2023 CFA Program: Level I Errata
15 June 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 2023 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.

Glossary
- The definition for “Secondary precedence rules” should read, “Rules that determine how to rank orders placed at the same price.”

Volume 1
Quant Learning Module 1
- In the paragraph under Exhibit 10 (page 25 of print), the last sentence should read, “The future value of the series of cash flows from Exhibit 5, $19,190.76, is equal to the single $15,036.46 amount compounded forward to t = 5:”
- In the Solution to 24 (page 54 of print), the timeline in part “i” should appear as follows:

```
0 1 2 .... 17 18 19 20
-20,000 -20,000 -20,000 -20,000

X  X
```

X
In part “iii” the last sentence should read, “The present value of the college costs as of \( t = 17 \) is \( 74,464 \).” and the calculation that follows should read,

\[
P V = \$20,000 \left[ 1 - \frac{1}{(1.05)^{17}} \right] \times 1.05 = 74,464
\]

In part “iv” the calculation should read,

\[
\$74,464 = \frac{(1.05)^{17} - 1}{0.05} = 25.840366X
\]

\[
X = \$2,881.60
\]

In the table below the calculation, \$70,919 should be \( 74,464 \).

**Quant Learning Module 2**

- In Exhibit 32 (page 93 of print), the y-axis label should read, “Utilities.”
- In Exhibit 33 (page 95 of print), it should be noted that the graphs moving diagonally from the top left to the bottom right are not scatter plots but instead frequency distributions.
- A paragraph should be added immediately preceding Example 11 (page 113 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.

\[
(1 + R_{\text{harmonk}}) = \frac{1}{n} \sum (1 + R_n) \rightarrow R_{\text{harmonk}}
\]

\[
= \frac{1}{n} \sum [1/(1 + R_n)] - 1
\]

- In the paragraph after Equation 8 (page 123 of print), the first sentence should read, “As an illustration of range, consider Exhibit 36, our example of annual returns for countries’ stock indexes. Likewise, in Example 16 (page 124 of print), the first sentence should read, “Using the country stock index returns in Exhibit 36, calculate the mean absolute deviation of the index returns for each year.”
• Under Exhibit 51 (page 138 of print), the second bullet should read, “The highest frequency of returns occurs within the **0.0 to 0.5** standard deviations from the mean (i.e., the **mode is greater than the mean as the positive returns are offset by extreme negative deviations**).”

Quant Learning Module 3
• In Example 1 (page 177 of print), the Solution to 1 should read, “In the example, if the odds against your second colleague passing the exam are 1 to 4, this means the probability of the event is $4/(1 + 4) = 4/5 = 0.80$.”
• In Example 11 (page 192 of print), the second sentence should read, “Using the probability distribution of EPS from Exhibit 7, you want to measure the dispersion around your forecast.”
• Equation 15 (page 198 of print) should read [under the sigma, it reads $t = 1$):

$$\text{Cov}(R_i, R_j) = \sum_{i=1}^{n} (R_{ij} - \bar{R}_i)(R_{ij} - \bar{R}_j) / (n - 1)$$

Quant Learning Module 4
• The first sentence of the Solution to Practice Problem 33 (page 301 in print) should read, “B is correct, since it is false.”

Quant Learning Module 6
• In Exhibit 8 (page 365 of print), the Procedure for Method 2 should read, “Compare the hypothesized parameter’s value with the bounds of the confidence interval.”
• In Example 4, the second sentence of the Solution (page 367 of print) should read, “The results indicate that the mean risk-adjusted return is greater than 0% because the calculated test statistic of 2.428 is greater than the critical value of $2.345$.”
• In Example 8, Solution to 2 (page 376 of print), in Step 2, the phrase “with $1,304 - 1 = 1,303$ degrees of freedom.” should be deleted.
• In Example 7, Solution to 2 (page 391 of print), the calculation should read, “€$185.70 - €3.70/0.075 = €136.37$$
• In the solution to Practice Question 3 (page 419 of print), the first sentence should read, “B is correct.”
• In the solution to Practice Question 14 (page 420 of print), the explanation is correct but the correct answer is A, not B. It should read, “A is correct. The critical value in a decision rule is the rejection point for the test. It is the point with which the test statistic is compared to determine whether to reject the null hypothesis, which is part of the fourth step in hypothesis testing.”
Quant Learning Module 7

- In Section 5 (page 456 of print), Equation 18 should read,

\[ s_{b_0} = s_e \sqrt{\frac{1}{n} + \frac{\bar{X}^2}{\sum_{i=1}^{n}(X_i - \bar{X})^2}}. \]

And the equation following Equation 18 should read,

\[ t_{intercept} = \frac{\hat{b}_0 - B_0}{s_{b_0}} = \frac{\hat{b}_0 - B_0}{s_e \sqrt{\frac{1}{n} + \frac{\bar{X}^2}{\sum_{i=1}^{n}(X_i - \bar{X})^2}}}. \]

- In Exhibit 27 (page 456 of print), the equation in Step 5 should read,

\[ 4.875 - 3.0 = 1.875 \times 0.7905 = 0.7905. \]

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

Economics Learning Module 3

- In the Solution to Example 2 (page 131 of print), the Implicit GDP price deflator for 2016 (in the table) should be 109.9. The last two sentences of the Solution should read, “For 2020, the annual inflation rate is equal to [(113.9/113.2) − 1] or 0.62 percent. This shows that Canada experienced a very low rate of inflation in 2020.

Volume 3

FSA Learning Module 4

- Practice Problem 8 (page 246 of print) should read, “With regard to the data in Problem 7, what would be the most reasonable explanation of the financial data?”

FSA Learning Module 5

- In the Solution to Practice Problem 37 (page 321 of print), the second sentence should read, “No LIFO liquidation occurred during 2018; the LIFO reserve increased from ¥10,120 million in 2017 to ¥19,660 million in 2018.”
FSA Learning Module 7
- In the Solution to Practice Problem 18 (page 443 of print), the second sentence should read, “The effective tax rate of 30.1 percent ($56,860/$189,167) was higher than the effective rates in Year 1 and Year 3.”

Corporate Finance Learning Module 1
- Exhibit 4 (page 609 of print) is cut off. The complete exhibit follows:

[Diagram of partnership structure]

Corporate Finance Learning Module 4
- In the paragraph after Example 5 (page 746 of print), the first sentence should read, “The effect of a capital investment’s positive or negative NPV on share price is more complicated than in Example 5, in which the value of the stock increased by the investment’s NPV.”
- In the Solution to Practice Question 18 (759 of print), there is a typo in the second calculation. It should read, “NPV = 0.50(26.18) = CAD13.09 million.”
Volume 4

Equity Learning Module 5
• In Example 3 (page 327-329 of print), the numbers in the table in the Solution are off by one number. It should read,

- Materials 8
- Consumer Discretionary 9, 11
- Consumer Staples 14
- Energy 2
- Financials 16
- Health Care 6, 18, 19
- Industrials 3, 20
- Real Estate 1, 21, 22
- Information Technology 5, 10, 15
- Communication 4, 7, 13
- Services/Telecommunications
- Utilities 12, 17

Equity Learning Module 6
• In Example 6, the Solution to 2A (page 389 of print), the last calculation should read,

\[ V_0 = \left[ \frac{¥79.5}{1.01525^5} + \frac{¥106}{1.01525^4} + \frac{¥106}{1.01525^3} + \frac{¥132.5}{1.01525^2} + \frac{¥132.5}{1.01525^1} + \frac{¥10,598}{1.01525^0} \right] \]

\[ = ¥10,279 \]

And the sentence below should read, “The difference between the current market price of ¥7,243 and the intrinsic value of ¥10,279 is the implied value of retractable option given to the holders of the Series AA shares.”

• In Example 7, the Solution to 2 (page 391 of print) should begin with “€185.70”

Volume 5

Fixed Income Learning Module 1
• In Example 2 (page 6 of print), the Year 6 cash flow should be 108 (not 8).

Portfolio Management Learning Module 2
• In Example 10 (page 578 of print), the first equation should read,

\[ R_p = w_1 \times R_1 + (1 - w_1) \times R_2 = 0.6 \times 0.055 + 0.4 \times 0.007 = 0.0358 \approx 3.6\% . \]