

2020 CFA Program: Level II Errata

28 April 2021

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 2020 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 “fair market value” should be replaced with “The price, expressed in terms of cash equivalents, at which a property (asset) would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at “arm’s length” in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts. Fair market value is most often used in a tax reporting context in the United States”

Volume 1

Reading 2

- Practice Problem 28 and its solution (print pages 181 and 198) should be deleted.
- In Practice Problem 32 (page 182), the second sentence should read, “Local is currently ~~not~~ listed on a stock exchange and...”

Reading 3

- In Section 3 (page 217 of print), the last sentence includes an extra “of” and should instead read: “Standards of Professional Conduct.”

Reading 4

- In Example 2 (page 247 of print) the equation listed in the first sentence should be: $Y_i = -0.0008 + \mathbf{0.3339}X_i$
- In the last paragraph of Section 9 (page 265 of print), the first sentence should read, “Finally, if the regression assumptions listed in Section **3** are violated...”
- In Practice Problem 17 (page 273 of print) should begin “Based on **Exhibits 1 and 2**, the correlation between...”
- In the information for Practice Problems 25 through 30 (page 275 of print), the note under Exhibit 2 should read, “The critical t -value for a **two**-sided t -test at the 5%”

significance level (**df = 34**) is **2.032**. The critical **t**-value for a two-sided **t**-test at the **1% significance level (df = 34)** is **2.728**.”

- In Practice Problem 28 (page 276 of print), the A option should read “**99% confidence interval for the slope coefficient to be 0.1594 to 0.3114**.”
- In the answer to Practice Problem 28 (page 281 of print), the following should be added to the end, “**A is incorrect because the lower limit for the confidence interval = $0.2354 - (2.728 \times 0.0760) = 0.0281$ and the upper limit for the confidence interval = $0.2354 + (2.728 \times 0.0760) = 0.4427$. B is incorrect because the lower limit for the confidence interval = $0.0095 - (2.032 \times 0.0078) = -0.0064$ and the upper limit for the confidence interval = $0.0095 + (2.032 \times 0.0078) = 0.0254$.**”

Reading 5

- In Exhibit 4 (page 301 of print), the second row under *t*-Statistic is missing a negative sign. It should be **-1.0143**.
- In the second-to-late paragraph in Section 4.2.3, Example 7 should be replaced with **Exhibit 9** and Example 6 should be replaced with **Example 8**
- In Equation 12 (page 333 of print), the following needs to be added to the denominator:

$$\hat{p} = \frac{\exp [\hat{b}_0 + \hat{b}_1 X_1 + \hat{b}_2 X_2 + \hat{b}_3 X_3]}{1 + \exp [\hat{b}_0 + \hat{b}_1 X_1 + \hat{b}_2 X_2 + \hat{b}_3 X_3]}$$

Reading 6

- In Exhibit 4 (page 449 of print), the fourth row should saw March **2015** (not March 2014).
- In the solution to Practice Problem 24 (page 457 of print), the subscript “**t + 1**” at the end of the first equation should be “**t – 1**”

Reading 7

- UPDATE: Under the first sigma should read **$i=1$** and the final character should be ***k***. In Section 5.1, after paragraph that starts “In addition to minimizing the sum of the squared residuals,” (page 477 of print), the equation that follows is missing a hat on the second Y_i :

$$\sum_{i=1}^n (Y_i - \hat{Y}_i)^2 + \lambda \sum_{k=1}^K |\hat{b}_k|$$

Reading 8

- In Section 4.1 under Data Wrangling (Preprocessing), list item 5 (page 527 of print), the second-to-last sentence should say that State is **nominal**, not ordinal. In the second paragraph, the last sentence should read “**In general, data values outside of the following are considered as outliers: $1.5 \times \text{IQR} + 3\text{rd Quartile Upper Bound}$; and $-1.5 \times \text{IQR} + 2\text{nd Quartile Lower Bound}$. Using a multiple of 3.0 (instead of 1.5) times IQR would indicate extreme values.**”

Volume 2

Reading 13

- In Example 3 (page 20 of print), the second sentence below the first table should read: “Prince reports net income for **2018** of €100,000...”
- In the last paragraph of Section 4.5 (page 22 of print), the first sentence should read, “Section **5.3.4** of this reading...”
- Practice problem 10 (page 50 of print), should read, “Based on Gelblum’s estimates, **and holding the size of Zimt’s ownership stake in Oxbow constant**, Zimt’s net income in 2018 will most likely be...”
- In question 14 (page 51 of print), answer choice C should be **€1,000 higher** (not €3,000 higher).
- Practice Problem 22 (page 53 of print) should read, “If Supreme Healthcare sells its receivables to the SPE, its consolidated financial results will **least** likely show...”
- In the information for questions 23-28 (page 53 of print), the third sentence of the first paragraph should begin “On 31 December **2018** ...” (not 2008).
- Updated: In the information for questions 29-36 (page 56 of print), the title of Exhibit 2 should be “Selected Financial Data for Rainer Co., **1 January 2018 (Acquisition Date) (\$ millions)**” and the first three rows of the exhibit should be deleted. the paragraph after Exhibit 2 should be deleted and replaced with: “**Thronen notes that, for fiscal year 2018, Rainer reported total revenue of \$1,740 million and net income of \$360 million, and paid dividends of \$220 million.**”
- Practice problem 33 (page 57 of print) should read “**Using only the information from Exhibit 2**, the carrying value of Topmaker’s investment in Rainer at the end of 2018 is *closest to*.”
- The solution to Practice Problem 22 should read, “**A is correct. Revenue will not be higher for 2018 because Supreme Healthcare controls the SPE and thus eliminates intra-entity transactions and balances in consolidation. Consolidated revenue will thus present the results as if this transaction did not occur.**”

Reading 14

- In the information for Practice Problems 8-12 (page 101), the fourth row of Exhibit 2 should be “Discount rate used to estimate plan liabilities **at beginning of year 2009**”
- At the bottom of Exhibit 2 in the information for Practice Problems 8-12 (page 101), the following statement should be added, “**All transactions (including plan amendments) are assumed to occur at year-end (end of 2009).**”
- For Practice Problem 8 (page 101), choice B (1,020) is the correct answer: $200 + 120 + [(42,000 - 39,000) \times 7\%] + 460 + (2,730 - 2,700) = 1,020$ or $(41,720 - 38,700) - (42,000 - 39,000) + 1,000 = 1,020$. All transactions are assumed to occur at year-end.
- For Practice Problem 9 (page 101), choice B should be **530**. The past service costs should not be included in the computation of interest cost $(42,000 - 39,000) \times 7\% = 210$, which is added to service cost of $(200+120) = 320$. All transactions are assumed to occur at year-end.
- For Practice Problem 10 (page 102), choice A should be **20**. Calculated as follows: $200 + 2,940 - 3,120 = 20$. The past service costs should **not** be added to the beginning PBO of 49,000 before multiplying by 7% to compute interest cost. All transactions are assumed to occur at year-end.

- In the information for Practice Problems 13-18 (page 102), the second row of Exhibit 4 should be “Discount rate **at beginning of year**”
- In the information for Practice Problems 19-25 (page 104), the first sentence should read, “The board of directors at Sallie-Kwan Industrials (SKI), a publicly traded company, is meeting with various committees following the release of audited financial statements prepared in accordance with **US GAAP**...”
- In the information for practice problems 19-25, under Plan C, second paragraph (last paragraph on p. 104 in print), a sentence should be added to the end of the paragraph: “Moreover, Note 16 indicates that SKI was required to use expected return on plan assets for the reporting year in question.”
- In the information related to Practice Problems 26-32 (106 of print), Statement 1 should read, “An actuarial loss is accompanied by an increase in the PVDBO.”
- **In the information related to Practice Problems 26-32 (107 of print), the second row of Exhibit 3, “Benefit expense change” should be “Change in benefit expense reported in P&L”**
- Practice Problem 30 (page 108 of print) and its solution should be deleted.
- **Update: In the solution to 9 (page 109 of print), the last sentence should read “Here, the service costs are 320 (= 200 + 120) and the net interest expense is 210 [= (42,000 – 39,000) × 7%]. Thus, the total periodic pension cost is equal to 530.”**

Reading 15

- In the solution to 35 (page 197 of print), in the second sentence, there are two corrections to the calculations: “The rate as of 30 June 2016 was BRD1.15/NER (or **NER/BRD0.8696**) and as of 31 December 2016 was BRD1.20/NER (or **NER/BRD0.8333**).”

Reading 16

- In the bullets at the end of Section 2.1 (page 206 of print), last bullet should read, “The International Organization of Securities Commissions (IOSCO) includes representatives **from** the regulators of the securities markets of various countries and jurisdictions.”
- In “A Brief Overview of Accounting for Derivatives” (page 244 of print), the fourth bullet should read, “Derivative instruments **can** be classified as a hedge of a cash flow, ~~a hedge of a fair value~~, or a hedge of a net investment in a foreign subsidiary. Classification of a derivatives contract as a hedge requires substantiating its correlation with the risk being hedged. If a derivatives contract is classified as **one of these two types of hedges**, changes in its value are recorded as part of **other** comprehensive income and will be recognized in net income over the life of the hedged transaction.” The first sentence of the fifth bullet should read, “If **such** a derivatives contract fails classification as a hedge and is instead a free-standing derivative instrument **or if the hedge is classified as a third type, a hedge of a fair value, then** changes in its fair value are reported as income or expense in the income statement at each reporting period.”
- The solution to practice problem 4 (page 276 of print) should be **C**. The explanation is correct.

Reading 17

- In the information for questions 5-12 (page 359 of print), the paragraph after Statement 5 and Exhibit 1 should be deleted.

- Practice problem 9 (page 360 of print) and its solution should be deleted.

Reading 18

- In the paragraph after Exhibit 14 (page 384), in the second sentence, IFRS 19 should be IFRS 11.
- In the paragraph before Exhibit 18, in the third sentence (page 387 of print), pre-IFRS 19 should be pre-IFRS 11.

Volume 3

Reading 21

- In Practice Problem 26 (page 191 of print), Choice C should be **61%**. The solution (page 195) should read, "**C is correct. Earnings available for dividends = Earnings – Capital spending × 0.65 = USD 25 million – USD 15 million × 0.65 = USD 15.25 million; USD 15.25 million/USD 25 million = 61% dividend payout ratio.**"
- In the solution to Practice Problem 14 (page 194 of print), the second sentence should read, "Choice A is consistent with a **constant dividend** target payout ratio policy."

Reading 22

- In Example 1 (page 204 of print), The first two sentences should be "The managers of Company A, **a widely held conglomerate**, collectively own approximately **30%** of the outstanding shares. **No other shareholder holds more than a 1% stake.**" The first sentence of the solution should read "Company A has **dispersed** ownership and **dispersed** voting power."

Volume 4

Reading 26

- In Exhibit 41 (page 165 of print), the year 2012 appears twice. The second should read **2013**
- Clarification on solution to practice problem 16 (page 194 in print). Replace solution with: "B is correct. The electric scooter market is expected to grow rapidly and so the contribution of Omrikoon's new electric scooter division is forecast to expand significantly over the next 10 years. A is not correct because the investment company's portfolio turnover is not relevant for forecasting Omrikoon's future results. C is not correct because the light truck division is expected to add only 2% to total revenues in the future."

Reading 27

- The solution to practice problem 11A (pages 269-270 of print) should read as follows: "Let r be the required rate of return. Also let $t = 0$ indicate the middle of 2008. Because the dividend growth rate becomes constant from the middle of 2011 ($t = 3$), **this can be solved using the two-stage dividend discount model as follows:**
 $D_1 = 0.27(1.10) = 0.2970$
 $D_2 = 0.27(1.10)^2 = 0.3267$
 $D_3 = 0.27(1.10)^3 = 0.3594$

$$V_3 = 0.27(1.10)^3(1.08)/(0.12 - 0.08) = 9.7030$$

V_0 can be expressed as

$$\begin{aligned} V_0 &= \frac{D_1}{1+r} + \frac{D_2}{(1+r)^2} + \frac{D_3}{(1+r)^3} + \frac{V_3}{(1+r)^3} \\ &= \frac{0.2970}{1+0.12} + \frac{0.3267}{(1+0.12)^2} + \frac{0.3594}{(1+0.12)^3} + \frac{9.7030}{(1+0.12)^3} \\ &= 0.2652 + 0.2604 + 0.2558 + 6.9064 \\ &= A\$7.69 \end{aligned}$$

Reading 28

- In Exhibit 19 (page 336 of print), the numbers shown in the Depreciation row should be half of the figures currently shown.
- In the information for questions 31-36 (page 356 of print), Statement 1 should read as follows: "Changes in leverage do not impact free cash flow **to equity**."
- In the solution to practice problem 6 (page 362 of print), the paragraph after the table should begin "The terminal stock value is 18.0 times the earnings in **2022** ..." (not 2013).
- The solution to practice problem 36 (page 376 of print) should have calculations as follows:

$$TV_3 = 3,398.66/(0.0770 - 0.0075) = \mathbf{\text{€}48,901.58 \text{ million.}}$$

$$\text{The total value of operating assets} = (3,040.37 + 2,865.42 + 2,700.53) + \mathbf{48,901.58}/(1 + 0.0770)^3 = 8,606.32 + \mathbf{39,144.95} = \mathbf{47,751.27}$$

$$\text{Value of Bern's common stock} = \text{Value of operating assets} + \text{Value of non-operating assets} - \text{Market value of debt} - \text{Preferred stock} = \mathbf{47,751.27} + 50.00 - 15,400 - 4,000 = \mathbf{\text{€}28,401.27}$$

Reading 29

- In Section 4.1.2 (page 444 of print), the second-to-last sentence should read, "Return on invested capital (ROIC) is calculated as operating profit after tax divided by **total** invested capital."
- In Section 4.1.2 (page 444), the second sentence of the second paragraph should read, "The example includes a measure of total firm value, market value of invested capital (**sometimes also known as total invested capital, TIC, at market value**), that is an alternative to enterprise value."
- In Exhibit 19 (page 445 of print), the row labeled "Equals: Total Invested Capital (TIC)" should read "Equals: **Market value of TIC**"
- In the sentence before Exhibit 38 (page 452), the word "electronics" should be deleted: "Example 38 applies analysis of SUE to two **electronics** companies." In the first sentence of Exhibit 38, Volkswagen should be Volkswagen

Reading 30

- Example 10 immediately after the formula (page 512 of print) should read "with T equal to **20** and **2037** residual income equal to 23.8664..." and the equation should read:

$$\frac{23.8664}{(1 + 0.12 - 0.60)(1.12)^{19}} = 5.33$$

The sentences following the equation should read, "Total value is **ZL\$89.26** calculated by adding the present value of the terminal value, ZL\$5.33, to **ZL\$83.93 (the sum of the PV of residual income in the first 19 years)**."

Volume 5

Reading 32

- In the box right before 3.5 (page 31 of print), the number “0.00021” should be “0.0021” as shown below:

The Z-spread is given as 109.6 bps. Using the spot curve and the Z-spread, the invoice price is

$$\frac{1,000,000 \left(\frac{0.01625}{2} \right)}{\left(1 + \frac{0.0016 + 0.01096}{2} \right)^{\left(1 - \frac{10}{180} \right)}} + \frac{1,000,000 \left(\frac{0.01625}{2} \right)}{\left(1 + \frac{0.0021 + 0.01096}{2} \right)^{\left(2 - \frac{10}{180} \right)}} + \dots + \frac{1,000,000 \left(\frac{0.01625}{2} \right)}{\left(1 + \frac{0.0041 + 0.01096}{2} \right)^{\left(6 - \frac{10}{180} \right)}} + \frac{1,000,000}{\left(1 + \frac{0.0041 + 0.01096}{2} \right)^{\left(6 - \frac{10}{180} \right)}} = \text{US\$1,003,954.12}$$

- Question 39 (page 61 of print) should read: “In presenting Investment 2, Smith should show **an annual** return *closest* to:”

Reading 33

- In Exhibit 11 (page 89 of print), the bond price at Time 0 should be **99.9363**.
- In the solution to 4 (page 113 of print), the number in the numerator should be **101.5168** (not 101.5816).
- In solution to 14 (page 116 of print) in the figure, the top number in the second box under the Time 2 column should be 101.3294.

Reading 35

- In Example 2 (page 209 of print), the last full paragraph of the solution, second sentence should read “If this **3**-year, 5% bond were default-free, its price would be 107.1401.”
- In Exhibit 15 (page 226 of print), the first box under Date 3 should be **91.3858** (not 93.3858).
- In the second paragraph after Exhibit 18 (page 230 of print), the second sentence should read as follows: “The PODs in Exhibit 18 reflect the probability of **default** for each year.”
- In Example 7, in the paragraph that begins with “The assumed default...” (page 233 of print), the section sentence should read as follows: “The POD for date 2 is 7.00%, which is the probability of **default** into the second year...”
- In the paragraph above Exhibit 21 (page 234 of print), the first sentence should read as: “In addition, there is still a **56.7%**...”

Reading 36

- In Example 10 (page 302 of print), the last sentence of the first paragraph should read as follows: “**The investor can borrow at Libor, which is currently 2.5%.**”

Reading 37

- In Example 8 (page 342 of print), A should be “C\$14,125” and B should be “C\$14,350”
- In Example 9 (page 347 of print), the last sentence in the first paragraph should be, “The equilibrium euro-bund **quoted** futures price based on...” and the last sentence in the example should read, “In equilibrium, the euro-bund **quoted** futures price...”
- In Example 16, Solution to 1 (page 367 of print), under Quarterly Cash Flows Exchanged, 0.00692381 should be 0.006923**75** and 0.00062422 should be 0.000624**25**. Same changes in the equation below, and the solution should be A\$2,145,**167**.” In the Solution to 2, should be A\$2,145,**167** in two places and the solution should be - \$1,898,**378**”
- In the information for questions 1-7 (page 374 of print), Position 2 should have “(Euro-JGB Forward Contract)” in the heading. The text should read “One month ago, Troubadour **took a long position in Euro-Japanese government bond (JGB)** forward contracts with ...”
- The solution to practice problem 3 (page 380 of print) should read “A is correct. The value of Troubadour’s **euro-JGB** forward position is calculated as ...”
- In the solution to practice problem 9 (page 382 of print), the third sentence should read, “Given the current equilibrium two-year swap “ rate of **1.12%** and the fixed swap rate at initiation of 3.00%...”

Reading 38

- The paragraph after Example 2 (page 394 of print) should read as follows: “What we have shown to this point is the no-arbitrage approach. Before turning to the expectations approach, we mention, for the sake of completeness, that the transactions **for replicating the payoffs** for writing options are the reverse for those of buying them. Thus, for writing a call option, the writer will be selling stock short and *investing* proceeds (**i.e., lending**), whereas for a put, the writer will be purchasing stock on margin (**i.e., borrowing**). Once again, we see the powerful result that the same basic conceptual structure is used for puts and calls, whether written or purchased. Only the exercise and expiration conditions vary.”
- In the last paragraph between Example 11 (page 419 of print), the third sentence should read, “The key insight is that dividends influence the dynamically managed portfolio by lowering the number of shares to buy for calls and **raising** the number of shares...” and the last sentence should read, “Also, higher dividends will lower the number of bonds to short sell for calls and **raise** the number of bonds to buy for puts.”
- The ninth bullet of the Summary (page 449) should read, “A key assumption of the Black-Scholes-Merton option valuation model is that the return of the underlying instrument follows geometric Brownian motion, implying a lognormal distribution of the **price**.”

Volume 6

Reading 40

- In Section 6.2, first paragraph, second sentence (p. 105 of print), should read, “The first, funds from operations (FFO), is generally calculated as net income (computed in accordance with generally accepted accounting principles) plus **losses (minus gains) from sales of properties, plus depreciation and amortization related to real estate, plus real estate impairments and write-downs unrelated to depreciation.**”
- In Section 6.2, the third paragraph should read, “Net income is adjusted for gains and losses from sales of previously depreciated operating properties on the grounds that they do not represent sustainable, normal income.”
- In Exhibit 8 (p. 106 of print), the third line should read, “**(Gains)**/losses from sale of depreciable real estate”

Reading 41

- In section 3 (page 171 of print), first paragraph, second sentence should read as indicated: “Because there is considerable risk involved in a typical venture capital deal, venture capitalists usually apply a very high discount **rate** “to compensate for the risk.””

Reading 44

- In footnote 6 (page 302 of print), the first sentence should read, “WML is an equally weighted average of the stocks with the highest 30% **11**-month returns lagged 1 month minus...”
- In Section 4.2, in the fifth paragraph (page 305 of print), the definition for F_{GDP} = the surprise in GDP growth (assumed to be uncorrelated with F_{INFL}). Three paragraphs down, second sentence has the same correction: F_{INT} should be F_{INFL} .
- In Practice Problem 3, in both the problem (page 324 of print) and the solution (page 329 of print), the expected return column should be replaced with **0.196**, **0.156**, and **0.244**
- In Practice Problem 9 (page 326 of print), choice C should read, “Strategy 3: Sell short \$60,000 of Fund A and \$40,000 of Fund B; buy \$100,000 **Fund C.**”

Reading 45

- In the practice problem information for questions 1–5 (page 385 of print), under the heading “Trust Department’s Equity Fund”, item b, the first sentence should read as indicated: “The Index Plus Fund has a value at risk (VaR) of \$6.5 million **at 5% for one day.**”
- In the solution to practice problem 10 (page 395 of print), the line for σ_p should have **0.00501** for the first number (not 0.0051).

Reading 47

- In Section 2.3, first bullet (page 498 of print), the first sentence should read, “As shown in the table, Fidelity Magellan added value of $R_A = R_P - R_B = 35.3\% - 32.3\% = 3.0\%$ and PIMCO Total Return Fund added value of $R_A = R_P - R_B = -1.9\% - (-2.0\%) = 0.1\%$.”
- In the solution to practice problem 26 (page 554 of print), the last two lines should read, “A is incorrect. It represents the value added from asset allocation **(2.3%)**.”

C is incorrect. It represents the total value added **(2.3% + 3.9% = 6.1%, with rounding).**”

Reading 48

- In Example 1 (page 561 of print), the fourth sentence after C should read, “This order exceeded the quoted bid size and ‘walked down’ the limit order book (i.e., after the market bid was filled, the order continued to **sell** at lower prices).” The last sentence in the paragraph should read, “Tanager did want to **sell** the 2,000 unfilled shares on the next trading day.”
- In Section 2.4, the first equation (Page 559 of print) should appear as follows:

Effective spread transaction cost estimate =

$$\text{Trade size} \times \begin{cases} \text{Trade price} - \left(\frac{\text{Bid} + \text{Ask}}{2} \right) & \text{for buy orders} \\ \left(\frac{\text{Bid} + \text{Ask}}{2} \right) - \text{Trade price} & \text{for sell orders} \end{cases}$$