



**Congressional
Research
Service**

CRS Report for Congress

Lump-Sum Distributions under the Pension Protection Act

Patrick Purcell
Specialist in Income Security
Domestic Social Policy Division

Summary

The *Pension Protection Act of 2006* (PPA, P.L. 109-280) established new funding requirements for defined benefit pensions. The PPA also modified the provisions of federal law that prescribe how the minimum permissible value of a lump-sum distribution from a defined benefit plan will be determined in 2008 and thereafter. It also established conditions under which payment of lump sums from defined benefit plans will be restricted. This report summarizes the provisions of the PPA that affect lump sums paid from defined benefit pension plans.

Employer-sponsored retirement plans are legally classified as either *defined benefit* plans or *defined contribution* plans. Defined benefit (DB) plans pay pensions that are usually based on each worker's years of service and average pay. DB pensions must offer participants the option to receive an annuity: a series of monthly payments guaranteed for life. Some DB plans also offer participants the option of taking their accrued benefits as lump sums when they separate from the employer. Defined contribution (DC) plans are individual accounts established by the employer for each participant. In a DC plan, the participant's benefit is equal to his or her account balance, which is the sum of employer and employee contributions, plus interest, dividends, and investment gains (or losses). Employers usually pay these benefits as lump sums to the participants when they quit or retire. They are not required to offer participants the option of taking an annuity.

In a defined benefit plan, a participant's accrued benefit usually is defined as an annuity beginning at the plan's normal retirement age, which typically is age 65. If the plan allows lump-sum distributions, the lump sum must be equal to the present value of the future annuity to which the participant is entitled. To calculate the present value of an annuity, the plan must apply an interest rate and estimate the participant's life expectancy. To protect the value of each participant's pension benefit, the Internal Revenue Code (IRC) prescribes the interest rate and mortality table that the plan must use to determine the minimum lump-sum value of the annuity that each participant has earned. A plan may pay a larger lump sum, but it may not pay less than this minimum.

The PPA modified both the mortality assumptions and interest rate prescribed by the IRC. Beginning in 2008, plans must use a new mortality table that reflects recent increases in life expectancy. The new mortality estimates by themselves would increase the value of lump sums by 1% to 2%, depending on the age of the participant. Under prior law, DB plans were required to use the current interest rate on 30-year U.S. Treasury bonds to determine the minimum lump-sum value of an annuity.¹ The PPA requires plans to use a corporate bond interest rate for this calculation. The present value of an annuity is inversely related to the interest rate used to convert the annuity to its present value: the higher the interest rate, the smaller the lump-sum and vice versa. The interest rate on Treasury bonds has historically been lower than the interest rate on corporate bonds of the same maturity because bond markets price Treasury securities as having no risk of default. Replacing the lower Treasury bond interest rate with a higher corporate bond interest rate will tend to reduce lump sums. The PPA requires the corporate bond interest rate to be phased in from 2008 to 2012.

Determining the Minimum Value of a Lump Sum

IRC §417(e) prescribes the interest rate and mortality table that plans must use to determine the *minimum present value* of an annuity, and thus the minimum value of a lump-sum distribution that a participant who elects to take a lump sum is entitled to receive from the plan. Section 302 of the PPA amended IRC §417(e) to replace the 30-year Treasury bond interest rate with a corporate bond interest rate as the rate to be used in this calculation.² The PPA requires plans to use interest rates that will be derived from a three-segment “yield curve” of investment-grade corporate bonds to determine the minimum lump-sum value of an annuity.³

The corporate bond interest rate that plans will use to determine the minimum lump sum value of an annuity will be based on the date at which the annuity otherwise would be payable to the participant. The present value of the portion of the annuity that is payable within five years will be valued using a short-term corporate interest rate, (i.e., the first segment of the yield curve). The portion of the annuity that is payable in six to 20 years will be valued using a medium-term interest rate (the second segment), and the portion of the annuity that is payable in more than 20 years will be valued using a long-term interest rate (the third segment). As a result, when section 302 of the PPA takes effect in 2008, the minimum value of a lump-sum will be calculated using up to three different interest rates. In general, older plan participants will experience smaller reductions in their lump sums than younger participants because part of their annuities

¹ §767, *Retirement Protection Act of 1994* (P.L. 103-465, December 8, 1994).

² The specific interest rate that a plan uses to calculate a lump sum depends on the plan’s “stability period” and “lookback month.” The stability period can be a month, quarter, or year. The lookback month can be any of the five calendar months preceding the stability period. If the plan year is a calendar year, and the plan uses a one-year stability period with October as the lookback month, lump-sum distributions in 2007 would be calculated using the 30-year Treasury bond interest rate for October 2006. See 26 CFR §1.417(e)-1(d)(5).

³ A yield curve is a graph that shows interest rates plotted on the vertical axis and time plotted on the horizontal axis. Long-term rates usually are higher than short-term rates because the risks posed by inflation and the possible default of the borrower rise with the length of time over which credit is extended. Therefore, most of the time, the yield curve slopes upward from left to right.

will be converted to a lump sum using short-term interest rates, which usually are lower than long-term interest rates. For example, a worker who retires at age 65 and is eligible for an immediate annuity would have the first five years of his or her annuity converted to a lump-sum using the rate for the first segment of the interest rate yield curve. The sixth through twentieth years of the annuity would be converted to a lump-sum using the rate for the second segment of the yield curve, and the remainder of the annuity would be converted to a lump-sum using the rate for the third segment of the yield curve. In contrast, a worker in a plan with a normal retirement age of 65 who separates from the employer at age 45 and elects to take his or her accrued benefit as a lump sum would have the entire annuity converted to a lump sum using the third segment of the yield curve.

The PPA does not require plan sponsors to use the corporate bond yield curve to calculate the lump-sum value of an annuity. It merely prohibits plans from paying lump sums that are *less* than the amounts that would result from using the corporate bond yield curve and the new mortality table. A plan sponsor may elect to use a lower interest rate, which would result in larger lump sums; however, in such a case, the PPA requires the plan sponsor to take this higher cost into account when calculating its liabilities and funding requirements. Under the PPA, these higher lump sums are considered to be a subsidy to the plan's participants, and they must be treated as a cost to the plan. Plan sponsors that elect to pay lump sums that are greater than those that would result from using the corporate bond yield curve will have to make additional contributions to their plans. A private-sector actuarial firm has estimated that if a plan sponsor chooses to continue using the Treasury bond interest rate to determine minimum lump-sum values, it would experience a one-time increase in plan liabilities of about 5%.⁴

Guidance to Plans from the Internal Revenue Service. The Internal Revenue Service has published the interest rates for each of the three segments of the corporate bond yield curve for the months of August, September, and October 2007. The interest rates are shown in **Table 1**:

Table 1. Treasury Bond Interest Rate and Corporate Bond Rates

	Treasury bond	Corporate bond yield curve		
		First segment	Second segment	Third segment
August	4.93	5.02	5.18	5.28
September	4.79	4.89	5.06	5.14
October	4.77	4.85	5.02	5.09

Source: Internal Revenue Service, Notices 2007-81, 2007-82, and 2007-91.

How Will the PPA Affect Lump-sum Distributions? The new mortality table mandated by the PPA will go into effect in January 2008. As noted above, it will tend to increase lump sums by 1% to 2%, depending on the age of the recipient. At the same time, however, the new interest rate mandated by the PPA will begin to take effect. Historically, interest rates on corporate bonds have been higher than the interest rates on

⁴ JPMorgan Compensation and Benefit Strategies "Lump Sums under the Pension Protection Act of 2006," *Insight*, Nov. 15, 2006. [<http://www.jpmorgan.com/pages/jpmorgan/am/cbs/insight>]

U.S. Treasury bonds of similar maturities. Because the present value of an annuity is inversely related to the interest rate used to calculate it, replacing the Treasury bond interest rate with a corporate bond interest rate will tend to reduce lump sums. How the PPA will affect the value of any given individual's lump sum will depend on the participant's age, whether he or she is eligible for an immediate annuity or a deferred annuity, and the difference between the Treasury bond interest rate and the corporate bond interest rate in each segment of the yield curve.⁵

The effect of the change from the Treasury bond interest rate to a corporate bond interest rate will be mitigated in the years from 2008 through 2011 by the phase-in schedule mandated by the PPA. In 2008 through 2011, the interest rate under IRC §417(e) will be a weighted average of the Treasury bond rate and the corporate bond rate. In 2008, the Treasury bond interest rate will be weighted at 80% and the corporate bond interest rate will be weighted at 20%. The corporate bond interest rate will be weighted at 40% in 2009, 60% in 2010, 80% in 2011, and 100% in 2012.

To illustrate the effect on lump sums of the new mortality table and interest rates mandated by the PPA, CRS estimated the minimum permissible lump sums under IRC §417(e) using the pre-PPA mortality table and the Treasury bond interest rate. We then calculated the lump sums that would result from using the new mortality table and the interest rates for the three segments of the corporate bond yield curve published by the IRS. **Table 2** shows the lump-sum value of an *immediate annuity* of \$12,000 per year received by individuals at age 65, 60, and 55 starting in 2008.⁶ The first row shows the present value of the annuity as calculated under the rules in effect in 2007: the pre-PPA mortality table and the October 2007 Treasury bond interest rate of 4.77%. The second row shows the present value of the annuity as calculated under the rules that will be in effect in 2008: the new mortality table and the weighted average of the Treasury bond interest rate and the three segments of the corporate bond yield curve. The third row shows the percentage difference between the amounts in rows 1 and 2. The fourth row shows what the present value of the annuity would be using the new mortality table and the fully phased-in interest rates in each segment of the corporate bond yield curve.⁷ This illustrates how lump sums would be affected if the corporate bond interest rates were fully in effect in 2008. The fifth row shows the percentage difference between the amounts in rows 1 and 4.

Table 2 shows that the effect of the changes made by the PPA on lump sums paid in 2008 is likely to be relatively small. An individual eligible for an immediate annuity of \$12,000 at age 65 is likely to see his or her lump sum reduced by less than 1%, and those who will be eligible for an immediate annuity at age 60 or age 55 will see the lump-sum value of their benefits reduced by less than 2%. If the interest rates from the corporate bond yield curve were fully in effect in 2008, the reduction in lump sums would be greater. Individuals eligible for an immediate annuity at age 65 would see their lump

⁵ Both the shape of the yield curve (whether it slopes upward or downward) and its slope (steepness) determine the spread between the Treasury bond rate and the corporate bond rate.

⁶ An immediate annuity is an annuity for which the participant is eligible at his or her current age.

⁷ The mortality table used in 2007 was published in IRS Revenue Ruling 2001-62. The mortality table to be used in 2008 and later was published in IRS Revenue Ruling 2007-67.

sums reduced by about 9%, and those eligible for an immediate annuity at age 55 would see their lump sums reduced by about 12%.

Table 2. Present Value of an Immediate Annuity of \$12,000 per Year

	Age 65	Age 60	Age 55
1. Pre-PPA method	\$145,194	\$162,206	\$177,820
2. PPA with 2008 rules	\$143,951	\$160,318	\$174,924
3. % difference, rows 1 and 2	-0.9%	-1.2%	-1.6%
4. PPA with 2012 rules	\$131,797	\$144,767	\$155,870
5. % difference, rows 1 and 4	-9.2%	-10.8%	-12.3%

Source: Congressional Research Service.

Table 3 shows the lump-sum value of a *deferred annuity* of \$12,000 per year received by individuals at age 60, 55, and 50 starting in 2008.⁸ In these estimates, the deferred annuity is assumed to be payable at age 65. The first row shows the present value of the annuity as calculated under the rules in effect in 2007: the pre-PPA mortality table and the October 2007 Treasury bond interest rate of 4.77%. The second row shows the present value of the annuity as calculated under the rules that will be in effect in 2008: the new mortality table and the weighted average of the Treasury bond interest rate and the three segments of the corporate bond yield curve. The third row shows percentage difference between the amounts in rows 1 and 2. The fourth row shows what the present value of the annuity would be using the new mortality table and the interest rates in the three segments of the corporate bond yield curve. This illustrates how lump sums would be affected if the corporate bond interest rates were fully in effect in 2008. The fifth row shows the percentage difference between the amounts in rows 1 and 4.

Table 3. Present Value of a Deferred Annuity of \$12,000 per Year

	Age 60	Age 55	Age 50
1. Pre-PPA method	\$109,899	\$85,001	\$66,464
2. PPA with 2008 rules	\$109,055	\$82,837	\$64,203
3. % difference, rows 1 and 2	-0.8%	-2.6%	-3.4%
4. PPA with 2012 rules	\$97,199	\$67,407	\$49,681
5. % difference, rows 1 and 4	-11.6%	-20.7%	-25.3%

Source: Congressional Research Service.

Table 3 shows that the effect of the PPA on the lump-sum value of deferred annuities is likely to be relatively small in 2008, but will be slightly greater than the effect on immediate annuities. An individual eligible for a deferred annuity of \$12,000 at age 65 who takes a lump sum at age 60 is likely to see his or her lump sum reduced by less than 1%, and those who take lump sums at age 55 or age 50 will see the lump-sum value of their benefits reduced by about 3% under the 2008 rules. If the interest rates from the

⁸ A deferred annuity is one for which the participant will be eligible at a later age, such as 65.

corporate bond yield curve were fully in effect in 2008, the reduction in lump sums would be about 12% for lump sums taken at age 60, 21% for lump sums taken at age 55, and 25% for lump sums taken at age 50.

Other PPA Provisions Affecting Lump Sums

Upper Limit on Lump-sum Distributions. IRC §415(b) limits the annual single-life annuity payable from a tax-qualified DB plan to the lesser of 100% of average compensation over three consecutive years or \$180,000 (in 2007). IRC §415(b)(2)(B) requires a lump-sum paid from a DB plan to be converted to an actuarially equivalent single-life annuity to determine whether the distribution exceeds this limit. The lower the interest rate used in this calculation, the less likely it is that the annuity value of the lump-sum will exceed the limit. Section 303 of the PPA requires the interest rate used in this calculation to be no less than *the greatest of* (1) 5.5%, (2) a rate that results in a benefit of not more than 105% of the benefit that would result from using the rate defined in IRC §417(e)(3), or (3) the interest rate specified in the plan.

Lump-sum Distributions from Underfunded Plans. Section 103 of the PPA prohibits a DB plan from paying lump sums if the plan is funded at less than 60% of the full funding level or if the plan sponsor is in bankruptcy and the plan is less than 100% funded. If the plan is funded at more than 60% but less than 80%, the plan may distribute as a lump sum no more than the lesser of (1) 50% of the participant's accrued benefit, or (2) the amount of the participant's benefit that is guaranteed by the Pension Benefit Guaranty Corporation (PBGC). Section 103 of the PPA requires plan sponsors to notify participants of these restrictions on lump sums within 30 days of the plan being subject to the restrictions. The restrictions become effective in 2008, but not before 2010 for collectively-bargained plans. Proposed regulations published by the IRS provide that if a participant requests a prohibited lump-sum distribution, the plan would have to permit the participant to elect another form of benefit or to defer payment to a later date. A plan may provide other options, such as paying the unrestricted portion as a lump sum while deferring the restricted portion to a later date.

Lump-sum Distributions from Cash Balance Plans. Some pension plans – called *hybrid plans* – have characteristics of both DB and DC plans. The most popular of these hybrids has been the *cash balance plan*. A cash balance plan looks like a DC plan in that the accrued benefit is defined in terms of an account balance. Unlike a DC plan, however, a cash balance plan must pay a benefit at retirement that is no less than the amount the employer has contributed to the plan plus the interest that has been credited to those contributions. Legally, therefore, a cash balance plan is a defined benefit plan. Prior to enactment of the PPA, there were some circumstances in which employers were required to pay departing employees amounts that exceeded the nominal values of their cash balance accounts. This could occur if the interest rate credited to the cash balance plan was higher than the interest rate required for calculating minimum lump-sum values under IRC §417(e). Section 701 of the PPA allows lump-sum distributions from cash balance plans to be equal to the employee's accrued benefit, expressed as his or her account balance. This provision was effective on the date of enactment of the PPA.