

# INTERNAL REVENUE BULLETIN



## HIGHLIGHTS OF THIS ISSUE

These synopses are intended only as aids to the reader in identifying the subject matter covered. They may not be relied upon as authoritative interpretations.

### ADMINISTRATIVE

#### **T.D. 9826, page 337.**

This document contains final regulations prescribing mortality tables to be used by most defined benefit pension plans. The tables specify the probability of survival year-by-year for an individual based on age, gender, and other factors. This information is used (together with other actuarial assumptions) to calculate the present value of a stream of expected future benefit payments for purposes of determining the minimum funding requirements for a defined benefit plan. These mortality tables are also relevant in determining the minimum required amount of a lump-sum distribution from such a plan. In addition, this document contains final regulations updating the requirements that a plan sponsor must meet to obtain IRS approval to use mortality tables specific to the plan for minimum funding purposes (instead of using the generally applicable mortality tables). These regulations affect participants in, beneficiaries of, employers maintaining, and administrators of certain retirement plans.

#### **Rev. Proc. 2017-55, page 373.**

This revenue procedure sets forth the procedure by which the sponsor of a defined benefit plan that is subject to the funding requirements of § 430 of the Internal Revenue Code may request approval from the Internal Revenue Service for the use of plan-specific substitute mortality tables in accordance with § 430(h)(3)(C) and § 1.430(h)(3)-2 of the Treasury Regulations.

### INCOME TAX

#### **Notice 2017-56, page 365.**

Notice 2017-56 provides relief under I.R.C. § 937 to individuals who would otherwise qualify as bona fide residents of Puerto Rico and the U.S. Virgin Islands, but for their need to leave (or inability to return to) these territories as a result of Hurricanes Irma or Maria. Notice 2017-56 expands the 14-day period under Treas. Reg. § 1.937-1(c)(3)(i)(C)(1) to a fixed period of 117 days beginning on September 6, 2017, and ending on December 31, 2017. An affected individual who is outside of an impacted U.S. territory on any day during this 117-day period will be treated as leaving or being unable to return to the relevant U.S. territory as a result of Hurricane Irma and Hurricane Maria on such day.

#### **Rev. Proc. 2017-46, page 372.**

This revenue procedure supplements Section 3 of Rev. Proc. 2014-64 by providing an updated list of countries with which the United States has in force an information exchange agreement, such that bank deposit interest paid to residents of such countries must be reported by payors to the extent required under Treas. Reg. §§ 1.6049-4(b)(5) and 1.6049-8(a). This revenue procedure also supplements Section 4 of Rev. Proc. 2014-64 by providing an updated list of countries with which the Treasury Department and the IRS have determined that it is appropriate to have an automatic exchange relationship with respect to bank deposit interest income information under §§ 1.6049-4(b)(5) and 1.6049-8(a). This supplement adds two countries (Faroe Islands and Greenland) to the Section 3 list and two countries (Croatia and Panama) to the Section 4 list.

## **EMPLOYEE PLANS**

### **Notice 2017–60, page 365.**

This notice sets forth the mortality table that is used for purposes of determining minimum present value under § 417(e)(3) of the Internal Revenue Code for 2018. This notice also sets forth static mortality tables for 2018 determined under the methodology of § 1.430(h)(3)–1 prior to its amendment, which apply for certain plans.

### **Rev. Proc. 2017–55, page 373.**

This revenue procedure sets forth the procedure by which the sponsor of a defined benefit plan that is subject to the funding requirements of § 430 of the Internal Revenue Code may request approval from the Internal Revenue Service for the use of plan-specific substitute mortality tables in accordance with § 430(h)(3)(C) and § 1.430(h)(3)–2 of the Treasury Regulations.

## **EXCISE TAX**

### **Notice 2017–61, page 371.**

Sections 4375 and 4376, added to the Code by the Affordable Care Act, impose a fee on issuers of specified health insurance policies and plan sponsors of applicable self-insured health plans to help fund the Patient-Centered Outcomes Research Trust Fund (PCORTF). This notice provides that the adjusted applicable dollar amount that applies for determining the PCORTF fee for policy years and plan years ending on or after October 1, 2017 and before October 1, 2018, is \$2.39. This adjusted applicable dollar amount has been determined using the percentage increase in the projected per capita amount of the National Health Expenditures published by HHS in February 2017.

# The IRS Mission

Provide America's taxpayers top-quality service by helping them understand and meet their tax responsibilities and enforce the law with integrity and fairness to all.

## Introduction

The Internal Revenue Bulletin is the authoritative instrument of the Commissioner of Internal Revenue for announcing official rulings and procedures of the Internal Revenue Service and for publishing Treasury Decisions, Executive Orders, Tax Conventions, legislation, court decisions, and other items of general interest. It is published weekly.

It is the policy of the Service to publish in the Bulletin all substantive rulings necessary to promote a uniform application of the tax laws, including all rulings that supersede, revoke, modify, or amend any of those previously published in the Bulletin. All published rulings apply retroactively unless otherwise indicated. Procedures relating solely to matters of internal management are not published; however, statements of internal practices and procedures that affect the rights and duties of taxpayers are published.

Revenue rulings represent the conclusions of the Service on the application of the law to the pivotal facts stated in the revenue ruling. In those based on positions taken in rulings to taxpayers or technical advice to Service field offices, identifying details and information of a confidential nature are deleted to prevent unwarranted invasions of privacy and to comply with statutory requirements.

Rulings and procedures reported in the Bulletin do not have the force and effect of Treasury Department Regulations, but they may be used as precedents. Unpublished rulings will not be relied on, used, or cited as precedents by Service personnel in the disposition of other cases. In applying published rulings and procedures, the effect of subsequent legislation, regulations, court decisions, rulings, and procedures must be considered, and Service personnel and others concerned are cautioned

against reaching the same conclusions in other cases unless the facts and circumstances are substantially the same.

The Bulletin is divided into four parts as follows:

### **Part I.—1986 Code.**

This part includes rulings and decisions based on provisions of the Internal Revenue Code of 1986.

### **Part II.—Treaties and Tax Legislation.**

This part is divided into two subparts as follows: Subpart A, Tax Conventions and Other Related Items, and Subpart B, Legislation and Related Committee Reports.

### **Part III.—Administrative, Procedural, and Miscellaneous.**

To the extent practicable, pertinent cross references to these subjects are contained in the other Parts and Subparts. Also included in this part are Bank Secrecy Act Administrative Rulings. Bank Secrecy Act Administrative Rulings are issued by the Department of the Treasury's Office of the Assistant Secretary (Enforcement).

### **Part IV.—Items of General Interest.**

This part includes notices of proposed rulemakings, disbarment and suspension lists, and announcements.

The last Bulletin for each month includes a cumulative index for the matters published during the preceding months. These monthly indexes are cumulated on a semiannual basis, and are published in the last Bulletin of each semiannual period.

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# Part I. Rulings and Decisions Under the Internal Revenue Code of 1986

26 CFR 1.430(h)(3)-1 Mortality tables used to determine present value;

26 CFR 1.430(h)(3)-2 Plan-specific substitute mortality tables used to determine present value

## T.D. 9826

### DEPARTMENT OF THE TREASURY Internal Revenue Service 26 CFR Part 1

### Mortality Tables for Determining Present Value under Defined Benefit Pension Plans

**AGENCY:** Internal Revenue Service (IRS), Treasury.

**ACTION:** Final regulations.

**SUMMARY:** This document contains final regulations prescribing mortality tables to be used by most defined benefit pension plans. The tables specify the probability of survival year-by-year for an individual based on age, gender, and other factors. This information is used (together with other actuarial assumptions) to calculate the present value of a stream of expected future benefit payments for purposes of determining the minimum funding requirements for a defined benefit plan. These mortality tables are also relevant in determining the minimum required amount of a lump-sum distribution from such a plan. In addition, this document contains final regulations updating the requirements that a plan sponsor must meet to obtain IRS approval to use mortality tables specific to the plan for minimum funding purposes (instead of using the generally applicable mortality tables). These regulations affect participants in, beneficiaries of, employers maintaining,

and administrators of certain retirement plans.

**DATES:** *Effective date:* These regulations are effective on October 5, 2017.

*Applicability date:* These regulations apply to plan years beginning on or after January 1, 2018.

#### FOR FURTHER INFORMATION

**CONTACT:** Concerning the regulations, Arslan Malik at (202) 317-6700; concerning the construction of the base mortality tables and the static mortality tables for 2018, Michael Spaid at (206) 946-3480.

#### SUPPLEMENTARY INFORMATION:

##### Background

##### A. Generally Applicable Mortality Tables

Section 412 of the Internal Revenue Code (Code) prescribes minimum funding requirements for defined benefit pension plans. Section 430 specifies the minimum funding requirements that apply generally to defined benefit plans that are not multiemployer plans.<sup>1</sup> Section 430(a) defines the minimum required contribution for a plan year by reference to the plan's funding target for the plan year. Under section 430(d)(1), a plan's funding target for a plan year generally is the present value of all benefits accrued or earned under the plan as of the first day of that plan year.

Section 430(h)(3) contains rules regarding the mortality tables to be used under section 430. Under section 430(h)(3)(A), except as provided in section 430(h)(3)(C) or (D), the Secretary is to prescribe by regulation mortality tables to be used in determining any present value or making any computation under section 430. Those mortality tables must be based on the actual mortality experience of pension plan participants and projected trends in that

experience. In prescribing those mortality tables, the Secretary is required to take into account results of available independent studies of mortality of individuals covered by pension plans.<sup>2</sup> Under section 430(h)(3)(B), the Secretary is required to make revisions to any table in effect under section 430(h)(3)(A) at least every 10 years to reflect actual mortality experience of pension plan participants and projected trends in that experience.

Section 430(h)(3)(C) prescribes rules for a plan sponsor's use of substitute mortality tables reflecting the specific mortality experience of a plan's population instead of using the generally applicable mortality tables. Under section 430(h)(3)(C), the plan sponsor may request the Secretary's approval to use plan-specific substitute mortality tables that meet requirements specified in the statute.

Section 430(h)(3)(D) provides for the use of separate mortality tables with respect to certain individuals who are entitled to benefits on account of disability. These separate mortality tables are permitted to be used with respect to disabled individuals in lieu of the generally applicable mortality tables provided pursuant to section 430(h)(3)(A) or the substitute mortality tables under section 430(h)(3)(C). The Secretary is to establish separate tables for individuals with disabilities occurring in plan years beginning before January 1, 1995, and in later plan years, with the mortality tables for individuals with disabilities occurring in those later plan years applying only to individuals who are disabled within the meaning of Title II of the Social Security Act.

Final regulations (TD 9419) under section 430(h)(3) were published in the **Federal Register** for July 31, 2008 (73 FR 44632). The final regulations issued in 2008 include rules regarding generally applicable mortality tables, which are set forth in § 1.430(h)(3)-1 (the 2008 general

<sup>1</sup>Section 302 of the Employee Retirement Income Security Act of 1974, Public Law No. 93-406, as amended (ERISA), sets forth funding rules that are parallel to those in section 412 of the Code, and section 303 of ERISA sets forth additional funding rules for defined benefit plans (other than multiemployer plans) that are parallel to those in section 430 of the Code. Under section 101 of Reorganization Plan No. 4 of 1978 (43 FR 47713) and section 302 of ERISA, the Secretary of the Treasury has interpretive jurisdiction over the subject matter addressed in these regulations for purposes of ERISA, as well as the Code. Thus, these Treasury regulations issued under section 430 of the Code also apply for purposes of section 303 of ERISA.

<sup>2</sup>The standards prescribed for developing these mortality tables are the same as the standards that are prescribed for developing mortality tables for multiemployer plans under section 431(c)(6)(D)(iv)(II) (which are used to determine current liability as part of the calculation of the minimum full funding limitation under section 431(c)(6)(B)). These standards also apply for purposes of determining current liability as part of the calculation of the minimum full funding limitation under section 433(c)(7)(C) for a CSEC plan (as defined in section 414(y)).

mortality table regulations), as well as rules regarding substitute mortality tables, which are set forth in § 1.430(h)(3)–2 (the 2008 substitute mortality table regulations).

The 2008 general mortality table regulations prescribe a base mortality table and a set of mortality improvement rates that are used to project mortality rates for years after the year 2000. The mortality tables included in those regulations are based on the mortality tables included in the RP–2000 Mortality Tables Report (based on an experience study for the period 1990–1994 and referred to in this preamble as the RP–2000 mortality tables) released by the Society of Actuaries in July 2000 (updated in May 2001). The mortality improvement rates included in those regulations are the Scale AA Projection Factors (which are based on mortality improvement for the period 1977 through 1993), which were included in the RP–2000 Mortality Tables Report for use in conjunction with the RP–2000 mortality tables.<sup>3</sup>

The 2008 general mortality table regulations prescribe the use of generational mortality tables,<sup>4</sup> but include an option for plans to use static mortality tables. The static mortality tables (which are updated annually) use a single mortality table for all years of birth to approximate the present value that would be determined using the generational mortality tables. The 2008 general mortality table regulations set forth static mortality tables for valuation dates occurring in 2008 and provide that static mortality tables for valuation dates occurring in later years will be published in the Internal Revenue Bulletin. Static mortality tables for valuation dates occurring during 2009–2013 were published in Notice 2008–85 (2008–1 C.B. 747 (March 28, 2008)). Updated static mortality tables for valuation dates occurring during 2014 and 2015 were published in Notice 2013–49 (2013–32 I.R.B. 127 (July 10, 2013)). Updated static mortality tables for valuation dates occurring in 2016 and 2017 were published in Notice 2015–53 (2015–33 I.R.B. 190 (July 31, 2015)) and

Notice 2016–50 (2016–38 I.R.B. 371 (September 2, 2016)), respectively.

Notice 2013–49 also requested comments on whether a separate disability mortality table is still warranted with respect to participants who became disabled before 1995. In addition, Notice 2013–49 noted that the Treasury Department (Treasury) and the IRS were aware that the Society of Actuaries was conducting a mortality study of pension plan participants and specifically requested comments on whether other studies of actual mortality experience of pension plan participants and projected trends of that experience were available that should be considered for use in developing mortality tables for future use under section 430(h)(3).

In October 2014, the Retirement Plans Experience Committee (RPEC) of the Society of Actuaries issued a new mortality study of participants in private pension plans. The study, which is based on mortality experience for the years 2004 to 2008, is referred to as the RP–2014 Mortality Tables Report (and sets forth mortality tables that are referred to as the RP–2014 mortality tables). The RP–2014 Mortality Tables Report, as revised November 2014, is available at [www.soa.org/Research/Experience-Study/pension/research-2014-rp.aspx](http://www.soa.org/Research/Experience-Study/pension/research-2014-rp.aspx). At the same time, RPEC issued a companion study of mortality improvement, referred to as the Mortality Improvement Scale MP–2014 Report (which sets forth mortality improvement rates that are referred to as the Scale MP–2014 rates). As described in the Mortality Improvement Scale MP–2014 Report (available at [www.soa.org/Research/Experience-Study/pension/research-2014-mp.aspx](http://www.soa.org/Research/Experience-Study/pension/research-2014-mp.aspx)), the Scale MP–2014 rates were based on mortality improvement experience for the general population through 2009.

In October 2015, RPEC released an update to the Scale MP–2014 rates. The updated rates, referred to as the Scale MP–2015 rates, were released as part of the Mortality Improvement Scale MP–2015 Report (available at <https://www.soa.org/Research/Experience-Study/Pension/>

[research-2015-mp.aspx](https://www.soa.org/Research/Experience-Study/Pension/research-2015-mp.aspx)). The Scale MP–2015 rates were created using historical data for mortality improvement for the general population through 2011 and the same model and parameters that were used to produce the Scale MP–2014 rates. In conjunction with the release of the updated rates, RPEC indicated the intent to reflect the latest data available by providing future annual updates to the model as soon as practicable following the public release of updated data upon which the model is constructed.

In October 2016, RPEC released a further update to the Scale MP–2014 rates, which are referred to as the Scale MP–2016 rates. The Scale MP–2016 rates take into account data for mortality improvement for the general population for 2012 and 2013, along with an estimate of mortality rates for 2014. As described in the Mortality Improvement Scale MP–2016 Report (available at [www.soa.org/Research/Experience-Study/Pension/research-2016-mp.aspx](http://www.soa.org/Research/Experience-Study/Pension/research-2016-mp.aspx)), in developing the Scale MP–2016 rates, RPEC changed some of the parameters from those that were used in developing the Scale MP–2014 rates.

#### B. Plan-Specific Substitute Mortality Tables

Section 430(h)(3)(C) permits a plan sponsor to request approval by the Secretary to use plan-specific substitute mortality tables in lieu of the generally applicable mortality tables. If the Secretary determines that the proposed tables meet the statutory standards and approves the request, the substitute mortality tables are used to determine present values and make computations under section 430 during the period of consecutive plan years (not to exceed 10) specified in the request. Under the statute, a substitute mortality table may be used for a plan, only if: (1) the plan has a sufficient number of plan participants and has been maintained for a sufficient period of time to have credible mortality information necessary to create a substitute mortality table; and (2) the table reflects the actual mortality experience of the plan's partic-

<sup>3</sup>The RP–2000 Mortality Tables Report is available at <https://www.soa.org/experience-studies/2000-2004/research-rp-2000-mortality-tables/>.

<sup>4</sup>Generational mortality tables are a series of mortality tables, one for each year of birth, each of which fully reflects projected trends in mortality for individuals who are born in a particular year.

ipants and projected trends in general mortality experience. Except as provided by the Secretary, a plan sponsor may not use substitute mortality tables for any plan unless substitute mortality tables are established and used for each plan maintained by the plan sponsor or a member of its controlled group.

The 2008 substitute mortality table regulations provide for review by the Commissioner of a plan sponsor's request for approval to use substitute mortality tables. Under those regulations, to use substitute mortality tables with respect to a plan, a plan sponsor must submit a written request to the Commissioner that demonstrates that those substitute mortality tables comply with applicable requirements. A request for approval to use substitute mortality tables must specify the first plan year and the term of years for which the tables are requested to be used.

Substitute mortality tables may not be used for a plan year unless the plan sponsor submits the request at least 7 months before the first day of the first plan year for which the substitute mortality tables are to apply. The Commissioner has 180 days to review a request for approval to use substitute mortality tables. If the Commissioner does not deny the request within this 180-day period, the request is deemed to have been approved unless the Commissioner and the plan sponsor have agreed to extend that period.

Under the 2008 substitute mortality table regulations, substitute mortality tables for a plan must be established separately for each gender, and a substitute mortality table may be established for a gender only if there is credible mortality experience with respect to that gender. If the mortality experience for one gender is credible but the mortality experience for the other gender is not credible, the substitute mortality tables are used for the gender that has credible mortality experience, and the generally applicable mortality tables are used for the gender that does not have credible mortality experience.

Under the 2008 substitute mortality table regulations, there is credible mortality experience with respect to a gender if and only if, over the period covered by the experience study, there are at least 1,000 deaths of individuals of that gender.<sup>5</sup> For this purpose, the minimum length of the experience study period is 2 years and the maximum length of the experience study period generally is 5 years. Furthermore, the last day of the final year reflected in the experience data must be less than three years before the first day of the first plan year for which the substitute mortality tables are to apply.

Under the 2008 substitute mortality table regulations, development of substitute mortality tables for a plan requires creation of a base table and identification of a base year, which are then used to determine the substitute mortality tables. The base table must be developed from a study of the mortality experience of the plan using amounts-weighted data. Under those regulations, a plan's substitute mortality tables must be generational mortality tables that are determined using the base mortality tables developed from the experience study and the Scale AA Projection Factors (that is, using the same basis for mortality improvement that is used under 2008 general mortality table regulations).

Under the 2008 substitute mortality table regulations, the use of substitute mortality tables is terminated early in certain circumstances, including pursuant to a replacement of the generally applicable mortality tables. The early termination pursuant to such a replacement must be effective as of a date specified in guidance published in the Internal Revenue Bulletin.

Rev. Proc. 2008-62 (2008-2 C.B. 935) sets forth the procedure by which a plan sponsor of a defined benefit plan may request and obtain approval to use plan-specific substitute mortality tables in accordance with section 430(h)(3)(C). The revenue procedure specifies the information that must be provided in a request for approval to use substitute mortality tables

and specifies two alternative acceptable methods of construction for base substitute mortality tables. Under section 11 of Rev. Proc. 2008-62, a base table for a population may be created from the unadjusted base table for the population through the application of a graduation method generally used by the actuarial profession in the United States.<sup>6</sup> Section 12 of Rev. Proc. 2008-62 provides for an alternative method of constructing a base table through the application of a fixed percentage to the mortality rates of a standard mortality table, projected to the base year.

Section 503 of the Bipartisan Budget Act of 2015, Public Law No. 114-74 (129 Stat. 584 (2015)), which was enacted November 2, 2015, provides for changes to the rules on the use of substitute mortality tables. Under that section, "the determination of whether plans have credible information shall be made in accordance with established actuarial credibility theory, which (1) is materially different from the rules under [section 430(h)(3)(C)], including Revenue Procedure 2007-37,<sup>7</sup> that are in effect on [November 2, 2015]; and (2) permits the use of tables that reflect adjustments to the tables described in [section 430(h)(3)(A) and (B)]" if those adjustments are based on the actual experience of the pension plan maintained by the plan sponsor.

Proposed regulations regarding revisions to mortality tables under section 430(h)(3) (REG-112324-15) were published in the **Federal Register** on December 29, 2016 (81 FR 95911). The proposed regulations contain revisions to the generally applicable mortality tables (based on the RP-2014 Mortality Tables Report), as well as new rules regarding substitute mortality tables that reflect section 503 of the Bipartisan Budget Act of 2015. Comments were received on the proposed regulations, and a public hearing was held on April 13, 2017. After consideration of the comments, the proposed regulations are adopted by this Treasury decision subject to certain changes, the most significant of which are described in

<sup>5</sup>The 1,000-death threshold for credible mortality experience under the regulations was intended to provide a high degree of confidence that the plan's past mortality experience will be predictive of its future mortality, and is consistent with relevant actuarial literature (see, for example, Thomas N. Herzog, Introduction to Credibility Theory (1999); Stuart A. Klugman, *et. al.*, Loss Models: From Data to Decisions (2004)).

<sup>6</sup>The revenue procedure identifies the Whittaker-Henderson Type B graduation method or the Karup-King graduation method as acceptable methods.

<sup>7</sup>Rev. Proc. 2007-37, 2007-1 CB 1433, was not in effect on November 2, 2015. It was issued in 2007 in conjunction with proposed regulations regarding substitute mortality tables (REG-143601-06, 72 FR 29456) and was replaced by Rev. Proc. 2008-62 when those regulations were finalized in 2008.

this preamble under the heading Explanation of Provisions.

## Explanation of Provisions

### I. Overview

These final regulations revise the methodology for developing the generally applicable mortality tables that are used to determine present value or make any computation under section 430. Pursuant to section 417(e)(3)(B), a modified version of these tables will be used for purposes of determining the amount of a single-sum distribution (or another accelerated form of distribution). This revised methodology for developing tables under section 430(h)(3)(A) is being issued pursuant to the requirement under section 430(h)(3)(B) to revise the mortality tables used under section 430 at least every 10 years to reflect the actual mortality experience of pension plan participants and projected trends in that experience. As under the 2008 general mortality table regulations, the methodology involves the separate determination of base tables and the projection of mortality improvement.

These regulations also revise the rules regarding substitute mortality tables. This revision is being made pursuant to section 503 of the Bipartisan Budget Act of 2015, which requires that the determination of whether a plan has credible information be made in accordance with established actuarial credibility theory. Following enactment of that requirement, Treasury and the IRS undertook a review of actuarial literature regarding credibility theory and consulted with experts on that topic from the Society of Actuaries. Based on that review and analysis, these regulations set forth a method for developing substitute mortality tables that is materially different from the method that is required under the 2008 substitute mortality table regulations and the associated revenue procedure. The method for developing substitute mortality tables that is set forth in the final regulations is simpler than the graduation method that applies under the 2008 substitute mortality table regulations and also accommodates the use of substitute mor-

tality tables for plans with smaller populations that have only partially credible mortality experience.

### II. Generally Applicable Mortality Tables

#### A. Base Mortality Tables

Under these regulations, the generally applicable base mortality tables are derived from the tables contained in the RP-2014 Mortality Tables Report. In response to Notice 2013-49, commenters generally recommended that the RP-2014 mortality tables form the basis for the mortality tables used under section 430. After reviewing the RP-2014 mortality tables, the accompanying report published by the Society of Actuaries, and related public comments, Treasury and the IRS determined that the experience study used to develop the RP-2014 mortality tables is the best available study of the actual mortality experience of pension plan participants (other than disabled individuals). As a result, Treasury and the IRS issued proposed regulations that use the RP-2014 mortality tables as the foundation for the base mortality tables used to project the mortality rates of pension plan participants (other than disabled individuals).<sup>8</sup>

Most commenters supported the selection of the base mortality tables in the proposed regulations. One commenter opposed this selection but did not suggest any alternative. Accordingly, the base mortality tables under these final regulations are the same as in the proposed regulations. Like the mortality tables provided in the 2008 general mortality table regulations, the mortality tables under these final regulations are gender-distinct because of significant differences between expected male mortality and expected female mortality. In addition, as under the 2008 general mortality table regulations, these regulations set forth separate mortality rates for annuitants and nonannuitants.

The base tables that are set forth in these final regulations are used to develop the mortality tables for future years. These base tables have a base year of 2006 (the

central year of the experience study used to develop the mortality tables in the RP-2014 Mortality Tables Report). These base tables generally have the same mortality rates as the RP-2014 mortality tables after factoring out the mortality improvements from 2007 to 2014 (calculated using the Scale MP-2014 rates). However, these base tables also include non-annuitant mortality rates for ages below age 18 and above age 80 and annuitant mortality rates for ages below age 50. This generally is the same approach that was used to develop the base tables included in the 2008 general mortality table regulations.

#### B. Mortality Improvement and Static Mortality Tables

The proposed regulations, like the 2008 general mortality table regulations, provided that expected trends in mortality experience must be taken into account through the use of either generational or annually updated static mortality tables. In accordance with section 430(h)(3)(B), the proposed regulations updated the mortality improvement rates used under the 2008 general mortality table regulations. To select up-to-date mortality improvement rates, Treasury and the IRS reviewed the Mortality Improvement Scale MP-2014 Report, related public comments, the data sources cited in those comments, the Mortality Improvement Scale MP-2015 Report, the Mortality Improvement Scale MP-2016 Report, and other published data sources.<sup>9</sup> After that review, Treasury and the IRS issued proposed regulations that applied the MP-2016 rates to develop mortality tables for use in 2018.

Some commenters supported the selection of the mortality improvement rates in the proposed regulations, while other commenters expressed concerns about the selection of those rates. Those commenters who expressed concern about the mortality improvement rates noted that the selection of a long-term mortality improvement rate assumption is inherently speculative and cautioned against using the assumptions regarding the rate of long-term mortality improvement that

<sup>8</sup>Mortality tables that may be used as an alternative to the tables provided in these regulations with respect to certain disabled individuals are provided in Rev. Rul. 96-7 (1996-1 CB 59).

<sup>9</sup>See the August 2013 Literature Review and Assessment of Mortality Improvement Rates in the U.S. Population: Past Experience and Future Long-Term Trends, available at [www.soa.org/Files/Research/Exp-Study/research-2013-lit-review.pdf](http://www.soa.org/Files/Research/Exp-Study/research-2013-lit-review.pdf).

were used by RPEC (which are a long-term rate of 1.0 percent per year for ages 85 and younger, grading down to 0.85 percent at age 95, and further grading down to 0 at age 115). Instead of the RPEC assumptions, these commenters suggested that Treasury and the IRS use assumptions regarding the rate of long-term mortality improvement that are closer to the rates that are used by the Office of the Actuary within the Social Security Administration. Those rates also vary by age group, and the documentation accompanying the 2017 report of the Board of Trustees of the Federal Old-Age, Survivors Insurance and Disability Insurance Trust Funds indicates that, under the intermediate assumptions (which reflect the Trustees' best estimates of future experience), the weighted average over all ages of those assumed long-term mortality improvement rates is 0.72 percent per year.<sup>10</sup>

Treasury and the IRS carefully considered the assumptions used by Office of the Actuary within the Social Security Administration and compared it with the long-term assumptions currently recommended by RPEC. In evaluating the merits of each, Treasury and the IRS took into consideration the views of the Technical Panel of the Social Security Advisory Board. The Social Security Advisory Board is an independent federal government agency, and the Technical Panel, which is comprised of actuaries, economists and demographers, is charged by the Advisory Board with reviewing the assumptions and methods used in the annual report of the Board of Trustees of the Federal Old-Age, Survivors Insurance and Disability Insurance Trust Funds. The Technical Panel, which issues a report every 4 years, has consistently recommended that the mortality improvement assumption used by the Office of the Actuary be increased.<sup>11</sup> In addition, the Congressional Budget Office uses a faster rate of mortality improvement in evaluating

Social Security solvency than the Office of the Actuary.<sup>12</sup>

After review and consideration of the comments, the documentation accompanying the Trustees' Report, and the views of the Technical Panel of the Social Security Advisory Board, Treasury and the IRS have concluded that the procedures that RPEC used to develop the Scale MP–2016 rates generate mortality improvement rates that currently are the appropriate rates for use in developing mortality tables to be used for purposes of pension funding. Accordingly, these regulations provide that the mortality improvement rates for valuation dates in 2018 are the Scale MP–2016 rates.

Treasury and the IRS understand that RPEC expects to issue updated mortality improvement rates that reflect new data for mortality improvement trends for the general population on an annual basis. As noted by the commenters, while the rate of mortality improvement has fluctuated significantly on a year-to-year basis, there has been a significant reduction in the rate of improvement over the past few years compared to the rate of improvement for the past 25 years. RPEC has indicated the intent to continually review the methodology used in its mortality improvement model in an effort to improve the overall effectiveness of the model, especially with respect to year-over-year stability and forecast accuracy, and it has identified the assumed long-term rate of mortality improvement and graduation techniques as two of the items included in this review. In establishing the mortality improvement rates to be used under section 430(h)(3) for valuation dates in years after 2018, Treasury and the IRS will continue to take into account RPEC's updates (including any modifications to RPEC's methodology), as well as other sources of data or analyses regarding mortality improvement. These regulations provide that the mortality improvement rates applicable for those future valuation dates will be specified in guidance to be published in

the Internal Revenue Bulletin. See § 601.601(d)(2)(ii)(b) of this chapter. If Treasury and the IRS determine that significant revisions to the mortality improvement rates are appropriate, the revisions may first be proposed in a new rulemaking in order to allow for public comment before the rule is finalized.

Some commenters asked that Treasury and the IRS commit to providing the mortality improvement rates for a calendar year at least 12 months before the start of that year. Treasury and the IRS understand that a significant motivation for this request is to avoid the issuance of new mortality improvement rates in the early part of a calendar year (because issuance of new mortality improvement rates at that time could result in the need to revise calculations that have already been made in the course of preparing a plan sponsor's financial statement as of the previous December 31). While Treasury and the IRS intend that the mortality improvement rates for a calendar year generally will be issued more than 12 months in advance of that year, the final regulations do not include a provision requiring that the mortality improvement rates for a calendar year be issued within this timeframe. Retaining the flexibility to issue mortality improvement rates closer to the date they would become effective will allow additional time for the possibility that certain revisions to the mortality improvement rates will first be published in proposed form.

Other commenters requested that Treasury and the IRS consider updating the mortality tables on a less frequent basis than annually. Although the RPEC indicated its intent to issue updated mortality improvement rates on an annual basis, the final regulations do not require the mortality improvement rates under section 430(h)(3) to be updated annually. However, to minimize the discontinuities in mortality rates that could arise from infrequent updates, Treasury and the IRS contemplate that generally the rates will be

<sup>10</sup>See "The Long-Range Demographic Assumptions for the 2017 Trustees Report," Office of the Chief Actuary, Social Security Administration (July 13, 2017), at Mortality, page 17 (available at [https://www.ssa.gov/OACT/TR/2017/2017\\_Long-Range\\_Demographic\\_Assumptions.pdf](https://www.ssa.gov/OACT/TR/2017/2017_Long-Range_Demographic_Assumptions.pdf)).

<sup>11</sup>See "2015 Technical Panel on Assumptions and Methods Report to the Social Security Advisory Board," available at [www.ssab.gov/Details-Page/ArticleID/656/2015-Technical-Panel-on-Assumptions-and-Methods-A-Report-to-the-Board-September-2015](http://www.ssab.gov/Details-Page/ArticleID/656/2015-Technical-Panel-on-Assumptions-and-Methods-A-Report-to-the-Board-September-2015).

<sup>12</sup>See Comparing CBO's Long-Term Projections with Those of the Social Security Trustees: Hearing before the Subcommittee on Social Security, Committee on Ways and Means, U.S. House of Representatives, 114<sup>th</sup> Cong. September 21, 2016 (Testimony of Keith Hall), available at <https://www.cbo.gov/sites/default/files/114th-congress-2015-2016/reports/51988-socialsecuritytestimony.pdf>.

updated annually. If the changes from one year to the next are minimal, Treasury and the IRS may choose not to update the rates for that year.

As under the 2008 general mortality table regulations, the proposed regulations take into account the limitations of some current actuarial software that is not designed to use generational mortality tables and continue to permit the use of static mortality tables. These static mortality tables, when used to determine the present value of an annuity, approximate the present value that would be determined using the generational mortality tables. All but one commenter supported the option to use static mortality tables, and these final regulations provide for this option. These static tables consist of separate gender-specific tables, which are updated annually. The static mortality tables that will be used for 2018 are included in these regulations. For later years, updated static mortality tables will be set forth in guidance published in the Internal Revenue Bulletin. See § 601.601(d)(2)(ii)(b) of this chapter.

#### C. Use of Section 430 Mortality Tables for Other Provisions

Section 417(e)(3) generally provides that the present value of certain benefits under a qualified pension plan (including single-sum distributions) must not be less than the present value of the accrued benefit using applicable interest rates and the applicable mortality table. Section 417(e)(3)(B) defines the term “applicable mortality table” as the mortality table specified for the plan year for minimum funding purposes under section 430(h)(3)(A) (without regard to the rules for substitute mortality tables under section 430(h)(3)(C) or mortality tables for disabled individuals under section 430(h)(3)(D)), modified as appropriate by the Secretary. The modifications to the section 430(h)(3)(A) mortality table used to determine the section 417(e)(3)(B)

applicable mortality table are not addressed in these regulations and are currently provided in Revenue Ruling 2007–67 (2007–2 C.B. 1047).

As under the proposed regulations, the final regulations provide that the same mortality assumptions that apply for purposes of section 430(h)(3)(A) and § 1.430(h)(3)–1(a)(2) are used to determine a plan’s current liability for purposes of applying the full-funding rules of section 431(c)(6) (in the case of a multiemployer plan) and section 433(c)(7)(C) (in the case of a CSEC plan). For this purpose, a multiemployer plan or CSEC plan is permitted to apply either the annually-adjusted static mortality tables or the generational mortality tables.

#### D. Effective Date

The proposed regulations provide that the regulations will be effective beginning in 2018. Some commenters expressed concern that this effective date would not allow adequate time for compliance. One commenter requested that the effective date of the regulations be no sooner than 18 months after the regulations are finalized in order to give plan sponsors adequate time to plan for the higher level of contributions that will be required under the new mortality assumptions. Treasury and the IRS understand that most employers have been planning for the issuance of updated mortality tables for the purposes of section 430 since the RP–2014 Mortality Tables Report was issued in 2014 and many of those employers are already using updated mortality tables for financial reporting purposes. Furthermore, any additional required contributions for a plan resulting from the adoption of the new tables will not be due before September 15, 2019. For a plan with a calendar plan year, this date is 8½ months after the end of the first plan year for which the regulations apply.<sup>13</sup>

Moreover, as described in section II.C of this Explanation of Provisions, the

amount of a single-sum distribution computed as the present value of an annuity is determined using a mortality table that is based on the generally applicable mortality tables used for minimum funding purposes. Thus, retaining the mortality tables under existing regulations for the 2018 plan year, as requested by some commenters, would result in inappropriately depressing the amount of single-sum distributions payable to affected participants during the 2018 plan year (resulting in a permanent loss of retirement assets for those participants). A 2013 study indicates that approximately 56 percent of retiring participants in a traditional defined benefit plan with an unlimited single-sum option choose that option.<sup>14</sup> In addition, the Government Accountability Office recently issued a study examining the increase in “lump-sum window” offers – typically, limited time offers to participants who are no longer employed by the sponsor but still waiting for their pension benefit to begin in the future, or retirees already receiving their pension annuity payments.<sup>15</sup> Similarly, Willis Towers Watson reported significant risk transferring activity in recent years through lump sum windows and other means.<sup>16</sup>

Because these rules were proposed in December of 2016 to be applicable as final regulations for plan years beginning on and after January 1, 2018, the Treasury Department and the IRS believe that many plan sponsors have had adequate time to set aside funds needed for additional pension contributions for the 2018 plan year. Furthermore, because the steps that plan sponsors will need to take to update their administrative systems in response to these final regulations are not significantly different from the steps they would need to take in response to the annual update of mortality tables that has previously occurred at this time of the year, the Treasury Department and the IRS believe that plan sponsors generally will have suffi-

<sup>13</sup>However, new mortality tables may affect plan operations relating to the requirements of section 436 during the 2018 plan year.

<sup>14</sup>Sudipto Banerjee, Ph.D., Employee Benefits Research Institute, *Issue Brief: Annuity and Lump-Sum Decisions in Defined Benefit Plans: The Role of Plan Rules*, January 2013, available at [https://www.ebri.org/pdf/briefspdf/EBRI\\_IB\\_01-13.No381.LSDs2.pdf](https://www.ebri.org/pdf/briefspdf/EBRI_IB_01-13.No381.LSDs2.pdf).

<sup>15</sup>U. S. Government Accountability Office, *GAO 15–74, Participants Need Better Information When Offered Lump Sums That Replace Their Lifetime Benefits* (January 2015). This report also notes the substantial financial advantages that exist for plan sponsors implementing lump sum windows and attributes the recent increase in lump-sum window offers, in part, to the outdated mortality tables in the current regulations, which result in reduced payments to plan participants. Id. at pp. 16–17.

<sup>16</sup>Brendan McFarland, *After a few ups and downs, corporate pension funding levels showed little change in 2016: Late-year rise in interest rates and stock market performance mitigate earlier downturn in funded status*, Willis Towers Watson Insider, Vol. 27, No. 2 (February 2017) at p. 3, available at <https://www.towerswatson.com/en-US/Insights/Newsletters/Americas/insider>.

cient time to make any needed changes to these administrative systems.<sup>17</sup>

The final regulations generally retain the effective date that was proposed, and apply to plan years beginning on or after January 1, 2018. In response to comments indicating that this effective date may create certain administrative or financial difficulties, the final regulations provide an option that may be used in certain circumstances for the 2018 plan year to apply the regulations that were formerly in effect. Specifically, for a plan for which substitute mortality tables are not used for the 2018 plan year, mortality tables determined in accordance with regulations previously in effect may be used for purposes of applying the rules of section 430 for a valuation date occurring during 2018 if the plan sponsor (1) concludes that the use of mortality tables determined in accordance with the final regulations for the plan year would be administratively impracticable or would result in an adverse business impact that is greater than de minimis, and (2) informs the actuary of the intent to apply this option. While this option provides significant flexibility to plan sponsors, the use of the option will not affect the mortality table used to determine minimum present value for distributions with annuity starting dates in stability periods that begin during 2018 (which is based on the generally applicable mortality tables under section 430(h)(3)(A) that apply if this option is not used). Therefore, the lump-sum distributions received by participants retiring in 2018 will appropriately reflect their expected longevity.

### III. Plan-Specific Substitute Mortality Tables

#### A. Application of Established Actuarial Credibility Theory

These final regulations contain a comprehensive revision of the rules regarding

plan-specific substitute mortality tables for plans that are subject to the rules of section 430.<sup>18</sup> These regulations carry over many of the rules regarding substitute mortality tables from the 2008 substitute mortality table regulations. However, after analyzing the actuarial literature regarding credibility theory, Treasury and the IRS made a number of changes to the rules relating to the development of substitute mortality tables. Specifically, these final regulations, like the proposed regulations, generally require that a substitute mortality table be constructed by multiplying the mortality rates from a projected version of the generally applicable base mortality table by a mortality ratio (that is, a ratio of the actual deaths for the population to the expected deaths determined using the standard mortality tables for that population).

Use of mortality ratios (rather than providing for the graduation of raw mortality rates as under the 2008 substitute mortality table regulations) will make it easier for plan sponsors to develop substitute mortality tables because it eliminates the need to apply a complex graduation technique. It also facilitates efficient IRS review of applications for approval to use substitute mortality tables, which is particularly important in light of the other major change made in the regulations (permitting the use of substitute mortality tables for a plan that has mortality experience that is only partially credible). As a result of the changes made in these regulations, Treasury and the IRS expect that significantly more plan sponsors will request approval to use substitute mortality tables.

#### B. Development of Substitute Mortality Tables for Plans with Full Credibility

The substitute mortality table for a population with full credibility must be

determined by applying projected mortality improvement to a base substitute mortality table developed using an experience study of the population. Like the proposed regulations, the final regulations use the same general requirements for an experience study as under the 2008 substitute mortality table regulations but reflect certain changes from the proposed regulations in response to comments. Specifically, the experience study generally must cover a period of at least 2 (and no more than 5) consecutive 12-month periods that ends less than 3 years before the first day of the first plan year for which the substitute mortality tables are to apply, and must cover the same period for all populations within a plan.<sup>19</sup> However the final regulations include an exception that permits the use of an earlier study period if the submission is made more than 1 year (and less than 2 years) before the first day of the first plan year for which the substitute mortality tables are proposed to apply. Under this exception, the last day of the experience study period is permitted to be 3 years or more before the first day of the first plan year for which the substitute mortality tables are proposed to apply, provided that the last day of the experience study period is less than 2 years before the application is submitted.

A base substitute mortality table generally is determined by multiplying the mortality rates from the corresponding standard mortality table (that is, the generally applicable base mortality table for the population, projected with mortality improvement to the base year for the base substitute mortality table) by the mortality ratio for the population. For this purpose, the mortality improvement rates that apply for the calendar year during which the plan sponsor submits the request for approval to use substitute mortality tables are used to project the generally applicable base mortality table to the base year for the base substitute mortality table.<sup>20</sup>

<sup>17</sup>See section 4. of the Regulatory Impact Assessment provided under the heading **Special Analyses, Regulatory Planning and Review (Executive Orders 12866 and 13563)** in this preamble for a discussion of needed changes in administrative systems.

<sup>18</sup>There is no provision for defined benefit plans that are not subject to the requirements of section 430 (such as multiemployer plans) to request approval to use of substitute mortality tables. However, the mortality tables under section 430(h)(3) are required to be used for those plans only for very limited purposes (and the mortality tables used for those plans for most purposes, while subject to the requirements of section 431(c)(3) or 433(c)(3), are not tables specified by statute or regulations).

<sup>19</sup>As under the 2008 regulations and the proposed regulations, the final regulations provide for permissive aggregation of plans of a plan sponsor for purposes of developing and using substitute mortality tables. The final regulations clarify that if two or more plans with different plan years are aggregated, the experience study may consist of data that is collected over different periods for plans with different plan years, subject to certain conditions.

<sup>20</sup>If the plan sponsor submits such a request during 2017, then mortality improvement is reflected using the mortality improvement rates that generally apply for use for 2018, which are the Scale MP-2016 rates.

The mortality ratio is determined as a fraction, the numerator of which is the number of actual deaths during the experience study period (with each death weighted by the benefit amount) and the denominator of which is the number of expected deaths during that period (determined using the standard mortality table) weighted by the benefit amount. An individual's benefit amount (which is used to determine amounts-weighted mortality rates and for other purposes in the construction of base substitute mortality tables) is the individual's accrued benefit expressed in the form of an annual benefit commencing at normal retirement age (or at the current age, if later) if the individual has not commenced benefits, and the individual's annual payment if the individual has commenced benefits. Consistent with section 503 of the Bipartisan Budget Act of 2015 (and unlike § 1.430(h)(3)–2(c)(2)(ii)(D) of the 2008 substitute mortality table regulations, which provides that the Commissioner may permit the use of other recognized mortality tables to construct the base substitute mortality table), the regulations provide that the standard mortality table that must be used for this purpose is the generally applicable base mortality table projected with mortality improvement to the base year for the base substitute mortality table.

Some commenters pointed out that multiplying mortality ratios for a population by the mortality rates in the applicable standard mortality table could yield inappropriate results at extremely old ages. In response to those comments, the final regulations provide that mortality rates under the base substitute mortality tables must be the same as the mortality rates under the standard mortality table for ages above 109 and that a modified mortality ratio is used for ages from 96 through 109 (to accomplish a gradual transition to the standard mortality table while avoiding inappropriate results). If

the mortality ratio for the population is greater than 1.0, the modified mortality ratio for an age within this range is equal to the mortality ratio for the population reduced by  $1/15^{\text{th}}$  of the excess of the mortality ratio over 1.0 for each year by which the age exceeds 95. If the mortality ratio for the population is less than 1.0, the modified mortality ratio for an age within this range is equal to the mortality ratio for the population increased by  $1/15^{\text{th}}$  of the excess of 1.0 over the mortality ratio for each year by which the age exceeds 95.

### C. Standards for Full Credibility

The proposed regulations revised the standard for full credibility of a population under the 2008 substitute mortality table regulations (which is 1,000 actual deaths for the relevant population during the experience study period) to better reflect established actuarial credibility theory. Under established actuarial credibility theory, the 1,000-death threshold (which is a rounding down of the 1,082 actual deaths that would be needed for a 90% confidence level that the measured rate is within 5% of the underlying mortality rate) should apply to the credibility for a single mortality rate and not an entire mortality table.<sup>21</sup> Moreover, the 1,000 death threshold did not take into account the well-established actuarial principle that mortality experience within a population will vary predictably based on the amount of the annuity (or life insurance, as applicable). The base tables for the generally applicable mortality tables were constructed on an amounts-weighted basis (under which the individuals with higher benefit amounts have a greater weight in the computation of the mortality rate for a particular age); accordingly, substitute mortality tables should be constructed using the same principle.

Using established actuarial credibility theory to evaluate whether a population

has fully credible mortality experience entails the use of a threshold that takes into account the dispersion of benefits within the population. Accordingly, under the proposed regulations, the number of deaths that are needed for a population within a plan to have fully credible mortality experience is determined as the product of 1,082 and the benefit dispersion factor for the population.<sup>22</sup> The benefit dispersion factor for a population is equal to the number of expected deaths for the population during the experience study period, multiplied by the sum of the mortality-weighted squares of the benefits, divided by the square of the sum of the mortality-weighted benefits.<sup>23</sup>

Commenters supported the actuarial soundness of the standard for fully credible mortality information under the proposed regulations, and the final regulations adopt the provisions of the proposed regulations regarding full credibility. At the request of commenters, the regulations include expressions of various formulas in mathematical notation to assist actuaries in making computations under the regulations.<sup>24</sup>

One commenter noted that the increase of the threshold for full credibility (together with the inability to reflect the pattern of the plan's mortality experience at different ages) may produce substitute mortality tables that are substantially different than those that are currently in use. To address this concern, in part, the final regulations include an option to increase the credibility of a plan's mortality experience by basing it on the combined mortality experience of both genders.<sup>25</sup>

### D. Partial Credibility

As under the proposed regulations, the final regulations permit substitute mortality tables to be used for a plan that does not have sufficient deaths to have fully credible mortality information. In accordance with established actuarial credibil-

<sup>21</sup>Although the use of a graduation technique under Rev. Proc. 2008–62 enables a plan with fewer than 1,000 deaths at each age to have credible mortality experience that may be used to establish a substitute mortality table, the statutory instruction providing that the determination of whether a plan has credible mortality information be made in accordance with established actuarial credibility theory which is materially different than the rules in effect on November 2, 2015, led to the elimination of that technique.

<sup>22</sup>This formula for the number of deaths needed for full credibility is based on the assumption that the distribution of releases from liability due to deaths follows a compound Poisson model. See [www.actuaries.ca/members/publications/2002/202037e.pdf](http://www.actuaries.ca/members/publications/2002/202037e.pdf).

<sup>23</sup>See Gavin Benjamin, *Selecting Mortality Tables: A Credibility Approach*, available at [www.soa.org/Files/Research/Projects/research-2008-benjamin.pdf](http://www.soa.org/Files/Research/Projects/research-2008-benjamin.pdf).

<sup>24</sup>In the proposed regulations, these formulas were stated as amounts to be computed separately for each age and then summed for the population. The final regulations instead state these formulas more concisely as amounts to be computed for the entire population. These two approaches yield mathematically identical results.

<sup>25</sup>This option is described in section III.F.2 of this Explanation of Provisions (Option to use combined male and female mortality experience).

ity theory, the substitute mortality table used for such a plan is the weighted average of the standard mortality table and the substitute mortality table that would be developed for the plan if it were to have fully credible mortality information. The weight for the substitute mortality table that would be developed for the plan if the plan were to have fully credible mortality information is the square root of a fraction, the numerator of which is the actual number of deaths for the population within the experience study period and the denominator of which is the number of deaths needed for the plan to have fully credible mortality information.

#### *E. Controlled Group Consistency Requirement*

Under section 430(h)(3)(iv) there is a general consistency requirement for the use of substitute mortality tables with respect to all plans within a controlled group. Thus, use of substitute mortality tables for a plan is generally permitted only if substitute mortality tables are used for all plans subject to section 430 that are maintained within the controlled group of the plan sponsor.

The 2008 substitute mortality table regulations set forth an exception from this consistency requirement for plans that did not have credible mortality experience. As a result of the change permitting the use of substitute mortality tables for plans that have only partially credible mortality information, Treasury and the IRS concluded that the exception should be modified so that it only applies to plans with a relatively small population. Accordingly, the regulations provide that a population does not have credible mortality information (and so a substitute mortality table is neither permitted nor required to be used for that population) if the actual number of deaths for that population during the experience study period is less than 100. For this purpose, the length of the experience study period must be the same length as the longest experience study period for any plan in the controlled group<sup>26</sup> and must end less than 3 years before the first day of the first plan year for which the substitute mortality tables are to apply. Treasury and the IRS

proposed the use of a threshold of 100 deaths to balance the benefit of the use of substitute mortality tables for a plan with a relatively small population (which would be small, given the relatively low weight assigned to that plan's partially credible mortality experience) against the burden of developing substitute mortality tables for that plan (which would be required to comply with the controlled group consistency requirement). No comments were received objecting to this threshold or recommending a different threshold. As a result, the final regulations adopt the proposed 100-death threshold.

#### *F. Other Rules Relating to the Use of Substitute Mortality Tables*

##### *1. Multiple-Employer Plans*

In response to comments, the final regulations provide rules regarding the use of substitute mortality tables in connection with multiple-employer plans. Under the final regulations, the application for use of substitute mortality tables in the case of a multiple-employer plan must be made by the plan administrator, and the substitute mortality tables must apply on a plan-wide basis (even if the plan is subject to the rules of section 413(c)(4)(A)).

In addition, the final regulations provide special rules for the application of the controlled group consistency rule in the case of a multiple-employer plan. Under this special rule, an employer participating in a multiple-employer plan is treated as maintaining that plan if and only if the proportion of the plan's funding target attributable to the employees and former employees of the employer and members of the employer's controlled group is greater than 50 percent. Thus, such an employer is subject to the controlled group consistency rule with respect to the multiple-employer plan and any other plans subject to section 430 maintained by that employer (or any member of that employer's controlled group). By contrast, if the proportion of the multiple-employer plan's funding target attributable to the employees and former employees of the employer and members of the employer's controlled group is less than or equal to 50

percent, then that employer is not subject to the controlled group consistency rule with respect to the multiple-employer plan and any other plans subject to section 430 maintained by that employer (and any member of that employer's controlled group).

##### *2. Option to Use Combined Male and Female Mortality Experience*

Some commenters requested the ability to develop and use substitute mortality tables based on the combined experience of both males and females in the plan, to increase the credibility of mortality experience for a smaller population. Treasury and the IRS have determined that this approach is consistent with established actuarial credibility theory. Accordingly, the final regulations provide that a single mortality ratio may be developed for both genders and then used to construct separate gender-specific base substitute mortality tables for the plan. If this option is applied for a plan, then substitute mortality tables used for all plans in the plan sponsor's controlled group must be constructed in this manner (except for plans for which both the male and female populations, considered separately, have mortality experience with full credibility). In addition, if this option is applied for a plan, then the mortality experience for both genders must be combined for all other purposes under the regulations, including the determination of: (1) whether a plan has credible mortality information for purposes of the controlled group consistency requirement; (2) whether the mortality experience for a plan has full credibility; and (3) the partial credibility weighting factor.

##### *3. Special Rules for Newly-Affiliated Plans*

The proposed regulations provide for a transition period during which the controlled group consistency requirement does not apply with respect to a newly-affiliated plan (that is, a plan that has become maintained within the new controlled group in connection with a transition described in § 1.410(b)-2(f)). In response to comments, the final regula-

<sup>26</sup>If a plan has credible mortality information for one gender but not for the other gender, the length of the period of this demonstration is the length of the experience study for that plan.

tions extend the transition period during which the controlled group consistency requirement does not apply with respect to a newly-affiliated plan so that it ends on the last day of the plan year that immediately follows the period described in section 410(b)(6)(C)(ii) for any of the plans in the controlled group (whichever ends latest). For example, if all of the plans involved have a plan year that is the calendar year and a corporate transaction occurs during 2017, then the transition period during which the controlled group consistency requirement does not apply ends on December 31, 2019 (the end of the plan year that immediately follows December 31, 2018, which is the end of the period described in section 410(b)(6)(C)(ii)). This longer transition period will ensure that the plan sponsor has adequate time to complete an experience study covering the newly-affiliated plan for use in its submission for approval of substitute mortality tables for a plan year beginning January 1, 2020. As under the proposed regulations, the final regulations provide that this experience study may exclude the pre-affiliation data and the experience study period may be as short as 1 year (instead of 2 years). Therefore, under the facts of this example, the experience study used to develop substitute mortality tables for the plan may cover only calendar year 2018.<sup>27</sup>

#### 4. Early Termination of Use of Substitute Mortality Tables and Transition Rule

The final regulations retain the rules from the 2008 substitute mortality table regulations regarding the termination of use of substitute mortality tables before their originally scheduled expiration. Among the circumstances that lead to early termination is the replacement of the generally applicable mortality tables (other than annual updates to the static mortality tables or changes to the mortality improvement rates).

In response to comments, the final regulations include a transition rule under which previously approved base substitute

mortality tables continue to apply for plan years beginning in 2018 (assuming that plan year is covered by the original approval and that substitute mortality tables are used by all of the plans within the controlled group that have credible mortality experience under the standards in the 2008 substitute mortality table regulations). In addition, previously approved base substitute mortality tables continue to apply to later plan years during the term of their original approval, provided that the plan sponsor satisfies the requirement that substitute mortality tables be used for all plans in the controlled group that have credible mortality information under the standards in these regulations. However, the mortality improvement rates under the final regulations, rather than the Scale AA Projection Factors (which were used under the 2008 substitute mortality table regulations), must be applied to previously approved base substitute mortality tables beginning in 2019.

#### G. Effective Date

These regulations regarding substitute mortality tables apply to plan years beginning on or after January 1, 2018, subject to certain transition relief. In addition to the transition relief for previously approved base mortality tables described in section III.F.4 of the Explanation of Provisions portion of this preamble, the requirement that a plan sponsor apply for approval to use substitute mortality tables at least 7 months before the beginning of the plan year will be treated as satisfied if the plan sponsor's application is submitted on or before February 28, 2018, provided that the plan sponsor agrees to a 90-day extension of the 180-day review period.

#### Statement of Availability of IRS Documents

IRS Revenue Rulings, Revenue Procedures, and Notices cited in this document are published in the Internal Revenue Bulletin (or Cumulative Bulletin) and are available from the Superintendent of Documents, U.S. Government Printing Office,

Washington, DC 20402, or by visiting the IRS website at [www.irs.gov](http://www.irs.gov).

#### Special Analyses

#### Regulatory Planning and Review (Executive Orders 12866 and 13563)

It has been determined that these regulations constitute a significant regulatory action as defined in Executive Order 12866, as supplemented by Executive Order 13563. Accordingly, these rules have been reviewed by the Office of Management and Budget. The Regulatory Impact Assessment prepared by Treasury for these regulations is provided below. This rule is not subject to the requirements of Executive Order 13771 because this rule results in no more than *de minimis* costs.

#### 1. Description of Need for the Regulations

Section 430 of the Internal Revenue Code specifies the minimum funding requirements that apply generally to defined benefit plans that are not multiemployer plans. Section 430(h)(3) contains rules regarding the mortality tables to be used under section 430. Under section 430(h)(3)(A), the Secretary is to prescribe by regulation mortality tables to be used in determining any present value or making any computation under section 430.<sup>28</sup> Under section 430(h)(3)(B), the Secretary is required to revise any mortality table in effect under section 430(h)(3)(A) at least every 10 years to reflect actual mortality experience of pension plan participants and projected trends in that experience.

Section 430(h)(3)(C) prescribes rules for a plan sponsor's use of substitute mortality tables reflecting the specific mortality experience of a plan's population. Section 503 of the Bipartisan Budget Act of 2015 requires certain changes in the rules for developing a plan's substitute mortality tables.

The existing regulations regarding mortality tables were issued in 2008, for use beginning in 2008. Those tables were based on a study of mortality experience of pension plan participants covering the

<sup>27</sup>However, if the experience study is used to demonstrate a lack of credible mortality information, the experience study period may be shorter than required under the otherwise applicable rules only if it starts on the date the plan becomes a newly-affiliated plan.

<sup>28</sup>Those mortality tables must be based on the actual mortality experience of pension plan participants and projected trends in that experience. In prescribing those mortality tables, the Secretary is required to take into account results of available independent studies of mortality of individuals covered by pension plans.

years 1990–1994 that was published in 2000. Since that time, studies have shown that people are living longer. For example, a study that RPEC published in 2014 indicates that the mortality tables issued under the 2008 general mortality table regulations no longer reflect the actual mortality experience of pension plan participants and projected trends in that experience. In accordance with section 430(h)(3)(B), the Secretary is required to revise the mortality tables in the existing regulations as a result of these changes in the actual mortality experience and projected trends in that experience. In addition, changes in the existing regulations regarding substitute mortality tables are required under the provisions of the Bipartisan Budget Act of 2015.

## 2. Affected Population

The final regulations affect participants in private-sector defined benefit plans and employers sponsoring those plans.

Estimated change in tax revenue (in millions of 2017 dollars)

Year	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Full take-up amount	0	-123	-499	-914	-1,170	-1,278	-1,216	-1,081	-807	-353
No take-up amount	-84	-362	-717	-1,025	-1,241	-1,314	-1,238	-1,042	-604	-228

Present Value<sup>29</sup> with full take-up of delay option (3% Discount Rate): -\$6,372 million.

Present Value with no take-up of delay option (3% Discount Rate): -\$6,821 million.

Present Value with full take-up of delay option (7% Discount Rate): -\$5,245 million.

Estimated change in contributions (in millions of 2017 dollars)

Year	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Full take-up amount	0	2,933	4,873	6,071	6,574	6,069	5,322	3,667	750	407
No take-up amount	2,151	3,631	5,418	6,391	6,694	6,194	5,373	1,751	815	797

Present Value with full take-up of delay option (3% Discount Rate): \$32,417 million.

## 3. Baseline and Summary of Impacts

As required by OMB Circular A-4, the following table summarizes the estimated economic impact of the final regulations. The baseline for this estimate is the mortality tables issued under the existing regulations. Because the new tables reflect the fact that participants are living longer, the primary impact of the final regulations is to increase the reported liability for future benefit payments from pension plans; this higher reported liability will result in higher pension contributions. The higher liability will also result in an increase in PBGC premiums, which are a function of a plan's funded status. Because pension contributions and premiums are deductible from firms' incomes, tax revenues will fall.

As described in the effective date discussion in section II.D of the Explanation of Provisions portion of this preamble, these regulations include an option for a

plan sponsor that is not using plan-specific mortality tables to delay the application of the new tables in certain circumstances. Because it is difficult to predict how many plan sponsors will utilize this option, the following tables provide a range of estimates of the economic impact of these regulations. The first row of numbers in the tables, labeled "full take-up amount," is based on the assumption that all plan sponsors will use the option to delay the application of the new mortality tables; the second row of numbers, labeled "no take-up amount," is based on the assumption that no plan sponsors will use the option to delay application of the new mortality tables. As noted in the effective date discussion in section II.D of the Explanation of Provisions portion of this preamble, the use of this option will not affect the mortality table used to determine minimum present value under section 417(e).

Present Value with no take-up of delay option (7% Discount Rate): -\$5,718 million.

Annualized Estimate with full take-up of delay option (3% Discount Rate): -\$747 million.

Annualized Estimate with no take-up of delay option (3% Discount Rate): -\$800 million.

Annualized Estimate with full take-up of delay option (7% Discount Rate): -\$747 million.

Annualized Estimate with no take-up of delay option (7% Discount Rate): -\$814 million.

Present Value with no take-up of delay option (3% Discount Rate): \$35,100 million.

Present Value with full take-up of delay option (7% Discount Rate): \$27,784 million.

<sup>29</sup>The present values are discounted to the beginning of 2019.

Present Value with no take-up of delay option (7% Discount Rate): \$30,595 million.

Annualized Estimate with full take-up of delay option (3% Discount Rate): \$3,800 million.

Annualized Estimate with no take-up of delay option (3% Discount Rate): \$4,115 million.

Annualized Estimate with full take-up of delay option (7% Discount Rate): \$3,956 million.

Annualized Estimate with no take-up of delay option (7% Discount Rate): \$4,356 million.

Estimated change in PBGC premiums (in millions of 2017 dollars)

Year	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Full take-up amount	0	293	287	187	91	0	0	0	0	81
No take-up amount	293	287	280	183	89	0	0	0	0	80

Present Value with full take-up of delay option (3% Discount Rate): 869 million.

Present Value with no take-up of delay option (3% Discount Rate): 1,143 million.

Present Value with full take-up of delay option (7% Discount Rate): \$791 million.

Present Value with no take-up of delay option (7% Discount Rate): \$1,067 million.

Annualized Estimate with full take-up of delay option (3% Discount Rate): \$102 million.

Annualized Estimate with no take-up of delay option (3% Discount Rate): \$134 million.

Annualized Estimate with full take-up of delay option (7% Discount Rate): \$113 million.

Annualized Estimate with no take-up of delay option (7% Discount Rate): \$152 million.

For pension payments that are paid over a retiree’s lifetime, the actual liability will depend on how long the retiree actually lives, and the impact of reflecting longer life expectancies in the calculation of present values under these regulations will merely accelerate the time when additional contributions attributable to longer lifetimes will need to be made. For pension payments that are lump-sum settlements in lieu of lifetime payments, the new tables will increase the amount of the lump sum. If the plan has a lump sum-

based benefit formula, such as a cash balance plan, there will be no impact on the amount of a lump sum, but the optional annuity may be smaller.<sup>30</sup> However, it is difficult to quantify the impact of these changes.

#### 4. Cost Associated with the Regulation

Substantially all of the amounts involved (decreased tax revenue, increased plan contributions and PBGC premiums) constitute transfer payments, rather than costs. This is because these amounts are monetary payments from one entity to another that do not affect total resources available to society.

We believe that the incremental administrative costs to implement this regulation are negligible, because plan sponsors would have to incur the same costs to update their plan administration software to reflect the new mortality tables under these regulations as they would incur in implementing the annual update to the mortality tables that would apply in the absence of these regulations. Moreover, the specific mortality rates used to calculate benefits for individuals normally are not provided to individual plan participants, so there will be no need to distribute information about the new mortality tables. Rather, plan sponsors and administrators provide individual participants who are considering retiring in the near future with individualized estimates of

their benefits and that process is not dependent on the specific mortality rates used to determine benefits under the plan. Furthermore, Treasury and the IRS are issuing these regulations at a similar time of year as mortality tables were issued in prior years (and close in time to the issuance of the earliest interest rates that may be used in calculating the amount of a lump sum benefit to be distributed during a plan year beginning in 2018). In other words, these costs are included in the baseline of the analysis, not as new incremental costs associated with this rulemaking.

In terms of the use of the mortality tables for purposes of applying the funding requirements of section 430, these regulations (like the current regulations) permit actuaries to use static mortality tables that approximate the present value determined using the generational mortality tables. Even if a plan’s actuary chooses to use generational mortality tables (including plan-specific mortality tables) instead of the static mortality tables, actuarial software capable of applying that approach (including generational mortality tables determined using mortality improvement rates that vary by both age and calendar year) should be readily available, as such generational mortality tables determined using varying mortality improvement rates have been used routinely for financial reporting purposes by large employers since the Mortality Improvement Scale MP–2014 Report was issued

<sup>30</sup>The optional annuity may be smaller because, when converting the lump sum in which the participant’s benefit is stated under the plan to an stream of annuity payments for the life of the participant (and the life of the participant’s spouse if applicable), the lifetime(s) over which the payments must be paid will generally be assumed to be longer if the new tables are used for this purpose rather than the prior tables. To pay a fixed sum over a longer period, the amount of the periodic payments must be reduced. However, a plan is not required to use these tables for this purpose and a recent study indicates that relatively few participants take an annuity distribution from plans with lump sum based benefit formulas See Sudipto Banerjee, Ph.D., Employee Benefits Research Institute, *Issue Brief: Annuity and Lump-Sum Decisions in Defined Benefit Plans: The Role of Plan Rules*, January 2013, available at [https://www.ebri.org/pdf/briefspdf/EBRI\\_IB\\_01-13.No381.LSDs2.pdf](https://www.ebri.org/pdf/briefspdf/EBRI_IB_01-13.No381.LSDs2.pdf).

in 2014. In addition, these regulations permit any previously approved plan-specific mortality tables to continue to be used for the duration of the original approval period. Accordingly, any additional cost as a result of the issuance of these regulations should be negligible.

## Regulatory Flexibility Act (5 U.S.C. Chapter 6)

It is hereby certified that this rule will not have a significant economic impact on a substantial number of small entities. This rule applies to all employers that sponsor defined benefit plans regardless of size. As stated above, this rule implements the statutorily-required updates and any compliance costs related to this rule are small and are consistent with previously issued annual updates.

Pursuant to section 7805(f) of the Internal Revenue Code, the notice of proposed rulemaking preceding these regulations was submitted to the Chief Counsel for Advocacy of the Small Business Administration for comment on its impact on small business.

## Drafting Information

The principal authors of these regulations are Arslan Malik and Linda S. F. Marshall of the Office of Associate Chief Counsel (Tax Exempt and Government Entities). However, other personnel from Treasury and the IRS participated in the development of these regulations.

## List of Subjects in 26 CFR Part 1

Income taxes, Reporting and record-keeping requirements.

## Adoption of Amendments to the Regulations

Accordingly, 26 CFR part 1 is amended as follows:

### PART 1—INCOME TAXES

Paragraph 1. The authority citation for part 1 continues to read, in part, as follows:

Authority: 26 U.S.C. 7805 \* \* \*

**Par. 2.** Section 1.430(h)(3)–1 is revised to read as follows:

### § 1.430(h)(3)–1 Mortality tables used to determine present value.

(a) *Basis for mortality tables*—(1) *In general.* Pursuant to section 430(h)(3)(A), this section provides generally applicable mortality tables that are used to determine present value for purposes of section 430, and rules regarding the use of those mortality tables. Either the generational mortality tables under paragraph (a)(2) of this section or the static mortality tables under paragraph (a)(3) of this section may be used for a plan. In lieu of using the mortality tables provided under this section, plan-specific substitute mortality tables may be used pursuant to section 430(h)(3)(C), provided that the requirements of § 1.430(h)(3)–2 are satisfied. Mortality tables that may be used with respect to disabled individuals are provided in guidance published in the Internal Revenue Bulletin. See § 601.601(d)(2)(ii)(b) of this chapter.

(2) *Generational mortality tables*—(i) *In general*—(A) *Use of generational mortality tables.* The generational mortality tables that are permitted to be used under section 430(h)(3)(A) and paragraph (a)(1) of this section are determined using the base mortality tables described in paragraph (a)(2)(i)(B) of this section and the mortality improvement rates described in paragraph (a)(2)(i)(C) of this section.

(B) *Base mortality tables.* The base mortality tables are set forth in paragraph (d) of this section. The base year for those tables is 2006.

(C) *Mortality improvement rates.* The mortality improvement rates for valuation dates occurring during 2018 are the mortality improvement rates contained in the Mortality Improvement Scale MP–2016 Report (issued by the Retirement Plans Experience Committee (RPEC) of the Society of Actuaries and available at [www.soa.org/Research/Experience-Study/Pension/research-2016-mp.aspx](http://www.soa.org/Research/Experience-Study/Pension/research-2016-mp.aspx)). For later years, updated mortality improvement rates that take into account new data for mortality improvement trends of the general population will be provided in

guidance published in the Internal Revenue Bulletin. See § 601.601(d)(2)(ii)(b) of this chapter.

(D) *Application of mortality improvement rates.* Under the generational mortality tables described in this paragraph (a)(2), the probability of an individual's death at a particular age in the future is determined as the individual's base mortality rate that applies at that age (that is, the applicable mortality rate from the table set forth in paragraph (d) of this section for that age, gender, and status as an annuitant or a nonannuitant) multiplied by the cumulative mortality improvement factor for the individual's gender and for that age for the period from 2006 through the calendar year in which the individual is projected to reach the particular age. Paragraph (a)(2)(ii) of this section shows how the base mortality tables in paragraph (d) of this section and the mortality improvement rates for valuation dates occurring during 2018 are combined to determine projected mortality rates.

(E) *Cumulative mortality improvement factor.* The cumulative mortality improvement factor for an age and gender for a period is the product of the annual mortality improvement factors for that age and gender for each year within that period.

(F) *Annual mortality improvement factor.* The annual mortality improvement factor for an age and gender for a year is 1 minus the mortality improvement rate that applies for that age and gender for that year.

(ii) *Example of calculation*—(A) *Calculation of mortality rate.* The mortality rate for 2018 that is applied to male annuitants who are age 66 in 2018 is equal to the product of the mortality rate for 2006 that applied to male annuitants who were age 66 in 2006 (0.013855) and the cumulative mortality improvement factor for age 66 males from 2006 to 2018. The cumulative mortality improvement factor for age 66 males for the period from 2006 to 2018 is 0.8929, and the mortality rate for 2018 for male annuitants who are age 66 in that year would be 0.012371, as shown in the following table.

Calendar Year	Scale MP–2016 Mortality Improvement Rate	Annual Mortality improvement factor (1- Scale MP–2016 Rate)	Cumulative Mortality Improvement Factor	Mortality Rate
2006	n/a	n/a	n/a	0.013855
2007	0.0237	0.9763	0.9763	
2008	0.0211	0.9789	0.9557	
2009	0.0180	0.9820	0.9385	
2010	0.0142	0.9858	0.9252	
2011	0.0099	0.9901	0.9160	
2012	0.0053	0.9947	0.9112	
2013	0.0043	0.9957	0.9072	
2014	0.0035	0.9965	0.9041	
2015	0.0030	0.9970	0.9014	
2016	0.0028	0.9972	0.8988	
2017	0.0030	0.9970	0.8961	
2018	0.0036	0.9964	0.8929	0.012371

(B) *Probability of survival for an individual.* After the projected mortality rates are derived for each age for each year, the rates are used to calculate the present value of a benefit stream that depends on the probability of survival year-by-year. For example, for purposes of calculating the present value (for a 2018 valuation date) of future payments in a benefit stream payable for a male annuitant who is age 66 in 2018, the probability of survival for the annuitant is based on the mortality rate for a male annuitant who is age 66 in 2018 (0.012371), and the projected mortality rate for a male annuitant who will be age 67 in 2019 (0.013302), age 68 in 2020 (0.014321), and so on.

(3) *Static mortality tables.* The static mortality tables that are permitted to be used under section 430(h)(3)(A) and paragraph (a)(1) of this section are updated annually by the IRS according to the methodology described in paragraph (c)(2) of this section. Paragraph (e) of this section sets forth static tables that are permitted to be used for valuation dates in 2018. For valuation dates in later years, static mortality tables will be provided in guidance published in the Internal Revenue Bulletin. See § 601.601(d)(2)(ii)(b) of this chapter.

(b) *Use of the tables*—(1) *Separate tables for annuitants and nonannuitants*—(i) *In general.* Separate tables are provided for use for annuitants and nonannuitants. The nonannuitant mortality table is applied to determine the probability of survival for a nonannuitant for the period before the non-

annuitant is projected to commence receiving benefits. The annuitant mortality table is applied to determine the present value of benefits for each annuitant. In addition, the annuitant mortality table is applied for each nonannuitant with respect to each assumed commencement of benefits for the period beginning with that assumed commencement. For purposes of this section, an annuitant means a plan participant who has commenced receiving benefits, and a nonannuitant means a plan participant who has not yet commenced receiving benefits (for example, an active employee or a terminated vested participant). A participant whose benefit has partially commenced is treated as an annuitant with respect to the portion of the benefit that has commenced and treated as a nonannuitant with respect to the balance of the benefit. In addition, with respect to a beneficiary of a participant, the annuitant mortality table applies for the period beginning with each assumed commencement of benefits for the participant. If the participant has died (or to the extent the participant is assumed to die before commencing benefits), the annuitant mortality table applies with respect to the beneficiary for the period beginning with each assumed commencement of benefits for the beneficiary.

(ii) *Examples of calculation using separate annuitant and nonannuitant tables.* With respect to a 45-year-old active participant who is projected to commence receiving an annuity at age 55, the funding target is determined using the nonannui-

tant mortality table for the period before the participant attains age 55 (so that, if the static mortality tables are used pursuant to paragraph (a)(3) of this section, the probability of an active male participant living from age 45 to age 55 using the table that applies for a valuation date in 2018 is 0.988857) and using the annuitant mortality table for the period ages 55 and above. Similarly, for a 45-year-old terminated vested participant who is projected to commence an annuity at age 65, the funding target is determined using the nonannuitant mortality table for the period before the participant attains age 65 and using the annuitant mortality table for ages 65 and above.

(2) *Small plan tables.* If static mortality tables are used pursuant to paragraph (a)(3) of this section, as an alternative to the separate static tables specified for annuitants and nonannuitants pursuant to paragraph (b)(1) of this section, combined static tables that apply the same mortality rates to both annuitants and nonannuitants are permitted to be used for a small plan. For this purpose, a small plan is defined as a plan with 500 or fewer total participants (including both active and inactive participants and beneficiaries of deceased participants) on the valuation date. The combined static tables that are permitted to be used for small plans pursuant to this paragraph (b)(2) are constructed from the separate nonannuitant and annuitant static mortality tables using the weighting factors for small plans that are set forth in

paragraph (d) of this section. The weighting factors are applied to develop these combined static tables using the following equation: Combined mortality rate = [nonannuitant rate \* (1- weighting factor)] + [annuitant rate \* weighting factor].

(c) *Static tables*—(1) *Source of rates.* The static mortality tables that are used pursuant to paragraph (a)(3) of this section are determined using the base mortality tables described in paragraph (a)(2)(i)(B) of this section taking into account the mortality improvement rates described in paragraph (a)(2)(i)(C) of this section, in accordance with the rules of paragraph (c)(3) of this section.

(2) *Selection of static tables.* The static mortality tables that are used for a valuation date are the static mortality tables for the calendar year that contains the valuation date.

(3) *Projection of mortality improvements*—(i) *General rule.* Except as provided in paragraph (c)(3)(iii) of this section, the static mortality tables for a calendar year are determined by multiplying the applicable mortality rate for each age from the base mortality tables by both—

(A) The cumulative mortality improvement factor (determined under the rules of paragraph (a)(2) of this section) for the

period from 2006 through that calendar year; and

(B) The cumulative mortality improvement factor (determined under the rules of paragraph (a)(2) of this section) for the period beginning in that calendar year and continuing beyond that calendar year for the number of years in the projection period described in paragraph (c)(3)(ii) of this section.

(ii) *Projection period for static mortality tables*—(A) *In general.* The projection period is 8 years for males and 9 years for females, as adjusted based on age as provided in paragraph (c)(3)(ii)(B) of this section.

(B) *Age adjustment.* For ages below 80, the projection period is increased by 1 year for each year below age 80. For ages above 80, the projection period is reduced (but not below zero) by 1/3 year for each year above 80.

(iii) *Fractional projection periods.* If for an age the number of years in the projection period determined under this paragraph (c)(3) is not a whole number, then the mortality rate for that age is determined by using linear interpolation between—

(A) The mortality rate for that age that would be determined under paragraph (c)(3)(i) of this section if the number of

years in the projection period were the next lower whole number; and

(B) The mortality rate for that age that would be determined under paragraph (c)(3)(i) of this section if the number of years in the projection period were the next higher whole number.

(iv) *Example.* The following example illustrates how the mortality rates in the static mortality tables issued under the provisions of this paragraph (c) are calculated:

*Example.* At age 85, the projection period for a male is 6 2/3 years (8 years minus 1/3 year for each of the 5 years above age 80). For a valuation date in 2018, the mortality rate in the static mortality table for an 85-year-old male is based on a projection of mortality improvement for 6 2/3 years beyond 2018. Under paragraph (c)(3)(iii) of this section, the mortality rate for an 85-year-old male annuitant in the static mortality table for 2018 is 2/3 times the projected mortality rate for a male annuitant that age in 2024 plus 1/3 times the projected mortality rate for a male annuitant that age in 2025. Accordingly, the mortality rate for an 85-year-old male annuitant in the static mortality table for 2018 is 0.075196 (2/3 times the projected mortality rate for an 85-year old male annuitant in 2024 (0.075447) plus 1/3 times the projected mortality rate for an 85-year old male annuitant in 2025 (0.074693)).

(d) *Base mortality tables.* The following are the base mortality tables. The base year for these tables is 2006.

Age	Males			Females		
	Non-Annuitant	Annuitant	Weighting Factor For Small Plans	Non-Annuitant	Annuitant	Weighting Factor For Small Plans
0	0.008878	0.008878	0	0.007278	0.007278	0
1	0.000515	0.000515	0	0.000451	0.000451	0
2	0.000348	0.000348	0	0.000295	0.000295	0
3	0.000289	0.000289	0	0.000220	0.000220	0
4	0.000225	0.000225	0	0.000165	0.000165	0
5	0.000197	0.000197	0	0.000149	0.000149	0
6	0.000177	0.000177	0	0.000137	0.000137	0
7	0.000156	0.000156	0	0.000127	0.000127	0
8	0.000132	0.000132	0	0.000117	0.000117	0
9	0.000107	0.000107	0	0.000109	0.000109	0
10	0.000090	0.000090	0	0.000102	0.000102	0
11	0.000095	0.000095	0	0.000105	0.000105	0
12	0.000142	0.000142	0	0.000121	0.000121	0
13	0.000187	0.000187	0	0.000137	0.000137	0
14	0.000230	0.000230	0	0.000151	0.000151	0
15	0.000274	0.000274	0	0.000165	0.000165	0
16	0.000318	0.000318	0	0.000177	0.000177	0

Age	Males			Females		
	Non-Annuitant	Annuitant	Weighting Factor For Small Plans	Non-Annuitant	Annuitant	Weighting Factor For Small Plans
17	0.000364	0.000364	0	0.000187	0.000187	0
18	0.000412	0.000412	0	0.000196	0.000196	0
19	0.000463	0.000463	0	0.000202	0.000202	0
20	0.000510	0.000510	0	0.000202	0.000202	0
21	0.000552	0.000552	0	0.000197	0.000197	0
22	0.000587	0.000587	0	0.000191	0.000191	0
23	0.000599	0.000599	0	0.000190	0.000190	0
24	0.000594	0.000594	0	0.000188	0.000188	0
25	0.000545	0.000545	0	0.000186	0.000186	0
26	0.000510	0.000510	0	0.000186	0.000186	0
27	0.000486	0.000486	0	0.000188	0.000188	0
28	0.000472	0.000472	0	0.000192	0.000192	0
29	0.000468	0.000468	0	0.000198	0.000198	0
30	0.000470	0.000470	0	0.000209	0.000209	0
31	0.000480	0.000480	0	0.000222	0.000222	0
32	0.000495	0.000495	0	0.000238	0.000238	0
33	0.000514	0.000514	0	0.000257	0.000257	0
34	0.000534	0.000534	0	0.000278	0.000278	0
35	0.000557	0.000557	0	0.000301	0.000301	0
36	0.000581	0.000581	0	0.000325	0.000325	0
37	0.000611	0.000611	0	0.000355	0.000355	0
38	0.000648	0.000648	0	0.000389	0.000389	0
39	0.000694	0.000694	0	0.000428	0.000428	0
40	0.000750	0.000750	0	0.000471	0.000471	0
41	0.000814	0.000823	.0045	0.000518	0.000515	0
42	0.000890	0.000969	.0091	0.000570	0.000603	0
43	0.000982	0.001188	.0136	0.000628	0.000735	0
44	0.001088	0.001480	.0181	0.000691	0.000911	0
45	0.001207	0.001846	.0226	0.000758	0.001131	.0084
46	0.001342	0.002285	.0272	0.000831	0.001395	.0167
47	0.001487	0.002797	.0317	0.000908	0.001703	.0251
48	0.001643	0.003382	.0362	0.000986	0.002055	.0335
49	0.001807	0.004040	.0407	0.001065	0.002451	.0419
50	0.001979	0.004771	.0453	0.001151	0.002891	.0502
51	0.002159	0.005059	.0498	0.001242	0.002993	.0586
52	0.002351	0.005343	.0686	0.001344	0.003124	.0744
53	0.002539	0.005592	.0953	0.001458	0.003291	.0947
54	0.002741	0.005839	.1288	0.001588	0.003499	.1189
55	0.002967	0.006102	.2066	0.001735	0.003755	.1897
56	0.003231	0.006399	.3173	0.001902	0.004065	.2857
57	0.003548	0.006746	.3780	0.002091	0.004435	.3403
58	0.003932	0.007155	.4401	0.002302	0.004869	.3878
59	0.004396	0.007639	.4986	0.002537	0.005373	.4360
60	0.004954	0.008211	.5633	0.002795	0.005942	.4954
61	0.005616	0.008878	.6338	0.003080	0.006581	.5805

Age	Males			Females		
	Non-Annuitant	Annuitant	Weighting Factor For Small Plans	Non-Annuitant	Annuitant	Weighting Factor For Small Plans
62	0.006392	0.009646	.7103	0.003388	0.007283	.6598
63	0.007291	0.010523	.7902	0.003724	0.008043	.7520
64	0.008320	0.011514	.8355	0.004089	0.008870	.8043
65	0.009486	0.012621	.8832	0.004482	0.009760	.8552
66	0.010668	0.013855	.9321	0.005004	0.010731	.9118
67	0.011973	0.015221	.9510	0.005575	0.011790	.9367
68	0.013414	0.016736	.9639	0.006205	0.012952	.9523
69	0.015006	0.018421	.9714	0.006898	0.014226	.9627
70	0.016761	0.020288	.9740	0.007662	0.015628	.9661
71	0.018690	0.022348	.9766	0.008507	0.017170	.9695
72	0.020824	0.024638	.9792	0.009438	0.018861	.9729
73	0.023176	0.027176	.9818	0.010470	0.020723	.9763
74	0.025770	0.029992	.9844	0.011615	0.022780	.9797
75	0.028623	0.033113	.9870	0.012887	0.025057	.9830
76	0.031761	0.036585	.9896	0.014301	0.027590	.9864
77	0.035214	0.040457	.9922	0.015885	0.030438	.9898
78	0.039007	0.044778	.9948	0.017656	0.033653	.9932
79	0.043169	0.049605	.9974	0.019639	0.037296	.9966
80	0.047750	0.055022	1.0	0.021859	0.041440	1.0
81	0.049804	0.061087	1.0	0.023791	0.046181	1.0
82	0.053911	0.067902	1.0	0.027655	0.051564	1.0
83	0.060072	0.075550	1.0	0.033451	0.057714	1.0
84	0.068286	0.084162	1.0	0.041179	0.064709	1.0
85	0.078554	0.093775	1.0	0.050838	0.072601	1.0
86	0.090876	0.104507	1.0	0.062429	0.081490	1.0
87	0.105251	0.116487	1.0	0.075952	0.091444	1.0
88	0.121680	0.129770	1.0	0.091407	0.102470	1.0
89	0.140162	0.144470	1.0	0.108794	0.114635	1.0
90	0.160698	0.160698	1.0	0.128113	0.128113	1.0
91	0.177741	0.177741	1.0	0.142619	0.142619	1.0
92	0.195154	0.195154	1.0	0.157939	0.157939	1.0
93	0.212642	0.212642	1.0	0.173886	0.173886	1.0
94	0.230055	0.230055	1.0	0.190319	0.190319	1.0
95	0.247257	0.247257	1.0	0.207191	0.207191	1.0
96	0.265940	0.265940	1.0	0.225057	0.225057	1.0
97	0.284940	0.284940	1.0	0.243507	0.243507	1.0
98	0.304432	0.304432	1.0	0.262587	0.262587	1.0
99	0.324272	0.324272	1.0	0.282171	0.282171	1.0
100	0.344364	0.344364	1.0	0.302162	0.302162	1.0
101	0.364420	0.364420	1.0	0.322282	0.322282	1.0
102	0.384058	0.384058	1.0	0.342371	0.342371	1.0
103	0.403188	0.403188	1.0	0.362210	0.362210	1.0
104	0.421533	0.421533	1.0	0.381534	0.381534	1.0
105	0.438903	0.438903	1.0	0.400321	0.400321	1.0
106	0.455492	0.455492	1.0	0.418418	0.418418	1.0

Age	Males			Females		
	Non-Annuitant	Annuitant	Weighting Factor For Small Plans	Non-Annuitant	Annuitant	Weighting Factor For Small Plans
107	0.470810	0.470810	1.0	0.435390	0.435390	1.0
108	0.484965	0.484965	1.0	0.451459	0.451459	1.0
109	0.498023	0.498023	1.0	0.466408	0.466408	1.0
110	0.509768	0.509768	1.0	0.480123	0.480123	1.0
111	0.512472	0.512472	1.0	0.492664	0.492664	1.0
112	0.509296	0.509296	1.0	0.503970	0.503970	1.0
113	0.506193	0.506193	1.0	0.507361	0.507361	1.0
114	0.503061	0.503061	1.0	0.503564	0.503564	1.0
115	0.500000	0.500000	1.0	0.500000	0.500000	1.0
116	0.500000	0.500000	1.0	0.500000	0.500000	1.0
117	0.500000	0.500000	1.0	0.500000	0.500000	1.0
118	0.500000	0.500000	1.0	0.500000	0.500000	1.0
119	0.500000	0.500000	1.0	0.500000	0.500000	1.0
120	1.000000	1.000000	1.0	1.000000	1.000000	1.0

(e) *Static tables for 2018.* The following static mortality tables are used pursuant to paragraph (a)(3) of this section for determining present value or making any computation under section 430 with respect to valuation dates occurring during 2018.

Age	Males			Females		
	Non-Annuitant	Annuitant	Optional Combined Table for Small Plans	Non-Annuitant	Annuitant	Optional Combined Table for Small Plans
0	0.002420	0.002420	0.002420	0.002234	0.002234	0.002234
1	0.000142	0.000142	0.000142	0.000140	0.000140	0.000140
2	0.000097	0.000097	0.000097	0.000092	0.000092	0.000092
3	0.000081	0.000081	0.000081	0.000070	0.000070	0.000070
4	0.000064	0.000064	0.000064	0.000053	0.000053	0.000053
5	0.000056	0.000056	0.000056	0.000048	0.000048	0.000048
6	0.000051	0.000051	0.000051	0.000045	0.000045	0.000045
7	0.000046	0.000046	0.000046	0.000042	0.000042	0.000042
8	0.000039	0.000039	0.000039	0.000039	0.000039	0.000039
9	0.000032	0.000032	0.000032	0.000037	0.000037	0.000037
10	0.000027	0.000027	0.000027	0.000035	0.000035	0.000035
11	0.000029	0.000029	0.000029	0.000036	0.000036	0.000036
12	0.000044	0.000044	0.000044	0.000042	0.000042	0.000042
13	0.000058	0.000058	0.000058	0.000048	0.000048	0.000048
14	0.000072	0.000072	0.000072	0.000053	0.000053	0.000053
15	0.000087	0.000087	0.000087	0.000059	0.000059	0.000059
16	0.000102	0.000102	0.000102	0.000064	0.000064	0.000064
17	0.000118	0.000118	0.000118	0.000068	0.000068	0.000068
18	0.000135	0.000135	0.000135	0.000072	0.000072	0.000072
19	0.000153	0.000153	0.000153	0.000075	0.000075	0.000075
20	0.000170	0.000170	0.000170	0.000076	0.000076	0.000076
21	0.000192	0.000192	0.000192	0.000078	0.000078	0.000078
22	0.000214	0.000214	0.000214	0.000080	0.000080	0.000080

Age	Males			Females		
	Non-Annuitant	Annuitant	Optional Combined Table for Small Plans	Non-Annuitant	Annuitant	Optional Combined Table for Small Plans
23	0.000229	0.000229	0.000229	0.000084	0.000084	0.000084
24	0.000238	0.000238	0.000238	0.000087	0.000087	0.000087
25	0.000230	0.000230	0.000230	0.000090	0.000090	0.000090
26	0.000226	0.000226	0.000226	0.000094	0.000094	0.000094
27	0.000226	0.000226	0.000226	0.000099	0.000099	0.000099
28	0.000230	0.000230	0.000230	0.000105	0.000105	0.000105
29	0.000238	0.000238	0.000238	0.000111	0.000111	0.000111
30	0.000249	0.000249	0.000249	0.000120	0.000120	0.000120
31	0.000263	0.000263	0.000263	0.000130	0.000130	0.000130
32	0.000278	0.000278	0.000278	0.000142	0.000142	0.000142
33	0.000294	0.000294	0.000294	0.000155	0.000155	0.000155
34	0.000309	0.000309	0.000309	0.000168	0.000168	0.000168
35	0.000323	0.000323	0.000323	0.000182	0.000182	0.000182
36	0.000336	0.000336	0.000336	0.000196	0.000196	0.000196
37	0.000350	0.000350	0.000350	0.000213	0.000213	0.000213
38	0.000366	0.000366	0.000366	0.000231	0.000231	0.000231
39	0.000385	0.000385	0.000385	0.000251	0.000251	0.000251
40	0.000410	0.000410	0.000410	0.000273	0.000273	0.000273
41	0.000438	0.000443	0.000438	0.000298	0.000296	0.000298
42	0.000474	0.000516	0.000474	0.000326	0.000344	0.000326
43	0.000518	0.000627	0.000519	0.000358	0.000419	0.000358
44	0.000573	0.000779	0.000577	0.000395	0.000520	0.000395
45	0.000636	0.000973	0.000644	0.000436	0.000651	0.000438
46	0.000712	0.001213	0.000726	0.000484	0.000813	0.000489
47	0.000798	0.001502	0.000820	0.000538	0.001010	0.000550
48	0.000896	0.001844	0.000930	0.000597	0.001245	0.000619
49	0.001005	0.002248	0.001056	0.000661	0.001522	0.000697
50	0.001128	0.002719	0.001200	0.000734	0.001844	0.000790
51	0.001265	0.002963	0.001350	0.000814	0.001961	0.000881
52	0.001418	0.003224	0.001542	0.000903	0.002099	0.000992
53	0.001580	0.003481	0.001761	0.001003	0.002263	0.001122
54	0.001761	0.003751	0.002017	0.001114	0.002454	0.001273
55	0.001964	0.004040	0.002393	0.001235	0.002673	0.001508
56	0.002200	0.004357	0.002884	0.001367	0.002921	0.001811
57	0.002474	0.004704	0.003317	0.001509	0.003200	0.002084
58	0.002796	0.005088	0.003805	0.001661	0.003512	0.002379
59	0.003174	0.005515	0.004341	0.001823	0.003860	0.002711
60	0.003613	0.005989	0.004951	0.001994	0.004238	0.003106
61	0.004122	0.006516	0.005639	0.002181	0.004659	0.003619
62	0.004705	0.007100	0.006406	0.002381	0.005119	0.004188
63	0.005364	0.007742	0.007243	0.002600	0.005616	0.004868
64	0.006111	0.008457	0.008071	0.002842	0.006165	0.005515
65	0.006940	0.009234	0.008966	0.003107	0.006766	0.006236
66	0.007779	0.010103	0.009945	0.003465	0.007430	0.007080
67	0.008697	0.011056	0.010940	0.003863	0.008170	0.007897

Age	Males			Females		
	Non-Annuitant	Annuitant	Optional Combined Table for Small Plans	Non-Annuitant	Annuitant	Optional Combined Table for Small Plans
68	0.009709	0.012114	0.012027	0.004308	0.008993	0.008770
69	0.010836	0.013302	0.013231	0.004806	0.009912	0.009722
70	0.012093	0.014637	0.014571	0.005366	0.010945	0.010756
71	0.013486	0.016126	0.016064	0.006001	0.012111	0.011925
72	0.015044	0.017799	0.017742	0.006711	0.013412	0.013230
73	0.016794	0.019693	0.019640	0.007521	0.014886	0.014711
74	0.018751	0.021823	0.021775	0.008439	0.016552	0.016387
75	0.020950	0.024237	0.024194	0.009485	0.018443	0.018291
76	0.023428	0.026986	0.026949	0.010678	0.020600	0.020465
77	0.026183	0.030081	0.030051	0.012035	0.023061	0.022949
78	0.029308	0.033645	0.033622	0.013582	0.025888	0.025804
79	0.032774	0.037661	0.037648	0.015347	0.029144	0.029097
80	0.036705	0.042295	0.042295	0.017347	0.032886	0.032886
81	0.038556	0.047291	0.047291	0.019058	0.036992	0.036992
82	0.042087	0.053009	0.053009	0.022345	0.041662	0.041662
83	0.047283	0.059466	0.059466	0.027251	0.047017	0.047017
84	0.054248	0.066860	0.066860	0.033811	0.053130	0.053130
85	0.062990	0.075196	0.075196	0.042053	0.060056	0.060056
86	0.073605	0.084646	0.084646	0.052009	0.067888	0.067888
87	0.086115	0.095308	0.095308	0.063725	0.076724	0.076724
88	0.100513	0.107196	0.107196	0.077205	0.086549	0.086549
89	0.116840	0.120431	0.120431	0.092462	0.097426	0.097426
90	0.135087	0.135087	0.135087	0.109484	0.109484	0.109484
91	0.150610	0.150610	0.150610	0.122541	0.122541	0.122541
92	0.166534	0.166534	0.166534	0.136397	0.136397	0.136397
93	0.182546	0.182546	0.182546	0.150811	0.150811	0.150811
94	0.198598	0.198598	0.198598	0.165818	0.165818	0.165818
95	0.214442	0.214442	0.214442	0.181360	0.181360	0.181360
96	0.232944	0.232944	0.232944	0.198746	0.198746	0.198746
97	0.251903	0.251903	0.251903	0.216930	0.216930	0.216930
98	0.271612	0.271612	0.271612	0.235921	0.235921	0.235921
99	0.291889	0.291889	0.291889	0.255617	0.255617	0.255617
100	0.312680	0.312680	0.312680	0.275938	0.275938	0.275938
101	0.333720	0.333720	0.333720	0.296628	0.296628	0.296628
102	0.354570	0.354570	0.354570	0.317471	0.317471	0.317471
103	0.375136	0.375136	0.375136	0.338385	0.338385	0.338385
104	0.395172	0.395172	0.395172	0.358868	0.358868	0.358868
105	0.413945	0.413945	0.413945	0.379183	0.379183	0.379183
106	0.432145	0.432145	0.432145	0.398878	0.398878	0.398878
107	0.449197	0.449197	0.449197	0.417703	0.417703	0.417703
108	0.465497	0.465497	0.465497	0.435384	0.435384	0.435384
109	0.480869	0.480869	0.480869	0.452108	0.452108	0.452108
110	0.495080	0.495080	0.495080	0.467928	0.467928	0.467928
111	0.500557	0.500557	0.500557	0.482562	0.482562	0.482562
112	0.500454	0.500454	0.500454	0.496164	0.496164	0.496164

Age	Males			Females		
	Non-Annuitant	Annuitant	Optional Combined Table for Small Plans	Non-Annuitant	Annuitant	Optional Combined Table for Small Plans
113	0.500352	0.500352	0.500352	0.502110	0.502110	0.502110
114	0.500201	0.500201	0.500201	0.500952	0.500952	0.500952
115	0.500000	0.500000	0.500000	0.500000	0.500000	0.500000
116	0.500000	0.500000	0.500000	0.500000	0.500000	0.500000
117	0.500000	0.500000	0.500000	0.500000	0.500000	0.500000
118	0.500000	0.500000	0.500000	0.500000	0.500000	0.500000
119	0.500000	0.500000	0.500000	0.500000	0.500000	0.500000
120	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000

(f) *Effective/applicability date*—(1) *In general.* Except as provided in paragraph (f)(2) of this section, this section applies to plan years beginning or after January 1, 2018.

(2) *Option to apply prior regulations in certain circumstances.* For a plan for which substitute mortality tables are not used pursuant to § 1.430(h)(3)–2 for a plan year beginning during 2018, mortality tables determined in accordance with § 1.430(h)(3)–1 as in effect on December 31, 2017 (as contained in 26 CFR part 1 revised April 1, 2017) may be used for purposes of applying the rules of section 430 for a valuation date occurring during 2018 if the plan sponsor—

(i) Concludes that the use of mortality tables determined in accordance with this section for the plan year would be administratively impracticable or would result in an adverse business impact that is greater than *de minimis*; and

(ii) Informs the actuary of the intent to apply the option under this paragraph (f)(2).

**Par. 3.** Section 1.430(h)(3)–2 is revised to read as follows:

**§ 1.430(h)(3)–2 Plan-specific substitute mortality tables used to determine present value.**

(a) *In general.* This section provides rules for the use of substitute mortality tables under section 430(h)(3)(C) in determining any present value or making any computation under section 430 in accordance with § 1.430(h)(3)–1(a)(1). To use substitute mortality tables for a plan, a plan sponsor must first obtain approval to use the tables in accordance with the procedures described in paragraph (b) of this

section. Paragraph (c) of this section provides rules for the development of substitute mortality tables, including guidelines providing that a plan must have either fully or partially credible mortality information in order to use substitute mortality tables. Paragraph (d) of this section describes the requirements for full credibility. Paragraph (e) of this section describes the requirements for partial credibility. Paragraph (f) of this section provides special rules for newly-affiliated plans. Paragraph (g) of this section specifies the effective date and applicability date of this section. The Commissioner may, in revenue rulings and procedures, notices, or other guidance published in the Internal Revenue Bulletin (see § 601.601(d)(2)(ii)(b) of this chapter), provide additional guidance regarding approval and use of substitute mortality tables under section 430(h)(3)(C) and related matters.

(b) *Procedures for obtaining approval to use substitute mortality tables*—(1) *Written request for approval to use substitute mortality tables*—(i) *General requirements.* To use substitute mortality tables, a plan sponsor must first submit a written request to the Commissioner demonstrating that those substitute mortality tables meet the requirements of section 430(h)(3)(C) and this section. This request must specify the first plan year, and the term of years (not more than 10), for which the tables are to apply.

(ii) *Time for written request.* Substitute mortality tables may not be used for a plan year unless the plan sponsor submits the written request described in paragraph (b)(1)(i) of this section at least 7 months before the first day of the first plan year for which the substitute mortality tables are to apply.

(2) *Commissioner’s review of request*—(i) *In general.* During the 180-day period that begins on the date the plan sponsor submits a request for approval to use substitute mortality tables for a plan pursuant to this section, the Commissioner will determine whether the request for approval to use substitute mortality tables satisfies the requirements of this section (including any published guidance issued pursuant to paragraph (a) of this section), and will either approve or deny the request. The Commissioner will deny a request if the request fails to meet the requirements of this section or if the Commissioner determines that a substitute mortality table does not reflect the actual mortality experience of the applicable population.

(ii) *Request for additional information.* The Commissioner may request additional information with respect to the submission and deny a request to use substitute mortality tables if the additional information is not provided in a timely manner.

(iii) *Deemed approval.* Except as provided in paragraph (b)(2)(iv) of this section, if the Commissioner does not issue a denial within the 180-day review period, the request is deemed to have been approved.

(iv) *Extension of time permitted.* The Commissioner and a plan sponsor may, before the expiration of the 180-day review period, agree in writing to extend that period.

(c) *Development of substitute mortality tables*—(1) *Substitute mortality tables must be used for all plans in controlled group*—(i) *General rule.* Except as otherwise provided in this paragraph (c), substitute mortality tables are permitted to be

used for a plan for a plan year only if, for that plan year (or any portion of that plan year), substitute mortality tables are also approved and used for each other pension plan subject to the requirements of section 430 that is maintained by the plan sponsor and by each member of the plan sponsor's controlled group. For purposes of this section, the term controlled group means any group that is treated as a single employer under paragraph (b), (c), (m), or (o) of section 414. See paragraph (c)(7) of this section for special rules applicable to multiple-employer plans.

(ii) *Treatment of plans without credible mortality information.* The rule of paragraph (c)(1)(i) of this section does not prohibit use of substitute mortality tables for one plan for a plan year if the only other plan or plans maintained by the plan sponsor (or by a member of the plan sponsor's controlled group) for which substitute mortality tables are not used are too small to have fully or partially credible mortality information for the plan year. For this purpose, the demonstration that neither males nor females under a plan have credible mortality information for a plan year must be made by analyzing the actual number of deaths over a period that is the same length as the longest experience study period used for any plan within the controlled group and that ends less than three years before the first day of the plan year.

(2) *Mortality experience requirements*—(i) *In general.* Substitute mortality tables must reflect the actual mortality experience of the pension plan for which the tables will be used, and that mortality experience must consist of credible mortality information as described in paragraph (c)(2)(ii) of this section. Separate substitute mortality tables must be established for each gender and, except as provided in paragraph (d)(6) of this section, a substitute mortality table is permitted to be established for a gender only if the plan has credible mortality information for that gender. See paragraph (d)(5) of this section for rules permitting the use of substitute mortality tables for separate populations within a gender in certain circumstances.

(ii) *Credible mortality information*—(A) *In general.* A plan has credible mortality information for a gender if and only

if the mortality experience with respect to that gender satisfies the requirement for either full credibility (as described in paragraph (d) of this section) or partial credibility (as described in paragraph (e) of this section).

(B) *Simplified rule.* Whether there is credible mortality information for a gender may be determined by only taking into account people who are at least age 50 and less than age 100. If there is credible mortality information for a gender using this simplified rule, the entire gender (not just those who are at least age 50 and less than age 100) has credible mortality information.

(iii) *Gender without credible mortality information*—(A) *In general.* If, for the first plan year substitute mortality tables will be used for a plan, one gender has credible mortality information but the other gender does not have credible mortality information, then substitute mortality tables are established for the gender that has credible mortality information, and the mortality tables under § 1.430(h)(3)–1 are used for the gender that does not have credible mortality information. For a subsequent plan year, the plan sponsor may continue to use substitute mortality tables for the gender with credible mortality information without using substitute mortality tables for the other gender only if the other gender continues to lack credible mortality information for that subsequent plan year.

(B) *Demonstration of lack of credible mortality information for a gender.* The demonstration that a gender does not have credible mortality information (that is, the individuals of that gender had fewer than the minimum number of actual deaths to have partial credibility, as described in paragraph (e)(1) of this section) for a plan year must be made by analyzing the actual number of deaths over a period that is the same length as the period for the experience study on which the substitute mortality tables are based and that ends less than three years before the first day of the plan year.

(3) *Determination of substitute mortality tables*—(i) *Requirement to use generational mortality table.* A plan's substitute mortality tables must be generational mortality tables. A plan's substitute mortality tables are determined using the plan's base substitute mortality tables developed

pursuant to paragraph (d) or (e) of this section and the mortality improvement factors described in paragraph (c)(3)(ii) of this section.

(ii) *Determination of mortality improvement factors.* The mortality improvement factor for an age and gender is the cumulative mortality improvement factor determined under § 1.430(h)(3)–1(a)(2)(i)(E) for that age and gender for the applicable period. The applicable period is the period beginning with the base year for the base substitute mortality table determined under paragraph (d) or (e) of this section and ending in the calendar year in which the individual attains the age for which the probability of death is being determined. The base year for the base substitute mortality table is the calendar year that contains the day before the midpoint of the experience study period.

(4) *Disabled individuals.* Under section 430(h)(3)(D), separate mortality tables are permitted to be used for certain disabled individuals. If the separate mortality tables issued under section 430(h)(3)(D) for certain disabled individuals are used, then those disabled individuals are disregarded for all purposes under this section. Thus, if the mortality tables under section 430(h)(3)(D) are used for disabled individuals under a plan, mortality experience with respect to those individuals must be excluded in developing mortality rates for substitute mortality tables under this section.

(5) *Aggregation*—(i) *Permissive aggregation of plans.* A plan sponsor may use the same substitute mortality tables for two or more of its plans provided that the rules of this section are applied by treating those plans as a single plan. In such a case, the substitute mortality tables must be based on data collected with respect to those aggregated plans.

(ii) *Required aggregation of plans.* In general, plans are not required to be aggregated for purposes of applying the rules of this section. However, for purposes of this section, a plan is required to be aggregated with any plan that was previously spun off from that plan if a purpose of the spinoff is to avoid the use of substitute mortality tables for any of the plans that were involved in the spinoff.

(iii) *Special rule regarding experience study if aggregated plans have different*

*plan years.* If two or more plans are aggregated pursuant to this paragraph (c)(5) and not all of the plans have the same plan year, then the experience study period may be a period that is not a multiple of 12 months, provided that—

(A) The period over which mortality experience is collected for each plan (the data study period) is a multiple of 12 months and is based on the plan year for that plan;

(B) The data study periods for all of the plans consist of the same number of years;

(C) The data study periods for all of the plans satisfy the experience study period requirements of paragraph (d)(2)(ii) of this section; and

(D) The data study periods for all of the plans have been selected to minimize the total period of time covered by the experience study period by overlapping (to the greatest extent possible) those data study periods.

(6) *Duration of use of tables*—(i) *General rule.* Except as provided in this paragraph (c)(6), substitute mortality tables are used for a plan for the term of consecutive plan years specified in the plan sponsor's written request for approval to use such tables under paragraph (b)(1) of this section and approved by the Commissioner, or a shorter period prescribed by the Commissioner in the approval to use substitute mortality tables. Following the end of the approved term of use, or following any early termination of use described in this paragraph (c)(6), the mortality tables specified in § 1.430(h)(3)–1 must be used for the plan unless approval under paragraph (b)(1) of this section has been received by the plan sponsor to use substitute mortality tables based on an updated experience study for a further term.

(ii) *Early termination of use of tables.* A plan's substitute mortality tables must not be used beginning with the earliest of—

(A) For a plan using a substitute mortality table for only one gender because of a lack of credible mortality information with respect to the other gender, the first plan year for which there is credible mortality information with respect to the gender that had lacked credible mortality information (unless an approved substitute mortality table is used for that gender);

(B) The first plan year for which the plan fails to satisfy the requirements of paragraph (c)(1) of this section (regarding use of substitute mortality tables for all plans in the controlled group), taking into account the rules of paragraph (f)(3) of this section (regarding the transition period for newly-affiliated plans);

(C) The second plan year following the plan year for which there is a significant change in individuals covered by the plan as described in paragraph (c)(6)(iii) of this section;

(D) The first plan year following the plan year for which a substitute mortality table used for a population is no longer accurately predictive of future mortality of that population, as determined by the Commissioner or as certified by the plan's actuary to the satisfaction of the Commissioner; or

(E) The date specified in guidance published in the Internal Revenue Bulletin (see § 601.601(d)(2)(ii)(b) of this chapter) in conjunction with a replacement of mortality tables specified under section 430(h)(3)(A) and § 1.430(h)(3)–1 (other than annual updates to the static mortality tables issued pursuant to § 1.430(h)(3)–1(a)(3) or changes to the mortality improvement rates pursuant to § 1.430(h)(3)–1(a)(2)(i)(C)).

(iii) *Significant change in coverage*—(A) *Change in coverage from time of experience study.* For purposes of applying the rules of paragraph (c)(6)(ii)(C) of this section, a significant change in the individuals covered by a substitute mortality table for a plan year occurs if the number of individuals covered by the substitute mortality table for the plan year is less than 80 percent or more than 120 percent of the average number of individuals in that population over the years covered by the experience study on which the substitute mortality tables are based. However, a change in coverage is not treated as significant if the plan's actuary certifies in writing to the satisfaction of the Commissioner that the substitute mortality tables used for the population continue to be accurately predictive of future mortality of that population (taking into account the effect of the change in the population).

(B) *Change in coverage from time of certification.* For purposes of applying the rules of paragraph (c)(6)(ii)(C) of this sec-

tion, a significant change in the individuals covered by a substitute mortality table for a plan year occurs if the number of individuals covered by the substitute mortality table for the plan year is less than 80 percent or more than 120 percent of the number of individuals covered by the substitute mortality table in a plan year for which a certification described in paragraph (c)(6)(iii)(A) of this section was made on account of a prior change in coverage. However, a change in coverage is not treated as significant if the plan's actuary certifies in writing to the satisfaction of the Commissioner that the substitute mortality tables used by the plan with respect to the covered population continue to be accurately predictive of future mortality of that population (taking into account the effect of the change in the population).

(7) *Multiple-employer plans*—(i) *General rule.* In the case of a multiple-employer plan described in section 413(c), the plan administrator (as described in section 414(g)) is treated as the plan sponsor for purposes of this section. If approval is received to use substitute mortality tables by a plan, those tables must apply on a plan-wide basis (even if the plan is subject to the rules of section 413(c)(4)(A)).

(ii) *Application of controlled group consistency rules.* In the case of an employer that participates in a multiple-employer plan, if the proportion of the plan's funding target attributable to the employees and former employees of the employer and members of its controlled group represents more than 50 percent of the plan's funding target, then the employer is treated as maintaining the plan for purposes of paragraph (c)(1) of this section. Thus, for a multiple-employer plan with credible mortality information that is treated as maintained by an employer under this paragraph (c)(7), unless substitute mortality tables are used for that plan, substitute mortality tables may not be used for any plan maintained by that employer or a member of its controlled group (and if substitute mortality tables are used for any other plan maintained by any member of the employer's controlled group, they must be used for the multiple-employer plan). By contrast, if the proportion of the plan's funding target attribut-

able to the employees and former employees of the employer and members of its controlled group represents 50 percent or less of the funding target for a multiple-employer plan in which it participates, then the employer is not treated as maintaining the plan for purposes of paragraph (c)(1) of this section. Accordingly, whether substitute mortality tables may be used for other plans in such an employer's controlled group is independent of whether substitute mortality tables are used for the multiple-employer plan.

(d) *Full credibility*—(1) *In general.* The mortality experience with respect to a gender or other population within a plan has full credibility if the actual number of deaths for that population during the experience study period described in paragraph (d)(2) of this section is at least the full credibility threshold described in paragraph (d)(3) of this section. Paragraph (d)(4) of this section provides rules for the creation of a base substitute mortality table from the experience study, which apply if the mortality experience for the population has full credibility. Paragraph (d)(5) of this section provides rules regarding the use of separate substitute mortality tables for plan populations within a gender. Paragraph (d)(6) of this section provides an option to use the combined mortality experience of both genders to determine the existence and extent of credible mortality information and to develop a single mortality ratio for use in constructing substitute mortality tables.

(2) *Experience study period requirements*—(i) *General rule.* The base substitute mortality table for a gender or other population must be developed from an experience study of the mortality experience of that population that is collected over an experience study period. The experience study period must consist of 2, 3, 4, or 5 consecutive 12-month periods, and must be the same period for all populations except as provided in paragraph (c)(5)(iii) of this section.

(ii) *Requirement to use recent experience data*—(A) *General rule.* Except as provided in paragraph (d)(2)(ii)(B) of this section, the last day of the experience study period must be less than 3 years before the first day of the first plan year for which the substitute mortality tables are to apply. For example, if January 1,

2019, is the first day of the first plan year for which the substitute mortality tables will be used, then an experience study using calendar year data generally must include data collected for a period that ends no earlier than December 31, 2016.

(B) *Exception for submission between 1 and 2 years before effective date of table.* If the plan sponsor submits a request for approval to use of substitute mortality tables more than 1 year (and less than 2 years) before the first day of the first plan year for which the substitute mortality tables are to apply, then the experience study is not treated as failing to satisfy the rule in paragraph (d)(2)(ii)(A) of this section if the last day of the final year reflected in the experience data is less than 2 years before the date of submission. For example, if an application for approval to use of substitute mortality tables that would apply for plan years beginning on or after January 1, 2019 year is submitted in 2017, then an experience study using calendar year data may be based on data collected for a period that ends as early as December 31, 2015.

(iii) *Experience study based on benefit amount.* As provided in paragraph (d)(4)(i) of this section, the mortality rates under the base substitute mortality tables are amounts-weighted mortality rates that are derived from the experience study. An individual's benefit amount (which is used to determine amounts-weighted mortality rates and for other purposes under this paragraph (d)) is the individual's accrued benefit expressed in the form of an annual benefit commencing at normal retirement age (or at the current age, if later) if an individual has not commenced benefits and the individual's annual payment if the individual has commenced benefits. Because amounts-weighted mortality rates for a plan are determined using benefit amounts, the experience study used to develop a base substitute mortality table may not include periods before the plan was established.

(3) *Full credibility threshold*—(i) *Threshold number of deaths.* The full credibility threshold for a gender or other population is the product of 1,082 and the population's benefit dispersion factor. In calculating the population's benefit dispersion factor, for purposes of para-

graphs (d)(3)(iii), (iv), and (v) of this section, the population is adjusted, as appropriate, for individuals who leave the population on account of a reason other than death.

(ii) *Population's benefit dispersion factor.* The population's benefit dispersion factor is equal to—

(A) The number of expected deaths for the population during the experience study period (as defined in paragraph (d)(3)(iii) of this section); multiplied by

(B) The sum of the mortality-weighted squares of the benefits (as defined in paragraph (d)(3)(iv) of this section); divided by

(C) The square of the sum of the mortality-weighted benefits (as defined in paragraph (d)(3)(v) of this section).

(iii) *Number of expected deaths.* For a population, the number of expected deaths during the experience study period is equal to the sum, for all years in the experience study period, of the expected number of deaths in the population during the year using the mortality rates from the standard mortality tables determined under paragraph (d)(4)(iii) of this section. This amount is equal to:

$$\sum_{t=1}^E \sum_{x=1}^{N_t} q_{xt}$$

Where E is equal to the number of years in the experience study period, t represents each year during the experience study period, x represents an individual in the population during year t,  $q_{xt}$  is the mortality rate for that individual's age and gender for the calendar year in which year t begins under the applicable standard mortality table determined under paragraph (d)(4)(iii) of this section, and  $N_t$  is equal to the number of individuals in the population in year t.

(iv) *Sum of the mortality-weighted squares of the benefits*—(A) *Determination.* For a population, the sum of the mortality-weighted squares of the benefits is the sum, for all years in the experience study period, for all individuals in the

population at the beginning of the year, of the product of—

(1) The probability of death for the individual using the mortality rate for the individual's age and gender from the standard mortality table determined under paragraph (d)(4)(iii) of this section; and

(2) The square of the benefit amount for the individual.

(B) *Expression as formula.* The sum of the mortality-weighted squares of the benefits for a population determined pursuant to paragraph (d)(3)(iv)(A) of this section is equal to:

$$\sum_{t=1}^E \sum_{x=1}^{N_t} q_{xt} b_{xt}^2$$

Where E is equal to the number of years in the experience study period, t represents each year during the experience study period, x represents an individual in the population during year t,  $q_{xt}$  is the mortality rate for that individual's age and gender for the calendar year in which year t begins under the applicable standard mortality table determined under paragraph (d)(4)(iii) of this section,  $b_{xt}$  is equal to the benefit amount for that individual for year t, and  $N_t$  is equal to the number of individuals in the population in year t.

(v) *Square of the sum of the mortality-weighted benefits—(A) Determination.* For a population, the square of the sum of the mortality-weighted benefits is equal to the square of the sum, for all years in the experience study period, for all individuals in the population at the beginning of the year, of the product of—

(1) The probability of death of the individual using the mortality rate for the individual's age and gender from the standard mortality table determined under paragraph (d)(4)(iii) of this section; and

(2) The benefit amount for the individual.

(B) *Expression as formula.* The square of the sum of the mortality-weighted benefits for a population determined pursuant to paragraph (d)(3)(v)(A) of this section is equal to:

$$\left( \sum_{t=1}^E \sum_{x=1}^{N_t} q_{xt} b_{xt} \right)^2$$

Where E is equal to the number of years in the experience study period, t represents each year during the experience study period, x represents an individual in the population during year t,  $q_{xt}$  is the mortality rate for that individual's age and gender for the calendar year in which t begins under the applicable standard mortality table determined under paragraph (d)(4)(iii) of this section,  $b_{xt}$  is equal to the benefit amount for that individual for year t, and  $N_t$  is equal to the number of individuals in the population in year t.

(4) *Development of mortality rates—*

(i) *In general.* The mortality rates under the base substitute mortality tables must be amounts-weighted mortality rates that are derived from the experience study. Except as provided in paragraph (d)(4)(iv) of this section, the mortality rate for an age and gender is determined by multiplying the mortality rate for that age and gender from the standard mortality table determined under paragraph (d)(4)(iii) of this section by the mortality ratio determined under paragraph (d)(4)(ii) of this section. If the simplified rule of paragraph (c)(2)(ii)(B) of this section is used for the population, then the mortality ratio is determined only taking into account people who are at least 50 years old and less than 100 years old, but the mortality ratio is applied to all ages.

(ii) *Mortality ratio—(A) In general.* Except as provided in paragraph (d)(6) of this section, a mortality ratio is determined for a gender or other population within a gender, and is equal to the quotient determined by dividing—

(1) The sum, for all years in the experience study period, of the benefit amount for all individuals in the population at the beginning of the year who died during the year, by

(2) The sum, for all years in the experience study period, for all individuals in the population at the beginning of the year (adjusted, as appropriate, for individuals

who leave on account of reason other than death), of the product of—

(i) The probability of death of the individual using the mortality rate for the individual's age and gender from the standard mortality table determined under paragraph (d)(4)(iii) of this section; and

(ii) The benefit amount for the individual.

(B) *Expression as formula.* For purposes of determining a mortality ratio as described in paragraph (d)(4)(ii)(A) of this section, the amount described in paragraph (d)(4)(ii)(A)(2) of this section is equal to:

$$\sum_{t=1}^E \sum_{x=1}^{N_t} q_{xt} b_{xt}$$

Where E is equal to the number of years in the experience study period, t represents each year during the experience study period, x represents an individual in the population during year t,  $q_{xt}$  is the mortality rate for that individual's age and gender for the calendar year in which t begins under the applicable standard mortality table determined under paragraph (d)(4)(iii) of this section,  $b_{xt}$  is equal to the benefit amount for that individual for year t, and  $N_t$  is equal to the number of individuals in the population in year t.

(iii) *Standard mortality table—(A) Projection of base table.* The standard mortality table for a year is the mortality table determined by applying cumulative mortality improvement factors determined under § 1.430(h)(3)-1(a)(2)(i)(E) to the base mortality table under § 1.430(h)(3)-1(d) for the period beginning with 2006 and ending in the base year for the base substitute mortality table determined under paragraph (c)(3)(ii) of this section. For purposes of the previous sentence, the cumulative mortality improvement factors are determined using the mortality improvement rates described in § 1.430(h)(3)-1(a)(2)(i)(C) that apply for the calendar year during which the plan sponsor submits the request for approval to use substitute mortality tables. If the plan sponsor submits such a request during 2017, then the cumulative mortality improvement factors are determined using the mortality improvement

rates contained in the Mortality Improvement Scale MP-2016 Report (issued by the Retirement Plans Experience Committee (RPEC) of the Society of Actuaries and available at [www.soa.org/Research/Experience-Study/Pension/research-2016-mp.aspx](http://www.soa.org/Research/Experience-Study/Pension/research-2016-mp.aspx)).

(B) *Selection of base table.* If the population consists solely of annuitants, the annuitant base mortality table set forth in § 1.430(h)(3)-1(d) must be used for purposes of paragraph (d)(4)(iii)(A) of this section. If the population consists solely of nonannuitants, the nonannuitant base mortality table set forth in § 1.430(h)(3)-1(d) must be used for that purpose. If the population includes both annuitants and nonannuitants, a combination of the annuitant and nonannuitant base tables set forth in § 1.430(h)(3)-1(d) must be used for that purpose. The combined table is constructed using the weighting factors for small plans that are set forth in § 1.430(h)(3)-1(d). The weighting factors are applied to develop the combined table using the following equation: Combined mortality rate = [nonannuitant rate \* (1-weighting factor)] + [annuitant rate \* weighting factor].

(iv) *Modification for ages 96 and older.* Mortality rates for ages 96 and older under the base substitute mortality table are determined using the rules of paragraph (d)(4)(i) of this section but substituting a modified mortality ratio for the mortality ratio determined under paragraph (d)(4)(ii) of this section. The modified mortality ratio is determined as follows—

(A) For ages 96 through 109, if the mortality ratio is greater than 1.0, the modified mortality ratio is equal to the mortality ratio for the population reduced by 1/15<sup>th</sup> of the excess of the mortality ratio over 1.0 for each year that the age exceeds 95.

(B) For ages 96 through 109, if the mortality ratio is less than 1.0, the modified mortality ratio is equal to the mortality ratio for the population increased by 1/15<sup>th</sup> of the excess of 1.0 over the mortality ratio for each year that the age exceeds 95.

(C) For ages 110 and older, the modified mortality ratio is equal to 1.0.

(v) *Change in number of individuals covered by table.* Experience data may not

be used to develop a base table if the number of individuals in the population covered by the table (for example, the male annuitant population) as of the last day of the plan year before the year the request for approval to use the substitute mortality table is made is less than 80 percent or more than 120 percent of the average number of individuals in that population over the years covered by the experience study on which the substitute mortality tables are based, unless it is demonstrated to the satisfaction of the Commissioner that the experience data is accurately predictive of future mortality of that population (taking into account the effect of the change in individuals) after appropriate adjustments to the data are made (for example, excluding data from individuals with respect to a spun-off portion of the plan). For this purpose, a reasonable estimate of the number of individuals in the population covered by the table may be used.

(5) *Separate tables for specified populations—(i) In general.* Except as provided in this paragraph (d)(5), separate substitute mortality tables are permitted to be used for separate populations within a gender only if—

(A) All individuals of that gender are divided into separate populations;

(B) Each separate population has mortality experience that has full credibility as determined under the rules of paragraph (d)(5)(iii) of this section; and

(C) The separate base substitute mortality table for each separate population is developed applying the rules of paragraphs (d)(1) through (4) of this section using an experience study that takes into account solely members of that population.

(ii) *Annuitant and nonannuitant separate populations.* Notwithstanding paragraph (d)(5)(i)(B) of this section, a gender may be separated into separate populations of annuitants and nonannuitants for the purpose of developing and using substitute mortality tables, even if only one of those separate populations has credible mortality information. Similarly, if separate populations that satisfy paragraph (d)(5)(i)(B) of this section are established, then any of those populations may be further subdivided into separate annuitant and nonannuitant subpopulations, pro-

vided that at least one of the two resulting subpopulations has credible mortality information. The standard mortality tables under § 1.430(h)(3)-1 are used for a resulting subpopulation that does not have credible mortality information. For example, if the male hourly and salaried populations under a plan each have mortality experience with full credibility and the male salaried annuitant population has credible mortality information, then substitute mortality tables may be used for the plan with respect to the male salaried annuitant population even if the standard mortality tables under § 1.430(h)(3)-1 are used with respect to the male salaried nonannuitant population (because that nonannuitant population does not have credible mortality information).

(iii) *Credible mortality information for separate populations.* In determining whether the mortality experience for a separate population within a gender has full credibility, the rules of paragraph (d)(1) of this section must be applied to that separate population. In demonstrating that an annuitant (or nonannuitant) population within a gender or within a separate population does not have credible mortality information, the rules of paragraph (c)(2)(iii)(B) of this section are applied by substituting the annuitant (or nonannuitant) population for the gender.

(6) *Option to determine a single mortality ratio for both genders.* Base substitute mortality tables for a plan may be constructed by developing and applying a single mortality ratio for both genders, but only if the substitute mortality tables used for all plans maintained by members of the plan sponsor's controlled group (except for plans for which both the male and female populations, considered separately, have mortality experience with full credibility) are constructed in this manner. If the option under this paragraph (d)(6) is applied for a plan then, for all plans maintained by members of the plan sponsor's controlled group, whether both the male and female populations within the plan have credible mortality information (and, if that combined population's mortality experience does not have full credibility, the partial credibility weighting factor for the plan) is determined using the combined mortality experience for both genders.

(e) *Partial credibility*—(1) *In general.* The mortality experience with respect to a population has partial credibility if the actual number of deaths for that population during the experience study period described in paragraph (d)(2) of this section is at least equal to 100 and is less than the full credibility threshold described for the population in paragraph (d)(3) of this section. If the mortality experience for the population has partial credibility, then in lieu of creating a base substitute mortality table as described in paragraph (d) of this section, the base substitute mortality table is created as the sum of—

(i) The product of—

(A) The partial credibility weighting factor determined under paragraph (e)(2) of this section; and

(B) The mortality rates that are derived from the experience study determined under paragraph (d)(4)(i) of this section, and

(ii) The product of—

(A) One minus the partial credibility weighting factor described in paragraph (e)(2) of this section; and

(B) The mortality rate from the standard mortality tables described in paragraph (d)(4)(iii) of this section.

(2) *Partial credibility weighting factor.* The partial credibility weighting factor is equal to the square root of the fraction—

(i) The numerator of which is the actual number of deaths for the population during the experience study period, and

(ii) The denominator of which is the full credibility threshold for the population described in paragraph (d)(3) of this section.

(f) *Special rules for newly-affiliated plans*—(1) *In general.* This paragraph (f) provides special rules that provide temporary relief from certain rules in this section in the case of a controlled group that includes a newly-affiliated plan (as defined in paragraph (f)(2) of this section). Paragraph (f)(3) of this section provides a transition period during which the requirement in paragraph (c)(1) of this section (that is, the requirement that all plans within the controlled group that have credible mortality information must use substitute mortality tables) is not applicable. Paragraph (f)(4) of this section provides special rules that permit the use of a shorter experience study period in the case of a newly-affiliated plan that excludes the

mortality experience data for the period before the date the plan becomes a newly-affiliated plan.

(2) *Definition of newly-affiliated plan.* For purposes of this paragraph (f), a plan is a newly-affiliated plan if the plan sponsor becomes a member of the new controlled group in connection with a merger, acquisition, or similar transaction described in § 1.410(b)–2(f). A plan also is treated as a newly-affiliated plan for purposes of this section if the plan is established in connection with a transfer of assets and liabilities from another employer's plan in connection with a merger, acquisition, or similar transaction described in § 1.410(b)–2(f).

(3) *Transition period for newly-affiliated plans.* The use of substitute mortality tables for a plan within a controlled group is not prohibited merely because, during the transition period, substitute mortality tables are not used for a newly-affiliated plan that fails to demonstrate a lack of credible mortality information during that period. Similarly, during the transition period, the use of substitute mortality tables for a newly-affiliated plan is not prohibited merely because substitute mortality tables are not used for another plan within the controlled group that fails to demonstrate a lack of credible mortality information during that period. The transition period begins on the date of the transaction that results in the plan becoming a newly-affiliated plan and ends on the last day of the plan year that immediately follows the latest ending period described in section 410(b)(6)(C)(ii) with respect to that transaction for any of the plans in the controlled group.

(4) *Experience study period for newly-affiliated plan*—(i) *In general.* The mortality experience data for a newly-affiliated plan may either include or exclude mortality experience data for the period before the date the plan becomes a newly-affiliated plan. If a plan sponsor excludes mortality experience data for the period before the date the plan becomes a newly-affiliated plan, the exclusion must apply for all populations within the plan.

(ii) *Demonstration relating to lack of credible mortality information.* If the experience study for a newly-affiliated plan excludes mortality experience data for the

period prior to the date the plan becomes a newly-affiliated plan, then the demonstration that the plan does not have credible mortality information for a plan year that begins after the transition period can be made using a shorter experience study period than would otherwise be permitted under paragraph (c)(2)(iii)(B) of this section, provided that the experience study period begins with the date the plan becomes a newly-affiliated plan and ends not more than one year and one day before the first day of the plan year.

(iii) *Demonstration relating to credible mortality information.* If the experience study for a newly-affiliated plan excludes mortality experience data for the period before the date the plan becomes a newly-affiliated plan and the plan fails to demonstrate that it does not have credible mortality information for the plan year under the rules of paragraph (f)(4)(ii) of this section, then other plans within the controlled group may continue to use substitute mortality tables only if substitute mortality tables are used for the newly-affiliated plan for the plan year. In such a case, the experience study period for the newly-affiliated plan may consist of a 12-month period.

(g) *Effective/applicability date*—(1) *General rule.* This section applies for plan years beginning on or after January 1, 2018. Except as provided in paragraph (g)(2) of this section, the substitute mortality table used for a plan for such a plan year must comply with the rules of paragraphs (a) through (f) of this section.

(2) *Transition rule for previously approved substitute mortality tables*—(i) *Applicability for 2018.* If a plan sponsor has received approval from the Commissioner to use substitute mortality tables for a plan year beginning in 2017, then that previous approval applies to a plan year beginning in 2018 provided that—

(A) The previous approval period had not ended;

(B) Substitute mortality tables are used for all plans in the plan sponsor's controlled group in accordance with the terms of that approval; and

(C) The projection factors provided in Projection Scale AA, as set forth in § 1.430(h)(3)–1(d) as in effect on December 31, 2017 (as contained in 26 CFR part

1 revised April 1, 2017) are applied to the base substitute mortality table.

(ii) *Applicability for later plan years.* If a plan sponsor is described in paragraph (g)(2)(i) of this section, then that previous approval applies to a later plan year provided that—

(A) The previous approval period had not ended;

(B) Substitute mortality tables are used for all plans in the plan sponsor's controlled group that have credible mortality information within the meaning of paragraph (c)(2)(ii) of this section; and

(C) The mortality improvement factors described in paragraph (c)(3)(ii) of this section are applied to the base substitute mortality table.

(3) *Transition rule for requests for approval to use substitute mortality tables.* A written request described in paragraph (b)(1)(i) of this section to use substitute mortality tables for a plan year that begins during 2018 does not fail to satisfy the timing requirement of paragraph (b)(1)(ii) of this section if it is submitted no later than February 28, 2018, provided that the plan sponsor agrees to a 90-day extension of the 180-day review period in accordance with paragraph (b)(2)(iv) of this section.

**Par. 4.** Section 1.431(c)(6)–1 is revised to read as follows:

**§ 1.431(c)(6)–1 Mortality tables used to determine current liability.**

(a) *Mortality tables used to determine current liability.* The mortality assumptions that apply to a defined benefit plan for the plan year pursuant to section 430(h)(3)(A) and § 1.430(h)(3)–1(a) are used to determine a multiemployer plan's current liability for purposes of applying the rules of section 431(c)(6). Either the generational mortality tables used pursuant to § 1.430(h)(3)–1(a)(2) or the static mortality tables used pursuant to § 1.430(h)(3)–1(a)(3) may be used for a multiemployer plan for this purpose. However, for this purpose, substitute mortality tables under § 1.430(h)(3)–2 may not be used for a multiemployer plan.

(b) *Effective/applicability date.* This section applies for plan years beginning on or after January 1, 2018. For rules that apply to plan years beginning before January 1, 2018 and on or after January 1, 2008, see § 1.431(c)(6)–1 (as contained in 26 CFR part 1 revised April 1, 2015).

**Par. 5.** Section 1.433(h)(3)–1 is added to read as follows:

**§ 1.433(h)(3)–1 Mortality tables used to determine current liability.**

(a) *Mortality tables used to determine current liability.* In accordance with sec-

tion 433(h)(3)(B), the mortality assumptions that apply to a defined benefit plan for the plan year pursuant to section 430(h)(3)(A) and § 1.430(h)(3)–1(a) are used to determine a CSEC plan's current liability for purposes of applying the rules of section 433(c)(7)(C). Either the static mortality tables used pursuant to § 1.430(h)(3)–1(a)(3) or generational mortality tables used pursuant to § 1.430(h)(3)–1(a)(2) may be used for a CSEC plan for this purpose, but substitute mortality tables under § 1.430(h)(3)–2 may not be used for this purpose.

(b) *Effective/applicability date.* This section applies for plan years beginning on or after January 1, 2018.

Kirsten Wielobob,  
*Deputy Commissioner for Services and Enforcement.*  
Approved: August 21, 2017.

David Kautter,  
*Assistant Secretary of the Treasury for Tax Policy.*

[Federal Register publication information was not available at time of publication in the Internal Revenue Bulletin.]

## Part III. Administrative, Procedural, and Miscellaneous

### Presence of Certain Individuals in the Commonwealth of Puerto Rico or the United States Virgin Islands Under Section 937(a) Following Hurricane Irma or Hurricane Maria

#### Notice 2017-56

##### SECTION 1. OVERVIEW

Section 937(a) of the Internal Revenue Code provides that an individual will be considered a “bona fide resident” of a U.S. territory for certain purposes if the individual meets a “presence test” and does not have a “tax home” or “closer connection” to a jurisdiction outside of the U.S. territory. For purposes of the presence test, an individual is considered to be present in a U.S. territory on any day that the individual is outside the relevant territory because the individual leaves or is unable to return to the relevant territory during any 14-day period within which a major disaster occurs in the relevant U.S. territory for which a Federal Emergency Management Agency (“FEMA”) Notice of a Presidential declaration of a major disaster is issued in the Federal Register. Section 1.937-1(c)(3)(i)(C)(I). In response to the unprecedented and catastrophic damage caused by Hurricane Irma and Hurricane Maria to the Commonwealth of Puerto Rico and the United States Virgin Islands (collectively, the “impacted U.S. territories”), FEMA has issued Notices of a Presidential declaration of a major disaster for the impacted U.S. territories with respect to both hurricanes. See FEMA-4335-DR (issued September 7, 2017); FEMA-4336-DR (issued September 10, 2017); FEMA-4339-DR (issued September 20, 2017); and FEMA-4340-DR (issued September 20, 2017). This Notice provides relief for individuals who may otherwise lose their status as a “bona fide resident” of an impacted U.S. territory under section 937(a) as a result of the unexpected and prolonged dislocation caused by Hurricane Irma and Hurricane Maria, absent an exten-

sion of the 14-day period contained in § 1.937-1(c)(3)(i)(C)(I).

##### SECTION 2. RELIEF UNDER THE PRESENCE TEST

With respect to the impacted U.S. territories, for purposes of § 1.937-1(c)(3)(i)(C)(I), the 14-day period is extended to 117 days, effective beginning September 6, 2017, and ending December 31, 2017. Further, for this same purpose, an individual who is outside of an impacted U.S. territory on any day during this 117-day period will be treated as leaving or being unable to return to the relevant U.S. territory as a result of Hurricane Irma and Hurricane Maria on such day.

##### SECTION 3. DRAFTING INFORMATION

The principal author of this notice is Alan S. Williams of the Office of Associate Chief Counsel (International). For further information regarding this Notice, contact Mr. Williams at (202) 317-6941 (not a toll-free number).

### Updated Static Mortality Tables for Defined Benefit Pension Plans for 2018

#### Notice 2017-60

##### PURPOSE

This notice sets forth the mortality table that is used for purposes of determining minimum present value under § 417(e)(3) of the Internal Revenue Code (Code) and section 205(g)(3) of the Employee Retirement Income Security Act of 1974, Public Law No. 93-406, as amended, for distributions with annuity starting dates that occur during stability periods beginning in the 2018 calendar year. This mortality table is a modified unisex version of the mortality tables specified under § 430(h)(3)(A) of the Code, which have been revised pursuant to § 430(h)(3)(B) by T.D. 9826, for plan years beginning in 2018.

This notice also provides updated static mortality tables determined using the

methodology in § 1.430(h)(3)-1 prior to its amendment by T.D. 9826. These updated static mortality tables apply for plan years beginning during 2017 with respect to valuation dates occurring during 2018. These updated static mortality tables also apply for the plan year beginning during 2018 if the option under § 1.430(h)(3)-1(f)(2) is used for the plan. The option under § 1.430(h)(3)-1(f)(2), which is available under certain circumstances for valuation dates occurring during 2018, is to apply mortality tables determined in accordance with regulations previously in effect.

##### BACKGROUND

Section 412 of the Code provides minimum funding requirements that generally apply for defined benefit plans. Section 412(a)(2) provides that § 430 specifies the minimum funding requirements that generally apply to defined benefit plans that are not multiemployer plans. Section 430(a) defines the minimum required contribution for such a plan by reference to the plan’s funding target for the plan year. Under § 430(d)(1), a plan’s funding target for a plan year generally is the present value of all benefits accrued or earned under the plan as of the first day of that plan year.

Section 430(h)(3) provides rules regarding the mortality tables that are generally used under § 430. Under § 430(h)(3)(A), except as provided in § 430(h)(3)(C) or (D), the Secretary is to prescribe by regulation mortality tables to be used in determining any present value or making any computation under § 430. Those tables are to be based on the actual experience of pension plans and projected trends in that experience. Section 430(h)(3)(B) requires the Secretary to revise any table in effect under § 430(h)(3)(A) at least every 10 years to reflect the actual experience of pension plans and projected trends in that experience.

Section 430(h)(3)(C) provides that, upon request by a plan sponsor and approval by the Secretary, substitute mortality tables that meet the applicable requirements may be used in lieu of the standard mortality tables provided under § 430(h)

(3)(A). Section 430(h)(3)(D) provides for the use of separate mortality tables with respect to certain individuals who are entitled to benefits on account of disability.

Section 417(e)(3) generally provides that the present value of certain accelerated forms of benefit under a qualified pension plan (including single-sum distributions) must not be less than the present value of the accrued benefit using applicable interest rates and the applicable mortality table. Section 417(e)(3)(B) defines the term “applicable mortality table” as the mortality table specified for the plan year under § 430(h)(3)(A) (without regard to § 430(h)(3)(C) or (D)), modified as appropriate by the Secretary.

Section 1.430(h)(3)–1 was amended on October 5, 2017, by T.D. 9826, 82 F.R. 46388, to revise the mortality tables used under § 430(h)(3)(A) for plan years beginning on or after January 1, 2018. The mortality tables used under § 430(h)(3)(A) are based on the tables contained in the RP–2014 Mortality Tables Report,<sup>31</sup> adjusted for mortality improvement. Section 1.430(h)(3)–1 sets forth base mortality tables with a base year of 2006. For valuation dates during 2018, these base mortality tables are adjusted for mortality improvement using the mortality improvement rates contained in the Mortality Improvement Scale MP–2016 Report.<sup>32</sup>

Section 1.430(h)(3)–1(f)(2) provides under certain circumstances an option to apply mortality tables determined in accordance with regulations previously in effect for purposes of applying the rules of § 430 for the 2018 plan year. Under § 1.430(h)(3)–1(f)(2), for a plan for which substitute mortality tables are not used pursuant to § 1.430(h)(3)–2 for a plan year beginning during 2018, mortality tables determined in accordance with § 1.430(h)(3)–1 as in effect prior to amendment by T.D. 9826 (referred to in this notice as former § 1.430(h)(3)–1) may be used for purposes of applying the rules of § 430 for a valuation date occurring during 2018 if

the plan sponsor: (1) concludes that use of mortality tables determined in accordance with § 1.430(h)(3)–1 for that plan year would be administratively impracticable or would result in an adverse business impact that is greater than *de minimis*, and (2) informs the actuary for the plan of the intent to apply the option under § 1.430(h)(3)–1(f)(2).

Former § 1.430(h)(3)–1 provided for mortality tables based on the tables contained in the RP–2000 Mortality Tables Report, adjusted for mortality improvement. The regulations permitted plan sponsors to apply the projection of mortality improvement in either of two ways: (1) through use of static tables that were updated annually to reflect expected improvements in mortality, or (2) through use of generational tables. Former § 1.430(h)(3)–1(b)(1) generally required the use of separate tables for annuitant and nonannuitant periods for large plans (those with over 500 participants as of the valuation date). Sponsors of small plans (those with 500 or fewer participants as of the valuation date) were permitted to use combined tables that apply the same mortality rates to both annuitants and nonannuitants pursuant to former § 1.430(h)(3)–1(b)(2). Former § 1.430(h)(3)–1(a)(3) provided that the static mortality tables for valuation dates occurring in years after 2008 were to be provided in the Internal Revenue Bulletin.

Rev. Rul. 2007–67, 2007–2 CB 1047, provides that, except as otherwise stated in future guidance, the applicable mortality table under § 417(e)(3) is a static mortality table set forth in published guidance that is developed based on a fixed blend of 50 percent of the static male combined mortality rates and 50 percent of the static female combined mortality rates used under § 1.430(h)(3)–1. Rev. Rul. 2007–67 also provides that the applicable mortality table for a calendar year applies to distributions with an-

nuity starting dates that occur during stability periods that begin during that calendar year.

## STATIC MORTALITY TABLES FOR 2018

### Section 430

Section 1.430(h)(3)–1(e) provides the static mortality tables that generally apply for 2018 under section 430(h)(3)(A).

Static mortality tables for 2018 determined in accordance with former § 1.430(h)(3)–1 are set forth in Appendix A of this Notice. These static mortality tables apply under § 430(h)(3)(A): (1) for valuation dates occurring during 2018 with respect to plan years beginning during 2017, and (2) with respect to plan years beginning during 2018 if the option under § 1.430(h)(3)–1(f)(2) is used for a plan.

### Section 417(e)(3)

The mortality table that applies under § 417(e)(3) for distributions with annuity starting dates occurring during stability periods beginning in 2018 is set forth in Appendix B of this Notice. The mortality rates in this table are derived from the mortality tables specified under § 430(h)(3)(A) for the 2018 plan year (which are set forth in § 1.430(h)(3)–1(e)) by following the procedures set forth in Rev. Rul. 2007–67. This mortality table applies to a plan for 2018 (including for purposes of § 1.430(d)–1(f)(4)(iii)(B)) regardless of whether the option under § 1.430(h)(3)–1(f)(2) is used for the plan.

### Drafting Information

The principal authors of this notice are Arslan Malik and Linda S. F. Marshall of the Office of the Associate Chief Counsel (Tax Exempt and Government Entities). For further information regarding this notice, contact Arslan Malik or Linda Marshall at (202) 317-6700 (not a toll-free number).

<sup>31</sup>The RP–2014 Mortality Tables Report, as revised November 2014, is available at [www.soa.org/Research/Experience-Study/pension/research-2014-rp.aspx](http://www.soa.org/Research/Experience-Study/pension/research-2014-rp.aspx).

<sup>32</sup>The Mortality Improvement Scale MP–2016 Report is available at [www.soa.org/Research/Experience-Study/Pension/research-2016-mp.aspx](http://www.soa.org/Research/Experience-Study/Pension/research-2016-mp.aspx).

**APPENDIX A**

**STATIC MORTALITY TABLES DETERMINED UNDER FORMER § 1.430(h)(3)–1(c) and (d) (APPLICABLE FOR VALUATION DATES IN 2018 FOR PLAN YEARS BEGINNING IN 2017 OR IF THE OPTION UNDER § 1.430(h)(3)–1(f)(2) IS USED)**

Age	MALE	MALE	MALE	FEMALE	FEMALE	FEMALE
	2018 Non-Annuitant Mortality Rate	2018 Annuitant Mortality Rate	2018 Optional Combined Table for Small Plans	2018 Non-Annuitant Mortality Rate	2018 Annuitant Mortality Rate	2018 Optional Combined Table for Small Plans
1	0.000327	0.000327	0.000327	0.000293	0.000293	0.000293
2	0.000221	0.000221	0.000221	0.000191	0.000191	0.000191
3	0.000183	0.000183	0.000183	0.000143	0.000143	0.000143
4	0.000143	0.000143	0.000143	0.000107	0.000107	0.000107
5	0.000131	0.000131	0.000131	0.000097	0.000097	0.000097
6	0.000125	0.000125	0.000125	0.000090	0.000090	0.000090
7	0.000120	0.000120	0.000120	0.000085	0.000085	0.000085
8	0.000111	0.000111	0.000111	0.000075	0.000075	0.000075
9	0.000107	0.000107	0.000107	0.000072	0.000072	0.000072
10	0.000109	0.000109	0.000109	0.000072	0.000072	0.000072
11	0.000112	0.000112	0.000112	0.000073	0.000073	0.000073
12	0.000117	0.000117	0.000117	0.000076	0.000076	0.000076
13	0.000123	0.000123	0.000123	0.000080	0.000080	0.000080
14	0.000135	0.000135	0.000135	0.000089	0.000089	0.000089
15	0.000143	0.000143	0.000143	0.000100	0.000100	0.000100
16	0.000151	0.000151	0.000151	0.000107	0.000107	0.000107
17	0.000160	0.000160	0.000160	0.000116	0.000116	0.000116
18	0.000168	0.000168	0.000168	0.000118	0.000118	0.000118
19	0.000176	0.000176	0.000176	0.000115	0.000115	0.000115
20	0.000183	0.000183	0.000183	0.000112	0.000112	0.000112
21	0.000196	0.000196	0.000196	0.000109	0.000109	0.000109
22	0.000208	0.000208	0.000208	0.000110	0.000110	0.000110
23	0.000227	0.000227	0.000227	0.000116	0.000116	0.000116
24	0.000244	0.000244	0.000244	0.000122	0.000122	0.000122
25	0.000270	0.000270	0.000270	0.000130	0.000130	0.000130
26	0.000310	0.000310	0.000310	0.000144	0.000144	0.000144
27	0.000324	0.000324	0.000324	0.000150	0.000150	0.000150
28	0.000333	0.000333	0.000333	0.000158	0.000158	0.000158
29	0.000349	0.000349	0.000349	0.000167	0.000167	0.000167
30	0.000376	0.000376	0.000376	0.000189	0.000189	0.000189
31	0.000423	0.000423	0.000423	0.000236	0.000236	0.000236
32	0.000476	0.000476	0.000476	0.000269	0.000269	0.000269
33	0.000535	0.000535	0.000535	0.000292	0.000292	0.000292
34	0.000595	0.000595	0.000595	0.000312	0.000312	0.000312
35	0.000655	0.000655	0.000655	0.000330	0.000330	0.000330
36	0.000713	0.000713	0.000713	0.000345	0.000345	0.000345
37	0.000766	0.000766	0.000766	0.000360	0.000360	0.000360
38	0.000790	0.000790	0.000790	0.000376	0.000376	0.000376
39	0.000810	0.000810	0.000810	0.000394	0.000394	0.000394

Age	MALE 2018 Non-Annuitant Mortality Rate	MALE 2018 Annuitant Mortality Rate	MALE 2018 Optional Combined Table for Small Plans	FEMALE 2018 Non-Annuitant Mortality Rate	FEMALE 2018 Annuitant Mortality Rate	FEMALE 2018 Optional Combined Table for Small Plans
40	0.000828	0.000828	0.000828	0.000429	0.000429	0.000429
41	0.000847	0.000875	0.000847	0.000470	0.000470	0.000470
42	0.000872	0.000968	0.000873	0.000517	0.000517	0.000517
43	0.000902	0.001108	0.000905	0.000569	0.000569	0.000569
44	0.000938	0.001295	0.000944	0.000625	0.000625	0.000625
45	0.000979	0.001528	0.000991	0.000660	0.000668	0.000660
46	0.001015	0.001808	0.001037	0.000695	0.000754	0.000696
47	0.001053	0.002135	0.001087	0.000728	0.000883	0.000732
48	0.001092	0.002508	0.001143	0.000787	0.001055	0.000796
49	0.001133	0.002928	0.001206	0.000851	0.001270	0.000869
50	0.001174	0.003395	0.001275	0.000952	0.001527	0.000981
51	0.001215	0.003422	0.001325	0.001065	0.001643	0.001099
52	0.001257	0.003406	0.001404	0.001235	0.001861	0.001282
53	0.001346	0.003453	0.001547	0.001433	0.002141	0.001500
54	0.001444	0.003498	0.001709	0.001666	0.002481	0.001763
55	0.001608	0.003655	0.002031	0.001938	0.002889	0.002118
56	0.001815	0.003889	0.002473	0.002260	0.003377	0.002579
57	0.002060	0.004198	0.002868	0.002551	0.003869	0.003000
58	0.002347	0.004607	0.003342	0.002789	0.004341	0.003391
59	0.002592	0.005001	0.003793	0.003050	0.004880	0.003848
60	0.002865	0.005476	0.004336	0.003332	0.005470	0.004391
61	0.003268	0.006169	0.005107	0.003632	0.006104	0.005067
62	0.003594	0.006795	0.005868	0.003946	0.006783	0.005818
63	0.004064	0.007698	0.006936	0.004271	0.007507	0.006704
64	0.004413	0.008518	0.007843	0.004601	0.008288	0.007566
65	0.004756	0.009433	0.008887	0.004934	0.009143	0.008534
66	0.005259	0.010720	0.010349	0.005261	0.010069	0.009645
67	0.005583	0.011867	0.011559	0.005579	0.011063	0.010716
68	0.005695	0.012794	0.012538	0.005886	0.012149	0.011850
69	0.005972	0.014133	0.013900	0.006178	0.013368	0.013100
70	0.006026	0.015219	0.014980	0.006452	0.014770	0.014488
71	0.006827	0.016839	0.016605	0.007035	0.015984	0.015711
72	0.008428	0.018697	0.018483	0.008200	0.017778	0.017518
73	0.010830	0.020825	0.020643	0.009948	0.019270	0.019049
74	0.014033	0.023233	0.023089	0.012278	0.021358	0.021174
75	0.018037	0.026595	0.026484	0.015191	0.022993	0.022860
76	0.022841	0.029643	0.029572	0.018686	0.025332	0.025242
77	0.028446	0.033819	0.033777	0.022764	0.028612	0.028552
78	0.034852	0.038544	0.038525	0.027424	0.031540	0.031512
79	0.042059	0.043933	0.043928	0.032667	0.034821	0.034814
80	0.050067	0.050067	0.050067	0.038490	0.038490	0.038490
81	0.057467	0.057467	0.057467	0.042601	0.042601	0.042601
82	0.065843	0.065843	0.065843	0.047227	0.047227	0.047227

Age	MALE			FEMALE		
	2018 Non-Annuitant Mortality Rate	2018 Annuitant Mortality Rate	2018 Optional Combined Table for Small Plans	2018 Non-Annuitant Mortality Rate	2018 Annuitant Mortality Rate	2018 Optional Combined Table for Small Plans
83	0.073396	0.073396	0.073396	0.052439	0.052439	0.052439
84	0.083709	0.083709	0.083709	0.058321	0.058321	0.058321
85	0.092919	0.092919	0.092919	0.066628	0.066628	0.066628
86	0.103019	0.103019	0.103019	0.076203	0.076203	0.076203
87	0.117040	0.117040	0.117040	0.087152	0.087152	0.087152
88	0.132854	0.132854	0.132854	0.097072	0.097072	0.097072
89	0.146819	0.146819	0.146819	0.110532	0.110532	0.110532
90	0.165921	0.165921	0.165921	0.122153	0.122153	0.122153
91	0.180722	0.180722	0.180722	0.134140	0.134140	0.134140
92	0.200931	0.200931	0.200931	0.146213	0.146213	0.146213
93	0.216754	0.216754	0.216754	0.162113	0.162113	0.162113
94	0.232553	0.232553	0.232553	0.173875	0.173875	0.173875
95	0.254433	0.254433	0.254433	0.185013	0.185013	0.185013
96	0.270045	0.270045	0.270045	0.195353	0.195353	0.195353
97	0.285214	0.285214	0.285214	0.209923	0.209923	0.209923
98	0.307507	0.307507	0.307507	0.218415	0.218415	0.218415
99	0.322050	0.322050	0.322050	0.225671	0.225671	0.225671
100	0.336045	0.336045	0.336045	0.231601	0.231601	0.231601
101	0.358628	0.358628	0.358628	0.244834	0.244834	0.244834
102	0.371685	0.371685	0.371685	0.254498	0.254498	0.254498
103	0.383040	0.383040	0.383040	0.266044	0.266044	0.266044
104	0.392003	0.392003	0.392003	0.279055	0.279055	0.279055
105	0.397886	0.397886	0.397886	0.293116	0.293116	0.293116
106	0.400000	0.400000	0.400000	0.307811	0.307811	0.307811
107	0.400000	0.400000	0.400000	0.322725	0.322725	0.322725
108	0.400000	0.400000	0.400000	0.337441	0.337441	0.337441
109	0.400000	0.400000	0.400000	0.351544	0.351544	0.351544
110	0.400000	0.400000	0.400000	0.364617	0.364617	0.364617
111	0.400000	0.400000	0.400000	0.376246	0.376246	0.376246
112	0.400000	0.400000	0.400000	0.386015	0.386015	0.386015
113	0.400000	0.400000	0.400000	0.393507	0.393507	0.393507
114	0.400000	0.400000	0.400000	0.398308	0.398308	0.398308
115	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
116	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
117	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
118	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
119	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
120	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000

**APPENDIX B**

**APPLICABLE MORTALITY TABLE FOR DISTRIBUTIONS SUBJECT TO § 417(e)(3) WITH ANNUITY STARTING DATES OCCURRING IN STABILITY PERIODS BEGINNING IN 2018**

<b>Age</b>	<b>Mortality Rate</b>	<b>Age</b>	<b>Mortality Rate</b>	<b>Age</b>	<b>Mortality Rate</b>
0	0.002327				
1	0.000141	41	0.000368	81	0.042142
2	0.000095	42	0.000400	82	0.047336
3	0.000076	43	0.000439	83	0.053242
4	0.000059	44	0.000486	84	0.059995
5	0.000052	45	0.000541	85	0.067626
6	0.000048	46	0.000608	86	0.076267
7	0.000044	47	0.000685	87	0.086016
8	0.000039	48	0.000775	88	0.096873
9	0.000035	49	0.000877	89	0.108929
10	0.000031	50	0.000995	90	0.122286
11	0.000033	51	0.001116	91	0.136576
12	0.000043	52	0.001267	92	0.151466
13	0.000053	53	0.001442	93	0.166679
14	0.000063	54	0.001645	94	0.182208
15	0.000073	55	0.001951	95	0.197901
16	0.000083	56	0.002348	96	0.215845
17	0.000093	57	0.002701	97	0.234417
18	0.000104	58	0.003092	98	0.253767
19	0.000114	59	0.003526	99	0.273753
20	0.000123	60	0.004029	100	0.294309
21	0.000135	61	0.004629	101	0.315174
22	0.000147	62	0.005297	102	0.336021
23	0.000157	63	0.006056	103	0.356761
24	0.000163	64	0.006793	104	0.377020
25	0.000160	65	0.007601	105	0.396564
26	0.000160	66	0.008513	106	0.415512
27	0.000163	67	0.009419	107	0.433450
28	0.000168	68	0.010399	108	0.450441
29	0.000175	69	0.011477	109	0.466489
30	0.000185	70	0.012664	110	0.481504
31	0.000197	71	0.013995	111	0.491560
32	0.000210	72	0.015486	112	0.498309
33	0.000225	73	0.017176	113	0.501231
34	0.000239	74	0.019081	114	0.500577
35	0.000253	75	0.021243	115	0.500000
36	0.000266	76	0.023707	116	0.500000
37	0.000282	77	0.026500	117	0.500000
38	0.000299	78	0.029713	118	0.500000
39	0.000318	79	0.033373	119	0.500000
40	0.000342	80	0.037591	120	1.000000

# Adjusted Applicable Dollar Amount for Fee Imposed by Sections 4375 and 4376

## Notice 2017-61

### I. PURPOSE

This notice provides the adjusted applicable dollar amount to be multiplied by the average number of covered lives for purposes of the fee imposed by §§ 4375 and 4376 of the Internal Revenue Code for policy years and plan years that end on or after October 1, 2017, and before October 1, 2018.

### II. BACKGROUND

Section 4375 imposes a fee on the issuer of a specified health insurance policy for each policy year ending after September 30, 2012, and before October 1, 2019. Section 4376 imposes a fee on the plan sponsor of an applicable self-insured health plan for each plan year ending after September 30, 2012, and before October 1, 2019. The fee imposed by §§ 4375 and 4376 helps to fund the Patient-Centered Outcomes Research Trust Fund (PCORTF) and is calculated using the average number of lives covered under the policy or plan and the applicable dollar amount for that policy year or plan year. Under §§ 4375(a) and 4376(a), the applicable dollar amount is \$2 for policy and plan years ending on or after October 1, 2013, and before October 1, 2014.<sup>33</sup> Treas.

Reg. §§ 46.4375-1(c)(4) and 46.4376-1(c)(3).

Under §§ 4375(d) and 4376(d) and Treas. Reg. §§ 46.4375-1(c)(4) and 46.4376-1(c)(3), the applicable dollar amount for policy years and plan years ending in any Federal fiscal year beginning on or after October 1, 2014 is increased based on increases in the projected per capita amount of National Health Expenditures.

Specifically, the applicable dollar amount is the sum of –

- (i) The applicable dollar amount for the policy year or plan year ending in the previous Federal fiscal year; plus
- (ii) The amount equal to the product of –
  - (A) The applicable dollar amount for the policy year or plan year ending in the previous Federal fiscal year; and
  - (B) The percentage increase in the projected per capita amount of the National Health Expenditures most recently released by the Department of Health and Human Services (HHS) before the beginning of the Federal fiscal year.

Notice 2016-64, 2016-46, I.R.B. 726, provides that the adjusted applicable dollar amount for policy years and plan years that end on or after October 1, 2016, and before October 1, 2017, is \$2.26.

### III. ADJUSTED APPLICABLE DOLLAR AMOUNT

The applicable dollar amount that must be used to calculate the fee imposed by

§§ 4375 and 4376 for policy years and plan years that end on or after October 1, 2017, and before October 1, 2018, is \$2.39. The increase from the prior amount is calculated by multiplying the adjusted applicable dollar amount for policy years and plan years ending in the previous Federal fiscal year, \$2.26, by the percentage increase of the projected per capita amount of National Health Expenditures published by HHS on February 14, 2017. See : <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsProjected.html>, Table 3. The percentage increase is calculated after adjustment to reflect updates to the data used to calculate the prior amount, \$2.26, which was based on the per capita amounts of National Health Expenditures for 2016 and 2017 published by HHS on July 12, 2016.

### IV. EFFECTIVE DATE

This notice is effective for policy years and plan years ending on or after October 1, 2017.

### V. DRAFTING INFORMATION

The principal author of this notice is Stephanie L. Caden of the Office of Associate Chief Counsel (Tax Exempt & Government Entities). For further information regarding this notice, contact Ms. Caden at (202) 317-5500 (not a toll-free number).

<sup>33</sup>The applicable dollar amount is \$1 for policy and plan years ending before October 1, 2013.

## Part IV. Items of General Interest

### Rev. Proc. 2017-46

#### SECTION 1. PURPOSE

This revenue procedure supplements the listing in Section 3 of Revenue Procedure 2014-64, 2014-53 I.R.B. 1022, as previously supplemented by Rev. Proc. 2016-56, 2016-52 I.R.B. 920, of the countries with respect to which the reporting requirement of §§ 1.6049-4(b)(5) and 1.6049-8(a) of the Income Tax Regulations applies, effective for interest paid on or after January 1, 2018.

This revenue procedure also supplements the listing in Section 4 of Revenue Procedure 2014-64, as previously supplemented by Rev. Proc. 2015-50, 2015-42 I.R.B. 583, Rev. Proc. 2016-18, 2016-17 I.R.B. 635, Rev. Proc. 2016-56, and Rev. Proc. 2017-31, 2017-16 I.R.B. 1104, of the countries with which the Department of the Treasury (Treasury Department) and the Internal Revenue Service (IRS) have determined that it is appropriate to have an automatic exchange relationship with respect to the information collected under §§ 1.6049-4(b)(5) and 1.6049-8(a).

#### SECTION 2. BACKGROUND

Sections 1.6049-4(b)(5) and 1.6049-8(a), as revised by T.D. 9584, 2012-20 I.R.B. 900, require the reporting of certain deposit interest paid to nonresident alien individuals on or after January 1, 2013. Rev. Proc. 2012-24, 2012-20 I.R.B. 913, was published contemporaneously with the publication of T.D. 9584. Section 3 of that revenue procedure identified those countries with which the United States has in force an information exchange agreement, such that interest paid to residents of such countries must be reported by payors to the extent required under §§ 1.6049-4(b)(5) and 1.6049-8(a). Section 4 of that revenue procedure identified the countries with which the Treasury Department and the IRS had determined that it was appropriate to have an automatic exchange relationship with respect to the information collected under §§ 1.6049-4(b)(5) and 1.6049-8(a). Rev. Proc. 2012-24 was updated and superseded by Rev. Proc. 2014-64. Section 4 of Rev.

Proc. 2014-64 contained an updated list of countries with which an automatic exchange relationship had been determined appropriate. Rev. Proc. 2014-64 was supplemented by Rev. Proc. 2015-50, Rev. Proc. 2016-18, Rev. Proc. 2016-56, and Rev. Proc. 2017-31. This revenue procedure further supplements Rev. Proc. 2014-64 by adding the Faroe Islands and Greenland to the list of countries in Section 3 of Rev. Proc. 2014-64 and by adding Croatia and Panama to the list of countries in Section 4 of Rev. Proc. 2014-64.

#### SECTION 3. SUPPLEMENT TO SECTION 3 OF REV. PROC. 2014-64

Section 3 of Rev. Proc. 2014-64, as previously supplemented by Rev. Proc. 2016-56, is further supplemented to read as follows:

The following are the countries with which the United States has in effect an income tax or other convention or bilateral agreement relating to the exchange of tax information within the meaning of section 6103(k)(4) pursuant to which the United States agrees to provide, as well as receive, information and under which the competent authority is the Secretary of the Treasury or his delegate:

Antigua & Barbuda  
Aruba  
Australia  
Austria  
Azerbaijan  
Bangladesh  
Barbados  
Belgium  
Bermuda  
Brazil  
British Virgin Islands  
Bulgaria  
Canada  
Cayman Islands  
China  
Colombia  
Costa Rica  
Croatia  
Curacao  
Cyprus  
Czech Republic  
Denmark  
Dominica

Dominican Republic  
Egypt  
Estonia  
Faroe Islands  
Finland  
France  
Germany  
Gibraltar  
Greece  
Greenland  
Grenada  
Guernsey  
Guyana  
Honduras  
Hong Kong  
Hungary  
Iceland  
India  
Indonesia  
Ireland  
Isle of Man  
Israel  
Italy  
Jamaica  
Japan  
Jersey  
Kazakhstan  
Korea, Republic of  
Latvia  
Liechtenstein  
Lithuania  
Luxembourg  
Malta  
Marshall Islands  
Mauritius  
Mexico  
Monaco  
Morocco  
Netherlands  
Netherlands island territories: Bonaire, Saba, and St. Eustatius  
New Zealand  
Norway  
Pakistan  
Panama  
Peru  
Philippines  
Poland  
Portugal  
Romania  
Russian Federation  
Saint Lucia  
Slovak Republic  
Slovenia  
South Africa

Spain  
Sri Lanka  
St. Maarten (Dutch part)  
Sweden  
Switzerland  
Thailand  
Trinidad and Tobago  
Tunisia  
Turkey  
Ukraine  
United Kingdom  
Venezuela

#### **SECTION 4. SUPPLEMENT TO SECTION 4 OF REV. PROC. 2014–64**

Section 4 of Rev. Proc. 2014–64, as supplemented by Rev. Proc. 2015–50, Rev. Proc. 2016–18, Rev. Proc. 2016–56, and Rev. Proc. 2017–31, is further supplemented to read as follows:

The following list identifies the countries with which the automatic exchange of the information collected under §§ 1.6049–4(b)(5) and 1.6049–8 has been determined by the Treasury Department and the IRS to be appropriate:

Australia  
Azerbaijan  
Belgium  
Brazil  
Canada  
Colombia  
Croatia  
Czech Republic  
Denmark  
Estonia  
Finland  
France  
Germany  
Gibraltar  
Guernsey  
Hungary  
Iceland  
India  
Ireland  
Isle of Man  
Israel  
Italy  
Jamaica  
Jersey  
Korea, Republic of  
Latvia

Liechtenstein  
Lithuania  
Luxembourg  
Malta  
Mauritius  
Mexico  
Netherlands  
New Zealand  
Norway  
Panama  
Poland  
Portugal  
Saint Lucia  
Slovak Republic  
Slovenia  
South Africa  
Spain  
Sweden  
United Kingdom

#### **SECTION 5. EFFECT ON OTHER DOCUMENTS**

Rev. Proc. 2014–64, as supplemented by Rev. Proc. 2015–50, Rev. Proc. 2016–18, Rev. Proc. 2016–56, and Rev. Proc. 2017–31, is further supplemented.

#### **SECTION 6. EFFECTIVE DATE**

With respect to the additional countries listed in Section 3, this revenue procedure is effective for interest paid on or after January 1, 2018.

#### **SECTION 7. DRAFTING INFORMATION**

The principal author of this revenue procedure is Jackie Bennett Manasterli of the Office of Associate Chief Counsel (International). For further information regarding this revenue procedure, contact Ms. Manasterli at (202) 317-6941 (not a toll-free number).

### **Rev. Proc. 2017–55**

#### **SECTION 1. PURPOSE**

.01 This revenue procedure sets forth the procedure by which the sponsor of a defined benefit plan that is subject to the funding requirements of § 430 of the Internal Revenue Code (Code) may request

approval from the Internal Revenue Service (IRS) for the use of plan-specific substitute mortality tables in accordance with § 430(h)(3)(C) and § 1.430(h)(3)–2 of the Treasury Regulations.<sup>34</sup>

.02 This revenue procedure is an update of Rev. Proc. 2008–62, 2008–2 C.B. 935. Rev. Proc. 2008–62 was issued in conjunction with final regulations under § 430(h)(3)(C) that were published in the Federal Register on October 6, 2008 (§ 1.430(h)(3)–2, T.D. 9419, 2008–40 I.R.B. 790) (“2008 regulations”). Amendments to the 2008 regulations were published in the Federal Register on October 5, 2017 (T.D. 9826, 82 F.R. 46388) (“2017 regulations”).

.03 This revenue procedure includes the following significant changes from Rev. Proc. 2008–62 to reflect the 2017 amendments to § 1.430(h)(3)–2:

(1) Section 7 (Demonstrations of Credible Mortality Information) has been expanded to require the information needed to calculate the full credibility threshold in accordance with § 1.430(h)(3)–2(d)(3), the mortality ratio in accordance with § 1.430(h)(3)–2(d)(4)(ii), and the partial credibility weighting factor in accordance with § 1.430(h)(3)–2(e)(2).

(2) Section 9 (Information Regarding Other Plans in the Plan Sponsor’s Controlled Group) has been updated to reflect changes to the rules in the regulations regarding what constitutes lack of credible mortality information.

(3) Sections 10 through 12 (which previously provided guidance regarding substitute mortality table construction) have been replaced by a new section 10 (Substitute Base Table Construction), which requests information to support the construction of base substitute mortality tables under the 2017 regulations, including base substitute mortality tables for populations with mortality experience that is only partially credible.

#### **SECTION 2. BACKGROUND INFORMATION**

.01 *Statutory background.* Section 412 sets forth minimum funding requirements for defined benefit pension plans. In ac-

<sup>34</sup>Section 302 of the Employee Retirement Income Security Act of 1974, Pub. L. 93–406, as amended (ERISA) sets forth funding rules that are parallel to those in § 412 of the Code, and section 303 of ERISA sets forth additional funding rules for defined benefit plans (other than multiemployer plans) that are parallel to those in § 430 of the Code. Section 303(h)(3)(C) of ERISA requires the approval of the Secretary of Treasury for the use of substitute mortality tables, and this revenue procedure applies for that purpose.

cordance with § 412(a)(2)(A), § 430 specifies the minimum funding requirements for defined benefit plans other than multi-employer plans and CSEC plans. Section 430(h)(3)(A) sets forth rules regarding the use of generally applicable mortality tables for purposes of § 430, and § 430(h)(3)(B) requires the Secretary of the Treasury to make periodic revisions (at least every 10 years) to those mortality tables. Section 430(h)(3)(C) provides that the Secretary may approve plan-specific substitute mortality tables to be used for a plan for a period not to exceed 10 years in determining any present value or making any computation under § 430. Substitute mortality tables meet the requirements for approval if the pension plan has enough participants and has been maintained for a long enough period of time to have credible mortality experience, and those tables reflect the actual experience of the plan and projected trends in general mortality experience. Except as provided by the Secretary, a plan sponsor may not use substitute mortality tables for any plan unless substitute mortality tables are established and used for each plan subject to § 430 of the Code that is maintained by the plan sponsor or a member of the plan sponsor's controlled group (as defined in § 1.430(h)(3)-2(c)(1)(i)).

.02 *Bipartisan Budget Act of 2015.* Section 503 of the Bipartisan Budget Act of 2015, Pub. L. 114-74, 129 Stat. 584, which was enacted November 2, 2015, provides for changes to the rules on the use of substitute mortality tables. Under that section, "the determination of whether plans have credible information shall be made in accordance with established actuarial credibility theory, which (1) is materially different from the rules under [section 430(h)(3)(C)], including Revenue Procedure 2007-37,<sup>35</sup> that are in effect on [November 2, 2015]; and (2) permits the use of tables that reflect adjustments to the tables described in [section 430(h)(3)(A) and (B)]" if those adjustments are based on the actual experience of the pension plan maintained by the plan sponsor.

.03 *Regulations.* Under both the 2008 and 2017 regulations, substitute mortality

tables must reflect the actual mortality experience of the pension plan for which the tables are to be used, and that mortality experience must be credible. Separate mortality tables must be established for each gender under the plan and, in general, substitute mortality tables are permitted to be established for a gender only if the plan has credible mortality experience with respect to that gender. The 2017 regulations provide an option for determining the credibility of mortality experience using the plan's combined mortality experience for both genders (and using that combined experience to develop separate substitute mortality tables for each gender).

.04 *Credibility.* Under the 2008 regulations, a population has credible mortality experience if and only if the population experienced at least 1,000 deaths during the period covered by the experience study. The 2017 regulations permit the use of substitute mortality tables derived from mortality experience that does not have full credibility, if the population's mortality experience has partial credibility. The 2017 regulations also revise the standard for mortality experience to have full credibility. In lieu of the previous 1,000-actual-death standard, the 2017 regulations require a population-specific calculation of the full credibility standard that takes into account the dispersion of benefits within the population.

.05 *Use of mortality ratios.* Development of substitute mortality tables under both the 2008 and 2017 regulations requires creation of a base substitute mortality table ("Substitute Base Table"), with an associated base year that is used in conjunction with mortality improvement factors to construct generational mortality tables. Unlike the 2008 regulations, which generally required that a base substitute mortality table be created by applying a graduation method to the raw mortality rates from the experience study, the 2017 regulations require a Substitute Base Table to be constructed in a multiple-step process based on (1) a projection of the generally applicable mortality table to the base year for the Substitute Base Table, (2) a mortality ratio calculated from the

experience study for the population, and (3) in the case of a plan with partially credible mortality experience, a weighting factor based on the credibility of the plan's experience.

.06 *Controlled group consistency requirement.* Except as provided by the Secretary, a plan sponsor may not use substitute mortality tables for any plan for a plan year unless substitute mortality tables are established and used for each other plan subject to § 430 that is maintained by the plan sponsor or a member of the plan sponsor's controlled group for that plan year (or, for plans with different plan years, a portion of that plan year). Under the regulations, the use of substitute mortality tables for one plan is not prohibited merely because another plan maintained by the plan sponsor (or by a member of the plan sponsor's controlled group) may not use substitute mortality tables because neither the males nor the females under that other plan have credible mortality information for a plan year.

.07 *Treatment of disabled individuals.* If separate mortality tables are used for disabled individuals pursuant to § 430(h)(3)(D), then those individuals are disregarded for all purposes under this revenue procedure.

.08 *Treatment of multiple-employer plans.* A multiple-employer plan for which the proportion of the plan's funding target attributable to employees and former employees of the employer and members of the employer's controlled group is greater than 50 percent is treated as maintained by that employer for purposes of the controlled group consistency requirement pursuant to § 1.430(h)(3)-2(c)(7)(ii). By contrast, any other multiple-employer plan in which the employer or a member of the employer's controlled group participates is not treated as maintained by the employer for purposes of the controlled group consistency requirement and is disregarded under this revenue procedure.

### SECTION 3. GENERAL ADMINISTRATIVE PROCEDURES

.01 *Compliance with regulations.* A request for approval to use substitute mortality tables for a plan that would first

<sup>35</sup>Rev. Proc. 2007-37, 2007-1 C.B. 1433, was not in effect on November 2, 2015. It was issued in 2007 in conjunction with proposed regulations regarding substitute mortality tables (REG-143601-06, 72 FR 29456) and was replaced by Rev. Proc. 2008-62 when those regulations were finalized in 2008.

apply for a plan year beginning on or after January 1, 2018, must satisfy the requirements of the 2017 regulations and this revenue procedure.

*.02 Address and user fee for application.* A request for approval to use substitute mortality tables must be submitted to the address specified in Section 31.01(1) of Rev. Proc. 2017-4, 2017-1 I.R.B. 146 (or the corresponding section of its successors).

The user fee required by section 6.01(10) of Rev. Proc. 2017-4, 2017-1 I.R.B. 146 (or the corresponding section of its successors) must be sent with the request.

*.03 Necessary procedural documents.* A request will not be considered for approval unless it complies with section 3.03(1)-(4) of this revenue procedure.

(1) The request (and any subsequently provided additional information) must be signed by the plan sponsor (“applicant”) or an authorized representative of the applicant who is described in section 6.02(11)(a), (b), (c), (d) or (e) of Rev. Proc. 2017-4 (or the corresponding sections of its successors). If an authorized representative signs the request or will appear before the IRS in connection with the request, a properly signed and dated Form 2848, *Power of Attorney and Declaration of Representative*, must be submitted with the request. An individual is not an authorized representative of the applicant merely because the individual is the administrator or a trustee of the plan.

(2) The request must include a declaration in the following form: “Under penalties of perjury, I declare that I have examined this request, or this modification to the request, including accompanying documents, and, to the best of my knowledge and belief, the request or the modification includes all the relevant facts relating to the request, and such facts are true, correct, and complete.” This declaration must be signed by the applicant (for example, by an authorized officer of a corporate applicant), in compliance with section 6.02(14) of Rev. Proc. 2017-4 (or the corresponding section of its successors). The signature of an individual with a power of attorney will not satisfy the requirements of this section 3.03(2).

(3) Because a request for approval to use substitute mortality tables constitutes

a request for a ruling, compliance with § 6110 of the Code is required. Section 601.201 of the Statement of Procedural Rules sets forth the requirements applicable to requests for rulings and determination letters which are subject to § 6110. Section 601.201(e) provides specific instructions to applicants.

The applicant must provide with the request either a statement of proposed deletions and the statutory basis for each proposed deletion, or a statement that no information other than names, addresses, and taxpayer identifying numbers need be deleted.

(4) The checklist set forth in Appendix A of this revenue procedure must be completed, signed and dated by the applicant or authorized representative, and included at the front of the request.

*.04 Optional use of electronic format for certain information.* In addition to providing the submission in written format, an applicant may provide the information required under sections 7.04 and 7.05 of this revenue procedure and section 10.02 or 10.03 of this revenue procedure, as applicable, in electronic format (such as a spreadsheet on a USB drive). Providing that information in electronic format may expedite the IRS review of the applicant’s request.

#### **SECTION 4. TIMING PROVISIONS RELATED TO REQUESTS FOR APPROVAL TO USE SUBSTITUTE MORTALITY TABLES**

*.01 In general.* A request for approval to use substitute mortality tables generally must be submitted at least 7 months before the first day of the first plan year for which the substitute mortality tables are to apply. Thus, for example, if the first plan year to which substitute mortality tables are to apply is the plan year that begins January 1, 2020, then the deadline for submitting a request for approval to use substitute mortality tables is June 1, 2019.

*.02 Incomplete requests.* An incomplete request for approval to use substitute mortality tables will be denied unless the IRS and the applicant mutually agree to extend the 180-day period specified under § 430(h)(3)(C)(v)(II). Ordinarily, the IRS will reject a request for approval to use substitute mortality tables without considering the substance of the request (rather

than agree to extend the 180-day period for review of the request) and refund the user fee if the request does not include substantially all of the applicable information specified in sections 5 through 11 of this revenue procedure.

*.03 Request for delay for other plans.* If other plans subject to § 430 maintained by the applicant (or members of the applicant’s controlled group) have credible mortality information and a request for approval to use substitute mortality tables will be made for those plans in one or more separate applications, the applicant must request that the 180-day review period be extended by 90 days. Upon receiving the request for extension of the review period, except as provided in section 4.02 of this revenue procedure, the IRS will agree to that extension and give the applicant 90 days to submit those additional applications (which must be submitted no later than the deadline that applies to each such separate request under section 4.01 or 4.04 of this revenue procedure). The IRS will summarily reject the initial application if it does not include a request for a 90 day extension of the 180-day review period, or if all of the additional applications are not submitted within 90 days after the submission of the initial application (on the grounds that at least one plan with credible mortality information maintained by the applicant (or a member of the applicant’s controlled group) would not be using substitute mortality tables).

*Example.* Employer E maintains Plans A and B, each of which have credible mortality information. Plan A’s plan year is the calendar year and Plan B’s plan year runs from July 1 through June 30. Employer E submits a request for approval to use substitute mortality tables for Plan A for the 2020 plan year on May 31, 2019 (“A Request”). To avoid denial of the A Request on the grounds that substitute mortality tables would not be used for all plans with credible mortality information maintained by the applicant, Employer E requests that the 180-day review period for the A Request be extended by 90 days to provide Employer E additional time to submit a separate request for approval to use substitute mortality tables for Plan B for the 2020 plan year. The IRS agrees to this extension in accordance with this sec-

tion 4.03. The IRS will summarily reject the A Request unless Employer E submits a separate request for approval to use substitute mortality tables for Plan B no later than August 29, 2019.

.04 *Transition rule for submissions for plan years beginning in 2018.* Notwithstanding the generally applicable deadline, a request for approval to use substitute mortality tables will be considered timely if it is submitted on or before February 28, 2018, provided that the plan sponsor requests a 90-day extension of the 180-day review period. Except as provided in section 4.02 of this revenue procedure, the IRS will agree to such a request.

## SECTION 5. GENERAL RULES

.01 *Contents of request.* A request for approval to use substitute mortality tables must include the general information described in this section 5, the plan identification information described in section 6 of this revenue procedure, the credible mortality information demonstrations described in section 7 of this revenue procedure, the stability demonstrations described in section 8 of this revenue procedure, the information regarding other plans in the plan sponsor's controlled group described in section 9 of this revenue procedure, the Substitute Base Table construction information described in section 10 of this revenue procedure, and the demonstrations described in section 11 of this revenue procedure.

.02 *General standard for approval.* The IRS will approve a request for approval to use substitute mortality tables that meet the requirements of § 1.430(h)(3)-2 and this revenue procedure, unless the IRS determines that the Substitute Base Table does not sufficiently reflect the mortality experience of the applicable plan population.

.03 *Proposed period of use.* A separate request must be made with respect to each plan ("Plan"), or group of plans that are aggregated under § 1.430(h)(3)-2(c)(5) ("Aggregated Group"), for which approval to use substitute mortality tables is requested. The request must state the first day of the first plan year for which the substitute mortality tables are to be applicable ("Requested Effective Plan Year") and must state the term of years (not more

than 10) for which the tables would be used.

.04 *Description of populations.* The request must include a description of the populations within the Plan (or the Aggregated Group) covered by the request for approval to use substitute mortality tables and a description of the populations, if any, for which the generally applicable mortality tables will be used.

For example, if approval to use substitute mortality tables is requested for non-disabled female individuals (but no other individuals) under a plan for which the mortality tables set forth in Rev. Rul. 96-7, 1996-1 CB 59, are used for disabled individuals pursuant to § 430(h)(3)(D), then the population covered by the request for approval to use substitute mortality tables would be described as "Non-disabled Females" and the population for whom the generally applicable mortality tables will be used would be described as "Nondisabled Males."

Similarly, if approval to use substitute mortality tables is requested for male annuitants (but not male nonannuitants) and for females on a combined annuitant/nonannuitant basis, in each case including disabled individuals, then the populations covered by the request for approval to use substitute mortality tables would be described as "Male Annuitants" and "Females," and the population for whom the generally applicable mortality tables will be used would be described as "Male Nonannuitants."

## SECTION 6. IDENTIFICATION OF PLANS

.01 *Information for plan for which approval to use substitute mortality tables is requested.* The following plan information must be provided for the Plan (or for each plan within the Aggregated Group) for which approval to use substitute mortality tables is requested:

- (1) Plan name;
- (2) Plan number;
- (3) Plan year (calendar year, or if a fiscal year, the first and last day of the plan year);
- (4) Employer identification number;
- (5) Date of plan establishment; and
- (6) Copies of the actuarial valuation reports for each plan year that begins or ends during the Experience Study Period

as defined in section 7.01 of this revenue procedure.

.02 *Plans for which substitute mortality tables are not intended to be used.* The following information must be provided for each plan that is subject to § 430 covering employees of the applicant, or a member of the applicant's controlled group, for which substitute mortality tables are not intended to be used:

- (1) Plan name;
- (2) Plan number;
- (3) Plan year (calendar year, or if a fiscal year, the first and last day of the plan year);
- (4) Employer identification number;
- (5) Date of plan establishment;
- (6) If the plan is a newly affiliated plan under § 1.430(h)(3)-2(f)(2), the date of the merger, acquisition, or similar transaction described in § 1.410(b)-2(f), and the last day of the transition period described in § 1.430(h)(3)-2(f)(3); and
- (7) If the applicant or a member of the applicant's controlled group is an employer whose employees participate in a multiple-employer plan, whether the portion of the multiple-employer plan's funding target attributable to employees and former employees of the applicant and the members of the applicant's controlled group is less than or equal to 50 percent (so that the multiple-employer plan is not treated as being maintained by the applicant or a member of the applicant's controlled group under § 1.430(h)(3)-2(c)(7)(ii)).

.03 *Other plans for which substitute mortality tables are being used or are intended to be used.* The following information must be provided for each plan that is subject to § 430 covering employees of the applicant, or a member of the applicant's controlled group (including a multiple-employer plan that is treated as maintained by the applicant or a member of the applicant's controlled group pursuant to § 1.430(h)(3)-2(c)(7)(ii)), for which substitute mortality tables are being used or for which a request for approval to use substitute mortality tables has been submitted or will be submitted:

- (1) Plan name;
- (2) Plan number;
- (3) Plan year (calendar year, or if a fiscal year, the first and last day of the plan year);

- (4) Employer identification number;
- (5) Date of plan establishment;
- (6) If the plan sponsor has received previous approval to use substitute mortality tables for that plan, the date of that approval;

(7) If the plan sponsor has requested approval to use substitute mortality tables for that plan (but not yet received approval), the date of that request; and

(8) If the plan sponsor has not yet requested approval to use substitute mortality tables for that plan, the expected date of the submission.

**.04 Special Rule for Multiple-Employer Plans.** If the applicant is the plan administrator of a multiple-employer plan (who is treated as the plan sponsor under § 1.430(h)(3)–2(c)(7)(i)), the request for approval to use substitute mortality tables must include either:

- (1) A statement that none of the employers whose employees participate in the plan are treated as maintaining the plan under § 1.430(h)(3)–2(c)(7)(ii); or
- (2) If one or more of the participating employers is treated as maintaining the plan under § 1.430(h)(3)–2(c)(7)(ii), the information specified in sections 6.02 and 6.03 of this revenue procedure, as applicable, treating each such employer as the applicant.

**.05 Spun-off plans.** The following additional information must be provided with respect to each plan that is subject to § 430 that is maintained by the applicant, or a member of the applicant’s controlled group, that was spun off from another plan (“original plan”) that is maintained by the applicant or a member of the applicant’s controlled group within the 5-year period preceding the date of the request:

(1) The plan name and the plan number of the spun-off plan, and the plan name and number of the original plan;

(2) The employer identification number of the employer maintaining the spun-off plan and the employer identification number of the employer maintaining the original plan;

(3) The date of the spinoff;

(4) The approximate number of individuals covered by the spun-off plan as of the date of the spinoff and the approximate number of individuals covered by

the original plan immediately before the spinoff; and

(5) The reason for the spinoff.

## **SECTION 7. DEMONSTRATIONS OF CREDIBLE MORTALITY INFORMATION**

**.01 Experience Study Period.** The applicant must identify the period of time covered by the mortality experience study (“Experience Study Period”) used to develop the Substitute Base Table(s) and the base year for the Substitute Base Table(s). See § 1.430(h)(3)–2(d)(2) and (f)(4) (regarding the selection of an experience study period) and § 1.430(h)(3)–2(c)(3)(ii) (regarding identification of the base year).

**.02 Full credibility threshold.** The applicant must identify the full credibility threshold in § 1.430(h)(3)–2(d)(3) and the number of actual deaths in the Experience Study Period.

**.03 Optional rules.** (1) *Simplified rule.* The applicant must identify whether it used the simplified rule under which the determination of whether there is credible mortality information for a gender is made by only taking into account individuals who are at least age 50 and less than age 100. See § 1.430(h)(3)–2(c)(2)(ii)(B).

(2) *Combined genders rule.* The applicant must identify whether it used the rule under which a single mortality ratio is developed and applied for both genders to construct Substitute Base Tables for the Plan (or Aggregated Group). See § 1.430(h)(3)–2(d)(6).

**04. Required information.** The information required in section 7.04(1)–(11) of this revenue procedure must be provided in tabular form for all individuals within each population for whom separate approval to use substitute mortality tables is requested, for all ages between 18 and 100 (unless the applicant is using the simplified rule as provided in section 7.03(1) of this revenue procedure, in which case, only those individuals who are at least age 50 and less than age 100 are considered). This information must be provided separately for each year of the Experience Study Period and also as an aggregate amount for all years in the Experience Study Period.

(1) The total number of individuals at that age at the beginning of the year, ex-

cluding individuals who left the population during the year for reasons other than death.

(2) The total number of individuals at that age at the beginning of the year who left the population for reasons other than death.

(3) The total number of individuals at that age at the beginning of the year who died during the year.

(4) The number of expected deaths for individuals at that age determined by multiplying the mortality rate from the standard mortality table described in section 7.05 of this revenue procedure by the total of the individuals determined in section 7.04(1) and (2) of this revenue procedure, adjusted for exposure periods of less than one year.

(5) The sum of the benefit amounts described in § 1.430(h)(3)–2(d)(2)(iii) for all individuals at that age at the beginning of the year, excluding individuals who left the population during the year for reasons other than death.

(6) The sum of the benefit amounts described in § 1.430(h)(3)–2(d)(2)(iii) for individuals at that age who left the population during the year for reasons other than death.

(7) The sum of the benefit amounts described in § 1.430(h)(3)–2(d)(2)(iii) for individuals at that age who left the population during the year on account of death.

(8) The amount determined by multiplying the mortality rate for that age from the standard mortality table described in section 7.05 of this revenue procedure, by the total of the amounts determined in section 7.04(5) and (6) of this revenue procedure, adjusted for exposure periods of less than one year.

(9) The sum of the squares of the benefit amounts described in § 1.430(h)(3)–2(d)(2)(iii) for all individuals at that age at the beginning of the year excluding individuals who left the population during the year for reasons other than death.

(10) The sum of the squares of the benefit amounts described in § 1.430(h)(3)–2(d)(2)(iii) for individuals at that age who left the population during the year for reasons other than death.

(11) The amount determined by multiplying the mortality rate from the standard mortality table described in section 7.05 of this revenue procedure by the total of

the amounts determined in section 7.04(9) and (10) of this revenue procedure, adjusted for exposure periods of less than one year.

.05 *Standard mortality table.* The request must include the standard mortality table for the base year for the Substitute Base Table, determined pursuant to § 1.430(h)(3)–2(d)(4)(iii).

.06 *Adjustment for exposure periods of less than one year.* The request must include a description of the method or methods used to make adjustments for individuals who left the population for reasons other than death to reflect exposure periods of less than one year.

.07 *Adjustments to make experience study predictive of future mortality experience in light of changes to the plan population.* The request must include a description of any method used to adjust the experience study data to reflect changes in the population during the Experience Study Period.

.08 *Other data adjustments.* The request must include a description of any other method used to adjust experience study data.

## **SECTION 8. DEMONSTRATION OF POPULATION STABILITY**

.01 *Required comparison of population count.* The following information must be provided in tabular form for each population within the Plan (or plans within the Aggregated Group) for which approval to use substitute mortality tables is requested, aggregating all plans that have the same plan year:

(1) The average number of individuals within the population during the Experience Study Period; and

(2) The number of individuals within the population as of the last day of the plan year immediately preceding the plan year during which approval to use substitute mortality tables is requested.

.02 *Additional requirement for significant change in participant count.* If the number of individuals described in section 8.01(2) of this revenue procedure is less than 80 percent or more than 120 percent of the number of individuals described in section 8.01(1) of this revenue procedure, then information and analysis that shows that the mortality experience during the Experience Study

Period (taking into account any adjustments described in section 7.07 of this revenue procedure) is accurately predictive of the future mortality of the population must be provided.

## **SECTION 9. INFORMATION REGARDING OTHER PLANS IN THE PLAN SPONSOR'S CONTROLLED GROUP**

.01 *General rule.* Under § 1.430(h)(3)–2(e), a population lacks credible mortality information if the number of deaths during the experience study is less than 100. For all plans maintained by the applicant or a member of the applicant's controlled group (other than a plan for which approval to use substitute mortality tables is requested or used for all populations or a newly affiliated plan with respect to which the transition period has not ended before the first day of the Requested Effective Plan Year), the applicant must identify the following information for any population for which there is a lack of credible mortality information (such that substitute mortality tables may not be used for that population):

(1) The period of time used to demonstrate a lack of credible mortality information ("Demonstration Period"), and

(2) The number of deaths during that period.

.02 *Alternative demonstrations of lack of credible mortality information.* In lieu of the information described in section 9.01(2) of this revenue procedure, a lack of credible mortality information may be demonstrated by providing alternative information that demonstrates to the satisfaction of the Commissioner that the number of male and/or female deaths did not exceed 100 during the Demonstration Period. For example, a year-by-year reconciliation of the participant population (such as might be shown in an actuarial valuation report) might be submitted showing that the total number of participants leaving the plan during the Demonstration Period is less than 100, as this would demonstrate that the number of male and female deaths must also be less than 100 during that period. Similarly, if the total number of participants in the plan does not exceed 100 for any year during the Demonstration Period, the year-by-year number of participants in the plan

during such period might be submitted in lieu of the information described in section 9.01(2) of this revenue procedure, as this would show that the number of male and female deaths must also be less than 100 during that period.

## **SECTION 10. SUBSTITUTE BASE TABLE CONSTRUCTION**

.01 *Mortality ratio.* For each population for which approval to use substitute mortality tables is requested, the applicant's request must include the mortality ratio determined pursuant to § 1.430(h)(3)–2(d)(4)(ii).

.02 *Substitute Base Table for population with full credibility.* With respect to a population with mortality experience that is fully credible, the applicant's request must contain the Substitute Base Table constructed pursuant to § 1.430(h)(3)–2(d)(4).

.03 *Substitute Base Table for population with partial credibility.* With respect to a population with mortality experience that is only partially credible, the applicant's request must include:

(1) A base substitute mortality table constructed pursuant to § 1.430(h)(3)–2(d)(4) as if the population had mortality experience that is fully credible;

(2) The partial credibility weighting factor for the population determined pursuant to § 1.430(h)(3)–2(e)(2); and

(3) The Substitute Base Table constructed pursuant to § 1.430(h)(3)–2(e)(1).

## **SECTION 11. DEMONSTRATIONS WITH RESPECT TO BASE TABLES**

.01 *Funding target comparison.* For each plan for which approval to use substitute mortality tables is requested, the applicant must provide a comparison of: (1) the plan's funding target (determined without regard to at-risk assumptions under § 430(i)) calculated using the generally applicable generational mortality tables, and (2) the amount that funding target would have been if the substitute mortality tables had been used to determine the funding target, holding all other assumptions constant.

These amounts must be determined as of the valuation date for a plan year ending no earlier than one year and one day before the first day of the Requested Ef-

fective Plan Year, and must be provided in total and separately for: (1) active participants, (2) terminated vested participants, and (3) retired participants and beneficiaries receiving payment.

.02 *Generational mortality tables.* For each population for which approval to use substitute mortality tables is requested, the applicant's request must include sample generational mortality tables, as of the Requested Effective Plan Year, for individuals whose years of birth are 1940, 1960, and 1980, respectively, constructed from the Substitute Base Table using the rules of § 1.430(h)(3)–2(c)(3).

.03 *Annuity factors.* For each population for which approval to use substitute mortality tables is requested, the applicant's request must include the following annuity factors based on the substitute mortality table for an individual whose year of birth is 20 years before the base year for the Substitute Base Table, determined using interest assumptions consistent with those used under section 11.01 of this revenue procedure.

(1) For a Substitute Base Table that is not an annuitant Substitute Base Table, deferred to age 55 factors at quinquennial ages from 20 to 50.

(2) For a Substitute Base Table that is not a nonannuitant Substitute Base Table, immediate annuity factors at quinquennial ages from 50 to 90.

## SECTION 12. EFFECT ON OTHER DOCUMENTS

Rev. Proc. 2008–62 is modified and superseded. Sections 24.01(11) and 26.02(4) of Rev. Proc. 2017–4 are modified to refer to this revenue procedure in lieu of Rev. Proc. 2008–62.

## SECTION 13. EFFECTIVE DATE

This revenue procedure is effective for all requests for approval to use plan-specific substitute mortality tables in accordance with § 430(h)(3)(C) of the Code for which the Requested Effective Plan Year begins on or after January 1, 2018.

## SECTION 14. PAPERWORK REDUCTION ACT

The collection of information included in this revenue procedure has been reviewed and approved by the Office of Management and Budget in accordance with the Paperwork Reduction Act (44 U.S.C. section 3507) under control number 1545-2073.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the collection of information displays a valid OMB control number.

The collection of information in this revenue procedure is in sections 3 through 11 of this revenue procedure. This collection of information is required to provide sufficient information to enable the IRS to

evaluate, process, and rule on the request for approval to use substitute mortality tables. This information will be used to make determinations under § 430(h)(3) of the Code. The likely respondents are businesses or other for-profit institutions and nonprofit institutions.

The estimated total annual reporting/recordkeeping burden is 60,000 hours.

The estimated annual burden per respondent/recordkeeper varies from 167 to 900 hours, depending on individual circumstances, with an estimated average burden of 267 hours. The estimated annual number of respondents/recordkeepers is 225.

The estimated annual frequency of responses is once every 10 years.

Books or records relating to a collection of information must be retained as long as their contents may become material in the administration of any internal revenue law. Generally, tax returns and tax return information are confidential, as required by 26 U.S.C. Section 6103.

## DRAFTING INFORMATION

The principal author of this revenue procedure is Arslan Malik of the Office of the Associate Chief Counsel, Tax Exempt and Government Entities. For further information regarding the submission of a request for approval to use substitute mortality tables, please contact Michael Spaid at (206) 946-3480 (this is not a toll-free number).

## Appendix A

### REQUEST FOR APPROVAL TO USE SUBSTITUTE MORTALITY TABLES CHECKLIST

#### Instructions

You must include a completed copy of this checklist with your submission. Answer each question in the checklist by circling Yes, No, or N/A; explanations must be provided for “No” or “N/A” responses. If a completed checklist is not included, or if explanations are not provided for “No” and “N/A” responses, then your submission will be considered incomplete for purposes of section 4.02 of this revenue procedure.

**Sign and date the checklist (as plan sponsor or authorized representative) and place it on top of your request.**

Response	Item number	Description of item	Page number in application
Yes No N/A	1.	Have you included the user fee required under Rev. Proc. 2017–4 or its successors? (See section 3.02)	
Yes No N/A	2.	If you are designating an authorized representative, <sup>36</sup> have you included a properly executed Form 2848 (Power of Attorney)? (See section 3.03(1))	

<sup>36</sup>It is recommended that an actuary who is able to answer technical questions about the construction of the substitute mortality tables be designated as an authorized representative. Not

<b>Response</b>	<b>Item number</b>	<b>Description of item</b>	<b>Page number in application</b>
Yes No N/A	3.	Have you satisfied all the requirements of Rev. Proc. 2017-4 or its successors (especially concerning original signatures, penalties of perjury statement, and statement of proposed deletions)? (See section 3.03(2) and (3))	
Yes No N/A	4.	If any separate application for approval to use substitute mortality tables will be made for other plans maintained within the applicant's controlled group, have you requested that the 180-day review period be extended? (See section 4.03)	
Yes No N/A	5.	Have you identified the first day of the first plan year for which approval to use substitute mortality tables is requested and the number of years for which the substitute mortality tables would be used? (See section 5.03)	
Yes No N/A	6.	Have you included a description of the populations for which approval to use substitute mortality tables is requested? (See section 5.04)	
Yes No N/A	7.	Have you included a description of the populations, if any, for which the generally applicable mortality tables will be used? (See section 5.04)	
Yes No N/A	8.	Have you included the identification information required under section 6.01 for the Plan (or for each plan in the Aggregated Group) for which approval to use substitute mortality tables is requested?	
Yes No N/A	9.	Have you provided the information required for each plan for which substitute mortality tables are not intended to be used? (See section 6.02)	
Yes No N/A	10.	Have you provided the information required for each other plan for which substitute mortality tables are being used or are intended to be used? (See section 6.03)	
Yes No N/A	11.	If the applicant is a plan sponsor of a multiple-employer plan, have you provided either (1) a statement that none of the employers whose employees participate in the plan are treated as maintaining the plan under § 1.430(h)(3)-2(c)(7)(ii); or (2) if one or more of the participating employers is treated as maintaining the plan under § 1.430(h)(3)-2(c)(7)(ii), the information specified in section 6.02 and 6.03 of this revenue procedure, as applicable, treating each such employer as the applicant? (See section 6.04)	
Yes No N/A	12.	Have you provided the required information for any plans that were spun off from another plan maintained by the applicant or a member of the applicant's controlled group within the past 5 years? (See section 6.05)	
Yes No N/A	13.	Have you identified the Experience Study Period and the base year for the Substitute Base Tables? (See section 7.01)	
Yes No N/A	14.	Have you provided the full credibility threshold and the number of actual deaths during the Experience Study Period for each population within the Plan (or within the Aggregated Group) for which approval to use substitute mortality tables is requested (see section 7.02)?	
Yes No N/A	15.	Have you identified whether the applicant used either or both of the optional rules specified in section 7.03?	
Yes No N/A	16.	Have you included a table showing the required information for each applicable population within the Plan (or within the Aggregated Group), for each year of the Experience Study Period and also as an aggregate amount for all years in the Experience Study Period? (See section 7.04)	
Yes No N/A	17.	Have you included the relevant standard mortality tables (which is the base mortality table under § 1.430(h)(3)-1(d) projected with mortality improvement to the base year for the Substitute Base Tables)? (See section 7.05)	
Yes No N/A	18.	Have you included a description of the methods used to reflect exposure periods of less than one year? (See section 7.06)	
Yes No N/A	19.	Have you included a description of any methods used to adjust the experience study data? (See section 7.07 and 7.08)	

having an actuary available to discuss these tables with the IRS may cause a delay in the processing of your request for approval.

<b>Response</b>	<b>Item number</b>	<b>Description of item</b>	<b>Page number in application</b>
Yes No N/A	20.	Have you included a table showing the average number of individuals during the Experience Study Period and the number of individuals within the population as of the last day of the plan year immediately preceding the date of this application, for each population within the Plan (or within the Aggregated Group) for which the approval to use substitute mortality tables is requested? (See section 8.01)	
Yes No N/A	21.	Have you provided information and analysis required if the population has had a significant change in the number of participants, as described in section 8.02?	
Yes No N/A	22.	Have you identified the Demonstration Period for all plans maintained by the applicant or a member of the applicant's controlled group other than a plan for which approval to use substitute mortality tables is requested or used for all populations or a newly-affiliated plan with respect to which the transition period has not ended before the first day of the Requested Effective Plan Year? (See section 9.01(1))	
Yes No N/A	23.	Have you identified the number of deaths during the Demonstration Period for all plans maintained by the applicant or a member of the applicant's controlled group (other than a plan for which approval to use substitute mortality tables is requested or used for all populations or a newly affiliated plan with respect to which the transition period has not ended before the first day of the Requested Effective Plan Year) for any population for which there is a lack of credible mortality information (such that substitute mortality tables may not be used for that population)? (See section 9.01(2))  Alternatively, have you provided other information for a population that demonstrates that the number of deaths during the Demonstration Period would not exceed 100? (See section 9.02)	
Yes No N/A	24.	Have you provided the mortality ratio for each population for which approval to use substitute mortality tables is requested? (See section 10.01)	
Yes No N/A	25.	For each population within the Plan (or within the Aggregated Group) whose mortality experience has full credibility, have you provided a full copy of the Substitute Base Table? (See section 10.02)	
Yes No N/A	26.	For each population within the Plan (or within the Aggregated Group) for which approval to use substitute mortality tables is requested but for which mortality experience does not have full credibility, have you provided a full copy of the base substitute mortality table constructed as if the population's mortality information had full credibility, the partial credibility weighting factor, and a full copy of the Substitute Base Table reflecting credibility adjustments? (See section 10.03)	
Yes No N/A	27.	Have you included a comparison of hypothetical funding targets determined using generally applicable mortality tables and the proposed substitute mortality tables? (See section 11.01)	
Yes No N/A	28.	Have you included the required sample generational mortality tables as of the Requested Effective Plan Year, developed from each Substitute Base Table? (See section 11.02)	
Yes No N/A	29.	Have you included annuity factors for each Substitute Base Table based on the substitute mortality table for an individual whose year of birth is 20 years before the base year for the Substitute Base Table? (See section 11.03)	
Yes No N/A	30.	For a request for approval to use substitute mortality tables submitted on or before February 28, 2018, have you included a request for a 90-day extension of the 180-day review period? (see section 4.04)	
<b>Signature</b>		<b>Date</b>	
<b>Title or Authority</b>			
<b>Typed or printed name of person signing checklist</b>			

# Definition of Terms

*Revenue rulings and revenue procedures (hereinafter referred to as “rulings”) that have an effect on previous rulings use the following defined terms to describe the effect:*

*Amplified* describes a situation where no change is being made in a prior published position, but the prior position is being extended to apply to a variation of the fact situation set forth therein. Thus, if an earlier ruling held that a principle applied to A, and the new ruling holds that the same principle also applies to B, the earlier ruling is amplified. (Compare with *modified*, below).

*Clarified* is used in those instances where the language in a prior ruling is being made clear because the language has caused, or may cause, some confusion. It is not used where a position in a prior ruling is being changed.

*Distinguished* describes a situation where a ruling mentions a previously published ruling and points out an essential difference between them.

*Modified* is used where the substance of a previously published position is being changed. Thus, if a prior ruling held that a principle applied to A but not to B, and the new ruling holds that it applies to both A

and B, the prior ruling is modified because it corrects a published position. (Compare with *amplified* and *clarified*, above).

*Obsoleted* describes a previously published ruling that is not considered determinative with respect to future transactions. This term is most commonly used in a ruling that lists previously published rulings that are obsoleted because of changes in laws or regulations. A ruling may also be obsoleted because the substance has been included in regulations subsequently adopted.

*Revoked* describes situations where the position in the previously published ruling is not correct and the correct position is being stated in a new ruling.

*Superseded* describes a situation where the new ruling does nothing more than restate the substance and situation of a previously published ruling (or rulings). Thus, the term is used to republish under the 1986 Code and regulations the same position published under the 1939 Code and regulations. The term is also used when it is desired to republish in a single ruling a series of situations, names, etc., that were previously published over a period of time in separate rulings. If the new ruling does more than restate the sub-

stance of a prior ruling, a combination of terms is used. For example, *modified* and *superseded* describes a situation where the substance of a previously published ruling is being changed in part and is continued without change in part and it is desired to restate the valid portion of the previously published ruling in a new ruling that is self contained. In this case, the previously published ruling is first modified and then, as modified, is superseded.

*Supplemented* is used in situations in which a list, such as a list of the names of countries, is published in a ruling and that list is expanded by adding further names in subsequent rulings. After the original ruling has been supplemented several times, a new ruling may be published that includes the list in the original ruling and the additions, and supersedes all prior rulings in the series.

*Suspended* is used in rare situations to show that the previous published rulings will not be applied pending some future action such as the issuance of new or amended regulations, the outcome of cases in litigation, or the outcome of a Service study.

## Abbreviations

*The following abbreviations in current use and formerly used will appear in material published in the Bulletin.*

A—Individual.  
Acq.—Acquiescence.  
B—Individual.  
BE—Beneficiary.  
BK—Bank.  
B.T.A.—Board of Tax Appeals.  
C—Individual.  
C.B.—Cumulative Bulletin.  
CFR—Code of Federal Regulations.  
CI—City.  
COOP—Cooperative.  
Ct.D.—Court Decision.  
CY—County.  
D—Decedent.  
DC—Dummy Corporation.  
DE—Donee.  
Del. Order—Delegation Order.  
DISC—Domestic International Sales Corporation.  
DR—Donor.  
E—Estate.  
EE—Employee.  
E.O.—Executive Order.  
ER—Employer.

ERISA—Employee Retirement Income Security Act.  
EX—Executor.  
F—Fiduciary.  
FC—Foreign Country.  
FICA—Federal Insurance Contributions Act.  
FISC—Foreign International Sales Company.  
FPH—Foreign Personal Holding Company.  
F.R.—Federal Register.  
FUTA—Federal Unemployment Tax Act.  
FX—Foreign corporation.  
G.C.M.—Chief Counsel’s Memorandum.  
GE—Grantee.  
GP—General Partner.  
GR—Grantor.  
IC—Insurance Company.  
I.R.B.—Internal Revenue Bulletin.  
LE—Lessee.  
LP—Limited Partner.  
LR—Lessor.  
M—Minor.  
Nonacq.—Nonacquiescence.  
O—Organization.  
P—Parent Corporation.  
PHC—Personal Holding Company.  
PO—Possession of the U.S.  
PR—Partner.  
PRS—Partnership.

PTE—Prohibited Transaction Exemption.  
Pub. L.—Public Law.  
REIT—Real Estate Investment Trust.  
Rev. Proc.—Revenue Procedure.  
Rev. Rul.—Revenue Ruling.  
S—Subsidiary.  
S.P.R.—Statement of Procedural Rules.  
Stat.—Statutes at Large.  
T—Target Corporation.  
T.C.—Tax Court.  
T.D.—Treasury Decision.  
TFE—Transferee.  
TFR—Transferor.  
T.I.R.—Technical Information Release.  
TP—Taxpayer.  
TR—Trust.  
TT—Trustee.  
U.S.C.—United States Code.  
X—Corporation.  
Y—Corporation.  
Z—Corporation.

## Numerical Finding List<sup>1</sup>

Bulletin 2017–27 through 2017–43

### Action on Decision:

2017-5, 2017-27 I.R.B. 1  
2017-6, 2017-33 I.R.B. 194  
2017-7, 2017-42 I.R.B. 311

### Announcements:

2017-05, 2017-27 I.R.B. 5  
2017-08, 2017-28 I.R.B. 9  
2017-09, 2017-35 I.R.B. 219  
2017-10, 2017-33 I.R.B. 210  
2017-11, 2017-39 I.R.B. 255  
2017-12, 2017-38 I.R.B. 238  
2017-13, 2017-40 I.R.B. 271

### Notices:

2017-36, 2017-33 I.R.B. 208  
2017-37, 2017-29 I.R.B. 89  
2017-38, 2017-30 I.R.B. 147  
2017-39, 2017-31 I.R.B. 150  
2017-40, 2017-32 I.R.B. 190  
2017-41, 2017-34 I.R.B. 211  
2017-42, 2017-34 I.R.B. 212  
2017-43, 2017-36 I.R.B. 224  
2017-44, 2017-36 I.R.B. 226  
2017-45, 2017-38 I.R.B. 232  
2017-46, 2017-41 I.R.B. 275  
2017-47, 2017-38 I.R.B. 232  
2017-48, 2017-39 I.R.B. 254  
2017-49, 2017-40 I.R.B. 258  
2017-50, 2017-41 I.R.B. 280  
2017-51, 2017-40 I.R.B. 260  
2017-52, 2017-40 I.R.B. 262  
2017-53, 2017-42 I.R.B. 318  
2017-54, 2017-42 I.R.B. 321  
2017-55, 2017-42 I.R.B. 324  
2017-56, 2017-43 I.R.B. 365  
2017-57, 2017-42 I.R.B. 324  
2017-58, 2017-42 I.R.B. 326  
2017-60, 2017-43 I.R.B. 365  
2017-61, 2017-43 I.R.B. 371

### Proposed Regulations:

REG-128841-07, 2017-42 I.R.B. 327  
REG-139633-08, 2017-31 I.R.B. 175  
REG-128483-15, 2017-32 I.R.B. 191  
REG-136118-15, 2017-28 I.R.B. 9  
REG-105004-16, 2017-41 I.R.B. 295  
REG-125374-16, 2017-41 I.R.B. 300

### Revenue Procedures:

2017-41, 2017-29 I.R.B. 92  
2017-42, 2017-29 I.R.B. 124  
2017-43, 2017-31 I.R.B. 153

## Revenue Procedures:—Continued

2017-44, 2017-35 I.R.B. 216  
2017-45, 2017-35 I.R.B. 216  
2017-46, 2017-43 I.R.B. 372  
2017-47, 2017-38 I.R.B. 233  
2017-48, 2017-36 I.R.B. 229  
2017-50, 2017-37 I.R.B. 230  
2017-52, 2017-41 I.R.B. 283  
2017-53, 2017-40 I.R.B. 263  
2017-54, 2017-42 I.R.B. 336  
2017-55, 2017-43 I.R.B. 373

### Revenue Rulings:

2017-14, 2017-27 I.R.B. 2  
2017-15, 2017-32 I.R.B. 176  
2017-16, 2017-35 I.R.B. 215  
2017-17, 2017-36 I.R.B. 222  
2017-18, 2017-39 I.R.B. 239  
2017-19, 2017-40 I.R.B. 257  
2017-20, 2017-41 I.R.B. 273

### Treasury Decisions:

9819, 2017-29 I.R.B. 85  
9820, 2017-32 I.R.B. 178  
9821, 2017-32 I.R.B. 181  
9822, 2017-33 I.R.B. 195  
9823, 2017-33 I.R.B. 206  
9824, 2017-42 I.R.B. 312

<sup>1</sup>A cumulative list of all revenue rulings, revenue procedures, Treasury decisions, etc., published in Internal Revenue Bulletins 2017–01 through 2017–26 is in Internal Revenue Bulletin 2017–26, dated June 27, 2017.

## **Finding List of Current Actions on Previously Published Items<sup>1</sup>**

Bulletin 2017–27 through 2017–43

### **Notices:**

#### **2015-77**

Amplified by  
Notice 2017-40, 2017-32 I.R.B. 190

#### **2017-10**

Modified by  
Notice 2017-58, 2017-42 I.R.B. 326

#### **2017-29**

Modified by  
Notice 2017-58, 2017-42 I.R.B. 326

### **Revenue Procedures:**

#### **2016-27**

Modified by  
Rev. Proc. 2017-43, 2017-31 I.R.B. 153

#### **2016-27**

Superseded by  
Rev. Proc. 2017-43, 2017-31 I.R.B. 153

#### **2016-48**

Superseded by  
Rev. Proc. 2017-48, 2017-36 I.R.B. 232

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<sup>1</sup>A cumulative list of all revenue rulings, revenue procedures, Treasury decisions, etc., published in Internal Revenue Bulletins 2017–01 through 2017–26 is in Internal Revenue Bulletin 2017–26, dated June 27, 2017.

# **Internal Revenue Service**

## **Washington, DC 20224**

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## **INTERNAL REVENUE BULLETIN**

The Introduction at the beginning of this issue describes the purpose and content of this publication. The weekly Internal Revenue Bulletins are available at *www.irs.gov/irb/*.

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## **We Welcome Comments About the Internal Revenue Bulletin**

If you have comments concerning the format or production of the Internal Revenue Bulletin or suggestions for improving it, we would be pleased to hear from you. You can email us your suggestions or comments through the IRS Internet Home Page (*www.irs.gov*) or write to the Internal Revenue Service, Publishing Division, IRB Publishing Program Desk, 1111 Constitution Ave. NW, IR-6230 Washington, DC 20224.