2024 CFA Program: Level I Errata

31 October 2023

If you find something in the curriculum that you think is in error, please submit full details via the form at http://cfa.is/Errata.

The eBook for the 2024 curriculum is formatted for continuous flow, so the text will fit all screen sizes. Therefore, eBook page numbering—which is linked to section heads—does not match page numbering in the print curriculum.

- Corrections below are in bold, and new corrections will be shown in red; page numbers shown are for the print volumes.
- The short scale method of numeration is used in the CFA Program curriculum. A billion is $10^9$ and a trillion is $10^{12}$. This is in contrast to the long scale method where a billion is 1 million squared and a trillion is 1 million cubed. The short scale method of numeration is the prevalent method internationally and in the finance industry.

Volume 1
Rates and Returns (Quant LM1)

- In the lesson “Rates of Return,” the second and third sentences in the last paragraph under Holding Period Return (page 9 of print) should read, “For example, an analyst may need to compute a three-year holding period return from three annual returns. In that case, the three-year holding period return is computed by compounding the three annual returns:…”

- A paragraph should be added immediately preceding Example 7 (page 16 of print): The harmonic mean only works for non-negative numbers, so when working with returns that are expressed as positive or negative percentages, we first convert the returns into a compounding format, assuming a reinvestment, as $(1 + R)$, as was done in the geometric mean return calculation, and then calculate $(1 + \text{harmonic mean})$, and subtract 1 to arrive at the harmonic mean return.

$$
(1 + R_{\text{harmonic}}) = n \sum [1 / (1 + R)] R_{\text{harmonic}} \\
= n \sum [1 / (1 + R)] - 1
$$

- Equation 14 (page 34 of print) should read:

$$(1 + \text{real return}) = \frac{(1 + \text{nominal risk-free rate})(1 + \text{risk premium})}{1 + \text{inflation premium}}.$$

- The first Practice Problem (page 38 of print) should read, “The nominal risk-free rate is best described as the sum of the real risk-free rate and a premium for:”
The Time Value of Money in Finance (Quant LM2)

• In Example 2, the solution to 2 (page 51 of print) should read:

3.2876 percent

In this case, we must solve for r using Equation 6, with PV equal to 93.091, as follows:

\[ PV = 93.091 = 2/(1+r) + 2/(1+r)^2 + 2/(1+r)^3 + 2/(1+r)^4 + 2/(1+r)^5 + 102/(1+r)^6. \]

Here we may use the Microsoft Excel or Google Sheets RATE function (RATE (6,2,93.091,100,0,0.1)) to solve for r of 3.2876 percent.

Investors in fixed coupon bonds face a capital loss when investors expect a higher YTM.

• In Example 7, the second sentence of Step 2 (page 59 of print) should read:

We may solve for \( D_4 \) as GBP1.823 (=1.787 \times 1.02 = D_0(1 + g)) and the second expression to be GBP9.22 as follows:

\[ GBP9.22 = \frac{1.823}{(0.15 - 0.02)} \frac{(1.15)}{(1.15)^3}. \]

Portfolio Mathematics (Quant LM5)

• Equation 4 (page 154 of print) should read:

\[ \text{Cov}(R_i, R_j) = \sum_{t=1}^{n} (R_{i,t} - \bar{R}_i)(R_{j,t} - \bar{R}_j) / (n-1). \]

• The calculation under Equation 5 (page 154 of print) should read:

\[ = w_1^2 \sigma^2(R_i) + w_1w_2\text{Cov}(R_i, R_2) + w_1w_3\text{Cov}(R_i, R_3) \]
\[ + w_2w_2\sigma^2(R_2) + w_2w_3\text{Cov}(R_2, R_3) \]
\[ + w_3w_3\text{Cov}(R_3, R_3) \]
\[ = \text{GBP9.22} = \text{GBP9.22} \]

• The last line of the Solution to 3 in Example 1 (page 157 of print) should read:

\[ \sigma(R_p) = 99.72^{1/2} = 9.99\% \]

Simple Linear Regression (Quant LM10)

• In the lesson “Hypothesis Tests in the Simple Linear Regression Model,” Equation 20 (p. 286) should read,

\[ t_{\text{intercept}} = \frac{\hat{b}_0 - B_0}{s_{\hat{b}_0}} = S_e \frac{\hat{b}_0 - B_0}{\frac{1}{\sqrt{n}} \frac{\sum_{i=1}^{n} (X_i - \bar{X})^2}{\bar{X}}}. \]
• In Exhibit 24 (page 286 of print), the equation in Step 5 should read,

\[ t_{\text{intercept}} = \frac{4.875 - 3.0}{3.4596 \times \sqrt{\frac{1}{6} + \frac{6.1^2}{122.64}}} = \frac{1.875}{3.4596 \times 0.68562} = 0.7905. \]

And Step 6 should read, "Do not reject the null hypothesis. There is not sufficient evidence to indicate the intercept is greater than 3%.”

Volume 2
Portfolio Risk and Return: Part II (PM LM1)
• In Example 8 (page 89 of print), the second calculation under Solution should read:

\[ E(R_p) = R_f + \beta_p[E(R_m) - R_f] = 0.04 + 1.30 \times (0.16 - 0.04) = 0.196 = 19.6\% \]

Analyzing Balance Sheets (FSA LM3)
• In the Ratio Analysis practice questions, the Solution to 2 (page 477 of print) should read:

B and C are correct. The ratios are shown in the table below. The quick ratio and current ratio are lower in 2017 than in 2016. The cash ratio is slightly higher in 2017 than in 2016.

In the table in the solution the Cash row should read:

<table>
<thead>
<tr>
<th>Liquidity Ratios</th>
<th>Calculation</th>
<th>2017 € in millions</th>
<th>2016 € in millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>(Cash + Marketable securities) ÷ Current liabilities</td>
<td>(\text{((€4,011 + 0) ÷ €10,210 = 0.39)})</td>
<td>(\text{((€3,702 + 0) ÷ €9,674 = 0.38)})</td>
</tr>
</tbody>
</table>

Volume 3
Analysis of Income Taxes (FSA LM1)
• In the lesson “Deferred Tax Assets and Liabilities,” the first paragraph under Realizability of Deferred Tax Assets (page 10 of print) should read:

Assume Pinto Construction (a hypothetical company) depreciates equipment on a straight-line basis of 10 percent per year. The tax authorities allow depreciation of 15 percent per year. At the end of the fiscal year, the carrying amount of the equipment for accounting purposes would be greater than the tax base of the equipment thus resulting in a temporary difference. A deferred tax liability may be created only if the company expects to be able to realize the economic benefit of the deferred tax liability in the future. In this example, the equipment is used in the core business of Pinto Construction. If the company is a going concern and has stable earnings, there should
be no doubt that future economic benefits will result from the equipment, and it would be appropriate to create the deferred tax item.

If, however, it were doubtful that future economic benefits will be realized from a temporary difference (i.e., if Pinto Construction was being liquidated), the temporary difference will not lead to recognition of a deferred tax liability. If a deferred tax liability was recognized previously, but there was sufficient doubt about the economic benefits being realized, then, under IFRS, an existing deferred tax liability would be reversed. Under US GAAP, a valuation allowance would be established to reduce the amount of the deferred tax liability to the amount that is more likely than not to be realized. In assessing future economic benefits, much is left to the discretion of management in assessing the temporary differences and the issue of future economic benefits.

Equity Valuation: Concepts and Basic Tools (Equity LM 8)
- In Example 14 (page 596 of print), the last sentence of the second paragraph should read, “Thus, total revenues for Boeing are expected to be about a fifth higher than those for Airbus.”

Volume 4
Yield-Based Bond Duration Measures and Properties (FI LM11)
- In Example 1, the Maturity row in the first table (page 269 of print) should read “15 Oct. 2030.” In the third table in the example, the Settlement date should read “11 Dec. 2025” and Maturity should read “15 Oct. 2030.”
- In the question set at the end of the learning module, the table in the solution to the first practice question (page 287 of print) should read as follows:

<table>
<thead>
<tr>
<th>First bond</th>
<th>Second bond</th>
<th>Which has greater interest rate risk?</th>
</tr>
</thead>
<tbody>
<tr>
<td>4% coupon, paid semiannually, and five years to maturity, priced to yield 6%</td>
<td>5% coupon, paid semiannually, and five years to maturity, priced to yield 6%</td>
<td>First bond</td>
</tr>
<tr>
<td>4% coupon, paid semiannually, and five years to maturity, priced to yield 6%</td>
<td>4% coupon, paid semiannually, and six years to maturity, priced to yield 6%</td>
<td>Second bond</td>
</tr>
<tr>
<td>5% coupon, paid semiannually, and five years to maturity, priced to yield 6%</td>
<td>5% coupon, paid semiannually, and five years to maturity, priced to yield 8%</td>
<td>First bond</td>
</tr>
<tr>
<td>4% coupon, paid semiannually, and five years to maturity, priced to yield 8%</td>
<td>4% coupon, paid semiannually, and five years to maturity, priced to yield 8%</td>
<td>First bond</td>
</tr>
</tbody>
</table>
Credit Risk (FI LM14)
- In the question set at the end of the learning module, the second question and solution should read as follows:

2. A bond investor observes a bid/offer quote for a 5-year French government zero-coupon bond of 93.75/93.775. The bond’s liquidity spread is closest to:

A. 25 bps.
B. 5 bps.
C. 0.54 bps.

Solution:
C is correct. We first calculate the respective bid and offer yields as follows:

Bid yield: 93.75 = \( \frac{100}{(1 + r)^5} \)

\( r_{\text{bid}} = 1.2991\% \)

Offer yield: 93.775 = \( \frac{100}{(1 + r)^5} \)

\( r_{\text{offer}} = 1.2937\% \)

The liquidity spread of 0.54 bps (0.0054%) is equal to the difference in the bid yield and the offer yield (= 1.2991% − 1.2937%).

Mortgage-Backed Security (MBS) Instrument and Market Features (FI LM19)
- In the Practice Problems at the end of the learning module, Practice Problems 7 and 8 should be one question (page 524 of print). The solution to this practice problem appears as the solution to 7, and the subsequent solutions are all off one number: The solution to 8 in print is actually the solution to Practice Problem 9, the solution to 9 in print is actually the solution to Practice Problem 10, etc.

Volume 5
Pricing and Valuation of Futures Contracts (Derivatives LM6)
- In Example 2 (page 131 of print), the last two calculations should read,

\[
P V_0(C) = 1.99 = [2(1.02)^{0.24982}].
\]

and

\[
f_0(T) = (1,770.00 + 1.99)(1.02)^{0.24982}
\]

\[= 1,780.78 \text{ per ounce}.\]

Valuing a Derivative Using a One-Period Binomial Model (Derivatives LM10)
- Equation 8 (immediately before Example 1, page 224 of print) should read:
\[ V_1 = €12 = €11.43 (1 + 0.5) \]

- The first instance of Equation 9 (page 228 of print) is correct as is, but where it is repeated in the paragraph after Equation 10 (page 229 of print), there is a typo. The correct equation is:

\[
    c_0 = \frac{\pi c_i^a + (1 - \pi)c_i^d}{(1 + r)^T}
\]

**Volume 6**

**Guidance for Standards I-VII (Ethics LM3)**

- In the lesson “Standard IV(A): Recommended Procedures,” part of the text under Incident-Reporting Procedures (page 323 of print) is not appearing. The full paragraph is as follows:

Members and candidates should be aware of their firm’s policies related to whistleblowing and encourage their firm to adopt industry best practices in this area. Many firms are required by regulatory mandates to establish confidential and anonymous reporting procedures that allow employees to report potentially unethical and illegal activities in the firm.

**Ethics Application (Ethics LM5)**

- Under “Conduct as Participants in CFA Institute Programs” (page 460 of print), the first sentence of the Analysis should read, “\textbf{C} is correct.” The first sentence of the last paragraph should read, “\textbf{B} is incorrect.”