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ISSUE BRIEF

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What's Whipsaw? Why is it a Problem?

Background: More than 30 percent of the Fortune 100 sponsor cash balance retirement plans[1] for their employees. Like a 401(k), each participant in a cash balance pension plan has an account, but it differs in that the employer specifies not only the contribution to the employee's account (e.g., 5 percent of wages) but also specifies the annual investment return. For example, the annual investment return could be 6 percent, a Treasury rate, or a corporate bond rate.

Employers have found cash balance plans attractive to prospective employees because:

(1) They provide a larger benefit to mobile employees than traditional pension plans,
(2) Many employees understand and value the account balance better than the promise of a pension at retirement,
(3) Unlike a 401(k), employees generally do not have to make a contribution, and
(4) Employees do not have to worry about the stock market falling when they are planning on retiring (or after retirement if they elect to take the pension) — the employer takes on the risk of declining stock markets, not the employee.

Existing Pension Laws: Unfortunately, the application of pension law to these relatively new cash balance pension plans is unclear. People disagree on basic items such as what pension laws say employees should get when they quit. Employees, who generally think cash balance plans are like a 401(k), typically believe they should get their account balance in cash, and generally, that is what they get. However, if the employer is generous and specifies an investment return greater than the 30-year Treasury rate, some people claim employees should get more than their account balance. They determine the amount using the complex whipsaw calculation.

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Whipsaw Calculation Explained: Proponents of the whipsaw calculation say pension law gives employees a claim on the "additional interest" that they might have earned after their quit date and up to their normal retirement age. By "additional interest" we mean any interest credits in excess of the Treasury rate. For example, if the cash balance plan provides for interest credits based on corporate bond returns, which are about 2 percent greater than the returns on Treasury bonds, the additional interest is that 2 percent.

Defined benefit pension law states that the minimum lump sum can be no less than the present value of the normal retirement annuity benefit, using a discount rate equal to the Treasury rate.[2] Back in the early 1980s pension plans discounted pension promises using the very high discount rates prevalent in the bond markets (e.g., 15 percent), so participants received very small lump sums, which motivated Congress to mandate a minimum lump sum.

The law was enacted when pension plans generally specified their accrued benefit as a monthly pension payable at normal retirement age. However, cash balance plans are different. Most specify their accrued benefit in terms of a dollar amount payable today, not some future date. In addition, their lump sums are substantially larger than the lump sums prevalent in the 1980s.

So how do the whipsaw proponents project today's account balance up to normal retirement age? Here's an example using the following information:

(1) The plan's normal retirement age is 65;
(2) The employee is age 64;
(3) The employee's account balance equals $100,000; and
(4) The plan provides a corporate bond rate of return.

Whipsaw proponents suggest that the participant should get more than the $100,000 in his or her account. They say the account balance should be projected at today's corporate bond rate (let's say it's 8 percent). They would increase the account balance by today's rate, the 8 percent, to get $108,000 at age 65 and then discount it back at today's Treasury rate (let's say it's 6 percent) to today.[3] The calculation results in an amount of about $102,000. This is why it is called the whipsaw calculation. The account is projected up at 8 percent and discounted back at 6 percent to get a net larger amount. The lump sum is whipsawed up and down. Thus, even though this employee's account equals $100,000, the whipsaw calculation suggests that the employee should get another $2,000. In fact, IRS suggested this calculation in *Notice 96-8* and asked for comments to help them write a proposed regulation for cash balance plans. However, the proposed regulation was never written, possibly because the above interpretation has legal, economic, policy, and employee retention problems.

Legal Problems: The whipsaw calculation has various legal challenges confronting it. Many believe that it conflicts with age discrimination laws. For example, let us use the same employee as in the earlier example, but let us assume she is age 30 instead of age 64. Determining her lump sum by projecting the $100,000 account to age 65 using 8 percent and then discounting at 6 percent back to age 30 results in a lump sum amount of about $192,000. She worked the same number of years at the same salaries as the older employee, but would get $90,000 more, purely because she is younger. (See the following chart.) This is why many say it is age discriminatory.

Lump Sums Under Various Scenarios from a Cash Balance Plan
(using the whipsaw calculation)

Worker's Age	Account Balance	Lump Sum
64	$100,000	$102,000
30	$100,000	$192,000

Economic Problems: A basic tenet of economics and finance is that $1 invested in stocks is worth $1 invested in Treasury bonds. While an investor may expect to have greater returns from stocks, they may also get less (maybe even zero). Since there is more risk when investing in stocks, the present value is still one dollar whether it is invested in stocks or Treasuries. Thus, economics and finance would say that the $100,000 account should be valued at $100,000 whether it is invested in Treasuries or stocks.

Policy Problems: All sides agree that this whipsaw problem does not happen when a cash balance plan promises an investment return equal to the 30-year Treasury rate. However, if the employer wants to be generous to the employees and provide a better investment return (or a subsidized annuity), the proponents would say the plan is subject to the whipsaw. This discourages employers from providing better rates of return to employees in the cash balance plan. Employees might then encourage the employer to replace it with a 401(k), even though the employee has to contribute something and take on investment and longevity risks.

Employee Retention Problems: As mentioned above, the whipsaw rule discourages employers from providing better rates than the low ones available on Treasury bonds. Due to the lower rates, employees with large accounts may prefer to take their money and invest it in assets that will provide better returns. This clearly is not what employees or employers want from their pension plans.[4]

In addition, some employees like the way the account balance in a typical cash balance plan always increases. However, if the whipsaw calculation is applied, the lump sum will go up and down depending on the interest rates at the time the lump sum is determined. As a result, employees may not appreciate the benefit as much, which defeats one of the employer's top purposes for having a pension plan. In fact, when the whipsaw amount goes up, it is in effect a windfall to the employees who happen to quit at that time. The two problems discussed in this section could make it difficult for employers to maintain an adequate, steady workforce.

Funding Problems: If a pension plan must pay out more than the account balance to people who take lump sums, it will make the plan more expensive than originally intended by the employer when it was set up. These larger lump sums could also be a problem for the Pension Benefit Guaranty Corporation (PBGC), the federal agency that guarantees pensions. Even though PBGC does not have to pay lumps sums, the cash balance plans that they take over will be more underfunded, because they had to pay larger lump sums than originally intended.

A Potential Solution: One way to avoid these problems is to allow cash balance plans to define the accrued benefit as the account balance. This could automatically eliminate the whipsaw calculation. Some pension plans (such as church plans) already do this.[5]

Many pension experts (both inside and outside the government) suggest that the whipsaw calculation is a misunderstanding of the IRC and that the law already allows the above solution. They say that pension law has a special rule for the purposes of the lump sum calculation in plans that do not define the accrued benefit as an annual benefit payable at normal retirement age. (i.e., Project the current account balance using the IRC Section 417(e) discount rate to retirement, and then apply that same rate to discount back to the current time. Using this calculation the discounted value of the account balance projected to retirement age is exactly the account balance.)[6]

Proponents of the whipsaw calculation are concerned about the effects of this interpretation on traditional defined benefit (DB) plans. They ask how we can draw a line between account-based DB plans and traditional DB plans, so that the traditional DB plans do not also take advantage of this analysis to avoid the minimum lump sum rules in IRC Section 417(e).

This concern can be resolved. It is difficult for a cash balance plan to mimic a traditional DB plan. Even if it were possible, the cash balance plan defines an account, and that is what employees expect to get, not the present value of the projected benefit. In fact, a definition that distinguishes cash balance plans from traditional DB plans passed the Senate Finance Committee in September of 2000.

Summary: Cash balance plans have aspects of both 401(k) and DB plans that can be beneficial to employees. Unfortunately, the application of pension law to these new plans is unclear. People disagree on basic items such as what pension laws say employees should get when they quit. Some people[7] suggest that cash balance plans with better rates of return are subject to the whipsaw calculation discussed in this issue brief. However, this interpretation has legal, economic, funding, and policy problems. It also hurts employees. For example, it discourages employers from providing better rates of returns to employees in their cash balance plans (and in fact, discourages many employers from even having DB plans).

Other ways of interpreting the lump sum rules (espoused by practitioners both inside and outside the government) provide a remedy for this and the many other problems listed earlier. Pension policy would be greatly aided if the rules were clarified to resolve these issues.

Endnotes

[1] The whipsaw concern is also relevant to other hybrid plans such as Pension Equity Plans, where the account balance equals a percentage (e.g., 10 percent) times years-of-service times average compensation.

[2] IRC Section 411(a)(11), the last sentence of regulation 1.411(a)-11(a)(2), and 417(e)(3).

[3] If the lifetime pension payable from the plan were subsidized, the subsidy would also increase the whipsaw result.

[4] Thus, employees would probably prefer a minimum rate of return for cash balance plans, rather than a maximum discount rate. Pension law may not need to require this since it is so visible to employees. Alternatively, pension law could specify that interest credits be *at least* a market-related rate. There are also reasons to limit interest credits to a market-related rate. Otherwise, some plans could take advantage of other pension rules. If Congress were to pass such a rule, we encourage it to accommodate cash balance plans that have some guarantees (such as promising a minimal return or protecting the return of principal).

[5] Church plans do not have to follow many of the pension rules in the Internal Revenue Code or IRC. The cash balance plan is also used by the social security systems in other countries like Sweden and Italy, and they have not adopted a whipsaw rule either.

[6] IRC Section 411(a)(7)(A)(i) references Section 411(c)(3) which states that for purposes of Section 411, "… if an employee's accrued benefit is to be determined as an amount other than an annual benefit commencing at normal retirement age … the employee's accrued benefit … shall be the actuarial equivalent of such benefit or amount determined under paragraph (1) or (2)". Paragraph (2) states in Section 411(c)(2)(C)(iii)(II) that one determines actuarial equivalency using Section 417(e)(3) – the same rate used for discounting. Congress was very specific on this in the Committee Reports for section 7881(m) of the Pension Protection Act in OBRA'89, because they noted that otherwise inconsistencies can happen when the present value of accumulated employee contributions are more than the accumulated employee contributions - a nonsensical result; but that is exactly what the whipsaw proponents suggest for cash balance plans.

[7] Some courts have also ruled in favor of the whipsaw calculation (using Notice 96-8, even though it never became a proposed regulation). However, the arguments in footnote 6 were not presented to them.