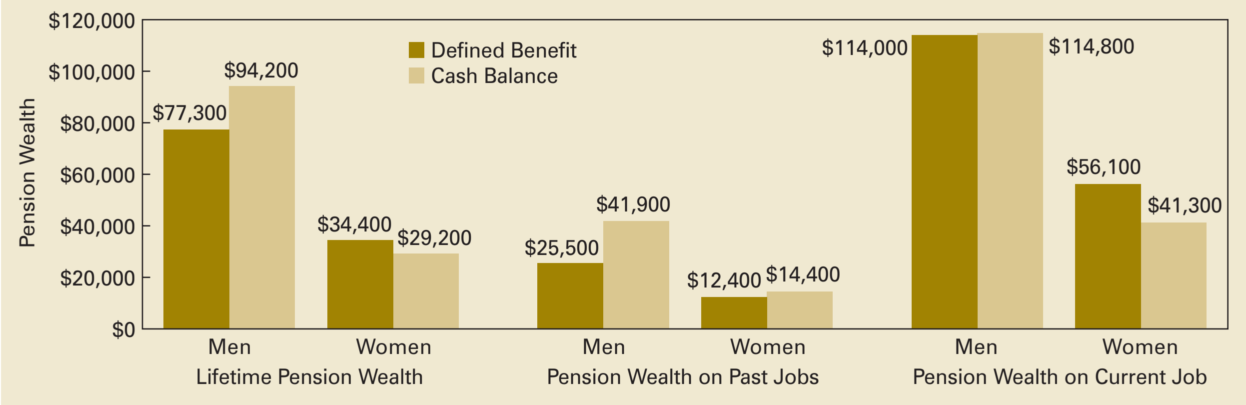
little defined benefit wealth early in their careers, their median pension wealth from past jobs would only be $2,000 higher in cash balance plans than in defined benefit plans, compared with a $16,000 difference for men.

Women would lose even more current-job pension wealth. Median pension wealth accumulated on women's current jobs would fall $15,000 under cash balance plans, while this wealth category for men would increase slightly. Many women in their 50s who are currently working have been at their jobs for a fairly short time, so they would not accumulate many benefits in cash balance plans. However, future cohorts of women—who will have worked longer and more steadily than women born in the 1930s—would likely see better results under cash balance plans.

Potential Winners and Losers

Overall, our analysis suggests that slightly more than half (53 percent) of individuals age 51 to 61 in 1992 would accumulate more lifetime pension wealth in cash balance plans than in defined benefit plans (see figure 4). Likely winners in

FIGURE 3. Gender Differences in Median Pension Wealth



Source: Johnson and Uccello forthcoming.
Note: Estimates are based on a sample of 3,228 individuals age 51 to 61 in the 1992 Health and Retirement Study who participated in defined benefit pension plans. Parameters of the cash balance plans were set to equalize expected aggregate pension benefits paid by the employer under the cash balance plan and defined benefit plan.

cash balance plans include those with limited defined benefit wealth and those who accumulated their pension wealth at relatively young ages. Eighty percent of those in the bottom quartile of the defined benefit wealth distribution would realize gains in cash balance plans, while 61 percent of those in the top quartile would fare worse. About 66 percent of those in their 50s who received all of their pension wealth from past jobs would fare better in cash balance plans. And 64 percent of men would accumulate more lifetime pension wealth in cash balance plans than in defined benefit plans, compared with only 37 percent of women.

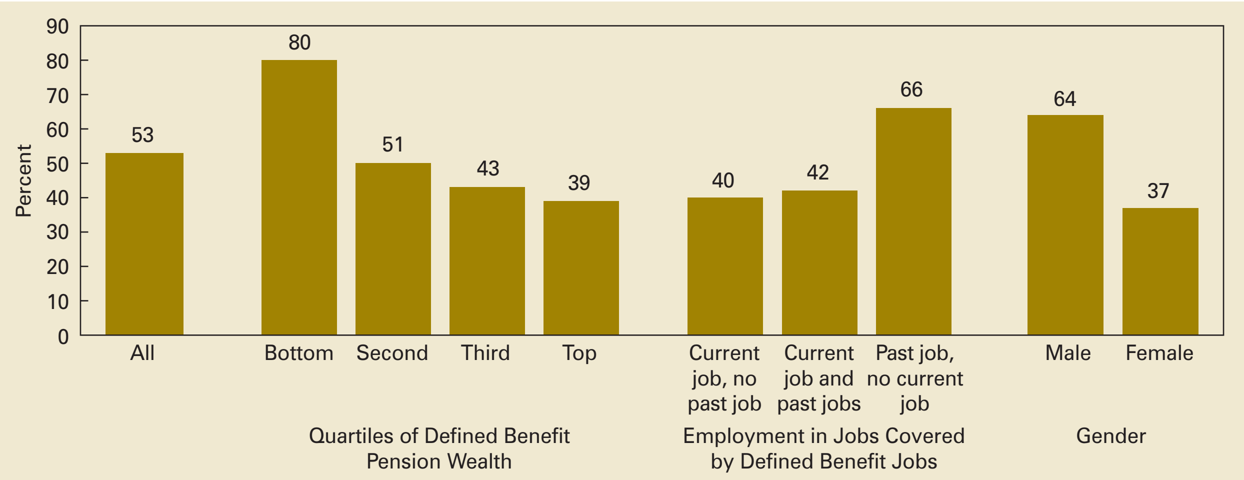
Conclusions

Replacing defined benefit plans with cash balance plans would shift pension wealth to individuals who held a series of relatively short-term jobs and those who had pension wealth from jobs held early in their work lives. Put another way, individuals with limited defined benefit wealth, whose pension benefits often came from short-term jobs or jobs held early on, would see gains. In contrast, workers who accumulated most of their pension wealth from a single job held until retirement would lose wealth in cash balance plans. Overall, most individuals near the bottom of the defined benefit wealth distribution would fare better in cash balance plans than in defined benefit plans, while most workers near the top of the defined benefit wealth distribution would fare worse.

Cash balance plans, by distributing pension wealth more equally across the population, would increase median lifetime pension wealth in the total covered population, and more people would gain, rather than lose, pension wealth. Pension wealth tied to current jobs would shrink for older workers under cash balance plans. However, large increases in pension wealth from past jobs held at relatively young ages would more than offset that decline.

Many advocates of cash balance plans contend that women, in particular, would benefit under these plans because they have higher turnover rates than men. But based on our findings, most women age 51 to 61 in 1992 with defined benefit coverage would have lost pension wealth if they had participated in cash balance plans throughout their working lives, primarily because this female cohort was less likely than men to have gained pension wealth on past jobs. Nonetheless, pension wealth from jobs held early on would increase sharply in cash balance plans, relative to defined benefit plans, offsetting the loss

FIGURE 4. Share of Adults Age 51 to 61 in Defined Benefit Plans Who Would Have Fared Better in Cash Balance Plans



Source: Johnson and Uccello forthcoming.
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in current-job pension wealth. But many working women at midlife did not work earlier and have had relatively short tenures on their current jobs. Since defined benefit wealth grows rapidly as workers approach retirement, even for those with limited service, replacing large late-career accruals with much smaller cash balance accruals would substantially shrink women's pension wealth.

Still, future cohorts of women may realize greater advantages from cash balance plans, as men's and women's employment and earnings patterns continue to grow more similar. For example, although women continue to have higher overall turnover rates than men, rates among young workers no longer differ by gender (Royalty 1998). If these trends persist and the gender gap in earnings diminishes, future women approaching retirement may accumulate almost as much pension wealth in cash balance plans as men.

For decades, traditional defined benefit coverage and the guaranteed pension income it offered were the most reliable path to a secure retirement. However, traditional defined benefit plans may no longer be the best choice for today's more mobile workforce. With employee turnover increasing (Farber 1999), fewer workers will reach retirement with enough years serving a single employer to qualify for a substantial defined benefit pension. Defined contribution plans have emerged as the principal alternative to defined benefit coverage. But these retirement vehicles saddle workers with enormous responsibilities. To accumulate enough pension wealth for a comfortable retirement, participants must make regular contributions throughout their working lives and must carefully manage their pension assets. Cash balance plans may be a better option for many workers, because even those who change jobs frequently can earn sizeable pension benefits. At the same time, cash benefit plans guarantee set benefits and protect workers from investment risk.

Notes

1. Although cash balance plans are a special type of defined benefit plan, when we refer to defined benefit plans in this brief, we mean traditional pension plans that are not cash balance plans.

2. Results are drawn from Johnson and Uccello (forthcoming).

3. Some plans allow workers to take reduced benefits at younger ages.

4. *Eaton v. Onan Corporation*, 117 f.supp.2d 812 (S.D. Ind. 2000).

5. We do not consider outcomes in defined contribution plans because only firms with traditional defined benefit plans have switched to cash balance plans.

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THE RETIREMENT PROJECT

The Retirement Project is a research effort that addresses how current and proposed retirement policies, demographic trends, and private-sector practices affect the well-being of older individuals, the economy, and government budgets.