

 The **Infinite Actuary**

CP-351

Detailed Study Manual

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About This Study Manual

This detailed study manual is just one component of our CP-351 course, which also includes comprehensive video lessons and handouts for all syllabus material, practice problems, commentary on previous SOA exams, flashcards, and much more.

We've organized the detailed study manual in exactly the same order as the online course, which generally follows the same order as the SOA syllabus's primary objectives. However, we have ordered specific readings in what we believe is the most logical order for learning the material from start to finish:

- A. Objectives of ALM.** This foundational section covers fundamental concepts such as risk identification, taxonomy, and Asset-Liability Management (ALM). It also covers several readings that illustrate how these principles apply to real-world events and case studies. Section A is largely qualitative, with very little emphasis on complex quantitative analysis. It's important not to get overly focused on memorizing all the terminology at this stage, as many of these concepts will be solidified and become more concrete for exam preparation through the more quantitative and technical readings in Sections B and C.
- B. Measuring Risks from Assets and Liabilities.** This section explores quantitative metrics for assessing ALM risks, beginning with key measures of interest rate risk—a central concern in ALM. Several readings cover concepts like duration and convexity from multiple angles. Section B also covers concepts for measuring market, equity, and liquidity risk.
- C. Tools and Strategies to Manage ALM Risks.** Like Section B, Section C delves into highly quantitative and technical concepts. Core ideas such as duration and convexity, introduced in Section B, reappear here in several readings. However, Section C distinguishes itself by primarily focusing on modeling methods and specific strategies for managing ALM risks. This section also explores a diverse range of topics, including asset allocation strategies, risk aggregation techniques like copulas, various stress testing methodologies, and hedging strategies that utilize options and derivatives.

We recommend downloading each section's detailed study manual before going through those lessons in the Study app—especially if you are using the Today view—so that you have the detailed study manual to read/reference as you go through the scheduled lessons.

This study manual is intended to help you get through the source material faster than if you had no study manual. Some readings are very difficult to absorb on the first attempt. The study manual will help you pick out important information more quickly.

How to Use This Study Manual With the Online Course

This detailed study manual will provide you with a detailed foundation and reference guide for the rest of the online course. It's the most detailed and verbose outline we provide with the course.

Unlike condensed outlines and flashcards, which are design to aid memorization, this detailed study manual is designed with readability in mind. You will not be able to memorize everything in this guide, nor should you.

As I explain in the Introduction section of the online course, ideally you'll have 3–4 months to prepare for the exam. You'll want to spend the first half of that time reading as much as you can and trying to learn concepts. Don't worry about memorization until the last 1–2 months before the exam.

Each summary in this detailed study manual starts with a section called "Overview of This Reading." These overviews show you the contents and most testable topics in each chapter at a glance. I recommend reviewing these sections before and after you tackle the readings on your own.

After going through the detailed study manual for a given reading, it's a good idea to watch the accompanying video lesson, which will further reinforce the big picture for that reading and provide illustrative examples to reinforce quantitative concepts.

Some people, however, prefer to watch the video lessons first. There's no right or wrong way to use the detailed study manual with the rest of the course as long as you are staying on schedule and learning key concepts. Feel free to experiment and change things up as you go.

Good Luck!

It's critically important to keep a couple of things in mind as you go through the material:

1. Keep moving forward. Don't get bogged down!
2. Remember that you are not trying to become an expert in the material. You are trying to identify and master *testable* material sufficiently to pass the exam.

If you study regularly and put in the time, you will be amazed at how much material you can pack into your head by exam day—*especially if you prioritize concept learning over memorization in the early stages of studying*. That said, a good deal of memorization is needed. Use the condensed lesson handouts and flashcards as a guide for that.

And remember one of the most important features of our online course is customer

support. Our course forum is a great place to post questions about any of the material because it gives other students a chance to answer and see answers. You can also email me anytime with any questions.

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Change Documentation

Any time the detailed study manual is updated, we post details about the changes in the “Revision History and Scheduled Updates” spreadsheet posted in the Introduction section of the online course. For example, if we update or correct a formula, we will describe the change and give the specific page(s) affected.

It’s a good idea to periodically check this revision history up through the exam date to see if a more recent version has been posted for any given section. You will find a version number on the end of the PDF file name of each section’s PDF.