



CASH BALANCE FUNDING ISSUES

How should cash balance assets be invested? That depends on many factors. By Jeff Thornton

Cash balance plans have become quite popular in the last few years.

Many plan sponsors are adding a cash balance plan on top of their existing 401(k) plan—often assuming that a cash balance plan works just like a 401(k) plan. But there are some key differences between the two—especially when it comes to funding. This article provides a summary of the funding rules that apply to cash balance plans.

ASSETS VS. LIABILITIES

In a cash balance plan, benefits owed to each participant are defined in the plan document and generally are increased for two reasons each year:

- 1. Employer Credit:** These are typically defined as a percentage of each participant's pay or as a flat dollar amount.
- 2. Interest Crediting Rate:** The plan document specifies an interest rate at which the account is increased each year. These are usually a flat percentage (usually between 3% to 6%) or a nominal rate such as the 30-year Treasury rate.

As an example, let's say the cash balance plan defines the employer credit for John Doe as a \$1,000 employer credit per year and the interest crediting rate is 5% per year. At the end of the first year of participating in the plan, John's cash balance account is \$1,000. At the end of the second year, it is $\$1,000 \times 1.05 + \$1,000 = \$2,050$.

As for the other side of the ledger, the cash balance plan's assets are comprised of the contributions that are made each year plus the investment earnings on those contributions.

HOW IS THE CONTRIBUTION AMOUNT DETERMINED?

Private sector defined benefit plans (which include cash balance plans) are governed by a set of IRS rules which

guarantee that the plan maintains certain funding levels—in other words, not too underfunded or too overfunded.

Each year, the plan's liabilities and assets are assessed by an actuary. The benefits that are expected to accrue over the next year are calculated as well as part of this valuation. Based on the overall plan's funded status and these expected accruals, a *minimum required contribution* and a *maximum deductible contribution* are calculated. Generally speaking, the minimum required contribution is structured to target a 100% funded status over the long term while the maximum deductible contribution calculation's purpose is capping the funded status at 150%.

As mentioned above, there are assets (i.e., contributions plus investment earnings on those contributions) and liabilities (cash balance employer credits plus interest on those employer credits):

- 1. Employer Credits.** These are benefits owed to each participant. After the benefit has accrued, you cannot go back and say you want to change it. However, you may generally change the benefits amounts prospectively.
- 2. Interest Crediting Rate (ICR).** The employer credits are increased with interest each year. The IRS has a list of permissible ICRs for cash balance plans. There are complex plan design topics regarding plans using the underlying asset return as the ICR and also modifying the ICR, but these situations are rare and beyond the scope of this article. The key point is that both Items #1 and #2 are part of the "defined benefit" nature of the cash balance plan and are, for the purposes of this article, considered inflexible in terms of modifying these retroactively. In the John Doe example above, he will be owed \$2,050 at the end of the second year, and the plan sponsor cannot modify that amount after it has accrued.

“HOW SHOULD CASH BALANCE ASSETS BE INVESTED? THIS QUESTION REALLY DEPENDS ON MANY FACTORS SUCH AS THE PLAN SPONSOR’S RISK TOLERANCE AND STABILITY OF INCOME, AND THE TIME HORIZON OF THE CASH BALANCE PLAN.”

3. Investment Earnings on Contributions. Clearly, investment earnings can vary from year to year. In an oversimplified/perfect world, the contributions each year equal to the employer credits and the investment earnings equal the interest crediting rate in the plan, thus making the plan 100% funded at all times. But in our imperfect world, asset returns vary. If the investment earnings are less than the ICR, the plan is losing ground for its funded status, and if the investments outperform the ICR, the plan’s funded status is increasing, keeping all other factors equal.

4. Contributions. This is the all-important “X-factor” that will ensure that the plan’s funded status does not get too overfunded or too underfunded. For instance, if investment earnings are dramatically negative, then you should expect for the contribution amounts (both the minimum required and maximum deductible) to go up when the next valuation is performed. Conversely, if the investment earnings are double-digit returns, then the funded status will improve and you should expect the range of contribution amounts to go down in the next year’s valuation, keeping all other factors equal.

It should also be noted that it is not all about the investment earnings. If a plan sponsor consistently overfunds or underfunds the plan (by making more or less than the employer credit amounts), the contribution range in *future* years will be adjusted downward or upward, respectively. At the end of the day, it is all about keeping the plan’s funded status in check.

In summary, when you are determining the impact on the funded status and the resulting range of contributions, there are two relationships that matter: the contributions in relation to the employer credits and the investment earnings in relation to the interest crediting rate.

WHY CAN’T I JUST CONTRIBUTE THE EMPLOYER CREDIT AMOUNT?

Many plan sponsors want to simply contribute the sum of the employer credits each year. As long as the employer credit amount falls within the minimum to maximum range, this approach works fine. However, if the plan becomes too

underfunded or overfunded, the minimum to maximum range may fall outside of the desired contribution amount.

Example 1

For the last 2 years, ABC Corporation’s pay credits are \$100,000 each year, and the minimum required contribution each year has been \$90,000. ABC contributed the minimum required contribution each year. In year 3, the cash balance underlying investments fall 20%.

ABC has been “losing ground” by \$10,000 each year in funded status since the minimum is less than the actual pay credits. For the valuation immediately after the 20% loss on assets, the minimum required contribution increases to \$150,000 due to the fact that they were losing ground by contributing less than the credits *and* also due to the investments performing dramatically less than the interest crediting rate (i.e., the growth rate of the liabilities).

Example 2

For the last 2 years, XYZ Corporation’s pay credits are \$100,000 each year, but the maximum deductible contribution each year has been \$150,000. XYZ contributes the maximum required contribution each year. In year 3, the cash balance underlying investments increase 20%.

XYZ has been overfunding the plan each year. For the valuation immediately after the 20% gain on assets, the maximum deductible amount decreases to \$60,000. As noted above, the plan’s funded percentage is generally capped at 150% under the maximum deductible calculation, so the 20% gain on assets will limit how much they can contribute to the plan.

As seen in these examples, excessive investment return volatility can play a big role in causing volatility in the minimum to maximum range of contributions. So how should cash balance assets be invested? This question really depends on many factors such as the plan sponsor’s risk tolerance and stability of income, and the time horizon of the cash balance plan. The conventional wisdom is to invest conservatively within the cash balance plan to avoid large swings in the funded status and the range of contributions from year to year. **PC**