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 2022 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 read, “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.”
- The definition for Funds from operations should read, “Net income (computed in accordance with generally accepted accounting principles) plus (1) gains and losses (minus gains) from sales of properties plus (2) depreciation and amortization related to real estate, plus real estate impairments and write-downs unrelated to depreciation.”

Volume 1
Reading 1
- In Exhibit 5 (page 10), the Company C residual should read, “$e_3 = Y_3 - (b_0 + b_1X_3)$” and the Company E residual should read, “$e_5 = Y_5 - (b_0 + b_1X_5)$

Reading 3
- In Example 3, Solution to 1 (page 179 of print), Note that a $\hat{b}_1$ of 0.0295 implies that the exponential growth rate per quarter in Starbucks’ sales will be 2.99394% ($e^{0.0295} - 1 = 0.0299394$).”
- In Exhibit 14 (page 189 of print), the autocorrelation for lag 4 or the value of the t-test should read, “0.2623”
- In Example 17 (page 215 of print), the last sentence of the second paragraph should read, “Consequently, the test statistics she computed in Exhibits 13 and 14 are not valid…”
• In Practice Problem 8 (page 229 of print), the 3Q 2019 Changes in Log of Sales should be **0.0403** in both Exhibit 6 and Exhibit 7.
• In the Solution to Practice Problem 8 (page 243 of print), the 3Q 2019 Changes in Log of Sales should be **0.0403**.

**Reading 4**
• In Section 5, first paragraph (page 266 of print), the fourth sentence should read, “The left panel in Exhibit 6 presents a simple dataset with two features (x and y coordinates) labeled in two groups (triangles and **diamonds**). In the third paragraph (page 267), the second sentence should read, “The intuitive idea behind the SVM algorithm is maximizing the probability of making a correct prediction (here, that an observation is a triangle or a **diamond**) by determining the boundary that is the furthest away from all the observations.”
• In Section 6, first paragraph (page 268 of print), the fourth sentence should read, “The diamond in Exhibit 8 needs to be classified as belonging to either the **diamond** or the triangle category.” The sixth sentence should read, “The right panel in Exhibit 8 presents the case where k = 5, so the algorithm will look at the diamond’s five nearest neighbors, which are three triangles and two **diamonds**.”

**Reading 6**
• In the solution to Practice Problem 15 (page 493 of print), the second sentence in the second paragraph should read, “Dealer A is effectively quoting **GBP/MXN** at 0.0403/0.040.

**Reading 7**
• In Example 1, in the table under Solution to 4 (page 506 of print), the sixth row should read, “Tax and regulatory **policies** discouraging entrepreneurship”
• In Section 10.2.1 (page 539 of print), in the second paragraph, the equation \( Y = Y/L = Ak^a \) should be \( y = Y/L = Ak^a \)
• In the second paragraph after Example 13 (page 559 of print), the second sentence should read, “In contrast, many East Asian countries, such as Singapore and South Korea, pursued outward-oriented **policies** during this same period…”

**Volume 2**

**Reading 9**
• In Example 2 (page 20 of print), the first sentence of the second paragraph should read, “Blake Co. believes the value of Brown Co. is higher than the **book** value of its identifiable net assets.”
• The second paragraph of Section 8.3 (page 37 of print) needs two sentences added to the end: “Income taxes are ignored in the table. In practice, however, non-controlling interest on the consolidated income statement is the non-controlling interest’s share of the subsidiary’s **after-tax** income.”
• In the second paragraph of Section 9 (page 40 of print), the sixth and seventh sentences should read, “Note that GlaxoSmithKline has **£6,172,000,000** in contingent consideration liabilities, which relate to future events such as development milestones or sales...”
performance for acquired companies. Of the £6 billion total contingent liability, £1,076,000,000 is expected to be paid within one year in respect of the Novartis Vaccines business, which reached its sales milestone.

Reading 10

- In the information for Practice Problems 26–31, in Exhibit 3 (page 114 of print), the second row should read, “Change in benefit expense reported in P&L.”
- The last sentence in the solution to Practice Problem 9 (page 116 of print) should read, “Here, the service costs are 320 (= 200 + 120) and the net interest expense is 218 [= (42,000 + 120 – 39,000) × 7%].”
- The last two sentences in the solution to Practice Problem 10 (pages 116–117 of print) should read, “Under US GAAP—assuming the company chooses not to immediately recognise the actuarial loss and assuming there is no amortisation of past service costs or actuarial gains and losses—the components of periodic pension cost that would be reported in P&L include the current service cost of 200, the interest expense on the pension obligation at the beginning of the period of 2,940 [= 7.0% × (42,000 + 120)], and the expected return on plan assets, which is a reduction of the cost of 3,120 (= 8.0% × 39,000). Summing these three components gives 28.”

Reading 14

- In Exhibit 5 (page 389 of print), two lines should be added to the bottom:

| Investments in associates and joint ventures | 8,649 | 12,315 | 11,586 | 10,317 |
| Total equity, excluding associates and joint ventures | 63,235 | 51,824 | 51,078 | 48,025 |

Volume 3

Reading 19

- In Practice Problem 2 (page 209 of print), the second sentence should read, “The fixed capital outlay is depreciated straight-line over a five-year life.” The B option is “$69,674 decrease.” The solution to Practice Problem 2 (page 221 of print) should read, “B is correct. The additional annual depreciation is $100,000/5 = $20,000. The depreciation tax savings is 0.40 ($20,000) = $8,000. The change in project NPV is

$$\sum_{t=1}^{5} \frac{8,000}{(1.10)^t} = -100,000 + 30,326 = -$69,674$$

Reading 21

- In the last paragraph in Section 2.2.2 (page 300 of print), the first sentence should read, “Using the Ibbotson-Chen format and a risk-free rate of 2.5%, an estimate of the US equity risk premium is...”
- In Example 7, under the Solution to 2 (page 310 of print), the second sentence should read, “The SMB premium is positive, and the company has negative exposure to it, resulting in the required return estimate being lower by 36 bps.”
• In the Solution to Example 10 (page 319 of print), the final sentence should read, “Therefore, Vodafone’s WACC based on the data provided is approximately 4.66%.”

Reading 22
• In Example 2 (page 344 of print), a sentence needs to be added to the question stem for item 1: “Wu’s projection is for a linear deceleration in revenue growth over four years to the long-term growth rate.”
• In Example 2, under the Solution to 1B (page 345 of print), 2015 = 4% should be 2022 = 4%.
• In Example 2, under the Solution to 2B (page 346 of print), the final sentence should read, “Note that the figure for Trulicity was 78% (913/1,164 = 0.784).”
• In Example 3, Question 2C (page 348 of print), the first sentence should read, “Benitez projects that Walgreens’ average selling area square footage will increase...”
• In Example 4, Question 2, the second bullet point (page 354 of print) should read, “L’Oreal’s mass market operations will have a gross margin of 60.5% (the average of the current gross margin of 72.8% and the 48.2% reported by its mass market peers.)”
• In Example 3, Solution to 2, the second sentence should read, “The operating margin of the mass market operations will improve by 280 bps to 20.7% because a 1,230 bps decline in gross margin (from 72.8% to 60.5%) will be more than offset by the 1,510 bps of decline in A&P expenditures (from 30.2 of sales to 15.1% of sales).”
• In Exhibit 7 (page 355 of print), the figure for Underlying operating profit margin, Personal Care for 2017 should be 21.1%.
• In Exhibit 7 (page 355 of print), the first panel of the table should read as follows:

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>18/17 YoY</th>
<th>Avg 2016-2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Care</td>
<td>20,697</td>
<td>21,339</td>
<td>3.1%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Foods</td>
<td>22,444</td>
<td>22,893</td>
<td>2.0</td>
<td>2.4</td>
</tr>
<tr>
<td>Home Care</td>
<td>10,574</td>
<td>11,018</td>
<td>4.2</td>
<td>4.3</td>
</tr>
<tr>
<td>Total Revenues</td>
<td>53,715</td>
<td>55,250</td>
<td>2.9</td>
<td>3.0</td>
</tr>
</tbody>
</table>

• In Example 10, Exhibit 27 (page 382 of print), the Total revenue growth for C should be 4.0%.
• In Example 10, Exhibit 28 (page 382 of print), the YoY% for Gross Profit for Analyst C should be 0.5% (positive, not negative).
• Exhibit 48 (page 410 of print) should read as follows:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Depreciation and amortization (€ millions)</td>
<td>19</td>
<td>20</td>
<td>22</td>
<td>30</td>
<td>35</td>
<td>46</td>
<td>56</td>
</tr>
<tr>
<td>As % of sales</td>
<td>1.8%</td>
<td>1.9%</td>
<td>1.9%</td>
<td>2.7%</td>
<td>3.1%</td>
<td>3.8%</td>
<td>4.3%</td>
</tr>
<tr>
<td>As % of fixed assets</td>
<td>2.2%</td>
<td>2.0%</td>
<td>2.3%</td>
<td>3.2%</td>
<td>3.7%</td>
<td>4.9%</td>
<td>5.9%</td>
</tr>
<tr>
<td>Capex (€ millions)</td>
<td>30</td>
<td>31</td>
<td>33</td>
<td>40</td>
<td>40</td>
<td>43</td>
<td>46</td>
</tr>
<tr>
<td>Capex as % of sales</td>
<td>2.9%</td>
<td>2.8%</td>
<td>2.9%</td>
<td>3.6%</td>
<td>3.5%</td>
<td>3.5%</td>
<td>3.5%</td>
</tr>
<tr>
<td>---------------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>As % of fixed assets</td>
<td>3.4%</td>
<td>3.2%</td>
<td>3.4%</td>
<td>4.3%</td>
<td>4.3%</td>
<td>4.6%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Capex/(depreciation and amortization)</td>
<td>1.6</td>
<td>1.8</td>
<td>1.5</td>
<td>1.3</td>
<td>1.3</td>
<td>1.2</td>
<td>1.2</td>
</tr>
</tbody>
</table>

Reading 23
- The solution to Practice Problem 3C (page 500 of print) should read, “The estimated value of Sage Broadcasting would decrease as \( r \) decreases and increase as \( g \) increases, all else equal.”

Volume 4
Reading 24
- In Example 10 (page 34 of print), the first bullet should read, “the net profit margin will remain at 8% (= 240/3,000), and.” The line after the bullets should read, “Espinosa’s forecast for 2021 is as follows (dollars in millions).”
- In Practice Problem 13, Exhibit 1 (page 67 of print), under Balance Sheet, the first row should read “Current assets (includes $5 cash in 2019 and 2020.”

Reading 25
- In Example 3, the third sentence of the first paragraph (page 105 of print) should read, “Adjusting for all of these items, Evergreen reported “core EPS” of £1.41 for the first quarter of 20X9, compared with core EPS of £1.81 for the first quarter of 20X8.”
- In Practice Problem 30 (page 196 of print), Option A should read, “€2.94.” The Solution to Practice Problem 30 (page 206 of print) should read, “A is correct. Based on the method of average ROE, normalized EPS are calculated as the average ROE from the most recent full business cycle multiplied by current book value per share. The most recent business cycle was 2011-2014, and the average ROE over that period was

\[
(0.1301 + 0.1371 + 0.1158 + 0.1421) / 4 = 0.131
\]

The book value of (common) equity, or simply book value, is the value of shareholders’ equity less any value attributable to the preferred stock: €1,027 million - €84 million = €943 million.

Current book value per share (BVPS) is calculate as €943 million / 41.94 million = €22.48.

So, normalized EPS is calculated as

\[
\text{Average ROE} \times \text{BVPS} = 0.131 \times €22.48 = €2.94.
\]
Reading 26
• In Example 10 (page 229 of print), the first sentence should read, “Rosato extends her analysis to consider the possibility that ROE will slowly decay toward r in 2040 and beyond, rather than using a perpetuity of Year 2039 residual income.”
• The Solution to Practice Problem 7B (page 263 of print) should read, “Market value added = Market value of capital – Total capital

\[
= (\$26 \ text{ stock price x 84 million shares}) - \$700 \ text{ million} \\
= \$1,484,000,000
\]

Market value added per share = $1,484,000,000 / 84 million shares

= $17.67 per share.”
• The solution to Practice Problem 16D (page 267 of print) needs the following two corrections, “Discounting the dividends from the table show in the solution to Part A above at 5.10% gives...” and “The estimated terminal stock price, calculated in the solution to Part C above, is $129,767, which equals...”
• The solution to Practice Problem 17A (page 268 of print) should be corrected to indicate the justified P/B is 5.37

Reading 27
• In Example 2 (page 285 of print), the first bullet should read, “Long-term growth of revenues and after-tax operating income is 3% annually.”

Reading 28
• In Example 1, the Solution to 3 should read, "Using Equation 2, 0.7722 = 0.9346 \times F_{1,2}. \quad F_{1,2} = 0.7722 \div 0.9346 = 0.8262." The first sentence in Solution to 4 should read, “The forward contract price of DF_{1,2} = 0.8262 is the price agreed on today, to be paid one year from today for a bond with a two-year maturity and a risk-free unit-principal payment (e.g., $1, €1, or £1) at maturity in three years.”
• Exhibit 2 (page 343 of print) and Exhibit 3 (page 344 of print) need an x-axis label: Years.

Reading 30
• In Section 10.2.3 (page 498 of print), the “Market conversion premium per share on 15 June 2019 
  = $54.40 – $35.14 
  = $19.26”

Then, the “Market conversion premium ratio on 15 June 2019 = \frac{$19.26}{19.26} = \frac{$19.26}{\$35.14} 
  = 54.18\%.”
Volume 5

Reading 33

- In Example 16, under Solution to 1 (page 56 of print), under Quarterly Cash Flows
  Exchanged, 0.00692381 should be 0.00692375 and 0.00062422 should be 0.00062425.
  Then, the equation should read as follows:
  \[ VCS = A$100,000,000 \times [0.00692375 (3.967683) + 0.986031] - 1.13 (A$/1US$) \times (US$87,719,298) \times [0.00062425 (3.994841) + 0.998336] = A$2,145,167. \]

Under Solution to 2 (page 57 of print):

\[ -VCS = -A$2,145,167, \text{ which when converted to US$ at St is:} \]
\[ -VCS = -A$2,145,167 \times (1US$/1.13A$) = -US$1,898,378. \]

Reading 34

- The second sentence of Section 5 (page 99 of print) should read, “It is well-known that
  non-dividend-paying call options on non-dividend-paying stock will not be exercised
  early because the minimum price of the option exceeds its exercise value.”
- In the information for Practice Problems 10-17, Exhibit 1 (page 149 of print), the fourth
  column head should be a lowercase sigma, not a capital sigma.
- In the Solution to 6 (page 154 of print), the second equation should read, “…
  \[ \left[1/(1.03)\right][0.46(0.2517) + 0.54(8.4530)] = 4.54 \]

Reading 35

- Example 15 (pages 198–199 of print) has been updated. The numbers under Valuation
  Metrics in the table should read as follows:

<table>
<thead>
<tr>
<th></th>
<th>Taller Towers/City of London</th>
<th>Fairview Ally/Mayfair</th>
<th>Real Estate Road/Knightsbridge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price Per Square Foot</td>
<td>£1,450</td>
<td>£1,600</td>
<td>£875</td>
</tr>
<tr>
<td>Price/Rental Revenue</td>
<td>22.7×</td>
<td>21.1×</td>
<td>16.8×</td>
</tr>
<tr>
<td>Price/Operating Income</td>
<td>25.3×</td>
<td>23.4×</td>
<td>19.8×</td>
</tr>
</tbody>
</table>

The solution should read as follows:

“The target property has more in common with the other Class B property based on quality, age, and rents trailing the market average. In contrast, the two Class A, or Grade A, properties, rent at a premium to the local market, and Taller Towers has the highest occupancy.

As the appraiser, you may come up with a range of values based on the property in its current condition, with the in-place tenant leases and occupancy, and what the property would be worth if occupancy and income were higher.
Using the most comparable property valuation metrics without any adjustments, values would range from a low of £87.5 million, based on a purchase price of £875 per square foot, to £90.9 million using the same price-to-revenue multiple of 16.8×. A discount to these multiples may be warranted because the target property is older. Alternatively, if the target property’s occupancy were to readily increase to 80%, the upper range of the valuation could move higher. It is beyond the scope of this example to consider how much it would cost to raise occupancy by spending capital to improve the vacant space and pay broker leasing commissions, nor are we considering the property potential if larger amounts were invested in renovating the property. If you were to estimate the property value following such a renovation, you would subtract the cost of the renovation from the post-renovation value."

- In the third paragraph of Section 10.2 (page 223 of print), the third sentence should read, “The revised net worth of the company divided by the number of shares outstanding is the NAVPS.”
- In Practice Problem 40 (page 259 of print), Option C should be “$28.83.” In the Solution to Practice Problem 40 (page 266 of print), the second sentence should read, “The estimated value per share for the Baldwin REIT using a two-step dividend discount model is $28.83.” Footnote b at the bottom of the table should read, “Calculated as $1.00/(1.085) + $32.77/(1.085)^2 = $28.83.”

Reading 36
- In the third-to-last paragraph in Section 4 (page 280 of print), the last sentence should read, “The preference shares component of the private equity fund earns an IRR of 12% per annum.”

Reading 37
- In the Solution to 10 (page 367 of print), the last sentence should read, “The basis for the near-term Brent crude oil futures contract is the difference between the spot price and the near-term futures price: $77.56 − $73.64 = $3.92.”

Reading 39
- In the Solution to 14 (page 465 of print), the second sentence should read, “When using a macroeconomic factor model, the expected return is the intercept (when all model factors take on a value of zero).”

Volume 6
Reading 43
- In Example 2 (page 100 of print), the last sentence of Solution to 3 should read, “To reconfirm, the Sharpe ratio of the combined portfolio is (8.4% − 2.3%)/14.6% = 0.42, the same as the original 0.42 value.”
Reading 44
• In Example 1, under Solution to 4 (page 160 of print), the fourth sentence should read, “A similar calculation using only the sales made by the mutual fund gives a trade VWAP of C$10.0680”

Reading 46
• In the Solution to Practice Problem 36 (page 404 of print), the second sentence should read, “Standard VII(A)–Conduct as Participants in CFA Institute Programs prohibits providing information to candidates or the public that is considered confidential to the CFA Program.”
• In the Solution to Practice Problem 61 (page 408 of print), the third sentence should read, “Standard VII(A)–Conduct as Participants in CFA Institute Programs prohibits conduct that compromises the reputation of the CFA designation including misrepresenting information on the Professional Conduct Statement.”