CASH BALANCE PLANS

Design and Investing

By L. Gregg Johnson, CFA®, CIMA®, AIF®, and Jacob T. Linney, QPA, QPFC, ERPA

Cash balance plans are the fastest-growing type of employer-sponsored retirement plan in the United States. The number of cash balance plans has grown more than 10 percent every year for more than a decade. Most of the growth has been with employers of fewer than 25 employees. Compare this to the increase in 401(k) plans, which have grown at a 1-percent pace. This set of factors is promising for opportunistic advisors. This article provides an overview of cash balance plans, examples of situations where they work well, and an overview of investment considerations.

What Is a Cash Balance Plan?

Very simply, a cash balance plan is a defined benefit tax-qualified plan. However, it contains characteristics that make it much different than a traditional defined benefit plan. Two of the important features are flexibility and portability:

1. A participant’s benefit in the plan is presented as a hypothetical account balance—it looks like a 401(k) plan. The explanation of this hypothetical account is covered in the plan operation section further in this article.
2. Lump-sum distributions are common.
3. Contributions are based largely on a participant’s current year compensation.

Table 1 outlines some of the key characteristics of several types of qualified plans.

Why Now?

The first cash balance plans were established in the 1980s. Their popularity has been surging of late for the following reasons:

Higher taxes. In 2013, the 39.6-percent marginal tax rate was added for high earners—the highest it has been since 2001. Because a cash balance plan is a defined benefit plan, it can be designed to provide for quite large contributions and thus significant current year tax deductions. See the case studies below for examples.

Regulatory comfort. In short, the Internal Revenue Service (IRS) is comfortable with cash balance plans now. There is now clarity on how to start and administer these plans, compared with 10 to 15 years ago when questions were still unanswered.

Economic recovery. Though the rate at which new cash balance plans were starting slowed in 2008 and 2009, the growth rate of these plans has recovered to pre-recession rates.

Table 2 shows an example of a cash balance plan combined with 401(k)/profit-sharing plan.

Case Study 1: Implementing a Cash Balance Plan with a 401(k)/Profit-Sharing Plan

Many professionals seek to maximize contributions during their peak earning years. A cash balance plan can be used along with a 401(k)/profit-sharing plan to significantly increase contributions and accumulations at retirement.

Table 2 shows an example of a cash balance plan combined with 401(k)/profit-sharing plan.

Number Crunching

The 401(k) projected numbers in table 2 are based on $59,000 of contributions per year.

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The cash balance plus 401(k) projected numbers are based on $40,000 of contributions per year for 10 years with investment returns of 5 percent per year. The cash balance return is based on provisions of the plan as explained below; the 401(k) return is an assumption but the actual balance is based on actual returns. A lump-sum distribution of $2,617,650 is assumed from the cash balance plan and is added to the 401(k) projected amount.

Annual returns are calculated as (contribution of $2,617,650 is assumed from the cash balance plan and is added to the 401(k) projected amount.

The projected retirement savings is rounded to the nearest $50,000. The retirement income is based on a 4-percent withdrawal of projected savings.

Case Study 2: Adding Flexibility to the Cash Balance Plan
Many professional incomes are not stable from year to year, which can make budgeting a fixed contribution problematic. Under certain corporate structures the cash balance plan can provide more flexibility than a defined benefit plan. By basing the credits on current income, cash flows into the plan often can be correlated to earnings. Table 3 illustrates an example of how a cash balance plan could be designed with contributions directly related to wages.

Mechanics and Investment Considerations
It is often said that a cash balance plan is a defined benefit plan that looks like a defined contribution plan. Because it is a defined benefit plan, it is subject to the arcane rules applicable to contributions, which normally are required every year and, desirably, directly relate to the total contribution credits for all participants. Common sense might suggest that the actual contribution into the plan exactly equal the contribution credits for participants. However, the attributes of a cash balance plan that provide aspects of a defined contribution plan make this somewhat problematic. Let’s visit those attributes.

Plan in Operation
Each participant has a hypothetical account that is credited with the individual contribution credit based on the plan design and the participant’s salary as in the examples. This account is hypothetical because only a defined contribution plan actually can have individual participant accounts; a defined benefit plan requires a single account. Therefore, hypothetical or tabular accounts are maintained for and illustrated to each participant, and this is the distribution the participant can expect.

Another element of a cash balance plan that is similar to a defined contribution plan is that the individuals’ hypothetical account grows at a stated rate—often called the bogey or hurdle rate—akin to investment earnings in a typical defined contribution plan. However, in the cash balance plan this return is stated in the document and is guaranteed by the plan sponsor because all investment gains and losses in a defined benefit plan are the responsibility of the sponsor. This guaranteed return is known as the crediting rate but often is referred to as the bogey or hurdle rate.

The plan sponsor has several options for the crediting rate—for this article we will look at two options, the selection of the 30-year Treasury bond yield in a month preceding the plan year, which is a safe harbor IRS rate and has been common for plans to date, and the selection of a 5-percent flat rate as illustrated above. The first option resets annually and the second option remains the same in all years. The selection of the crediting rate must be contained in the plan document and guaranteed to all participants.

Table 4 shows how the participant account balances in Case Study 2 would grow using these two rates.

It may seem that the plan sponsor would choose the crediting rate. However, besides not knowing which rate will be higher in any given year, the plan sponsor in a cash balance plan takes all investment risk and...
would have to make up any shortfall between the asset accumulation and the account balances. The basic relationship is

\[
\text{Contributions + Investment Return} = \text{Pay Credits + Interest Credits}
\]

The plan sponsor is on the hook for all of the left side of the equation.

If assets generally are less than account balances or liabilities at any time, payouts could be restricted or contributions in excess of the account credits could be required. Conversely, an overfunded plan might require smaller contributions and deductions or have reversions on termination subject to a 30-percent excise tax. This leads to the conclusion that an investment allocation that strives to earn the plan’s credit rate is quite desirable.

The Future Unfolds

To see how asset growth would compare to the growth of the accounts, we use contributions equal to the account credits, illustrated using the two options and a stylized return pattern, as shown in table 5.

Based on fairly common asset return patterns, assets easily can be less than the account balances. As mentioned above, any shortfall between account balances and assets must be made up by the plan sponsor. It may seem straightforward to try and attain the desirable investment objectives as they relate to the two interest crediting hurdles illustrated. However, things are rarely as simple as one hopes.

First, note that the 30-year Treasury option is based on yield, not return. If one were to invest in the actual bond one would receive the return for the year, which can be quite different than the yield, especially in the event of a spike in interest rates. This selection of the 30-year bond yield option actually functions similarly to the 5-percent flat rate; each is effectively an absolute-return play, the difference being the 30-year Treasury rate resets annually and is lower at this time. Current investment philosophy is split on whether an absolute-return strategy can effectively be achieved.

So, there is no matching investment to the growth of the accounts, à la a liability-driven investing (LDI) type strategy. Long-duration bonds might be considered, but they introduce interest-rate risk to the assets when the account balances have no interest-rate risk and the duration is zero; except for the annual crediting rate reset, changes in interest rates have no effect on account balances. Shorter-duration bonds reduce interest-rate risk but, because of today’s low-yield environment, virtually guarantee not meeting the hurdle rate.

Investments

After reviewing the issues, the three primary attributes of a successful cash balance investment strategy are the following:

- Earn at least the crediting (hurdle) rate with little excess
- Low volatility
- Liquidity

Because a 100-percent fixed-income allocation is unlikely to earn at least the hurdle rate, an equity component might be introduced to help, and a typical defined benefit portfolio of 60-percent equity and 40-percent fixed income might be considered. However, as the past 10 years have reminded us, even a balanced portfolio such as this carries no guarantee of a minimum return and certainly may introduce extreme volatility on both sides of the hurdle rate. A more conservative allocation, such as 40-percent equity and 60-percent fixed income with the introduction of low-volatility equity, might be considered but, as noted, low-volatility equity may not be a brass ring and a large fixed-income allocation could introduce tremendous interest-rate exposure.

A superior approach may be a tactically risk-managed strategy specifically managed for the cash balance hurdles. Several such strategies have been introduced recently, some by firms with long track records of successfully managing large downside deviations. The upside can be limited by moving out of equities into very-short-duration fixed income or cash when the hurdle rate has been achieved during the year. Returns

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Table 5: Comparison of Account Growth to Actual Plan Assets—Example

<table>
<thead>
<tr>
<th>End of Year</th>
<th>Contribution Credit</th>
<th>Interest Crediting Rate</th>
<th>Account Balance</th>
<th>Interest Crediting Rate</th>
<th>Account Balance</th>
<th>Return on Assets</th>
<th>Account Balance</th>
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<tbody>
<tr>
<td>1</td>
<td>$59,000.00</td>
<td>5%</td>
<td>$60,475.00</td>
<td>4.65%</td>
<td>$60,371.75</td>
<td>10.31%</td>
<td>$ 62,041.25</td>
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<td>$123,973.75</td>
<td>4.68%</td>
<td>$123,577.75</td>
<td>6.57%</td>
<td>$127,051.43</td>
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<td>$190,647.44</td>
<td>4.53%</td>
<td>$189,512.17</td>
<td>–1.68%</td>
<td>$183,416.88</td>
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<td>$260,654.81</td>
<td>2.87%</td>
<td>$254,797.82</td>
<td>–2.78%</td>
<td>$236,504.31</td>
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<td>$334,162.55</td>
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<td>$326,562.79</td>
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<td>$473,138.63</td>
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<td>$666,831.48</td>
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<td>$628,025.48</td>
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<td>2.83%</td>
<td>$705,633.45</td>
<td>12.70%</td>
<td>$731,842.82</td>
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</table>
within a band that contains the crediting rate would be targeted. (The timing of contributions and the possibility of plans not being on a calendar-year basis create issues but may be smoothed out over time.) Additionally, funds of this type tend to look at achieving the crediting rate on a three-year rolling basis while minimizing volatility, which would help keep the assets closely tracking the account balances.

Table 6 summarizes some of the ways cash balance assets might be invested.

**Conclusion**

Cash balance plans provide a unique opportunity to work with new qualified plans, particularly for closely held businesses and professional groups. With the proper design and investment structure, they can be counted on to function smoothly and provide a high level of asset accumulation.

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| Table 6: Pros and Cons of Some Cash Balance Investment Approaches |
|---------------------------------|-----------------|-------------------|-------------------|-------------------|
| **Fixed income** | **60%/40% Portfolio** | **40%/60% with Low Volatility Equity** | **Cash Balance Tactical Fund** |
| Earn at least the crediting rate with little excess | Likely No | Possibly Yes | Possibly Yes | Likely Yes |
| Low volatility | Possibly No | Possibly No | Possibly Yes | Yes |
| Liquid investments | Yes | | | |