

# ACTEX Learning

## Study Manual for Exam EA-2L

2<sup>nd</sup> Edition

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An EA Exam



# ACTEX Learning

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# TABLE OF CONTENTS

|   |     |
|---|-----|
| Preface .....   | i   |
| American Rescue Plan Act of 2021 .....  | ix  |
| Chapter 1    Overview of Qualified Plans<br>(IRC section 401) .....   | 1   |
| Chapter 2    Benefits under Defined Benefit Plans .....   | 11  |
| Chapter 3    Top-Heavy Minimum and §415 Maximum Benefits .....  | 67  |
| Chapter 4    Minimum Participation, Minimum Coverage, and Non-discrimination<br>Requirements .....                            | 91  |
| Chapter 5    Reporting and Disclosure .....   | 151 |
| Chapter 6    Certification of AFTAP<br>(IRC section 436) .....  | 165 |
| Chapter 7    Plan Terminations and Guaranteed Benefits .....  | 183 |
| Chapter 8    PBGC Premiums .....  | 203 |
| Chapter 9    Multiemployer Plans and Withdrawal Liability .....   | 217 |
| Chapter 10   Excise Taxes, Prohibited Transactions, Fiduciary Standards, and Joint Board for Enrollment of<br>Actuaries ..... | 245 |
| Solutions to Review Questions .....   | 270 |
| May 2014 EA-2L Exam .....   | 364 |
| Solutions .....   | 408 |
| May 2015 EA-2L Exam .....   | 420 |
| Solutions .....   | 468 |
| May 2016 EA-2L Exam .....   | 480 |
| Solutions .....   | 524 |
| May 2017 EA-2L Exam .....   | 538 |
| Solutions .....   | 588 |
| May 2018 EA-2L Exam .....   | 608 |
| Solutions .....   | 656 |

|                          |      |
|--------------------------|------|
| May 2019 EA-2L Exam..... | 668  |
| Solutions.....           | 712  |
| May 2020 EA-2L Exam..... | 730  |
| Solutions.....           | 780  |
| May 2021 EA-2L Exam..... | 806  |
| Solutions.....           | 852  |
| May 2022 EA-2L Exam..... | 874  |
| Solutions.....           | 922  |
| May 2023 EA-2L Exam..... | 950  |
| Solutions.....           | 1002 |
| May 2024 EA-2L Exam..... | 1024 |
| Solutions.....           | 1075 |

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## PREFACE

The purpose of this Study Guide is to familiarize you with the materials you will need to know in order to take and pass the EA-2L Exam. The material in this book is specifically targeted to candidates who will be taking the exam in May of 2025.

To be designated as an enrolled actuary by the U. S. Treasury department, you must pass two exams. The first exam (EA-1) covers mathematics, including the theory of interest, life tables, and commutation functions. The second exam (EA-2) covers the laws governing U. S. retirement plans and is broken into two parts. The exam is split into two parts to recognize that the massive amount of material was simply too much to test on a single exam.

The EA-2 material is split in a systematic fashion, with laws related directly to determining the funding of a plan given in a funding exam (EA-2F) and all other laws that do not directly bear on funding calculations tested in a law exam (EA-2L). Since the laws covered in the EA-2L exam indirectly affect the funding rules tested in the EA-2F exam, the EA-2F presupposes knowledge of the EA-2L exam. This study guide will describe the laws tested on the EA-2L exam without reference or assumed knowledge of the EA-2F exam topics. Certain terms used in plan funding, such as Funding Target (FT) and Target Normal Cost (TNC) are used for some purposes in topics included in this exam. Such terms will be defined and their use explained, but you will not have to know how such values are used in plan funding.

This study guide does presume that you have knowledge of the subjects covered on the EA-1 exam covering actuarial mathematics pertaining to probability, interest calculations, and life contingency functions. Actuarial terms and equations will be used without explanation, presuming the reader is familiar with such procedures. Also, this guide will use the abbreviation IRC to refer to the Internal Revenue Code, or refer to simply the Code. The terms IRC and Code will be used interchangeably throughout the book.

Also, the word regulation, generally, will mean Treasury regulations. The terms “Treasury regulations” and “IRS regulations” will be used interchangeably to describe regulations published under the authority of the IRS. Certain other government agencies are authorized to publish regulations under ERISA, but the regulations most concerned with this exam are Treasury regulations. When other regulations are referred to in the book, the publishing agency will be pointed out. But the word regulations will mean Treasury regulations, unless otherwise specified.

The EA-2L exam is a catch-all of everything not covered in one of the other EA exams. This means that there are literally thousands of pages of laws, rules, and regulations pertaining to the exam, and any single point within this material can be drawn on to supply a question for this exam.

To make the test even more challenging, there is almost never a year that passes in which the material covered by the test does not change in some way. New laws passed by Congress, new regulations from government agencies interpreting such laws, and new practices by American employer plan sponsors that create new retirement plan designs happen every year to obsolete some of the old test topics and introduce new ones in their place. Tax laws concerning retirement plans are an area frequently tinkered with by Congress, as a way to increase or decrease government revenue, often for an unrelated area of government funding.

This book will describe the hodge-podge of laws relating to tax qualified retirement plans. The reasons such laws have been passed have varied from time to time, and so the laws themselves are sometimes contradictory, as when a law to increase employer contributions to plans meets up with a prior law to reduce tax deductible contributions.

As a result, the EA-2L exam is as much a legal and history exam as a pure mathematical exam, making it fundamentally different from other actuarial exams. This study guide tries to describe not just the effect of laws but also the reason why such laws were passed, so that the exam taker can understand the motivation and be able to interpret the answer to an exam question based on the intentions leading to the laws passed by Congress.

The best way to study for this exam is to work on actual employer sponsored tax qualified retirement plan administration, especially the defined benefit plans that are the main focus of the exam. Exam questions are often drawn from real life examples of questions faced by working Enrolled Actuaries. Solving real life problems faced by plans and researching answers to actual questions asked by plan sponsors will teach the material more thoroughly than simply reading the regulations generally, with no specific question in mind.

That said, even an experienced practitioner may not have experience in all aspects covered by this exam. For example, a pension professional who works primarily with retirement plans of small employers may know the intricate details of passing non-discrimination testing for these plans, but have close to no experience with multiemployer plan withdrawal liabilities. Meanwhile, another professional working on a single plan for a very large corporation may know quite a bit about annual premium payments to the PBGC but have no practical experience with the PBGC's plan termination procedures.

You should know the general rules of pension law and pension plan administration. But exam questions usually turn on a specific fact or point of knowledge within the regulations and other published guidance rather than the broad, general rules of law. To answer actual exam questions, knowing specific facts and points of law is more important than knowing the broad outlines of the law. For this reason, this book relies heavily on a question and answer format, using questions from past exams and detailed answers to teach the specific points that are tested in exam questions.

This study guide will discuss each area of the exam and give a broad overview of what the test questions are looking for, and what materials can be studied for additional, more detailed information. It is recommended that you read each chapter in its entirety. Some chapters may present new material that you have never had an opportunity to work with. Others may read like a review of material that you already know and use on a regular basis, but even these chapters will introduce you to details that you may not have encountered in the past. The review questions at the end of the chapters will help you gauge how well you understand the material that you will need for the exam.

The material chosen for this study guide is based on the test description in the Spring 2025 Examination Program Booklet, published by the Joint Board for the Enrollment of Actuaries (JBEA) at their website here:

<http://www.irs.gov/Tax-Professionals/Enrolled-Actuaries/Joint-Board-Examination-Program>

The booklet includes a syllabus and a list of suggested readings for the exam. The JBEA may modify this official test guideline in the final months before the exam, after the publication of this study guide. You should refer to this internet site periodically to see if any updates have been published. Since the subject matter covered by the exam changes each year as new laws are passed and regulations issued, this Study Guide is updated each year. This year's study guide includes the following features:

➤ Organized into 10 chapters; the first chapter is a broad overview of the exam and its main focus, IRC 401(a). Please read the section labeled How To Use This Study Guide in chapter 1 to understand this book better. The remaining chapters cover one or more of the 14 topics listed on the exam syllabus. The topics are grouped and presented in an order that allows each section build upon past sections – the information in chapter two will help you study chapter three, the info in chapters two and three will help with chapter four, etc.

- Each chapter includes an introduction/overview of the topic(s) presented. Most of the chapters are summarizing dozens if not hundreds of pages of rules from regulations and other publications into a 10-20 page summary. As such, the chapter is a broad overview that spotlights only the major points of the topic. The overview will introduce you to the subject, and tell you how to look up additional information on topics you would like to research further.
- Each chapter's overview is fully referenced to the Code and applicable Regulations.....
  - Outdated material (included in past tests, but removed from the current syllabus or made obsolete by changes in the law) has been removed from this study guide
  - New information contained in laws passed and IRS regulations and announcements published since last year's exam has been reviewed and added
- After the introduction/overview of each chapter's topic are the Review Questions. The Review Questions are the heart of this study guide, and contain hundreds of questions and detailed answers from past exams. I believe the best way to study for the EA-2L (and later, the EA-2F) exam is by use of a question and answer format – to examine the syllabus material with a specific goal in mind, rather than just reading through. This promotes real learning of the material, rather than superficial memorization that can be forgotten when it comes time to take the exam.
- The Review Questions come from exams given in prior years; in most cases, the solutions have been expanded to include additional details that discuss topics related to but not specifically needed for a particular question – to illustrate other types of questions that could be on the next exam and to emphasize the point(s) that the question is designed to test. While it is true that questions from past tests may not be repeated on future exams, many of the items that the JBEA expects an enrolled actuary to know remain constant from year to year. Understanding the key point of past exam questions will help you with questions on the next exam.

Review Questions from prior exams will show you what types of information will be given on actual exam questions, and acquaint you with the style, tone, and layout of exam questions. Familiarity prior to the exam will help eliminate anxiety during the exam and allow you to block out distractions and instead focus on nothing other than getting the correct answer to each question. Some of the exam topics may have been added to the law recently. The chapters on these sections may seem very light on review questions, since there are not many past exams from which to draw the questions. For these topics, actual exam questions from more recent exams included in this book will describe the topic in more detail.

- The Guide has been organized not only for the student's initial studying of the material, but so it can be used to review all material during those critical final weeks before the exam.

## STUDY APPROACH

The chapters are designed according to the following format:

- Readings (all of the readings in the chapters are taken from the reading list in the Examination Program Booklet)
  - Internal Revenue Code sections
  - Regulations
  - Revenue Rulings
  - Notices and other Publications
- Introduction to Chapter with study hints
- Summary outline with examples where applicable
- Review Questions (from prior exams); Solutions to Review Questions from all chapters are at the end of this study guide

The recommended study approach is:

1. Read the Introduction
2. Study the summary outline with examples
3. Study the Internal Revenue Code sections
4. Read the Regulations and related Revenue Rulings and Notices in regard to any areas where you still have questions
5. Solve the Review Questions (study solutions)
6. Re-read the portions of the suggested readings based on type of questions asked on prior exams until you are thoroughly familiar with the concepts asked about on the exam.

## EXAM PRACTICE

After completing all of the chapters in this Study Guide, take the exams included after the chapters in the Study Guide. Try to simulate actual exam conditions when taking the prior year exams. After each exam, review your answers with the detailed solutions included in this Study Guide. This will help you identify difficult topics for you that will require additional study before the actual Exam.

The May 2025 EA-2L Exam will be 2½ hours long. It is not known how many questions the exam will contain, but each exam questions will have a value of from 1 to 5 points (typically, true/false questions tend to be 1 or at most 2 points, while numerical questions involving calculations will be of the 3-5 point variety), and all of the exam questions will sum to a total of 100 points. Therefore, the exam is designed to allow 1½ minutes per point. Use this general guideline during the exam to know about how far along you should be based on the time expired. Do not spend too long on a very complex question if it means you will not have the time to finish several questions at the end of the exam. The exam is designed so that a qualified candidate will have enough time to complete the examination, but if you feel that you need more time to work on a particular subject, you should pass over questions on that topic until the end of the exam.

Since there is no credit for unanswered questions and no penalty for incorrect answers, you should answer EVERY question even if it is a guess. Also, remember when studying particularly complex topics that even for the most complex exam questions (those valued at 5 points), you should be able to be read and solve the question in about 7½ minutes.



If you have any questions regarding the information in this study guide, or if you believe there is some question about any of the information contained on any topic, please use the feedback sheet included in this book to report your comments to ACTEX publications.

Good luck to you on the 2025 EA-2L exam!

Michael J. Reilly, ASA, EA, MAAA  
January 2025

## SYLLABUS FOR THE EA-2L EXAMINATION

The syllabus for the EA-2L exam is broken into 14 major topics reproduced in the chart below. The chart also shows, by number, the specific questions asked on each topic for the last three exams, and the total point value of such questions. The specific question numbers are provided to guide students looking for questions on a specific topic from a particular exam. The point values are shown to show the relative weight given to the topics on the last few exams.

The 2025 exam, of course, is not required to follow the trends of the last five exams regarding the number of questions or point value to assign to any of the syllabus topics. However, the chart may reveal some patterns on which topics the exam question writers have focused on over the past three years, and these patterns may help you decide where to best focus your study time for the exam.

The chart also shows the nature and types of questions likely to be asked on each topic. For example, by comparing the number of questions to the total point value for the first topic, regarding reporting and disclosure, shows that the topic lends itself to questions of the one and two point variety, mostly true/false types of questions. Topics on non-discrimination, on the other hand, frequently involve extensive calculations, making them more time consuming and of the 3, 4, and 5 point variety.

Please use the following chart to gain any advantage you can regarding areas to study, study time to devote, and what to expect on the upcoming 2025 exam. Note that there may be instances of overlap between various topics in a single question. In such cases, the number of points were allocated to the topic tested most heavily for that particular question.

Candidates should familiarize themselves with the basic provisions of the American Rescue Plan Act of 2021 (“ARPA”), which may be referenced in exam questions. This legislation included various funding relief measures for single employer and multiemployer pension plans. As such, ARPA is more likely to be referenced in Exam EA-2F than in Exam EA-2L, but candidates should nevertheless have a working knowledge of ARPA in case it is referenced in this exam. This manual includes a brief outline of the main provisions of ARPA.

<https://www.irs.gov/tax-professionals/enrolled-actuarial-joint-board-examination-program>

| Topic   | 2020 Questions                         | 2021 Questions                | 2022 Questions                   | 2023 Questions                     | 2024 Questions   |
|---|--|-------------------------------|----------------------------------|------------------------------------|--|
| Requirements with respect to vesting, service credits, employee contributions, accrued benefits, normal retirement.                                       | 6, 7, 33<br>[4 points]                 | 23<br>[3 points]              | 3, 4, 5, 6, 29, 30<br>[9 points] | 4, 5, 8, 28, 30, 31<br>[14 points] | 4, 5, 6, 14, 15, 24, 25, 26, 27, 28, 29<br>[25 points] |
| Requirements with respect to and adjustments for early retirement, postponed retirement, joint and survivor annuities, and pre-retirement death benefits. | 30, 31<br>[5 points]                   | 5, 22, 25<br>[6 points]       | 26, 27<br>[8 points]             | 6, 7, 29<br>[5 points]             | 23, 35<br>[6 points]                                   |
| Determination of benefits, including permitted disparity.   | 32<br>[4 points]                       | 43<br>[3 points]              | 45<br>[2 points]                 | 27<br>[4 points]                   | [0 points]   |
| Maximum benefit limitations under Code § 415  | 20, 44, 45, 49<br>[10 points]          | 15, 24, 37, 38<br>[12 points] | 18, 19, 41, 42<br>[10 points]    | 18, 19, 44<br>[5 points]           | 43, 44<br>[6 points]                                   |
| Determination of top-heavy status; additional requirements with respect to top-heavy plans  | 21, 22, 23, 46, 47, 48<br>[12 points]  | 16, 39, 40, 41<br>[10 points] | 20, 43<br>[4 points]             | 20, 21, 22, 45<br>[7 points]       | 16, 17, 18, 45<br>[6 points]                           |
| Funding based limits on benefits and benefit accruals under single employer defined benefit plans (AFTAP rules).  | 18, 19, 41, 42, 43<br>[10 points]      | 14, 35, 36<br>[9 points]      | 16, 17, 39, 40<br>[10 points]    | 42, 43<br>[7 points]               | 42<br>[3 points]                                       |
| Nondiscrimination requirements including those related to plan participation, coverage, and permitted disparity.  | 3, 4, 5, 26, 27, 28, 29<br>[17 points] | 3, 4, 20, 21<br>[9 points]    | 2, 24, 25<br>[9 points]          | 2, 3, 26<br>[7 points]             | 3, 21, 22<br>[7 points]                                |

| Topic   | 2020 Questions                | 2021 Questions                     | 2022 Questions                           | 2023 Questions                           | 2024 Questions                   |
|---|-------------------------------|------------------------------------|--|--|----------------------------------|
| Requirements with respect to reporting and disclosure, including underfunded plans, reductions in future benefit accruals, and reportable events.   | 1, 11, 24, 25<br>[4 points]   | 1, 2, 7, 17, 18, 19<br>[10 points] | 1, 11, 21, 22, 23, 28, 34<br>[13 points] | 1, 12, 16, 17, 23, 24, 25<br>[14 points] | 1, 2, 19, 20<br>[6 points]       |
| PBGC premium requirements   | 8, 9, 34, 35<br>[9 points]    | 6, 26, 27, 28<br>[11 points]       | 7, 8, 31, 32<br>[10 points]              | 9, 10, 32, 33, 34<br>[12 points]         | 7, 30, 31, 32, 41<br>[15 points] |
| Plan termination requirements including standard and distress terminations, involuntary terminations, missing participants, guaranteed benefits, allocation of assets, plan liability and employer liability. | 10, 36<br>[5 points]          | 9, 29<br>[5 points]                | 9, 33, 44<br>[6 points]                  | 11, 36, 37<br>[7 points]                 | 13, 33, 34<br>[8 points]         |
| Withdrawal liability under multiemployer plans.   | 12, 13, 37, 38<br>[10 points] | 10, 30, 31<br>[9 points]           | 10, 46<br>[5 points]                     | 38, 39<br>[8 points]                     | 36<br>[4 points]                 |
| Prohibited transactions and fiduciary standards.  | 15, 16, 39<br>[4 points]      | 11, 33, 42<br>[4 points]           | 13, 36<br>[3 points]                     | 13, 14<br>[2 points]                     | 11<br>[1 point]                  |
| Excise taxes other than for funding requirements.   | 2, 14<br>[3 points]           | 8, 32<br>[5 points]                | 12, 35, 37<br>[7 points]                 | 35, 40<br>[5 points]                     | 8, 9, 10, 37, 38<br>[8 points]   |
| Standards of performance and professional conduct for enrolled actuaries.   | 17, 40<br>[3 points]          | 12, 13, 34<br>[4 points]           | 14, 15, 38<br>[4 points]                 | 15, 41<br>[3 points]                     | 12, 39, 40,<br>[5 points]        |

## AMERICAN RESCUE PLAN ACT OF 2021

The American Rescue Plan Act of 2021 (“ARPA 2021”) was signed into law on March 11, 2021. This law provides for Special Financial Assistance (“SFA”) to financially distressed multiemployer pension plans, offers funding relief to multiemployer and single employer pension plans, and increases the multiemployer PBGC premiums for plan years beginning after December 31, 2030. The law’s main provisions are summarized as follows:

### I. Special Financial Assistance (“SFA”)

ARPA 2021 appropriated funds (known as “SFA”) to be distributed to financially distressed multiemployer pension plans which meet certain criteria. Such SFA is intended to help financially distressed multiemployer pension plans meet their financial obligations through 2051 (30 years after the law’s enactment).

Multiemployer pension plans which are seeking SFA must file an application with the PBGC for approval no later than December 31, 2025 (December 31, 2026 for re-submitted applications). Upon approval of an application, SFA is distributed to the multiemployer pension plan as a lump sum and there is no repayment obligation.

Multiemployer pension plans which receive SFA will be deemed to be in critical status beginning with the plan year in which the effective date of the SFA occurs and ending with the last plan year ending in 2051. As such, plans receiving SFA are restricted from improving benefits and reducing contributions in accordance with the limitations imposed on plans in critical status. Additionally, plans receiving SFA that previously implemented benefit suspensions under the Multiemployer Pension Reform Act of 2014 (“MPRA”) are required to restore the suspended benefits and are prohibited from implementing MPRA benefit suspensions in the future.

SFA must be kept separately from the plan’s other assets, is restricted from risky investments, and can only be used for paying the plan’s benefit payments and expenses.

A multiemployer pension plan must meet one of the following conditions in order to be eligible for SFA:

1. The plan is in critical and declining status, or
2. The plan was approved for MPRA benefit suspensions as of March 11, 2021, or
3. The plan became insolvent after December 16, 2014 and is not terminated as of March 11, 2021, or
4. The plan meets all of the following conditions:
  - a. Certified to be in critical status in any plan year beginning in 2020 through 2022, and
  - b. The current value of assets divided by the current liability is less than 40% for any plan year beginning in 2020 through 2022, and
  - c. The ratio of active to inactive participants is less than 2 to 3 in any plan year beginning in 2020 through 2022.

## II. Funding Relief for Multiemployer Pension Plans

The following three funding relief measures apply to multiemployer pension plans:

1. Election of Section 432 Status. For the first plan year beginning between March 1, 2020 and February 28, 2021, plans are permitted to elect for the status for this plan year under Section 432 of the Internal Revenue Code to be the same as the immediately preceding plan year. For plans that are not in critical status under such election, but would be in critical status absent this election, the plan is exempt from the excise tax on any funding deficiency that is required under Code Section 4971.
2. Extension of Funding Improvement and Rehabilitation Periods. Plans in endangered or critical status for a plan year beginning in 2020 or 2021 may elect to extend its funding improvement or rehabilitation period by 5 years, thus increasing the overall period from 10 years to 15 years. Plans in seriously endangered status for a plan year beginning in 2020 or 2021 may elect to extend its funding improvement period by 5 years, thus increasing the overall period from 15 years to 20 years.
3. Extended Amortization Period for Adverse COVID-19 Experience. Plans that have not received SFA and that are not facing insolvency may elect to amortize adverse experience resulting from COVID-19 for the first plan year beginning after February 29, 2020 over a period of 30 years instead of the typical 15 years for experience amortization bases.

## III. Funding Relief for Single Employer Pension Plans

The following two funding relief measures apply to single employer pension plans:

1. Extension of Period for Shortfall Amortization Installments. The shortfall amortization base period is extended from 7 years to 15 years with respect to plan years beginning after December 31, 2021. Plans may *elect* for this extension to apply to an earlier plan year beginning after December 31, 2018. All outstanding shortfall amortization bases for plan years prior to the first plan year to which the 15-year amortization applies are eliminated.
2. Segment Rate Stabilization. Per Section 430(h)(2)(C) of the Internal Revenue Code, each of the valuation segment rates must fall within a corridor of the 25-year average of applicable segment rates. ARPA 2021 imposed a floor on the 25-year average segment rate of 5.00% and defined the corridor around the 25-year average segment rates for future years as follows:

| Calendar Year | Minimum Percentage | Maximum Percentage |
|---------------|--------------------|--------------------|
| Through 2030  | 95%                | 105%               |
| 2031          | 90%                | 110%               |
| 2032          | 85%                | 115%               |
| 2033          | 80%                | 120%               |
| 2034          | 75%                | 125%               |
| After 2034    | 70%                | 130%               |

#### **IV. PBGC Premiums for Multiemployer Pension Plans**

The multiemployer premium rate per plan participant is set to increase to \$52 for plan years beginning after December 31, 2030. Such premium rate is to be indexed to the Social Security national average wage index for subsequent years.

## Overview of Tax Qualified Plans (IRC section 401) Structure of this Book

READINGS: ERISA – Employee Retirement Income Security Act of 1974

Internal Revenue Code (IRC) Section 401 (excluding subsections (f), (g), (i), (m), (n), and (o))

Section 414 – Definitions (excluding sections (d), (e), (o), (t), (u))

The United States retirement system provides retirees with income through three sources. The system is figuratively referred to as the “three legged stool” of retirement savings. The first leg of the stool is the government operated Social Security system. The program is run by the federal government and is funded through general tax receipts. The second leg of the stool is the private retirement savings of the retiree. The U. S. government subsidizes individual savings for retirement through tax incentives for Individual Retirement Accounts (IRAs)

The third leg of the retirement income stool is the employer financed tax qualified retirement plan system. The government supports these plans through tax policy, in three specific ways. First, annual employer contributions to the plans are tax deductible to the plan sponsor, up to specified limits. Next, the earnings on the trust that funds a tax qualified plan are not taxed immediately but instead are tax-deferred to the time the benefit is distributed to plan participants.

Finally, the contributions to fund the benefits for employees who participate in the plan, which reflect a part of the employee's total compensation package, are not treated as taxable income to the individual until such time as the assets are distributed as plan benefits. Since the benefits are meant to be distributed after retirement, when a plan participant may be in a lower tax bracket, the deferred taxation is intended to provide an overall tax savings to the employee.

Since the tax treatment of these plans represents a significant tax cost to federal revenues, the government has an interest in making sure the plans are run fairly, that the benefits they provide are secure, and that the plans are regulated in a manner that benefits both employee plan participants and employer plan sponsors.

In 1974, Congress passed ERISA, the Employee Retirement Income Security Act, a comprehensive law establishing requirements for tax qualified retirement plans in the United States. All of the questions on the EA-2L exam are derived from DOL regulations under ERISA, IRS regulations under new sections of the Internal Revenue Code (IRC) established by ERISA, IRS and DOL Revenue Rulings, notices, and other publications, and PBGC publications published over the past 40 plus years under the authority of ERISA. While nearly everything covered in this book deals with these secondary publications, you should keep in mind that the original requirement for the rules comes from ERISA, even as it has been amended many times since its original passage. You may want to review the current version of ERISA for a general overview of the qualified plan rules that will be discussed in more detail throughout the remainder of this book.

Prior to ERISA, employer sponsored retirement plans were mostly unregulated. Several high profile failures involving improperly funded plans or questionable treatment of employees by employers led to increased government regulation of tax qualified plans in general. In addition to regulating retirement plans, ERISA created the position of the Enrolled Actuary. To become enrolled, an actuary must show proficiency and understanding of the laws relating to qualified retirement plans to the satisfaction of the IRS, and is then permitted to practice before the IRS.



To become enrolled, an actuary must pass two exams designed and published by the IRS. One exam demonstrates command of basic actuarial principles regarding the theory of interest and life contingencies (EA-1). The other exam (EA-2) tests knowledge of the federal laws regarding plans, and covers so much material it is broken into two parts. One part of EA-2 demonstrates understanding of the laws relating to funding tax qualified defined benefit plans (EA-2F) and the other demonstrates all other laws regarding defined benefit plans (EA-2L). This book describes the laws relating to qualified plans covered under the EA- 2L.

The EA-2L exam is different from most other actuarial exams – for example, the exams sponsored by the Society of Actuaries. Unlike most actuarial exams, the EA-2L is less of a mathematical exam and more of a legal exam, although some of the questions will lend themselves to demonstrating knowledge of the law through correct mathematical calculations required by the law. This book will spend less time on the mathematical calculations required by the exam (although these will be explained and examples will be provided) and more time regarding the laws, why they were passed, and what Congress intended to accomplish in passing such laws. Because of this, the book will often read more like a legal or history text than a mathematical guide.

Broadly speaking, ERISA creates responsibilities regarding employer sponsored tax qualified retirement plans to be handled by three government agencies, the Treasury Department (IRS), the Department of Labor (DOL), and the Pension Benefit Guaranty Corporation (PBGC, a regulatory body first established by ERISA). This chapter will give a broad overview of the IRS requirements under Code section 401. Laws regulated by the DOL and PBGC will be covered in later chapters.

ERISA created section 401 of the Internal Revenue Code. This Code section and the related Regulations, Revenue Rulings and Notices provide the rules that must be followed for a plan to be tax qualified. Qualification is important because only a qualified plan allows the tax benefits discussed above – deduction of employer plan sponsor contributions, exemption from income tax by the plan trust, and deferral of income taxes by plan participants on benefits provided by the employer plan sponsor.

In the same way that different subtitles of ERISA distribute authority to different government agencies under the law, several subsections of IRC section 401, particularly subsections of Code section 401(a), establish general rules by reference to other sections of the Code. These other Code sections then establish more detailed requirements that must be met for plan qualification. For example:

| <u>General rule under IRC section</u> | <u>Specific rules under IRC section</u>             |
|---------------------------------------|---|
| 401(a)(3)                             | 410 (participation)                                 |
| 401(a)(7)                             | 411 (vesting)                                       |
| 401(a)(10)(B)                         | 416 (top-heavy)                                     |
| 401(a)(11)                            | 417 (QJSA, QPSA, and lump sum distributions)        |
| 401(a)(29)                            | 436 (funding based limits on benefits and accruals) |

Also, certain nondiscrimination testing under 401(a)(4) must satisfy coverage tests defined under Code section 40(b). This chapter will review only the basics in section 401 - these other sections will be addressed in later chapters of this study guide.

Section 401 is long, but the rules it lists are general, rather than specific. The purpose of this first chapter is to familiarize you with the general provisions of IRC section 401 – the specific rules of how to apply these general rules (i.e., the information that produces questions you will see on the EA-2L examination) will be covered in later chapters. The purpose of this chapter 1 is to ease you in to the exam, to let you know where everything is. The information will provide a valuable frame of reference when you begin to study further chapters of this guide.

As you read through the sections below, remember that IRC section 401 covers all qualified plans, including both defined contribution and defined benefit plans. An enrolled actuary must know the correct rules for administering a defined benefit plan, and all or nearly all of the questions on the EA-2L exam will concern defined benefit plans in at least some way. However, an Enrolled Actuary must understand defined

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contribution plans as well, and specifically how they interact with defined benefit plans with regard to employee coverage and non-discrimination testing.

The Internal Revenue Code is broken down into numbered sections, subsections under those sections labeled (a), (b), (c), etc., and further subsections thereafter. For example, Section 401(a) is broken into (1), (2), (3), etc. Then, 40(a)(1) may be broken into (A), (B), (C), etc. Each subsection may be broken into sub-subsections, and so on, ad infinitum. Many government regulations and other publications are number and sub-numbered in the same manner.

If you are familiar with working with the internal Revenue Code and other governmental publications, this will already be familiar to you. If not, you should be able to quickly pick up on the system.

The EA-2L exam basically asks you to know the requirements for a retirement plan to be tax qualified. These requirements are spelled out in IRC §401 and other referenced sections. An Enrolled Actuary should be intimately familiar with the requirements of Section 401, and the exam tests such knowledge.

The following pages are an example of what I will call “mapping” an Internal Revenue Code section. From time to time throughout this book, I will map other code sections or specific regulations. The actual Code and its sections and sub-sections are in the public domain, and can be found on the internet or in published reference materials.

The law is written in legal jargon and can be complex, referring to specifically defined terms that appear in other code sections. Mapping the section is my attempt to turn this legal jargon into ordinary English, so the code sections will be paraphrased to state a simple version of what is actually meant by the section. This will allow you to understand where you can find the general rule that provides the basis of a very specific rule required for an exam question.

This may seem confusing at first, but I hope it will become clear once you review the mapped section 401 below.

**CODE SEC 401    QUALIFIED PENSION, PROFIT-SHARING AND STOCK BONUS PLANS****Sec 401(a) REQUIREMENTS FOR QUALIFICATION**

- (1) Contributions are made for the exclusive benefit of employees or beneficiaries
- (2) Assets cannot be diverted from the exclusive purpose of providing benefits to the employees covered by the plan and their beneficiaries
- (3) Plan must meet the minimum coverage standards of Code Sec 410 (covered in detail in chapter 4 of this study guide)
- (4) Contributions or benefits do not discriminate in favor of highly compensated employees [defined in Code Sec 414(q)] [see Reg 1.401(a)(4), covered in detail in chapter 4 of this study guide]
- (5) Special Rules
  - (A) Coverage may be limited to salaried or clerical employees
  - (B) Contributions and benefits may bear uniform relationship to compensation [defined in Code Sec. 414(s)]
  - (C) Permitted disparity in plan benefits (i.e., benefits may be integrated with Social Security benefits) [see Code Sec 401(l) and Regulation 1.401(l), discussed in detail in chapter 2 of this study guide]
  - (D) Integrated Defined Benefit Plan – employer-derived accrued benefit may be limited to excess of final pay over employer-derived Social Security benefit (over 35 years) (also discussed in detail in chapter 2)
  - (E) Employers that sponsor 2 or more qualified plans may satisfy the rules for non-discrimination under paragraph (4) above by considering all plans as a single plan
  - (F) Social Security retirement age may be considered a uniform retirement age for purposes of testing under paragraph (4) above
  - (G) Government plans (described in Code section 414(d)) shall not be subject to the requirements of paragraphs (3) or (4) above
- (6) Participation requirements of 401(a)(3) must be met on one day in each quarter
- (7) Minimum Vesting Standards [see Code Sec 411 – covered in detail in chapter 2 of this study guide]
- (8) Forfeitures must not increase benefits in defined benefit plan
- (9) Required Distributions [see Notice 97-75 and chapter 2 of this study guide]
  - (A) Distribution must begin no later than “required beginning date” over life of employee or lives of employee and beneficiary.
  - (B) Rules for distribution when employee dies before the full distribution of benefits
  - (C) Required Beginning Date is April 1 of calendar year following: later of year attains age 70 ½ or retires. (If 5% owner, year attains age 70 ½)  
Actuarial Adjustment: for period after age 70 ½ in which employee was not receiving benefits
  - (D) Rules for determining life expectancy
  - (E) Rules for determining a designated beneficiary under this paragraph (a)(9)
  - (F) Rules for plan payments to minor children of participants
  - (G) Treatment of ‘incidental death benefits under this paragraph (a)(9)

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- (H) A temporary waiver of this section not applicable to defined benefit plans
  - (10) Other requirements
    - (A) Plans benefiting owner – employees [see Code Sec 401(d)]
    - (B) Top-heavy Plans [see Code Sec 416]
  - (11) Joint and Survivor Annuity and Pre-Retirement Survivors Annuity [see Code Sec 417 – and chapter 2 of this study guide] Special rule where participant and spouse married less than 1 year
  - (12) Protection of benefit after merger or spin-off
  - (13) Assignments and Alienation: Not permitted except for Domestic Relations Orders or certain judgments and settlements
  - (14) Plan must allow participant to begin payment of benefits no later than the 60<sup>th</sup> day after latest of the close of plan year of the later of:
    - (A) Attains earlier of age 65 or normal retirement age,
    - (B) 10<sup>th</sup> anniversary of participation in plan, or
    - (C) Terminates service.
 [see Rev Ruling 81-140]
  - (15) Benefits cannot be decreased by reason of increase in Social Security
  - (16) Benefits or contributions limitations [see Code Sec 415]
  - (17) Compensation Limit [see Reg 1.401(a)(17) and Notice 2001-56]
    - (A) \$200,000 in 2002 (see Limits, Tables and Formulas given with Exam)
    - (B) Cost-of-Living Adjustment – rounded to next lower multiple of \$5000
  - (18) [Repealed]
  - (19) Cannot forfeit employer benefits because of withdrawal of employee contributions if participant is at least 50% vested
  - (20) Plan can make one or more distributions within one taxable year of termination of plan. A plan sponsor that wishes to terminate a defined benefit must file notice with PBGC.
  - (21) [Repealed]
  - (22) Defined contribution plan (other than profit-sharing) limited to not more than 10% of total assets in securities of employer. Generally not applicable to the defined benefit plans tested on this exam.
  - (23) Stock Bonus Plans
  - (24) Group trust may include money from governmental unit.
  - (25) Requirement that actuarial assumptions be specified so that defined benefits are definitely determinable. [see Rev Ruling 92-66]
  - (26) Additional Participation Requirements [see Reg 1.401(26), discussed in detail in chapter 4 of this study guide]
    - (A) Defined Benefit Plan – on each day of plan year, benefits at least the lesser of
      - (i) 50 employees, or

- (ii) Greater of 40% of employees or 2 employees if the employer has only 2 employees. One employee if the employer employs only one employee.
  - (B) Definition of employees excludible for purposes of this section
  - (C) Collectively bargained union employees exempt from this requirement.
  - (D) Multiemployer plans exempt from this paragraph's requirement
  - (E) Special rules in the event of mergers and acquisitions.
  - (F) Separate testing for separate lines of business
  - (G) This paragraph does not apply to government plans
  - (H) IRS may publish regulations regarding the requirements of this section.
- (27) Profit-sharing Plans
- (A) Contributions need not be based on profits
  - (B) Plan must designate type – money purchase pension or profit-sharing
- (28) Additional requirements relating to ESOP
- (29) DB plans must meet the requirements of IRC Section 436 – see chapter 6 of this study guide
- (30) Limitations on elective deferrals in 401(k) and similar type plans
- (31) Plans must allow distribution in the form of a direct rollover to an IRA or to another qualified plan for certain distributions
- (32) Failure to make certain payments if plan has liquidity shortfall
- (33) Prohibition on benefit increases while sponsor is in bankruptcy
- (34) Benefits of missing participants on plan termination – transfer to PBGC.
- (35) Diversification requirements for certain defined contribution plans
- (36) Plans are permitted to pay distributions to participants who continue to work after reaching age 62 (working retirement)
- (37) Additional benefits mandatory for certain uniformed service members.

401(b) Certain retroactive changes in plan, necessary to satisfy Code Sec 401(a).

401(c) Definitions and rules relating to self-employed individuals and owner-employees

401(d) Contribution Limit on Owner-employees – contributions derived from trade or business to which such plan established

401(e) [Repealed]

401(f) Certain custodial accounts and contracts

401(g) Definition of the term ‘annuity’ for purposes of Code sections 401, 402, 403, and 404

401(h) Medical, etc., benefits for retired employees and their spouses and dependents [see Code Sec 420]

- (1) Such benefits subordinate to retirement benefits
- (2) Separate account established
- (3) Employer’s contributions to separate account are reasonable – 25% limit
- (4) Assets cannot be diverted
- (5) Amounts remaining in the account must be returned to the employer
- (6) Separate accounts must be maintained for key

employees 401(i) Certain union negotiated pension plans

401(j) [Repealed]

401(k) Cash or deferred arrangements (CODA – employee salary deferral accounts) permitted within defined contribution plans

401(l) Permitted Disparity in plan contributions or benefits – discussed in detail in chapters 2 and 4 of this study guide

401(m) Nondiscrimination testing of employee after tax and employer matching contributions

401(n) Plans must comply with Qualified Domestic Relations Orders (QDRO)

401(o) Cross reference to other Code sections

## HOW TO USE THIS STUDY GUIDE

As part of my job administering pension plans and preparing others to do the same, I frequently hold classes to prepare my co-workers to take exams offered by ASPPA – the American Society of Pension Professionals and Actuaries.. These exams (some of which, but certainly not all of which, are actuarial in nature) are broken into sections, and ASPPA publishes study guides broken into chapters, with review questions at the end of each chapter. My system was to have everyone read a chapter, and then to meet to discuss not the chapter information, but rather to review the questions, which demonstrated how the information in the chapter would be used to create questions on the exam. This preparation method worked very well, and I want to replicate the method, to the extent possible, in this EA exam guide.

This book teaches the exam topics primarily using a question and answer format. Each of the following chapters describes one or more of the topics on the exam syllabus (although the chapters and the syllabus may have areas of overlap so that the chapters do not conform exactly to each syllabus topic). Each chapter begins with an overview of the topic. Typically, a chapter will condense the rules found in what are literally hundreds of pages of government publications down to just a few pages. It would be impossible to list in the overview all of the minor details of every regulation which might lend themselves to forming a question on the exam. Instead, each chapter will present, after the general discussion of the topic, review questions taken directly from questions asked on EA exams from prior years, when such questions are available.

The review questions will illustrate how certain central points within the published regulations and other guidance are used to create questions on the exam. Past questions that have become obsolete due to subsequent changes in pension law are removed annually from this book.

The review questions are answered in detail at the end of this book. In the same way that the chapter outline discusses a topic in a general manner, the review questions and answers discuss the fine points and details of the topic. The review question answers discuss the central point that the question tests, as well as a discussion of how a question might be modified or asked differently to produce a different result, when applicable. Quite often, a specific point that determines the correct answer to a question may not be included in the more general discussion contained in the chapter, because the general overview in the chapter will not drill down to the level of detail needed for that question.

The solution to questions will discuss this more specific information. In reading through the review question solutions, you will see that certain topics and specifics have been asked repeatedly on past exams, sometimes with slight variations in the way the question is asked. Topics to which the exam writers return again and again are especially important, since they could very likely create questions on the exam that you will actually be taking.

It is recommended that you study the discussion of the topic at the start of each chapter. If any topic covered in the general outline is unfamiliar to you, you may wish to review it in more detail by reading the government published source material shown in the box at the start of each chapter. Then try to do the review questions on your own, and then carefully and fully read the solution to the review questions at the end of this book. The solutions to the review questions are a large portion of this study guide, and it is recommended that you read the fully developed solutions to all of the review questions, even if you were able to answer the question without any help. Again, if any question and answer seem to indicate a topic that is unfamiliar to you, or suggest that a law is implemented in a manner different from how you thought it was written, you should return to the source material for further study.

If you can answer all of the review questions at the end of a chapter, and, more importantly, understand why each question is answered in the way that it is, along with an understanding of the publication that contains the rule that is key to the exam question, you will have a thorough understanding of the topic for

exam purposes. If you can have this kind of thorough and complete knowledge of each chapter, you will be ready to earn a passing score on the actual exam.

Throughout this book, certain abbreviations will be used without additional explanation. IRC will refer to the Internal Revenue Code, and the terms IRC and “the Code” will be used interchangeably. The Employee Retirement Income Security Act will always be referred to as ERISA, and the Pension Protection Act of 2006 (which made extensive changes to the law regarding qualified DB and DC plans) will be PPA. The terms Treasury regulations and IRS regulations will be used interchangeably to refer to regulations published by that government organization.





## CHAPTER 2

### Benefits, Benefit Formulas, and Benefit Related Concerns under Defined Benefit Plans

|                |   |  |
|----------------|---|--|
| READINGS:      | <u>IRC</u> sections                       | 401(a)(9) Minimum Required Distributions   |
|                |   | 401(l) Permitted Disparity in Retirement Plans                                   |
|                |   | 411 Minimum Vesting Standards (Excluding section (e))                            |
|                |   | 417 Minimum Survivor Annuity Requirements  |
| <u>Reg</u>     | 1.401(a)-1                                | Normal retirement age  |
|                | 1.401(a)(9)(-1, -2, -3, -6 except Q&A-12) | Required minimum distributions   |
|                | 1.401(l)                                  | Permitted disparity  |
|                | 1.411(d)-3                                | Section 411(d)(6) protected benefits   |
|                | 1.411(d)-4                                | Section 411(d)(6) protected benefits   |
|                | 1.417(a)(3)-1                             | Disclosure on value of optional forms  |
| <u>Rev Rul</u> | 81-11                                     | Min. accrued benefits; fractional rule; break-in-service                         |
|                | 81-140                                    | Suspension of Benefits   |
|                | 89-60                                     | Interest Rates: ee accumulations   |
|                | 92-66                                     | Early Retirement Window Benefits   |
|                | 2003-65                                   | Vesting service upon resumption of accruals                                      |
|                | 2007-43                                   | Vesting on partial termination of plan   |
|                | 2007-67                                   | Minimum 417(e)(3) present value  |
| <u>Notice</u>  | 88-25                                     | Years of Service   |
|                | 88-126                                    | Years of Service   |
|                | 97-75                                     | Amendments to the 401(a)(9) MRD requirements                                     |
|                | 2001-56                                   | Amendments Made by the Economic Growth and Tax Relief Reconciliation Act of 2001 |
|                | 2004-78                                   | Distributions under the PFEA   |
|                | 2008-30                                   | PPA changes to IRC sections 401(a)(11) and 417                                   |

This chapter covers rules that apply to benefits under tax qualified defined benefit retirement plans. The main difference between a qualified defined contribution plan (a 401(k) or profit sharing plan, for example) and a defined benefit pension plan that requires annual certification by the plan's enrolled actuary, is that the defined benefit plan must use a formula to calculate a 'definitely determinable' benefit at retirement. The heart of any defined benefit plan is the benefit formula.

This chapter will provide an overview of the most important ERISA rules regarding the following syllabus topics that apply to the plan benefit formula:

- Basic Benefit Formulas
- Normal Retirement Date
- Benefit Service
- Vesting
- Accrued Benefits
- 411(d)(6) Protection of Benefits

Optional Forms of Benefits  
Qualified Joint and Survivor Annuity (QJSA)  
Qualified Optional Survivor Annuity (QOSA)  
Required Minimum Distributions  
Benefits from Employee Contributions  
Qualified Pre-Retirement Survivor Annuity (QPSA)  
Permitted Disparity in Benefit Formulas

### Basic Benefit Formula

A typical EA-2L exam question will describe a defined benefit pension plan according to its benefit formula. The most common type of formula is to multiply a fixed percentage of pay times the number of the participant's years of service.

**Example.** A plan provides a normal retirement benefit equal to 3% of average compensation times years of benefit service.

Note: In most questions, compensation is provided on an annual basis, and the retirement benefit may need to be expressed as a monthly payment or an annual payment, depending on the nature of the question. Be sure to keep the monthly vs. annual amounts straight by multiplying or dividing by 12 where needed.

**Example.** A participant at retirement age 65 has a benefit of \$3,000 per month. The present value factor for a participant age 65 (given by  $\ddot{a}_{65}$ ) is 11.25. What is the present value of the accrued benefit?

The answer is  $\$3,000 \times 12 \times 11.25 = \$405,000$ . The annuity factor is obviously an annual annuity, since a person age 65 has a life expectancy of about 11 years, not 11 months. This is obvious once stated, but can be forgotten under the pressure of actually taking the exam. Remember that you will frequently have to multiply or divide a benefit by 12 to keep units correct on an exam question.

A common variation on the above benefit formula is to provide a flat dollar amount, rather than a percentage of pay, for each year of service.

**Example.** A plan provides a normal retirement benefit equal to \$200 per month for each year of benefit service. A participant who retires with 12 years of service will have a benefit of \$2,400 per month or \$28,800 per year. The benefit is always expressed as an annuity for the participant's lifetime (referred to as a Single Life Annuity, or SLA) unless otherwise stated in the exam question.

In this example, the benefit is defined as a monthly annuity payment. Another common variation on a benefit formula is to have a tiered benefit formula for different years of service:

**Example.** A plan provides a normal retirement benefit equal to 3% of average compensation for each of the first ten years of benefit service, plus 4% of average compensation for each of the next ten years of benefit service, and 1% of average compensation for each year of benefit service thereafter (this is an acceptable benefit formula, see the section on accrued benefits below for similar formulas that may not be permitted under a qualified plan).

Assume the normal retirement age in the plan with this formula is 65. A 65 year old participant with 8 years of service will retire with a benefit of 24% of final average compensation. A participant with 18 years of service at retirement retires with  $(10 \times 3\% \text{ plus } 8 \times 4\%)$  62% of compensation, and a participant who retires with 28 years of service has a benefit of  $(10 \times 3\% \text{ plus } 10 \times 4\% \text{ plus } 8 \times 1\%)$  78% of compensation. You can see how such a benefit is highly dependent on the age at which an employee is

hired, and how such a benefit formula can be manipulated to reward a desired length of service.

The basic benefit formula is quite a simple concept. However, it is subject to many rules, restrictions and requirements that have been built up in the more than 40 years since the passage of ERISA. All of the following sections of this chapter will describe some type of modification to the above basic rules which can be used to generate questions on the EA-2L exam.

## Normal Retirement Date

The typical benefit payment in a defined benefit plan is an annuity payment (most commonly assumed to be a monthly payment, but may occasionally be described by the exam question as an annual payment). An annuity benefit is defined by the amount of the payments and by the period over which they are to be paid. The above benefit formulas define only the benefit payment amount.

The “normal retirement benefit” calculated by the plan’s benefit formula is an annuity paid in the plan’s “normal form” (most commonly an annuity lasting for the lifetime of the plan participant, but this may vary, and will be discussed further later in this chapter). The annuity always begins at the participant’s “Normal Retirement Date.”

A qualified defined benefit plan must define the plan’s Normal Retirement Date within the plan document, by reference to the plan’s normal retirement age. The latest age that a plan may use as the normal retirement age is the later of age 65 or the fifth anniversary of the first day of the plan year in which a participant joins a plan.

**Example.** A plan uses the latest retirement age allowed by law. Two employees, with birthdates of 1/1/1948 and 1/1/1970, are hired and join the plan on 1/1/2010. The first employee is age 62 on his date of plan participation, and since he is within 5 years of the normal retirement age of 65, the plan may legally delay his normal retirement date to five years after joining the plan, or 1/1/2015 at which time the participant is age 67. The second employee is more than five years from normal retirement age when joining the plan, and the employee’s normal retirement date is 1/1/2035.

A plan may use an earlier age for the normal retirement age, provided the age is reasonable. The IRS has ruled, using its regulatory authority to interpret provisions of the law, that a normal retirement age between 62 and 65, inclusive, will be deemed reasonable. Ages of 55 or greater, but not more than 62, will be deemed reasonable if it can be shown that the age represents the typical retirement age for the industry of the employer that sponsors the plan.

A normal retirement age of less than 55 will generally not be considered reasonable. An age of less than 55 may only be used by the plan as a normal retirement age if the IRS Commissioner rules that under all facts and circumstances pertaining to the industry of the plan sponsor, that such an age may be deemed reasonable as a typical retirement age in the industry. Professional athletes, for example, typically have careers that end prior to age 55. A retirement plan sponsored by a union covering professional baseball or football players, for example, would be permitted to have an earlier normal retirement age. Most industries, however, would not qualify for this exception.

## Benefit Service

The normal retirement benefit is commonly a function of a participant’s number of years of service. A defined benefit plan which uses such a benefit formula must define the manner in which benefit service is calculated.

Years of service may include all years of employment for a participant, or it may include only those years

in which the employee actually participated in the plan, and/or worked a sufficient number of hours (1,000 is common to denote full time employment). When a pension plan is initially adopted, the plan may, but is not required to, count service of employees prior to the adoption date of the plan for purposes of benefit service.

**Example.** An employee is hired on 1/1/2010 by an employer that sponsors a defined benefit plan. The employee becomes a participant in the plan on 1/1/2011. When the employee retires on 1/1/2020, the employee has ten years of employment service, but only nine years of participation service. For purposes of benefit accrual, the plan may use either nine or ten years of service to determine the benefit. The term “benefit service” must be defined in the plan document in such a way that it is not open to an employer’s discretionary interpretation, and must be uniformly applied to all plan participants.

**Example.** A participant is hired on 1/1/2005 by an employer that does not sponsor a defined benefit plan. On 1/1/2010, the employer adopts a defined benefit plan, and the employee immediately participates in the plan. The plan may treat the employee as having zero years of benefit accrual service as of the plan adoption date of 1/1/2010. The plan may also state that all years of past service will be counted as benefit service, in which case the employer will have 5 years of benefit accrual service on the 1/1/2010 adoption date. The plan may also grant past service for this employee in some amount less than 5 years. For example, the plan might state that all years of service after 1/1/2007 will count as benefit service. In such a case, this employee would have three years of benefit service on his plan entry date of 1/1/2010. Again, the rules for granting past service credit for benefits must be stated in the plan document, and must be uniformly applied to plan participants and not subject to the discretion of the employer that sponsors the plan.

For the default EA-2L question, the assumption is that the plan has been in place in all past years, that an employee joins the plan on his date of hire, and that all years of service are included for benefit calculation purposes. In any question where these default assumptions do not apply, the question data will state the manner in which benefit service is calculated.

Unlike a tax qualified defined contribution plan, a defined benefit plan may not require that an employee be employed as of the last day of the plan year in order to receive benefit service credit for that plan year. A defined benefit plan may condition service in a plan year on the number of hours worked by an employee in such plan year. The maximum number of hours that a plan may require for a plan year depends on whether or not the plan allows employees to earn partial years of benefit service.

If a plan does not consider partial years of service credit (i.e., employees always earn either one or zero years of service in a designated period, typically the plan year), then the maximum hours the plan may require to earn a year of service is 1,000. A plan may require up to 2,000 hours of service to earn a full year of service in a plan year, if the plan allows employees with less than 2,000 hours to earn a portion of a year of service ratably over that time.

**Example.** Two employers sponsor defined benefit plans. Both plans require the maximum number of hours worked to earn a full year of benefit accrual service. Plan A allows partial years of service credit for benefit accrual, but Plan B does not.

**Sample Employee 1.** An employee terminates on 5/31/2010 with 700 hours of service for the 2010 plan year. Under Plan A, the employee earns 0.35 years of service credit for the year 2010, determined using the formula:  $700 / 2,000 = 0.35$ . Under Plan B, the employee earns no service credit in 2010, since the employee failed to work the required 1,000 hours in the plan year.

**Sample Employee 2.** Another employee terminates employment on 9/30/2010 with 1,500 hours worked during the year 2010. Under Plan A, this employee would earn 0.75 years of benefit credit service for the 2010 year, using  $1,500 / 2,000 = 0.75$ . Under Plan B, the employee would earn 1 full year of benefit credit service, since the employee worked more than the 1,000 hours required to earn a full year of service.

As the two examples above show, neither of the two service crediting methods will result in more service credit than the other in all cases.

**NOTE:** For this discussion, it has been assumed that the plan year is the calendar year, and this is the twelve month period used to determine benefit accrual service. This is the default assumption for all questions on the exam, and it is the most common practice of actual defined benefit plans. However, a plan, within its document, may define any twelve month period as the benefit accrual period in which the employee must work the specified number of hours.

**Plan entry requirements:** The default assumption for an EA-2L exam question is that an employee participates in the defined benefit plan immediately upon date of hire. In actual plans, this is a rare provision. Almost all plans provide some type of waiting period to enter the plan, even if the plan will count retroactively for benefit purposes all service from date of hire (see examples above).

The maximum waiting period that a plan may impose on participation following date of hire, is one year of service (or the date on which the employee turns 21, if later), plus the lesser of six months or the time until the first day of the next plan year. In practice, this results in a waiting period of 12 to 18 months, as can be demonstrated in the following examples:

**Example 1.** A defined benefit plan with a plan year equal to the calendar year requires the maximum waiting period before an employee becomes a participant in the plan. An employee over the age of 21 is hired on 5/22/2010. The employee completes one year of service on 5/22/2011, and may be held out of the plan for a maximum of six months following this date. The employee's date of plan participation is 11/22/2011. If the employee were to terminate employment after 5/22/11 but before 11/22/11, the employee would never become a plan participant despite having more than one year of service.

In such a case the employee is treated as participating for the entire year of 2011, and not only on the period after entry into the plan. Thus, the employee in this example would receive a year of benefit service in 2011 based on total hours worked in 2011, not just the hours worked after 11/22/2011.

**Example 2.** The same employer hires an employee, who is over the age of 21, on 12/15/2012. The employee earns a year of service on 12/15/2013. Because the first day of the next plan year is less than 6 months away, the employee must enter the plan on 1/1/2014.

**Example 3.** The same employer hires an employee with birthdate 11/22/1990 on 2/15/2010. The employee completes a year of eligibility service on 2/15/2011. However, the employee does not turn age 21 until 11/22/2011. The employee may be held out of the plan up to six months, but not later than the first day of the next plan year, following this 21<sup>st</sup> birthday. This employee enters the plan on 1/1/2012.

This maximum waiting period rule is occasionally used to generate a plan question and should be memorized before taking the EA-2B exam. Note that this is the statutory *maximum* waiting period, a plan may define any shorter period, including immediate participation upon date of hire (effectively no waiting period). This no waiting period provision is the default assumption on exam questions – when a question provides a participant's date of hire, that same date should be assumed to be the date of entry into the plan and the date on which benefit accrual begins, unless the question states otherwise.

The initial year of service waiting period is important, because the plan may require an employee to work at least 1,000 hours of service in order to qualify to participate. Quite often, a plan will provide that an employee who does not satisfy the 1,000 hour requirement in the first twelve months after hire will have future entry measuring periods based on the plan year. An employee who remains part time (defined as less than 1,000 hours worked per twelve month period) may be held out of the plan indefinitely.

**Example.** A plan specifies the maximum waiting eligibility period. An employee hired on 11/15/2010 works a total of less than 1,000 from 11/15/2010 to 11/15/2011. The employee also works less than 1,000 hours in calendar year 2011 (note the overlap in these first two measuring periods), and continues to work less than 1,000 hours in each year 2012, 2013, and 2014. However, the employee increases the hours worked in 2015 to over 1,000. The employee has now satisfied the initial exclusion period and becomes a plan participant on 1/1/2016.

Note that the 1,000 hours worked in a twelve month period is a statutory requirement. The employer may not substitute its own definition of “part-time” and use this for eligibility purposes.

**Example.** A defined benefit plan requires a nine month waiting period for newly hired employees to enter the plan, and requires an employee to work at least 750 hours in the nine month period to enter the plan. This requirement is NOT permissible in a qualified plan, since an employee could fail to work 750 hours in a nine month period, but still work over 1,000 hours in the first twelve months of employment. Since the method described *could* result in making a participant wait longer than the maximum statutory period, it is not permitted in a qualified plan.

## Vesting

One purpose of the defined benefit plan, of benefit to and thus encouraging employers to adopt such plans, is to reduce employee turnover by providing incentive to employees to remain with the plan sponsor. One method of providing this benefit is to allow a vesting schedule under the plan. Under a vesting schedule, an employee’s right to receive the benefit earned is forfeitable. The employee may lose the right to receive a percentage of the benefit accrued under the plan if the employee terminates employment before completing a specified number of years of service with the employer.

Prior to the passage of ERISA, there were no federal laws defining or limiting a plan’s vesting schedule. At the most extreme, a plan could provide that an employee would remain 0% vested until normal retirement date, at which time the employee would become 100% vested in the benefit. In practice, this meant that an employee, even an employee with a long period of service for an employer, could be terminated from employment at any time right up until normal retirement date (for example, a few days before the employee’s 65<sup>th</sup> birthday) and receive no benefit from the plan.

ERISA created Internal Revenue Code section 411, which sets limits upon the employer’s ability to set a vesting schedule on plan benefits. The Code section attempts to strike a balance between the employer’s goal of encouraging long term employee participation in the plan and the employee’s right to secure benefits from the plan after a known period of service.

The original vesting schedules permitted by ERISA have been modified over time, almost always with the intent to reduce the number of years required for an employee to become vested, mostly to reflect the changing nature of employee / employer relationships and the fact that American workers tend to change jobs more often now than they have in the past.

Currently, there are only two vesting schedules allowed for DB plans under Code section 411(a):

- 1) The seven year graded vesting schedule – under this schedule, an employee is 0% vested with 0, 1, or 2 years of vesting service, then becomes vested at 20% per additional year, so that vesting is 20% after three years, 40% after four years, 60% after five years, 80% after six years, and 100% (full vesting) after no more than 7 years of vesting service.
- 2) The five year cliff vesting schedule – an employee is 0% vested while the employee has four or fewer years of service, and 100% with 5 or more years of service.

The above vesting schedules apply only in the case of a plan that is not top heavy. If a plan is top heavy,

the graded vesting schedule must be shortened by one year, so that an employee is 20% vested after two years of vesting service and 100% vested after six years, and the cliff vesting schedule must be no more than a three year cliff. Rules for determining a plan's top heavy status are discussed in chapter 3. An exam question may simply state whether a plan is top heavy or not, or may provide enough information for you to determine such status. In the event top heavy status is not addressed, the default is to assume a plan is not top heavy for purposes of determining a maximum vesting schedule.

A plan may use any other vesting schedule that it defines, as long as the schedule is at least as generous to employees as one of the schedules above at every level of service.

**Example:** A plan uses a vesting schedule where an employee is 0% vested with less than 4 years of service, 50% vested at four years, and 100% vested at 5 years of service. This schedule is less generous than the seven year graded schedule at 3 years of service. However, it fully vests the employee after 5 years and partially vests the employee earlier, and so it is at least as generous as the five year cliff vesting schedule. This is an acceptable vesting schedule under ERISA.

**Example.** A plan uses a vesting schedule where an employee is 25% vested with 3 years of service, 50% vested at four years, 75% vested at five years, and 100% vested at 6 or more years of service. This schedule is less generous than the five year cliff schedule, since the employee is not 100% vested at 5 years. However, the employee under this schedule is vested as much or more than under the seven year graded schedule at every number of years. This schedule is at least as generous as the seven year graded schedule and is an acceptable vesting schedule under ERISA.

**Example.** A plan uses a vesting schedule where an employee is 10% vested with 3 years of service, 20% vested at four years, 90% vested at five years, and 100% vested at 6 or more years of service. This schedule is less generous than the five year cliff schedule, since the employee is not 100% vested at 5 years (it is more generous at years 3 and 4), and it is less generous than the seven year graded schedule at years 3 and 4 (but more generous at years 5 and 6). This schedule is NOT an acceptable vesting schedule under ERISA, even though it is more generous than either schedule at some points in service.

Regardless of the vesting schedule used, the plan must provide that a participant is 100% fully vested upon reaching the normal retirement age under the plan. For example, a plan that uses a seven year graded vesting schedule could have an employee reach normal retirement age after five years of employment. Although the vesting schedule would normally provide 60% vesting at five years of vesting service, the plan must override this vesting schedule and provide the participant with 100% vesting, due to the attainment of normal retirement age. You can see how the mandatory rules for setting normal retirement age and date (shown above) can sometimes override a plan's maximum vesting schedule.

Notice that a vesting schedule is based on years of service. This is the same term as that used to determine benefit service in the normal retirement benefit formula, *but do not confuse these two terms*. Plans can, and often do, use different definitions of service for benefit calculation and for vesting (and possibly a third definition for year of service for purposes of the plan's eligibility waiting period, as discussed above).

For example, the use of fractional years of benefit service is acceptable and was discussed earlier in the chapter. Vesting service, however, must always be based on a whole number of full years of service, as implied by the vesting schedules described above. Vesting service years may be determined in one of two ways, the *elapsed time method*, and the *hours of service method*.

Under the elapsed time method of crediting vesting service, an employee receives credit for a full year of service if the employee is employed as of each anniversary of his date of employment.

**Example.** A plan measures vesting service using the elapsed time method. An employee who was hired on 6/15/2005 terminates employment on 5/1/2010. The employee has 4 years of vesting service because



the employee was no longer employed on the fifth anniversary of the employee's date of hire. Another employee, also hired on 6/15/2005, terminates employment on 7/1/2010. This employee is credited with 5 years of vesting service, since the employee was employed on 6/15/2010, the fifth anniversary of the date of hire. Suppose the plan used the five year cliff vesting schedule. These two employees demonstrate how just a couple of months of extra service allow the second employee to become 100% vested, whereas the first employee is 0% vested upon termination of employment.

You will notice that no minimum number of hours worked is required to receive a year of service under the elapsed time method. Part time employees continue to earn vesting credit for service at the same rate as full time employees. Employers who wish to prevent part time workers from becoming vested in the plan benefits may choose to credit vesting service under the hours of service method instead.

Under the hours of service method, the plan document must define a twelve month measuring period to be used to determine a vesting service year. Typically, the vesting service measurement period is defined as the plan year, but it does not have to be. An employee receives credit for a year of vesting service if the employee works 1,000 hours or more in the vesting measurement period. Under this vesting accrual method, part time employees (those who work less than 1,000 hours in any year) may be prevented from vesting in plan benefits indefinitely. Note that the employee does not need to be employed on either the first or the last day of the measurement period to receive vesting service credit, if the hours worked is sufficient.

**Example.** A plan uses the hours of service method to credit vesting service and defines the measurement period as the plan year. An employee is hired to work on a full time basis on 5/15/2010 and terminates employment on 8/15/2014. The employee works over 1,000 hours in the period of 5/15/2010-12/31/2010, and also works over 1,000 hours in the period 1/1/2014-8/15/2014, as well as working over 1,000 hours in calendar year 2011, 2012, and 2013. The employee has five years of credited vesting service. Notice that the employee has earned five years of service for vesting, despite working only three months more than 4 full years.

There are many other rules regarding vesting that cover circumstances that are rare, but which can occasionally generate a question on the EA-2L exam. Since covering every rule that could apply in every circumstance actually requires hundreds of pages of IRS publications, it is beyond the scope of this book. However, some of these unusual rules will be discussed here in a very brief manner:

**Excluded service:** A plan may exclude all employment service prior to the date an employee turns 18 for vesting purposes.

A plan may also exclude service prior to the date the plan is adopted, provided the employer did not sponsor a "predecessor plan." A predecessor plan is a plan that is terminated within five years before or after the current plan is adopted. This can lead to some unusual results.

Suppose an employer that sponsors a defined contribution plan adopts a defined benefit plan in addition to the existing plan. Since the defined contribution plan is ongoing, it is not a predecessor plan, and the defined benefit plan may exclude years prior to its adoption for vesting service. However, if the employer decides to terminate the defined contribution plan within five years of adopting the defined benefit plan, the defined contribution plan becomes a "predecessor plan," and the years it was in place must be considered for vesting service under the defined benefit plan. This may result in retroactively increasing the vesting of the DB plan participants, and require that terminated and paid out employees be located and paid their increased vested benefit amounts.

A plan document must define the date on which a terminated employee forfeits the non-vested portion of the benefit. The forfeiture may occur upon five breaks-in-service (see below). An employee who is re-hired after five consecutive breaks-in-service may have all previous service disregarded in determining vesting service. Alternatively, a plan may state that the non-vested portion of the benefit is forfeited upon payment of the entire vested benefit by the plan. If the plan utilizes this rule, an employee who is paid a

vested benefit and later re-hired before incurring five breaks-in-service must be given the opportunity to re-pay the distributed vested benefit to the plan (with interest, as applicable) and have the forfeited (non-vested) portion of the prior benefit restored by the plan.

A break-in-service is defined as a vested measuring period in which an employee works 500 hours or less. If the plan uses the elapsed time method of computing vesting service, a break-in-service occurs if the employee works less than three full months in a twelve month anniversary to anniversary measurement period. As described above, a plan may exclude all periods of vesting service earned by a re-hired employee, if that employee is re-hired after five consecutive breaks-in-service.

An employee who experiences a break-in-service during a period of time in which the employee is on a maternity or paternity leave of absence will be credited with sufficient hours (up to 501 hours) in order to avoid a break-in-service. The employee will not be credited with hours to bring the employee up to 1,000 hours, so as to receive credit for a year of service, however.

A plan which is terminated must fully 100% vest all participants and beneficiaries in the plan.

A plan which is “partially terminated” must fully 100% vest all participants who are affected by the plan’s partial termination. There is no hard and fast rule to determine when a plan is partially terminated, this is a determination made by the IRS based on the facts and circumstances of the terminations and which may be challenged and reviewed in a court of law.

A plan may specify that an employee becomes 100% vested if the employee terminates due to death, disability, or attainment of a plan defined early retirement age. While such provisions are quite common, they are not mandatory within a qualified plan. 100% vesting at normal retirement age, as discussed above, is mandatory in a qualified plan.

A defined benefit plan that requires mandatory employee contributions to the plan may exclude from vesting service all years where an employee fails to make such mandatory contributions. Such mandatory employee contribution plans, while once more common among large employers, are becoming increasingly rare.

Code section 411(a)(13) defines “applicable defined benefit plans.” These are plans that base benefits on a hypothetical account balance or a lump sum equal to a percentage of final average compensation. These include plans commonly known as cash balance plans and pension equity plans (PEP). Because they appear to participants to be similar in some ways to defined contribution plans, they are also known as “hybrid” plans. These plans are subject to a special vesting schedule requirement, in that the mandatory vesting schedule must be no less generous to participants as a three year cliff vesting schedule.

**Change of plan vesting schedule:** A plan which changes the vesting schedule, including a change caused by the plan changing its top heavy status, is subject to two rules. First, no participant may have the current vesting level reduced as a result of the change (i.e., the vesting level is similar to a 411(d)(6) protected benefit, which will be explained later in this chapter). And second, any plan participant with at least three years of service under the prior vesting schedule may elect to remain on that vesting schedule rather than transfer to the new schedule. Rather than request elections from all eligible participants, the plan may assume that a participant will choose a particular vesting schedule if that schedule is as favorable or more favorable to the participant at every level of service.

**Example.** A plan using a five year cliff vesting schedule is amended to provide a seven year graded schedule. Every participant who has already earned five years of vesting and was 100% vested under the prior vesting schedule at the time of the change must remain 100% vested under the new schedule.

**Example.** A plan that is top heavy and using a six year graded vesting schedule ceases to be top heavy. Under the provisions of the plan, the vesting schedule is automatically switched to a seven year graded schedule. All employees with at least three years of vesting service are deemed to remain on the six year

graded schedule, since such schedule is more favorable at every level than the seven year graded vesting schedule.

## Accrued Benefits

Prior to the time ERISA was passed, it was possible for a defined benefit plan to be “back-loaded” in such a manner as to circumvent the vesting requirements. For example, a benefit formula that provided a benefit of \$0 for the first 29 years of service and then 60% of pay in the 30<sup>th</sup> year would effectively establish a 30 year cliff vesting schedule, in violation of ERISA. As a result, ERISA includes a requirement that, in addition to the plan’s normal retirement benefit available upon reaching normal retirement age, a tax qualified defined benefit plan must provide that the benefit at retirement accrues to participants over time, and that such accruals may not be impermissibly (excessively) back-loaded.

The rules introduced by ERISA regarding benefit accruals are contained in Code section 411 (along with the rules on vesting, detailed above) and are interpreted under IRS regulations and other publications relating to such Code section. Code section 411 allows plans to use any one of three methods to demonstrate that the benefit formula is not excessively back-loaded. These methods are known as the 133⅓% method, the fractional accrual method, and the 3% method.

Under the 133⅓% accrual method, a plan is not excessively back-loaded as long as the accrual in any single plan year does not exceed the accrual in any prior year by more than one third.

**Example.** A plan benefit formula provides a benefit equal to 3% of compensation multiplied by the first ten years of benefit accrual service, 4% of compensation multiplied by the next ten years of accrual service, and 1% of compensation for all years of benefit accrual service thereafter. The only increase in annual benefit accrual occurs when the 3% annual accrual increases to 4% annual accrual. Since the larger accrual percentage is not more than one third higher than the lower percentage (that is, 4% is not more than 133⅓% of 3%), this increase is permitted, and this benefit formula satisfies the ERISA 133⅓% rule.

Notice that there is still some potential back-loading in this formula. For example, an employee who will have 20 years of benefit service at retirement will have a benefit of 70% of compensation. This employee will accumulate a 30% of pay benefit in the first ten years of service and 40% in the final 10 years. ERISA does not prohibit all cases of back-loading, only excessive back-loading, as determined under the law.

**Example.** A plan benefit formula provides a benefit equal to 3% of compensation multiplied by the first ten years of benefit accrual service, 4% of compensation multiplied by the next ten years of accrual service, and 5% of compensation for all years of benefit accrual service thereafter. This formula does not satisfy the 133⅓% requirement. There are two increases in benefit accrual, from 3% to 4% after ten years, and then from 4% to 5% ten years later. Even though there is no single jump of more than 133⅓% in any two consecutive years (i.e., 4% is equal to 133⅓ of 3%, and 5% is less than 133⅓% of 4%), the benefit percentage after each increase must be compared to ALL prior years. Because 5% is more than 133⅓% of the 3% accrual that occurred in earlier years under the formula, this formula does not satisfy the 133⅓% provision.

Under the fractional accrual method, the projected benefit at retirement is accrued ratably. The projected benefit at retirement is multiplied by a fraction, where the numerator is equal to the number of years of benefit service to date, and the denominator is the expected number of years of service at the participant’s normal retirement date.

**Example.** A plan provides a normal retirement benefit equal to 100% of the participant’s average compensation at normal retirement date. The accrued benefit at any time prior to normal retirement date is the normal retirement benefit multiplied by a fraction equal to the participant’s total number of years of

participation over the number of years of plan participation at normal retirement date. This type of plan would satisfy the fractional accrual rule.

It can be seen that this type of accrual under a plan, while fully satisfying the Code section 411 accrual rules, is inherently more favorable to participants who enter the plan at a later age than those who enter at an earlier age. For example, a participant who enters the plan at age 60, with a normal retirement age of 65, would earn a benefit equal to 20% of compensation for each of five years to have a 100% benefit at retirement.

On the other hand, an employee who enters the plan at age 40, 25 years from retirement, would earn benefits at a rate of 4% per year for 25 years, and an employee who enters the plan at age 25 (40 years from normal retirement) would earn 2.5% per year for 40 years.

However, Code section 411 requires only that benefits not be back-loaded. While the benefits described above may seem discriminatory against the younger plan participants, they can certainly be seen as non-back-loaded for any individual participant. Furthermore, there is no requirement under the law that states that a plan may not favor older workers over younger employees within a tax qualified plan.

There is a requirement that plans not favor Highly Compensated Employees (HCEs) over Non-Highly Compensated Employees (NHCEs). If this type of benefit accrual formula were adopted by a plan sponsor whose HCEs were primarily older employees than the NHCEs, the plan could fail to pass the non-discrimination rules required of plans under IRC section 401(a)(4), even though it passed the anti-back-loading rules of section 411. This topic will be discussed in great detail in chapter 4 dealing with plan non-discrimination testing. For now, simply remember that whether an accrual method is back-loading is determined separately from whether the resulting benefits are discriminatory.

Under the 3% accrual rule, an employee's benefit is not considered excessively back-loaded as long as the accrued benefit at any point is not less than 3% of the maximum benefit accrual under the plan multiplied by the number of years of service of benefit accrual to that point.

**Example.** A plan provides a benefit formula where a participant's benefit is equal to 3% of average compensation multiplied by the first ten years of benefit service, 5% of compensation for the next ten years of benefit service, and 1% of average compensation for the next ten years of benefit accrual, with no additional accruals after a maximum of 30 years of accrual service. It can be seen that the maximum benefit any participant can receive is 90% of compensation after 30 years of benefit service. After ten years, a participant's accrual is 30%, which is greater than  $90\% \times 3\% \times 10 = 27\%$ . After 20 years, the accrual of 80% is greater than  $90\% \times 3\% \times 20 = 54\%$ . In a similar manner, you can demonstrate that the actual accrual, after any number of years, is greater than the maximum benefit (90%) times 3% times the number of years of benefit service. This benefit formula satisfies the 3% accrual requirement and is not considered excessively back-loaded.

Notice that the benefit formula described in this example could not satisfy the  $133\frac{1}{3}\%$  rule, because he accrual of 5% per year in the second ten years of accrual exceed the first ten year's 3% accrual by more than a third. Also, the formula could not satisfy the fractional accrual. To pass the fractional accrual, the method must be tested for a participant with any number of years of service at retirement.

Consider a participant with 25 years of service at retirement. The retirement benefit for this participant is  $(10 \times 3\%) + (10 \times 5\%) + (5 \times 1\%) = 85\%$  of compensation. For this benefit to accrue ratably over the 25 years of benefit accrual service, the fractional accrual would have to be no less than  $85\% / 25 \text{ years} = 3.4\%$  per year. Since the accrual in the first ten years of the plan is only 3% per year, the formula would fail the fractional accrual requirement. Occasionally, a plan will be able to use the 3% accrual test to permit a formula that would not be allowed under either of the two previously described accrual methods.

A word about final average compensation: As has been seen throughout this chapter, plans often describe

the normal retirement and accrued benefit amounts as a percentage of final average compensation. In actual plans, final average compensation is often an average of the final three or final five years of compensation for an employee. It is also common to define a final average as the compensation earned over the highest three or five consecutive period over some larger time frame, such as the final ten years of compensation prior to retirement.

On exam questions, final average compensation is often defined as the one year salary that an employee earns in his final year of employment. Although this type of averaging is almost never used by plans in the private employment sector, it is often used on the exam to ease the calculations and shorten the time needed to answer a question.

Occasionally, a plan will calculate each year's benefit accrual based on the compensation earned in that year. This is often referred to as a career average pay plan. Cash balance plans that determine the contribution to the hypothetical account balance based on compensation in each plan year are always considered to be career average pay plans. The IRS has stated that all career average pay plans, including all cash balance plans, must satisfy the plan's anti-back-loading accrual rules through means of the 133⅓% rule.

**Accrual of benefits following normal retirement age:** Under the Age Discrimination in Employment Act (ADEA), a plan may not cease benefit accruals due to a participant reaching any specified age, although the plan may cap the number of years of service taken into account to determine a benefit, if such cap is applied uniformly to participants of all ages.

**Example.** A plan provides a benefit of 3% of compensation for the first ten years of benefit service, 2% of compensation for the next ten years of service, and 0% for all years thereafter. The plan's normal retirement age is 65. Smith is hired at age 45. At age 65, Smith has a benefit of 50% of compensation, and Smith's accrual is \$0 in all years thereafter. Jones is hired at the age of 50. At normal retirement age 65, Jones has accrued a benefit of 40% of compensation. Jones will continue to accrue an additional 2% of compensation for the next five years, if Jones continues to be employed.

The benefit in this example is permitted. It is not considered age discriminatory even though Smith's benefit ceases to accrue after age 65, since the cessation of accrual is a function of Smith's years of benefit service, and not of Smith's age.

It is possible that the actuarial value of a participant's benefit may decrease after the participant passes normal retirement age. Consider Smith in the above example. Smith's benefit at age 66 is the same as the benefit at age 65, 50% of compensation. Let's suppose Smith's compensation has not increased in this time, and so Smith's benefit starting at age 66 is the same as the benefit starting at age 65.

However, Smith's benefit at age 66 is less valuable than the same benefit starting at age 65, since Smith will receive 12 fewer payments. Even Jones' benefit at age 66, which is 42% of compensation rather than 40%, may be less valuable on an actuarial basis than the age 65 benefit.

Plans may address this situation in one of two ways. The plan may provide that a participant's post-normal retirement age benefit accrual is no less than the actuarial equivalent of the prior year's benefit. Or, the plan may notify participants at normal retirement age that benefits, which will not decrease when expressed as a normal annuity form, may decrease on an actuarial basis following normal retirement age. This is known as a notice of suspension of benefits.

A plan, even a plan which provides a notice of suspension of benefits, must provide actuarial increase of benefits to plan participants after they reach the age of 70½. The suspension of benefits notice only allows plans to avoid the actuarial increase of benefits from normal retirement age to age 70½.

Plans may also permit participants who have reached the plan's normal retirement age (or age 62, if

earlier) to begin to receive payments of benefits from the plan. Benefit accruals may be discounted by the benefit payments so made.

**Ancillary benefits for disability and early retirement.** The above section describes benefits that must be provided after a participant reaches normal retirement age under the plan. A plan may also (but is not required to) provide enhanced benefits upon a participant's disability or reaching early retirement age. These benefits, in addition to pre-retirement death benefits, discussed later in this chapter, are referred to as ancillary benefits.

Plans must define actuarial assumptions to define equivalence between different forms of benefits (this is discussed below) and benefits which are paid at some point in time other than normal retirement age. A plan may define disability for the purpose of paying some benefit larger than that provided by actuarial equivalence. The plan must define disability in a way that is not discriminatory and not subject to interpretation by the plan sponsor. Two common definitions of disability are that used by Social Security, or as determined by a physician chosen by the plan or by the participant. Additional benefits upon disability may include deemed 100% vesting, ability to take benefits earlier than otherwise permitted by the plan, or an increased benefit formula.

Similarly, a plan may define early retirement as an age less than normal retirement age, possibly with an additional service requirement, such as age 55 with 20 years of service, or age 60 with 30 years of plan participation. Again, the description of early retirement age must be defined in the document and not subject to employer discretion. Often the annuity that a participant may receive at early retirement age will be set as a specific percentage of the accrued benefit at normal retirement age, such as the full benefit reduced by 6% for each year prior to normal retirement age that the benefit commences. This benefit will be at least as large as the benefit provided by actuarial equivalence, and represents a benefit subsidized by the employer.

Typically, an employer will provide an early retirement subsidy both to reward long time employees of the employer, and to encourage employees to accept retirement at an earlier age, making it possible for the employer to replace older employees with younger hires, who may be brought in at a savings to the company in terms of compensation.

Early retirement subsidies are protected benefits (see the section on 411(d)(6) below), and once earned may not be taken away or reduced. However, an employer may cease the early retirement provisions of the plan at any time, effectively freezing such benefits at their current level.

Employers may also offer early retirement subsidies for a specific defined period of time, known as an early retirement window. Employers may offer such a window to encourage older employees to leave the company during the window, before the benefits return to their reduced levels. Examples of enhanced benefits for early retirement and disability will be seen in the chapter review questions throughout the book.

### **411(d)(6) Protection of Benefits**

Prior to the passage of ERISA, employers that sponsored defined benefit plans could legally amend their plans to retroactively change the benefit formula, even if such change caused a significant reduction in benefits already accrued under the plan. As a result, employees could never actually count on any pension benefit earned under a plan, since the benefit could be reduced retroactively by an amendment made by the plan sponsor at a later time.

ERISA added Code section 411(d)(6), which prohibits reduction of accrued benefits by means of a plan amendment within a qualified retirement plan. Over time, and due to IRS regulations and other publications that define and in some cases expand this rule, this Code section has become one of the

strongest protections of employee benefits and rights within a qualified defined benefit plan. Although the law only prohibits plan amendments from reducing benefits, the IRS has ruled that participants may not voluntarily choose to reduce benefits they have already accrued, since there would be no way of knowing whether they were pressured by the employer to sign such waivers. Even an owner of a business, who is responsible for funding his own benefit, may not voluntarily reduce such benefit after it has accrued.

What section 411(d)(6) protects: Pursuant to regulations published by the IRS, 411(d)(6) protections apply not just to the plan's normal form of benefit at normal retirement age (i.e., the benefit described by the plan's benefit formula), but extend to all forms of benefit offered by the plan and which begin at any time allowed by the plan. Furthermore, the IRS interpretation of the prohibition against "reducing" benefits also does not permit a form of benefit from being eliminated.

**Example.** Smith is a participant in a qualified defined benefit plan. Smith is 60 years old and has a normal retirement age of 65. Based on the plan's retirement benefit formula and accrual rules, Smith's accrued benefit (expressed as the plan's normal form of a life annuity beginning at age 65) is \$3,000 per month. Based on the plans actuarial equivalence factors and early retirement provisions (these factors will be discussed in more detail later in this chapter), Smith could elect to take the benefit at age 65 as a 10 year certain and life annuity of \$2,800, or to take a life annuity at age 60 of \$2,700. On Smith's 60<sup>th</sup> birthday, the plan sponsor amends the plan. The amendment does not change the amount or form of the plan's normal retirement benefit, but it does change the actuarial equivalence and early retirement factors in such a manner that the equivalent of Smith's \$3,000 normal retirement benefit is now a \$2,700 ten year certain and life annuity or an age 60 life annuity of \$2,600. Because the amendment has reduced forms of benefits available to Smith, his pre-amendment benefit amounts (\$2,800 as a 10C&L benefit or \$2,700 annuity at age 60) are protected. When Smith actually retires he may choose either of these benefits at no less than the amount he had accrued prior to the amendment, regardless of the terms of the plan after the amendment.

The above example would also apply if the amendment eliminated one of the forms of benefit available, such as no longer allowing a 10C&L benefit at age 65 or an immediate benefit at age 60. Smith would still have these benefit forms available to the extent they had been accrued at the time the amendment was adopted.

What 411(d)(6) does not protect: 411(d)(6) protects only those benefits that have actually been accrued at the time an amendment by the plan sponsor is made. It does not protect future accruals that would have occurred under the terms of the plan prior to the amendment.

**Example.** Suppose, in the example above, Smith continues to participate in the plan until he reaches age 65. Because of the additional service, his normal retirement benefit under the plan has grown to \$6,000. Under the terms of the plan prior to amendment (before Smith turned 60 years old), this would have been equivalent to a 10 year certain and life annuity of \$5,600. But, after the amendment, the ten year C&L equivalent is now only \$5,400. Recall that the age 65 10 year C&L form of benefit that Smith had accrued at the time of the plan amendment was \$2,800. Since the amended benefit form is larger than the accrued benefit at the time of the amendment, it may be applied in full, and Smith has the option to elect a 10 year C&L benefit of \$5,400, but not \$5,600.

This application of the 411(d)(6) rule allows a plan sponsor to amend the plan to completely freeze or terminate a defined benefit pension plan, ceasing all future benefit accruals under the plan. This may be done even though the plan may include some participants who are nearing their normal retirement age, and who are counting on their benefit increase over the final years of the plan to provide benefits to live on in retirement. 411(d)(6) protects past, but not future accruals.

ERISA section 204(h) requires the employer to provide notice of a reduction in future benefit accruals under a plan, including upon the adoption of an amendment to freeze benefit accruals or terminate a qualified defined benefit plan. This is commonly referred to as a 204(h) notice.

Code section 411(d)(6) only protects those benefits that are the primary purpose of the plan, including providing retirement income after an employee's termination of employment. There are certain ancillary benefits that a plan may provide in addition to these main benefits which are not protected by 411(d)(6). A list of benefits that a plan may provide that are not protected under 411(d)(6) include:

A Social Security supplemental benefit;

A pre-retirement death benefit in excess of the minimum required to be provided by the plan by law (see below) including elimination of life insurance coverage to provide such benefits;

A disability benefit, to the extent such benefit exceeds the plan's normal benefit otherwise

payable; A medical benefit under Code section 401(h);

A plant shutdown benefit or similar type of benefit within a defined benefit plan.

Finally, the regulations under 411(d)(6) allow plans to eliminate certain types of benefit forms that are found to be redundant under the plan. For example, a plan with several Joint and Survivor annuity benefit options with differing survivor percentages may eliminate some of the options available, provided that the largest and the smallest such survivor annuities are preserved.

## Optional Forms of Benefits

As detailed above, a qualified defined benefit plan document must state the plan's normal retirement benefit and formula for accrual of such benefit, as well as the plan's normal retirement age at which such benefit commences. The plan must also state the form in which such benefit will be paid, known as the plan's *normal* form of benefit.

The most common form of benefit and the default assumption for exam questions unless other information is stated is that the plan's normal retirement benefit is paid at normal retirement date in the form of a single life annuity (SLA) for the participant. Such a benefit does not decrease for the lifetime of the participant, and ends when the participant dies, with no additional payouts.

Please note that the *normal* form of benefit, as defined by the plan, is not the same as the plan's *default* benefit, which is mandatory by law (see below). For instance, it is quite common for the plan's normal form of benefit to be a life only annuity, but the default distribution for a married plan participant to be the actuarial equivalent of the SLA normal form converted to the plan's QJSA benefit (see below). Plan documents must define actuarial equivalence to be used to convert the plan's normal form of benefit to any other form offered by the plan. Following are some common distribution annuities found in qualified plans (both real life and exam question plans).

**X Year Certain and Life (X C&L):** Under a C&L annuity, the participant is paid a non-decreasing annuity for the participant's lifetime, just as in a SLA. However, if the participant dies before the end of the certain period, a named beneficiary continues to receive the annuity payments until the end of the certain period.

**X% Joint and Survivor (X% J&S):** Under this type of benefit, the participant receives a non-decreasing annuity amount for life. However, if the participant dies before the named beneficiary, the beneficiary continues to receive a (possibly reduced) benefit for the lifetime of the beneficiary. The beneficiary's benefit will be equal to X% of the original benefit. Notice that if the beneficiary dies before the participant, the benefit is not reduced and instead becomes a SLA. Also note that a 100% (unreduced) J&S pays the same benefit for as long as either the participant or beneficiary survives.



This type of benefit (where the benefit is not reduced if the beneficiary dies before the participant) is commonly called a Joint and Contingent annuity in other forms of actuarial practice. However, ERISA defines the annuity as a Joint and Survivor, and that term is used throughout pension actuarial practice, including for purposes of the EA exams. Do not confuse the terms.

Notice that both types of benefits described above are always at least as valuable as a SLA, but could be more valuable, since they could continue to pay after the death of the participant. For this reason, the initial payment under a SLA will always be greater than an actuarial equivalent payment of any C&L or J&S benefit.

Also, note that the benefit is non-decreasing for at least the lifetime of the participant. The benefit could be increasing, if the plan adds a type of automatic or cost of living increase to the benefit. Such increases are assumed not to apply unless specific information is provided within the exam question.

**417(e) forms of benefit:** Any form of benefit which does not include a non-decreasing annuity benefit for the lifetime of the plan participant (all of the above examples are NOT in this category), is subject to Code section 417(e). 417(e) actuarial equivalence applies when the form of benefit is scheduled to decrease due to some factor other than the death of the participant, and which could occur before the death of the participant.

417(e) provides a mandatory form of actuarial equivalence that creates a minimum floor for the converted benefit. 417(e) creates a minimum that works in conjunction with the plan's defined actuarial equivalence, it does not replace it. When a plan's normal form of benefit is converted to a benefit subject to 417(e), the equivalent benefit is the greater of the benefit determined by the plan's definition of actuarial equivalence or the equivalence mandated by 417(e). Some common types of benefits subject to 417(e) are listed here.

**Lump sum distribution:** The most common form of 417(e) benefit is a single lump sum paid to a participant at normal retirement date (or whatever date the benefit is paid). The lump sum so paid is the actuarial equivalent of the plan's normal form of benefit using the plan's definition of actuarial equivalence, but not less than the sum determined using the 417(e) actuarial equivalence factors.

**Term certain benefit:** Under this form of benefit, a participant is paid a set annuity amount for a specified period of time. The benefit ends (decreases to \$0) due to the passage of a specific amount of time, not tied in any way to the lifetime of the participant. The benefit conversion for this type of annuity must conform to the requirements of 417(e).

**Social Security level benefit:** This is a form of benefit that begins before a participant is eligible to begin collecting Social Security income payments, and decreases at the time such payments become available. In this way, the Social Security payments replace part of the plan annuity payments, and the combined payments provide a higher lifetime level income than the benefits from the plan alone. However, because the benefit anticipates a decrease after a specific amount of time, not tied to the participant's lifetime, the form is subject to the requirements of section 417(e).

Calculation of actuarial equivalent benefits under 417(e) requires the use of the "applicable mortality table" (updated each year by the IRS), and the "applicable interest rates" which are three rates tied to the rates paid on corporate bonds of differing durations. The first interest rate applies to benefits expected to be paid within five years of the calculation date, the second rate to benefits to be paid between five and twenty years from the calculation date, and the final interest rate for payments expected to be paid more than 20 years after the calculation date. More information needed to calculate 417(e) equivalent benefits will be provided in an exam question, if needed.

Applicable interest rates are published by the IRS every month. To balance the need to provide benefits at a current applicable rate with an employer's need to simplify benefit calculations, plans may use one set of published rates for a full stability period of up to one year based on rates published in a lookback month

defined in the plan.

### Qualified Joint and Survivor Annuity (QJSA)

A qualified defined benefit plan must define the default form of benefit payment at retirement (this is not necessarily the form of benefit calculated by the plan's benefit formula, see forms of benefit above for this important distinction). The *default* form of distribution is the form in which the distribution will be made by the plan if some other form of distribution is not selected by the participant. By law, the default distribution in a qualified plan must be a life annuity if the participant is not married at the annuity starting date, and must be a Qualified Joint and Survivor annuity with the participant's spouse as the beneficiary if the participant is married.

The default distribution is automatically the form in which an employee's benefit is paid, unless the employee consents, and, if the employee is married at the time the distribution begins, the employee's spouse also consents, to some other form of distribution.

**(Exception to the Rule.** The default forms of distribution do not apply if the lump sum equivalent of the participant's total benefit is \$5,000 or less and if the plan uses the mandatory cash out rule. The rule allows the plan to cash out a participant in a lump sum payment without the participant's (or spouse's) consent. The participant must be given the option to transfer the payment in a tax free rollover to an IRA. If the benefit payment is greater than \$1,000, the lump sum cash out must be paid to an IRA established in the name of the participant, unless the participant consents to another type of payment.)

A plan may offer several Joint and Survivor distribution options (in fact, it must offer no less than two, as explained below), differing by the percentage of the original benefit that is paid to the survivor after the participant's death. However, the plan must, in the plan document, define one such option as the *Qualified J&S* which is the default distribution to a married plan participant. The QJSA must provide a survivor percentage of at least 50% and not more than 100%

**Example.** A plan provides six J&S options to participants at retirement. The options are a Joint and 25%, 50%, 66⅔%, 75%, 90%, and 100% Survivor annuity. The 25% J&S may not be the QJSA under the plan, since the survivorship percentage is less than 50%. However, any of the other 5 J&S annuities may be designated by the plan document as the QJSA.

By law, the default form of benefit, whether life only for a non-married participant or QJSA for a married participant, must not be actuarially less valuable than any other form of benefit offered under the plan.

### Qualified Optional Survivor Annuity (QOSA)

In addition to the QJSA, a qualified defined benefit plan must also offer a second J&S annuity designated as the Qualified Optional Survivor Annuity. Thus, any married employee participant in a plan must have the option of at least two J&S annuities, the QJSA and the QOSA, in addition to any other benefit forms offered by the plan. While the QJSA is the automatic default form of benefit if the participant and participant's spouse fail to elect some other form, the QOSA is not a default benefit and has no special privileges over any other forms of benefit.

The Pension Protection Act of 2006 added Code section 417(g), which provides a two part definition of the QOSA: (i) if the survivorship percentage of the QJSA defined by the plan is less than 75%, then the QOSA must be a 75% J&S; (ii) if the QJSA survivor percentage is 75% or greater, then the QOSA is a 50% J&S. This is a simple formula which should be memorized before taking the exam.

**Example.** A plan offers three J&S annuities at retirement, with survivor percentages of 50%, 75%, and

100%. The 75% J&S is designated as the QJSA. The plan sponsor would like to eliminate the 75% J&S annuity and make the 50% J&S the QJSA. Can this be done?

**Solution.** No. Because the plan offers more than two J&S annuity forms, and because the 75% annuity is not the largest or smallest survivor percentage, it can be eliminated without violating 411(d)(6). However, a plan with a 50% QJSA must have a QOSA of a 75% J&S. The plan could, instead, designate the 100% J&S as the new QJSA, and the remaining 50% J&S annuity as the QOSA. This would allow the elimination of the 75% J&S annuity form.

Prior to passage of the PPA in 2006, plans were not required to offer a QOSA. A QJSA was still required, however, but a plan could have as few as one J&S annuity option, designated as the QJSA.

## Required Minimum Distributions

Benefits from qualified retirement plans are meant to provide income over the lifetime of the plan participants and their beneficiaries. To prevent payments from extending further out than this time frame, plans are required to begin distributions before a certain date. Plans are required to begin annuity payments at the later of the date a participant reaches age 70½ or terminates employment with the plan sponsor. However, a special rule applies to plan participants who own more than 5% of the employer plan sponsor. Such participants must begin payments after reaching age 70½, regardless of whether they have terminated employment.

**Required Beginning Date:** A participant's required beginning date (RBD) is defined as April 1 of the calendar year following the calendar year in which the employee passes the date discussed in the paragraph above.

**Examples.** An employee who is born on 3/15/1935 terminates employment on 12/31/2004. The employee reaches age 70½ on 9/15/2005 and has a RBD of April 1, 2006. An employee born 5/25/1934 retires on 1/15/2008. The employee's date of termination of employment occurs after reaching age 70½, and so the employee's RBD is April 1, 2009. A participant who owns more than 5% of the plan sponsor is born on 7/22/1940. The participant becomes 70½ in the year 2011. The participant's RBD is April 1, 2012, regardless of whether the employee has terminated employment on or before this date.

A participant must begin to receive benefit payments from the plan no later than the RBD. Payments must be paid in a form permitted under the plan and which will distribute the entire benefit no later than the life expectancy of the participant and a named beneficiary. For example, a SLA, a J&S annuity, or a lump sum distribution are all permitted forms of distribution.

Generally, the distribution must be non-increasing over the distribution period. This would prohibit a participant from taking a distribution smaller than the minimum, with a scheduled increase at a later date. An exception applies in the case of annual cost of living increases of no more than 5%. Also, note that a participant who continues to accrue benefits (a 5% owner who has not yet terminated employment but is receiving a required minimum benefit, for example) may have the distribution amount increased each year to reflect increased benefits under the plan.

Minimum required distributions, unlike most ordinary plan benefit distributions, may not be rolled over to an IRA to avoid immediate income taxation. As suggested above, a lump sum payment of all benefits owed from the plan will satisfy the minimum required distribution rule, since it distributes more than the minimum required distribution. When a defined benefit plan participant receives a lump sum distribution of all plan benefits after the employee's RBD, the amount of such distribution which may not be rolled into an IRA may be determined as if the plan were a defined contribution plan which distributes the full account balance to the participant, rather than the usual method of determining a defined benefit minimum distribution described above. In some cases, this may reduce the amount of the required distribution, and

maximize the amount of the tax free rollover available to the participant. These rules are too complex to explain fully here, but are discussed in detail in the regulations under 401(a)(9). An example will give some idea of the use of the rules.

**Example.** Smith is a terminated participant in a defined benefit plan. Smith is trying to minimize the taxable distributions from the plan, and does not take any benefits prior to the RBD. Smith turns 70½ in 2012 and has a RBD of 4/1/2013. At the RBD, Smith could receive a monthly benefit from the plan of \$10,000, or a lump sum of \$1,200,000. Smith takes the lump sum distribution and elects to calculate the mandatory distributions under the defined contribution rules for 2013. Smith turns 71 in calendar year 2013, and the distribution factor at age 71 is 26.4, so the mandatory distribution amount is  $\$1,200,000 / 26.4 = \$45,455$ . Smith must take \$45,455 as a taxable distribution and may rollover the rest of the \$1,200,000 lump sum into an IRA. Notice that Smith's total taxable amount for the year, calculated as though it is a distribution from a DC account, is less than the \$90,000 Smith would have received not eligible for rollover if Smith took \$10,000 monthly payments beginning April 1.

Taxpayers who have Individual Retirement Account(s) (IRAs), including those with multiple accounts, must begin to receive minimum payments from these accounts upon attainment of age 70½. For this purpose, a taxpayer may combine several or all of the IRAs owned and take a single distribution from any one IRA. A plan participant may NOT use this same rule in regard to any qualified plan(s) that the participant is in. Each qualified plan, DB or DC, must satisfy the minimum distribution rule on its own.

## Benefits from Employee Contributions

Although many qualified defined benefit plans fund all benefits by means of employer contributions to the plan, employees may make contributions to the plan as well. Such contributions may be mandatory, as a condition of employment or participation within the plan, or they may be voluntary.

Voluntary employee contributions to a defined benefit plan must be tested for non-discrimination in the same manner as employer matching contributions to a 401(k) plan under Code section 401(m). Such contributions, once in the plan, are treated in the same manner as an employee account under a defined contribution plan.

Mandatory employee contributions are used to fund the plan's normal form of benefit at retirement. Mandatory employee contributions are tracked in an accumulated employee contribution account. The account is credited with annual interest at a rate required by statute. Prior to 1988, the mandatory interest crediting rate to determine the accumulated employee account was 5%. Beginning in the year 1998, the mandatory interest rate for crediting a participant's mandatory contribution account was changed to the interest rate equal to 120% of the federal midterm interest crediting rate.

The mandatory employee contribution rate is increased using the 120% federal midterm rate until the date on which the employee first receives a distribution from the plan. For purposes of determining the portion of the benefit that is attributable to employee contributions, the mandatory contribution account is increased from the initial distribution date to the participant's normal retirement date using the 417(e) interest rate.

**Example.** Smith is a participant in a plan with mandatory employee contributions. Smith is born 1/1/1950 and has a normal retirement date of 1/1/2015. Smith has an accumulated employee mandatory contribution account of \$28,000 on 12/31/2008. Smith makes a mandatory employee contribution of \$1,000 on 1/1/2009 and 1/1/2010. The 120% federal midterm interest rate is 8.5% in 2009 and 9% in 2010. Smith terminates employment on 12/31/2010 and receives an immediate lump sum distribution of benefits. On the termination date, the 417(e) interest rate to determine Smith's benefit is 6%, and the annuity purchase rate using the applicable mortality table is 124.15. Smith's accrued benefit is \$800 per month beginning at normal retirement date on the termination date.

Smith's accumulated mandatory employee contribution account is increased as follows:  $(\$28,000 + \$1,000) \times 1.085 = \$31,465$  at 1/1/09 and  $(\$31,465 + \$1,000) \times 1.09 = \$35,387$  at 1/1/2010. Smith is five years away from retirement and so the value of the accumulated account expressed as an annuity at retirement is  $\$35,387 \times 1.06^5 = \$47,356 / 124.15 = \$381.44$ . Smith's benefit attributable to employee contributions is \$381.44 and the benefit attributable to employer contributions is \$418.56 (the remaining portion of the total benefit of \$800). If Smith is subject to a plan vesting schedule, only the portion of the benefit attributable to the employer contributions is subject to vesting.

### Qualified Pre-Retirement Survivor Annuity (QPSA)

Qualified defined benefit pension plans are designed primarily to provide a lifetime income after retirement to employee participants. However, plans may provide some other benefits, as long as such benefits are considered incidental to the plan's main purpose of providing retirement benefits. Usually, all incidental plan benefits are included in a plan document at the option of the employer plan sponsor, but one common incidental benefit is (to a certain extent) mandatory, and that is the plan's pre-retirement death benefit.

Plans must offer a minimum pre-retirement death benefit in the default annuity form of a QPSA. The amount of a QPSA for a married plan participant is calculated as the survivor portion of the benefit if the participant had retired on the date of death, and elected a distribution in the form of the plan's QJSA at the earliest permitted retirement date.

**Example.** Smith dies on 1/1/2011, at the age of 58. Smith's normal retirement date is 1/1/2018 (age 65) and the plan does not allow early retirement or any other type of distribution payment prior to age 65. Smith's accrued benefit expressed as the plan's QJSA at the date of death is a 50% Joint and Survivor annuity of \$400 (and thus, with a survivor payment of \$200) beginning at normal retirement age. The plan provides the minimum QPSA benefit. Smith's spouse receives a lifetime annuity of \$200 per month beginning on 1/1/2018.

The QPSA for an unmarried participant is \$0. In the above example, if Smith were an unmarried participant and the plan provided no more than the minimum QPSA required by law, no beneficiary of Smith would receive any payment from the plan.

A plan may provide a pre-retirement death benefit larger than the QPSA, including pre-retirement death benefits to unmarried plan participants. The QPSA, including a \$0 QPSA for an unmarried plan participant, is only a *minimum* mandatory benefit. For example, a plan could provide that the beneficiary of any participant who dies prior to normal retirement date is paid the actuarial equivalent of the participant's accrued benefit at the time of death. In such a case, the employee could name any person as a beneficiary. But the QPSA must be paid to a spouse, if the participant is married, and any portion of the death benefit included in the QPSA may not be assigned to any other person, without the written agreement of a participant's spouse.

Defined benefit plans may purchase life insurance for participants, with the proceeds of policies used to provide death benefits. In this way, employers will be able to provide life insurance benefits to employees using tax deductible plan contributions.

However, because the death benefit must be "incidental" to the plan's primary purpose of providing retirement income, there is a limit on the amount of the death benefit that may be provided by the plan, as well as a limit on the amount of insurance that may be purchased for any plan participants. The IRS provides two safe harbors under which insurance will be considered incidental. A plan may purchase insurance with a face value of up to 100 times the participant's projected monthly benefit at retirement. Or, the plan may calculate the Individual Level Premium (ILP) needed to fund a participant's normal retirement benefit, and may spend up to 2/3 of this amount to pay the premium on a whole life insurance

contract (or 1/3 of the amount in the case of a term life insurance policy).

The maximum amount of pre-retirement death benefit that a plan may provide is the proceeds of the life insurance policies provided under one of the two methods described above, plus the accumulated value of the benefits not provided by insurance under the plan.

## Permitted Disparity in Benefit Formulas

IRC section 401(l) allows *permitted disparity* in calculating benefits within a qualified retirement plan (both DB and DC plans allow permitted disparity, under different rules, as will be shown below). Permitted disparity is also referred to as *integration* with Social Security. The theory behind permitting this type of disparity is that employers contribute, on behalf of all of their employees, to the government Social Security retirement program. These contributions are mandatory, even if the employer also maintains a tax qualified retirement plan.

Employer contributions to Social Security are progressive in nature, due to the fact that employer contributions are a flat percentage of employee compensation, but only compensation up to a specified limit (which is adjusted each year for inflation). As a result, employees whose compensation is greater than the Social Security wage base limit receive a smaller employer contribution, as a percentage of salary. Since these higher paid employees receive a smaller percentage contribution to the Social Security system, fairness (as expressed by Code section 401(l)) permits the employer to provide larger benefits to such employees in their qualified defined benefit plan.

Permitted disparity allows larger benefits to higher paid employees, and as such is in direct conflict with Code section 401(a)(4). The exact formulas permitted in the name of allowable disparity have changed since the time ERISA was first passed, and the current rules are quite complex. The rules usually will generate only one or perhaps two exam questions on each EA-2L exam, but these tend to be especially time consuming questions in the 4 or 5 point range.

Permitted disparity also affects the non-discrimination testing discussed in chapter 4. Plans are permitted to include the effects of permitted disparity in testing (whether or not such disparity is actually part of the plan document benefit formula) – which tends to increase the level of HCE benefits (in comparison to benefits for NHCEs, that can pass testing).

**Permitted Disparity in Defined Contribution plans:** DC plans commonly provide an annual contribution equal to a specific percentage of compensation for all participants. Under a permitted disparity formula, the plan will offer one percentage level up to a specified compensation level known as the integration level, plus a higher percentage of compensation above the integration level.

**Example.** In a given year, a defined contribution plan offers an allocation to all participants equal to 8% of compensation earned by the participant up to \$100,000, plus 10% of compensation above \$100,000. It can easily be seen that this formula is mathematically equivalent to 8% of all compensation, plus 2% of compensation above \$100,000, if any. This is an integrated formula. The *base percentage* is 8%. The *excess percentage* is 2%, and the *integration level* is \$100,000.

Section 401(l) states that the excess percentage may not be greater than the base percentage in a DC plan integrated formula (this rule applies no matter what the plan defines as the integration level). DC plans are also subject to a maximum excess percentage based on the integration level.

If the integration level for a DC plan is defined as the year's taxable wage base (TWB), then the maximum excess percentage is 5.7%. The TWB for any year is the maximum amount of compensation that will be considered in calculating a citizen's Social Security benefit for that year. The TWB is indexed each year to increase with inflation. The TWB does not decrease in years of negative inflation.

**Example.** A plan uses the TWB as the integration level for the plan year. In 2008, the plan provides a base percentage level of 8% and maximum allowable excess percentage. The excess percentage is 5.7%, the maximum allowable when the integration level is equal to the taxable wage base. In 2009, the plan provides a base percentage of 4%, and maximum excess percentage. The maximum excess percentage is 4%, since the excess percentage may not exceed the base percentage, even when the base percentage is less than the 5.7% maximum in general.

The plan's integration level must be specified in the plan document, either as a specified dollar amount or by reference to a formula (for example, X% of the year's TWB). The integration level may not exceed the TWB for the year. In addition, if the plan's integration level is less than the TWB, the 5.7% maximum discussed above is reduced as follows:

If the integration level is less than 100% of the TWB, but more than 80% of the TWB, the 5.7% maximum is reduced to 5.4%.

If the integration level is greater than the larger of \$10,000 or 20% of the TWB, but not more than 80% of the TWB, the maximum excess percentage is 4.3%.

If the integration level is not more than the greater of \$10,000 or 20% of the TWB, then the maximum excess percentage remains at 5.7%.

An employer may provide both a DC and a DB plan that are integrated with Social Security. However, each plan must determine a fraction equal to the actual disparity within the plan over the maximum disparity allowed in the plan, and the DB fraction plus the DC fraction must not exceed 1.

**Example.** A DC plan uses the TWB as the integration level. In a given year, the DC plan provides a base percentage of 6% and an excess percentage of 2%. Since the base is greater than 5.7, the maximum excess percentage is 5.7%. The DC plan has used  $(2\% / 5.7\% = .3509)$  of the maximum allowable integration. If the plan sponsor also sponsors an integrated DB plan, the integration for the DB plan in this year must not be greater than  $(1 - .3509 = .6491)$  of the maximum allowable disparity.

**Maximum permitted disparity in Defined Benefit plans:** Maximum disparity rules in DB plans are more complex than those of DC plans, but they mirror the requirements of the DC plans.

An integrated DB plan may be either an *excess* or an *offset* benefit formula. An excess plan provides a benefit formula of a base percentage of total compensation, plus an excess percentage of compensation above the integration level. An offset formula provides total compensation multiplied by *base plus offset* percentage of, but *reduced* by an offset percentage of compensation *up to* the integration level. While the calculation method is slightly different, these two formulas are mathematically equivalent.

**Example.** Smith has final average compensation of \$120,000. Co-worker Jones has final average compensation of \$50,000. The employer sponsors an excess plan with integration level of \$100,000, a base percentage of 1% and an excess percentage of .65%, multiplied by years of service. Smith's annual benefit accrual is  $(1\% \times \$120,000) + (.65\% \times \$20,000) = \$1,330$ . Jones' annual accrual is  $(1\% \times \$50,000) + \text{no excess} = \$500$ .

Suppose instead the plan used the same integration level, but was set up as an offset plan with base percentage of 1% and offset percentage of .65%. Smith's annual benefit accrual is now calculated as  $(1.65\% \times \$120,000) - (.65\% \times \$100,000) = \$1,330$ . And Jones' annual accrual is  $(1.65\% \times \$50,000) - (.65\% \times \$50,000) = \$500$ . The excess formula and the offset formula each produce the same benefit level.

As seen above, the integration level in a DC plan is often based on the TWB. Since the DC benefit is based on the accumulation of annual contributions, changing the integration level each year along with the

TWB is not very difficult. However, a single DB retirement formula covers the entire career of a participant. Therefore, the integration level in a DB plan is based on a participant's *Covered Compensation*. The Covered Compensation for a given participant is calculated as the average of the TWB in each of the 35 years before the participant reaches Social Security Retirement Age (SSRA). An actual calculation of this amount will not be shown, since these figures are updated each year in tables released by the IRS. If a participant's Covered Compensation is needed on an exam question, it will be provided in the question's data.

As in a DC plan, the excess (or offset) percentage in a DB plan may not be greater than the base percentage, whether determined as a final percentage at retirement or an annual percentage multiplied by the participant's year of benefit service. (Integrated defined benefit formulas expressed as a final percentage at retirement are fairly rare, and, for the remainder of this chapter, we will assume the integrated DB formula is an annual formula multiplied by years of benefit accrual service).

Also as in a DC plan, the excess (offset) percentage may be no more than the lesser of the base percentage or a fixed percentage amount. The maximum excess or offset percentage in a DB plan is 0.75% per year, and may be accumulated over a maximum of 35 years (and thus, the maximum integration percentage at retirement is  $.75\%/year \times 35 \text{ years} = 26.25\%$ ).

You have seen how, in a DC plan, the use of an integration level other than 100% of the TWB could cause the maximum integration percentage to be reduced. In a DB plan, there are several factors that could cause the .75% factor to be reduced.

The maximum .75% factor applies only at the participant's SSRA. A participant's SSRA is based on the participant's date of birth, as follows:

If year of birth is before 1938, SSRA is 65. If year of birth is 1938 – 1954, SSRA is 66. And if year of birth is after 1954, SSRA is 67. If the plan's benefit is provided at any age other than SSRA, the maximum percentage is increased for a later retirement age and decreased for any younger age according to a table that will be provided with the EA-2B testing materials. (You can see the table in the past EA-2B exams reprinted in this book, or in the examination guide book published by the JBEA and available for download from their web site.)

**Examples.** A plan provides for a maximum excess benefit formula. A plan participant born in 1960 (SSRA = 67) has a normal retirement age of 65. The maximum annual excess percentage for the participant is .650%.

A participant born in 1936 (SSRA = 65) retires in 2004, at the age of 68 (later than his normal retirement date under the plan). The annual excess percentage used in calculating this participant's benefit at his late retirement age is .996%.

A participant born in 1950 has a normal retirement age of 65, but retires in 2012 at the age of 62. The plan offers the participant an early retirement benefit beginning immediately at his early retirement date. The maximum annual excess percentage that may be used to calculate this benefit is .550%.

In addition to showing the excess percentages available at each age for each SSRA, the chart includes a simplified table. The simplified table can be used by a plan to offer the same integration percentage to all participants regardless of each employee's SSRA. The plan may also choose to use the SSRA 67 table for all employees as well, since it produces a percentage no greater than that produced under any other SSRA table.

**Example.** A plan uses the simplified table to determine the maximum excess percentage for all participants. The plan has an excess percentage of .650% at normal retirement age 65. The plan also has a subsidized early retirement benefit at age 60 where the age 65 benefit is reduced by 4% per year before age 65.



Both the base and the excess portion of the benefit must be affected by the early retirement reduction. This means that a participant who retires at early retirement age 60 is actually receiving an annual excess benefit of  $(.650 \times (1 - 4\% \times 5 \text{ years early}) = .520\%)$ . However, the maximum excess percentage at age 60, when the earliest early retirement benefit begins, is .433%, so the plan must reduce the excess percentage used in the formula. The maximum excess percentage this plan may permit at age 65 is  $(.433\% / 80\% \text{ early retirement factor} = .541\%$ .

As mentioned above, the maximum per year integration percentage may not accumulate for more than 35 years. If the years of benefit service over which integration shall be applied is greater than 35 year, the per year percentage must be reduced accordingly.

**Example.** A plan uses the simplified table and has a normal retirement age of 65. The plan includes up to 40 years of service to calculate the benefit. The maximum per year excess or offset percentage is calculated as:  $.650\% \times 35 / 40 = .569$ .

The maximum integration percentage of .75% applies to a life only form of annuity benefit. If an annuity is offered in some other form, the integrated portion of the benefit must not exceed the maximum integration percentage when normalized to a life only annuity form of benefit.

As previously discussed, if the integration level specified by the plan is not larger than the participant's covered compensation, the .75% factor is not reduced. The plan may specify the integration level as a standard percentage of covered compensation, which would have to be determined separately for each participant based on that participant's date of birth and date of Social Security Retirement Date.

Alternatively, the plan could specify a set dollar amount to be used as the integration level for all employees under the plan. If the plan defines the integration level in this manner, the amount so specified must be compared to each plan participant. If the specified integration level is equal to or less than a participant's covered compensation, the plan may use the .75% factor for that participant.

If the integration level for a participant is greater than the covered compensation for that participant, whether because the plan uses a formula or a set dollar amount that is greater than 100% of covered compensation for such participant, the .75% factor must be reduced.

IRS regulation 1.401(l)-3 offers the following chart for this reduction. If the integration level of a plan falls between the categories shown, the maximum permitted disparity factor must be determined by interpolating between the two levels.

| Integration or Offset Level | Permitted Disparity Factor |
|-----------------------------|----------------------------|
| 100% Covered Comp           | 0.75%                      |
| 125% Covered Comp           | .69                        |
| 150% Covered Comp           | .60                        |
| 175% Covered Comp           | .53                        |
| 200% Covered Comp           | .47                        |
| TWB or Final Average Comp   | .42                        |

The combined effects of some of the permitted disparity requirements are demonstrated in the example below. Additional examples are to be found in the review questions as well as the past exams reprinted at the end of this book:

**Example.** A plan defines the normal retirement benefit as: The sum of 1.25% of final 3-year average compensation plus 0.50% of final 3-year average compensation in excess of covered compensation for each year of service up to 35 years (excess formula).

The plan includes the following terms and definitions:

|                             |  |
|-----------------------------|--|
| Normal retirement age:      | 62   |
| Earliest retirement age:    | 55   |
| Early retirement reduction: | 6% for each year by which the benefit commencement date precedes the normal retirement date. |
| Normal form of payment:     | Life annuity with 10 years certain   |
| Optional form of payment:   | Life annuity   |

Actuarial Equivalence factor to convert benefit from a life annuity with 10 years certain to a SLA:

$$1.050 - [.003(62 - \text{age at commencement})]$$

Find the Effective disparity percentage at normal retirement age 62 and for a participant who is eligible for early retirement at age 60, and at age 55

At ages 62, 60, and 55, the conversion factor from the plan's normal form of payment of 10 C&L to life annuity benefit are calculated as 1.050, 1.044, and 1.029. The early retirement reductions at the three ages are 1.0 (at normal retirement date), .88, and .58.

Both of these factors affect the plan's effective integration rate, as determined under 401(l). At each age, the excess rate of .50% is converted to:

$$\begin{aligned} 62: & .50\% \times 1.050 \times 1.0 = .525\% \\ 60: & .50\% \times 1.044 \times .88 = .459\% \\ 55: & .50\% \times 1.029 \times .58 = .298\% \end{aligned}$$

Notice that the excess factors at ages 60 and 62 exceed the maximum permitted factors for employees with SSRA of 67. This benefit formula fails to satisfy the overall permitted disparity rules of section 401(l), since one or more benefit payment forms can be shown to fail the requirements of the regulation. A plan that wanted such a benefit formula for participants with SSRA of 65 and 66 would have to add special language adjusting the excess percentage downward for participants with SSRA of 67.

**REVIEW QUESTIONS****Normal Retirement Date**

2-1. Consider the following statement:

In the case of a participant who commenced benefits upon reaching normal retirement age and continued to accrue additional benefits due to pay and service after normal retirement age, such participant's benefit must be reduced by the actuarial equivalent of prior distributions.

Is the above statement true or false?

- (A) True
- (B) False

2-2. Normal retirement age, for the purpose of IRC section 411, cannot be later than the later of age 65 or the fifth anniversary of the date of participation.

Is the above statement true or false?

- (A) True
- (B) False

2-3. Plan effective date: 1/1/1999  
Eligibility: Immediate participation  
Normal retirement age: The latest possible statutory requirement

Data for participant Smith:

Date of birth 1/1/1938  
Date of hire 1/1/1998

Consider the following statement:

Smith's normal retirement age is 65.

Is the above statement true or false?

- (A) True
- (B) False

2-4. An NHCE participant timely receives an applicable ERISA section 203(a)(3)(B) notice related to the suspension of benefit payments. The participant continues working past normal retirement age.

Consider the following statements:

- I. The plan must begin payment of benefits to the participant, unless the participant otherwise elects, within 60 days after the close of the plan year in which the latest of the following occurs:
  - (a) the earliest of the participant's attaining age 65 or the plan's normal retirement date,
  - (b) the 10th anniversary of the participant's participation in the plan, or (c) the participant's

termination of employment, but not later than the required beginning date under IRC section 401(a)(9).

- II. The plan must provide the participant with an actuarially-increased normal retirement benefit if the participant commences payment prior to age 70 1/2.
- III. The plan benefit formula must consider the participant's service and salary through the date of termination, if applicable.

Which, if any, of the above statements is (are) true?

- (A) None
- (B) I only
- (C) II only
- (D) III only
- (E) The answer is not given by (A), (B), (C), or (D) above.

- 2-5. A company has had more than 1,000 employees since its inception in 1970. The company has data that shows that over the company's history, the average retirement age for its employees is 58, which is significantly lower than that of the industry as a whole.

Consider the following statement:

Based on the company's history, the plan may use 58 as the normal retirement age.

Is the above statement true or false?

- (A) True
- (B) False

## Vesting

- 2-6. An employer has never sponsored a qualified plan.

Consider the following statement:

A new plan established by that employer may provide that service prior to the effective date is disregarded for vesting purposes.

Is the above statement true or false?

- (A) True
- (B) False

- 2-7. Vesting schedule:

| Years of service | Vested percentage |
|------------------|-------------------|
| 1                | 0%                |
| 2                | 20%               |
| 3                | 40%               |
| 4                | 60%               |
| 5                | 80%               |
| 6                | 100%              |

Consider the following statement:

The above vesting schedule satisfies the vesting requirements for an "applicable defined benefit

plan” under IRC section 411(a)(13)(C).

Is the above statement true or false?

- (A) True
- (B) False

2-8. Data for participant Smith:

|                          |          |
|--------------------------|----------|
| Date of birth            | 1/1/45   |
| Date of hire             | 1.1.2007 |
| Hours worked during 2007 | 1,000    |
| Hours worked during 2008 | 1,000    |

Selected plan provisions:

|                       |                         |                       |
|-----------------------|-------------------------|-----------------------|
| Normal retirement age | 64                      |                       |
| Vesting schedule      | <u>Years of Service</u> | <u>Percent Vested</u> |
|                       | Fewer than 3            | 0%                    |
|                       | 3 or more               | 100%                  |

Consider the following statement:

Smith is 100% vested at 1/1/2009

Is the above statement true or false?

- (A) True
- (B) False

2-9. A plan uses the elapsed time method to determine vesting.

Consider the following statement:

An employee may not be credited with a year of vesting service even though the employee may be credited with 1000 or more hours of service.

Is the above statement true or false?

- (A) True
- (B) False

2-10. An employer sponsors defined benefit Plan A, which covers salaried employees only. The employer suspends benefit accruals in Plan A effective December 31, 2006. A partial plan termination is deemed to occur on that date. The employer then establishes a new defined benefit Plan B that covers all employees effective January 1, 2008.

Consider the following statement:

Vesting service in Plan B must include all years of employment since the effective date of Plan A.

Is the above statement true or false?

- (A) True
- (B) False

- 2-11. ABC Company sponsors a 401(k) plan that was effective 1/1/1990. The ABC Company adopted a money purchase plan that was effective 1/1/2002.

Consider the following statement:

The money purchase plan may provide that service prior to 1/1/2002 is excluded for purposes of vesting

Is the above statement true or false?

- (A) True
- (B) False

- 2-12. Consider the following statement:

In a plan that does not credit vesting service on elapsed time; the plan may give less than a full year vesting credit to an employee who works over 1,500 hours during a plan year.

Is the above statement true or false?

- (A) True
- (B) False

2-13. Consider the following three vesting schedules with respect to a defined benefit plan:

- I. For each employment year where a participant exceeds 1,000 hours, a year of vesting service is earned.

| Years of Service | Non-forfeitable Percentage |
|------------------|----------------------------|
| 4                | 33.3%                      |
| 5                | 66.7%                      |
| 6                | 100.0%                     |

- II. A participant is 100% vested only if he completes 5 full calendar years of service.

- III. Plan year: January 1 through December 31

Vesting Year Determination: One year of vesting service if a participant works at least 1,000 hours during each year beginning August 1 and ending July 31

| Years of Service | Non-forfeitable Percentage |
|------------------|----------------------------|
| 3                | 10%                        |
| 4                | 10%                        |
| 5                | 100%                       |

Which of the following vesting schedules, if any, are acceptable under IRC section 411?

- (A) I and II only  
 (B) I and III only  
 (C) II and III only  
 (D) I, II, and III  
 (E) The correct answer is not given by (A), (B), (C), or (D) above.