Curriculum Errata Notice

2024 Level I CFA Program

UPDATED 7 OCTOBER 2024

This document outlines the errors submitted to CFA Institute that have been corrected.

Due to the nature of our publishing process, we may not be able to correct errors submitted after 1 September 2024 in time for the publication of the following year's print materials. However, we update all errors in the Learning Ecosystem (LES) and in this document at the end of each month.

We recommend checking either the LES or this document regularly for the most current information. Depending on when you purchase the print materials, they may or may not have the errors corrected.

All errors can be submitted via http://cfa.is/Errata

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Quantitative Methods

Rates and Returns

Lesson	Location	PDF Pg	Revised	Correction	
Rates Of Return	Holding Period Return	9	31 Jan 2024	Replace: For example, an analyst may need to compute a one-year holding period return from three annual returns. In that case, the one-year holding period return is computed by compounding the three annual returns…	With: 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…
Rates Of Return	Equation 14		8 March 2024	Replace: (1+real return) = (1+ real risk-free rate)(1+ risk premium) / **(1+ inflation premium)**	With: (1+real return) = (1+real risk-free rate)(1+risk premium)
Rates Of Return	Example 7	16	31 Jan 2024	The following paragraph should appear before the example:	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 + harmonic mean), and subtract 1 to arrive at the harmonic mean return.
Money-Weighted and Time-Weighted Return	Example 8, Question 4	23	8 March 2024	Replace the sum in the second calculation: 1.1471	With: 1.147**6**
Annualized Return		29	8 March 2024	Starting on page 29, the equation numbers do not match up with the equation numbers referenced in the text. For example, on page 29, the equation is labeled as equation “7” but the text below it refers to it as “Equation 8.” Each subsequent reference to an equation in the text should be one number less than written for the rest of the learning module. For example, “Equation 9” should be “Equation 8” and “Equation 10” should be “Equation 9.”	

Lesson	Location	PDF Pg	Revised	Correction	
Other Major Returns and Their Applications		33	31 Jan 2024	The first paragraph under Gross and Net Return should read:	A gross return is the return on assets managed less any trading expenses and commissions. Gross return is intended to reflect the investment skill of the manager. Expenses including management fees, custody fees, and taxes are not included in the gross return because they may be different for different investors. For example, most asset managers provide lower management fee rates to larger accounts. Excluding these expenses in gross returns provides a basis for evaluation and comparison of investment management skill.
Other Major Returns and Their Applications	Equation 14	34	8 March 2024	Fix the equation by removing the denominator: (1+inflation premium) $(1 + real\ return) = \frac{(1 + real\ risk\text{–}free\ rate)(1 + risk\ premium)}{1 + inflation\ premium}$	New equation should read: $(1 + real\ return) = (1 + real\ risk\text{–}free\ rate)(1 + risk\ premium)$
Practice Problem	Problem 1	38	31 Jan 2024	The full question prompt for Practice Problem 1 should read as follows:	"**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

Lesson	Location	PDF Pg	Revised	Correction	
Time Value of Money in Fixed Income and Equity	Example 2, Question 1	51	8 March 2024	Replace: PV = EUR100 $= \frac{2}{1.20} + \frac{2}{1.02^2} + \frac{2}{1.02^3} + \frac{2}{1.02^4} + \frac{2}{1.02^5} + \frac{2}{1.02^6} + \frac{2}{1.02^7}.$	With: PV = EUR100 $= \frac{2}{1.20} + \frac{2}{1.02^2} + \frac{2}{1.02^3} + \frac{2}{1.02^4} + \frac{2}{1.02^5} + \frac{2}{1.02^6} + \frac{\mathbf{102}}{1.02^7}.$

Lesson	Location	PDF Pg	Revised	Correction	
Time Value of Money in Fixed Income and Equity	Example 2, Question 2 and Solution 2	51	31 Jan 2024	Question 2 should begin: _____ The solution to Question 2 should read:	Next, let's assume that, exactly **two years** later, a sharp rise…. _____ **3.2876** percent In this case, we must solve for r using Equation 6, with PV equal to 93.09, as follows: PV = 93.091 = $2/(1+r) + 2/(1+r)^2 + 2/(1+r)^3 + \mathbf{2/(1+r)^4} + 2/(1+r)^5 + 102/(1+r)^6$. 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.
Time Value of Money in Fixed Income and Equity	Exhibit 6	58	31 Jan 2024	Within the exhibit, the bar representing the fifth year is incorrectly labeled. The exponent 4 should be 3, so replace this expression on top of the bar: $D(1+g_s)^4 (1+g_l)^2$	With: $D(1+g_s)^{\mathbf{3}} (1+g_l)^2$
Time Value of Money in Fixed Income and Equity	Example 7, Question 2	59	31 Jan 2024	Replace: We may solve for D4 as GBP1.894 (=1.787 × 1.02 = D3(1 + gl)) and the second expression to be GBP9.22 as follows: $GBP9.22 = \frac{1.894/(0.15 - 0.02)}{(1.15)^3}$.	With: We may solve for D4 as **GBP1.823** (=1.787 × 1.02 = D3(1 + gl)) and the second expression to be GBP9.22 as follows: $GBP9.22 = \frac{\mathbf{1.823}/(0.15 - 0.02)}{(1.15)^3}$.

Statistical Measures of Asset Returns

Lesson	Location	PDF Pg	Revised	Correction	
Measures of Central Tendency and Location	Paragraph following Exhibit 2	91	31 Jan 2024	Replace: The modal interval always has the highest bar in the histogram; in this case, the modal interval is 0.0 to 0.9 percent, and this interval has 493 observations out of a total of 1,258 observations.	With: The modal interval always has the highest bar in the histogram; in this case, the modal interval is 0.0 to **1.0** percent, and this interval has **555** observations out of a total of 1,258 observations.

Portfolio Mathematics

Lesson	Location	PDF Pg	Revised	Correction	
Measures of Dispersion	Question Set – Question 2	109	29 May 2024	Replace: 2. The fund with the mean absolute deviation (MAD) is Fund:	Replace: 2. The fund with the **highest** mean absolute deviation (MAD) is Fund:
Measures of Shape of a Distribution	Interpreting Skewness and Kurtosis – Question 2	115	29 May 2024	Replace: 2. Does the distribution displays kurtosis? Explain.	Replace: 2. Does the distribution **display** kurtosis? Explain.
Portfolio Expected Return and Variance of Return	Equation 2	153	31 Jan 2024	Replace: $\sigma^2(R_p) = E\{[R_p E(R_p)]^2\}$.	With: $\sigma^2(R_p) = E\{[R_p - E(R_p)]^2\}$.

Lesson	Location	PDF Pg	Revised	Correction	
Portfolio Expected Return and Variance of Return	Equation 4	154	31 Jan 2024	Replace: $\mathrm{Cov}(R_i, R_j) = \sum_{n=1}^{n}(R_{i,t}, \bar{R}_i)(R_{j,t} - E\bar{R}_j)/(n-1).$	With: $\mathrm{Cov}(R_i, R_j) = \sum_{n=1}^{n}(R_{i,t} - \bar{R}_i)(R_{j,t} - E\bar{R}_j)/(n-1).$
Portfolio Expected Return and Variance of Return	Calculation under Equation 5	154	31 Jan 2024	Replace: $= w_1^2\sigma^2(R_1) + w_1 w_2 \mathrm{Cov}(R_1, R_2) + w_1 w_3 \mathrm{Cov}(R_1, R_3)$ $+ w_1 w_2 \mathrm{Cov}(R_1, R_2) + w_2^2\sigma^2(R_2) + w_2 w_3 \mathrm{Cov}(R_2, R_3)$ $+ w_1 w_3 \mathrm{Cov}(R_1, R_3) + w_2 w_3 \mathrm{Cov}(R_2, R_3) + w_2^3\sigma^2(R_3).$	With: $= w_1^2\sigma^2(R_1) + w_1 w_2 \mathrm{Cov}(R_1, R_2) + w_1 w_3 \mathrm{Cov}(R_1, R_3)$ $+ w_1 w_2 \mathrm{Cov}(R_1, R_2) + w_2^2\sigma^2(R_2) + w_2 w_3 \mathrm{Cov}(R_2, R_3)$ $+ w_1 w_3 \mathrm{Cov}(R_1, R_3) + w_2 w_3 \mathrm{Cov}(R_2, R_3) + w_2^3\sigma^2(R_3)$
Portfolio Expected Return and Variance of Return	Example 1, Solution 3 last line	157	31 Jan 2024	Replace: σ(Rp)= $99.72^{1/2}$	With: σ(Rp)= $99.72^{1/2}$ = **9.99**%

Hypothesis Testing

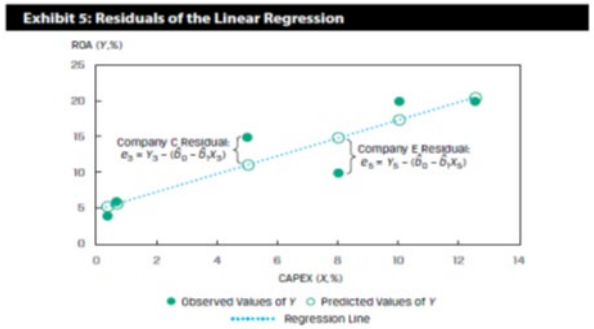
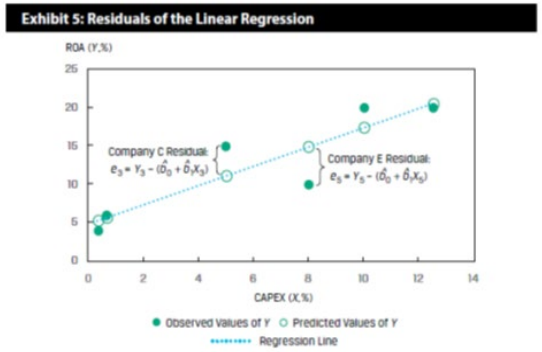
Lesson	Location	PDF Pg	Revised	Correction	
Tests of Return and Risk in Finance	Exhibit 6	222	31 Jan 2024	Replace the text in "Step 4: State the decision rule.": We reject the null hypothesis if the calculated χ2 statistic is less than 13.09051. _____ Replace the text in "Step 6: Make a decision.": Fail to reject the null hypothesis because the calculated χ 2 statistic is greater than the critical value. There is insufficient evidence to indicate that the variance is less than 16% (or, equivalently, that the standard deviation is less than 4%).	With: We reject the null hypothesis if the calculated χ2 statistic is **greater than** 13.09051. _____ With: "**Reject** the null hypothesis because the calculated χ 2 statistic is greater than the critical value. There is **sufficient** evidence to indicate that the variance is less than 16% (or, equivalently, that the standard deviation is less than 4%)."

Lesson	Location	PDF Pg	Revised	Correction	
Tests of Return and Risk in Finance	Example 3 – Solution 4	230	30 May 2024	Replace: Because 5.06 is not less than 3.325, we do not reject the null hypothesis; the calculated test statistic falls to the right of the critical value, where the critical value separates the left-side rejection region from the region where we fail to reject.	With: Because 5.06 **is greater than** 3.325, we **reject the** null hypothesis; the calculated test statistic falls to the right of the critical value, **where the critical value separates the left-side region from the region where we reject the null.**

Parametric and Non-Parametric Tests of Independence

Lesson	Location	PDF Pg	Revised	Correction	
Tests Concerning Correlation	Question Set, Practice Problem 2	251	31 Jan 2024	Replace: r s = 1 − 6(91(4840.)5) = − 0.20416.	With: r s = 1 − 6(91(4840.)5) = **–0.20417**.
Tests Concerning Correlation	Question Set, Practice Problem 3	251	31 Jan 2024	Replace: $t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$ is $t = \frac{-0.2416\sqrt{7}}{\sqrt{1-0.041681}} = \frac{-0.540156}{0.978937} = -0.55177.$	With: $t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$ is $t = \frac{\mathbf{-0.20417}\sqrt{7}}{\sqrt{1-0.041681}} = \frac{\mathbf{-0.540183}}{0.978937} = \mathbf{-0.55181.}$

Simple Linear Regression

Lesson	Location	PDF Pg	Revised	Correction	
Estimation of the Simple Linear Regression Model	Exhibit 5 image	268	4 June 2024	Replace: Company C residual (error term) given in Exhibit 5 as $e_3 = Y_3 - (b_0 - b_1X_3)$ Company E residual given as $e_5 = Y_5 - (b_0 - b_1X_5)$ 	With: Company C residual (error term) given in Exhibit 5 as $e_3 = Y_3 - (b_0 + b_1X_3)$ Company E residual given as $e_5 = Y_5 - (b_0 + b_1X_5)$ 
Hypothesis Tests in the Simple Linear Regression Model	Equation 20	286	31 Jan 2024	Replace: $t_{intercept} = \frac{\hat{b}_0 - B_0}{s_{\hat{b}_0}} = \frac{\hat{b}_0 - B_0}{\sqrt{\frac{1}{n} + \frac{\bar{X}^2}{\sum_{i=1}^{n}(X_i - \bar{X})^2}}}$	With: $t_{intercept} = \frac{\hat{b}_0 - B_0}{s_{\hat{b}_0}} = \frac{\hat{b}_0 - B_0}{\mathbf{S}\sqrt{\frac{1}{n} + \frac{\bar{X}^2}{\sum_{i=1}^{n}(X_i - \bar{X})^2}}}$
Hypothesis Tests in the Simple Linear Regression Model	Exhibit 24	286	31 Jan 2024	Replace equation in Step 5: $t_{intercept} = \frac{4.875 - 3.0}{\sqrt{\frac{1}{6} + \frac{6.1^2}{122.64}}} = \frac{1.875}{0.68562} = 2.73475$	With: $t_{intercept} = \frac{4.875 - 3.0}{\mathbf{3.4596} \times \sqrt{\frac{1}{6} + \frac{6.1^2}{122.64}}} = \frac{1.875}{\mathbf{3.4596} \times 0.68562} = \mathbf{0.7905}.$

Lesson	Location	PDF Pg	Revised	Correction	
Hypothesis Tests in the Simple Linear Regression Model	Exhibit 24	286	31 Jan 2024	Replace text in Step 6: Reject the null hypothesis. There is sufficient evidence to indicate that the intercept is greater than 3%.	With: **Do not** reject the null hypothesis. There is **not** sufficient evidence to indicate that the intercept is greater than 3%.
Hypothesis Tests in the Simple Linear Regression Model	Test of Hypotheses: Level of Significance and p-Values	289	31 Jan 2024	Replace second sentence in third paragraph under the section: The p-value corresponding to this test statistic is 0.016, which means there is just a 0.16 percent chance of rejecting the null hypotheses when it is true.	With: The *p*-value corresponding to this test statistic is 0.016, which means **that, assuming the null hypothesis is true, there is a 1.6% chance of observing a test statistic as extreme as the one observed, or more extreme**.

Financial Statement Analysis

Financial Analysis Techniques

Lesson	Location	PDF Pg	Revised	Correction	
Integrated Financial Ratio Analysis	Example 14 – Solution last sentence	154	12 September 2024	Replace: Choices B and C are incorrect because DOH and receivables turnover are misinterpreted.	With: **Choices A and C** are incorrect because DOH and receivables turnover are misinterpreted.

Analyzing Income Statements

Lesson	Location	PDF Pg	Revised	Correction	
Earnings per Share	Example 10 – first sentence	433	30 May 2024	Replace: 1. Assume the same facts as Example 7 except that on 1 December 2018, a previously declared 2-for-1 stock split took effect.	With: 1. Assume the same facts as **Example 9** except that on 1 December 2018, a previously declared 2-for-1 stock split took effect.

Economics

Monetary Policy

Lesson	Location	PDF Pg	Revised	Correction	
Interaction of Monetary and Fiscal Policy	Practice Problem 7	485	31 Jan 2024	Replace answer options: accurately determine the neutral rate of interest. A. regulate the willingness of financial institutions to lend. B. control amounts that economic agents deposit into banks.	With: **A.** accurately determine the neutral rate of interest. **B.** regulate the willingness of financial institutions to lend. **C.** control amounts that economic agents deposit into banks.

Introduction to Geopolitics

Lesson	Location	PDF Pg	Revised	Correction	
Geopolitical Risk and the Investment Process	Exhibit 14: Risk Velocity	530	30 May 2024	Replace: Pipeline Disruption Takes Several Quarters to Fix, Impacting the Energy Sector of Impacting Countries Low Velocity/Short-Term Impacts	With: Pipeline Disruption Takes Several Quarters to Fix, Impacting the Energy Sector of **Impacted** Countries Low Velocity/**Long**-Term Impacts

Exhibit 14: Risk Velocity

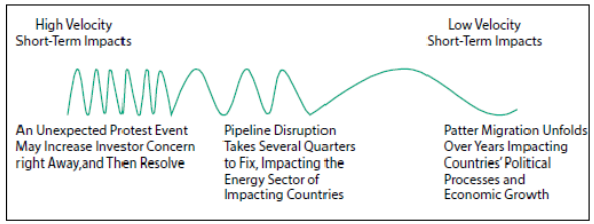
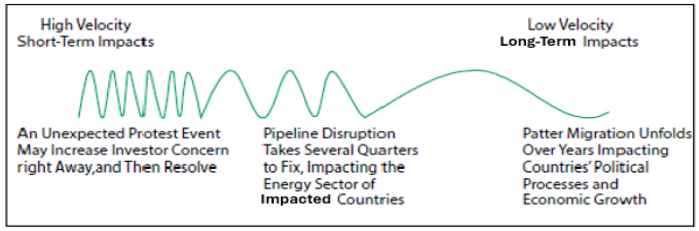


Exhibit 14: Risk Velocity



Portfolio Management

Portfolio Risk and Return: Part I

Lesson	Location	PDF Pg	Revised	Correction	
Portfolio Risk & Portfolio of Two Risky Assets	Example 5	28	8 March 2024	Replace formula under "The expected return of this portfolio is": Rp = w1 × R1 + (1 – w1) × R2 = 0.6 × 0.055 + 0.4 × 0.07 = 0.0358 ≈ 3.6%.	With: Rp = w1 × R1 + (1 – w1) × R2 = 0.6 × 0.055 + 0.4 × **0.007** = 0.0358 ≈ 3.6%.

Portfolio Risk and Return: Part II

Lesson	Location	PDF Pg	Revised	Correction	
Capital Asset Pricing Model: Assumptions and the Security Market Line	Example 8	89	31 Jan 2024	Replace the second calculation under Solution: $E(R_i) = R_f + \beta_i[E(R_m) - R_f]$ $= 0.04 + 1.30 \times (0.16 - 0.04)$ $= 0.196$ $= 19.6\%$	With: $E(\mathbf{R_p}) = R_f + \boldsymbol{\beta_p}[E(R_m) - R_f]$ $= 0.04 + 1.30 \times (0.16 - 0.04)$ $= 0.196$ $= 19.6\%$

Working Capital and Liquidity

Lesson	Location	PDF Pg	Revised	Correction	
Cash Conversion Cycle	Question Set	229	31 Jan 2024	Replace: B is correct. The issuer that uses the vendor financing by delaying payments is increasing its days payable outstanding and thus lengthening its cash conversion cycle.	With: **A is correct.** The issuer that uses the vendor financing by delaying payments is increasing its days payable outstanding and thus **shortening** its cash conversion cycle.

Analyzing Balance Sheets

Lesson	Location	PDF Pg	Revised	Correction	
Ratios and Common-Size Analysis	Ratio Analysis practice questions	447	31 Jan 2024	Replace Solution to question 2: A, B, and C are correct. The cash ratio, quick ratio, and current ratio are lower in 2017 than in 2016. _____ Replace the Cash row in the solution table: (Cash + Marketable securities) ÷ Current liabilities (EUR4,011 + EUR990 ÷ EUR10,210 = **0.49**) (EUR3,702 + EUR1,124 ÷ EUR9,674 = **0.50**)	With: **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.** _____ With: (Cash + Marketable securities) ÷ Current liabilities (€4,011 + 0) ÷ €10,210 = **0.39**) (€3,702 + 0) ÷ €9,674 = **0.38**

Corporate Issuers

Capital Structure

Lesson	Location	PDF Pg	Revised	Correction	
Modigliani-Miller Capital Structure Propositions	Firm Value with Taxes (MM Proposition II with Taxes)	317	25 September 2024	Replace: Firm Value with Taxes (MM Proposition II with Taxes)	With: **Firm Value with Taxes (MM Proposition I with Taxes)**

Lesson	Location	PDF Pg	Revised	Correction	
Optimal Capital Structure	Paragraph following Exhibit 7	323	4 March 2024	Replace: However, as debt increases, the possible financial distress costs rise substantially and equal the tax benefit of debt at D*. Beyond this point, greater leverage reduces firm value, the present value of financial distress costs outweigh the tax benefit.	With: However, as debt increases, the **present value of expected financial distress costs begins to rise and offset the tax benefit of debt, with the optimal amount of debt D* at the point at which the marginal benefit of the tax shield equals the marginal cost of expected financial distress.** Beyond this point, greater leverage reduces firm value, **as the increased** present value of **expected** financial distress costs outweighs the **marginal** tax benefit.

Working Capital and Liquidity

Lesson	Location	PDF Pg	Revised	Correction	
Cash Conversion Cycle	Question Set, Solution 3	229	4 March 2024	Replace: B is correct. The issuer that uses the vendor financing by delaying payments is increasing its days payable outstanding and thus lengthening its cash conversion cycle. The issuer is reducing its need for liquidity by taking advantage of the vendor financing at the cost of the forgone discount.	With: **A is correct.** The issuer that uses the vendor financing by delaying payments is increasing its days payable outstanding and thus **shortening** its cash conversion cycle. The issuer is reducing its need for liquidity by taking advantage of the vendor financing at the cost of the forgone discount.

Financial Statement Analysis

Analyzing Statements of Cash Flows I

Lesson	Location	PDF Pg	Revised	Correction	
Linkages between the Financial Statements	Exhibit 4	490	8 March 2024	Replace table header: Income Statement for year ended 31 December 20X1 _____ Replace table header: Statement of Cash Flows for year ended 31 December 20X1	With: Income Statement for year ended 31 December **20X2** _____ With: Statement of Cash Flows for year ended 31 December **20X2**
Linkages between the Financial Statements	Exhibit 5 table – last statement of cash flows item	490	26 September 2024	Replace: Cash flows from operating activities increases by USD100	With: Cash flows from operating activities increases by **USD150**

Analyzing Statements of Cash Flows II

Lesson	Location	PDF Pg	Revised	Correction	
Ratios and Common-Size Analysis	Paragraph under Exhibit 5	525	8 March 2024	Replace: The common-size statement in Exhibit 5 has been developed based on Acme's cash flow statement using the indirect method for operating cash flows and using net revenue (cash received from customers) for the company in 2018 of USD23,598 from Exhibit 3.	With: The common-size statement in Exhibit 5 has been developed based on Acme's cash flow statement using the indirect method for operating cash flows and using net revenue (cash received from customers) for the company in 2018 of **USD23,543** from Exhibit 3.

Analysis of Inventories

Lesson	Location	PDF Pg	Revised	Correction	
Practice Problems	Question 34	570	8 March 2024	Replace solution: B is correct. _____ Explanatory text should read:	With: **C** is correct. _____ In a period of rising inventory costs, inventory valued using FIFO would have relatively higher values compared to inventory valued using LIFO. Thus, any mark downs of inventory values to NRV would have the least impact on inventories valued using the LIFO method as they are already conservatively valued.

Financial Statement Modeling

Lesson	Location	PDF Pg	Revised	Correction	
Intro-duction to Financial Statement Modeling	Example 8	221	31 Jan 2024	Replace Solution to question 3: The highest gross profit is projected by Analyst D.	With: The highest gross profit is projected by **Analyst C**.

Equity Investments

Company Analysis: Past and Present

Lesson	Location	PDF Pg	Revised	Correction	
Operating Profitability and Working Capital Analysis	Example 3 – Solution 4	460	4 June 2024	Replace: C is correct. Last 12 months' sales: $7,688 Last 12 months' operating profit: $1,244 Low end of guidance Next 12 months' sales: 156.360 × $62.50 = $9,773 Next 12 months' operating profit: $9,773 – (156.360 × 17.34) – 1,565 = 5,496 Degree of operating leverage: (5,496/1,244 – 1)/(9,773/7,688 – 1) = 1.95 High end of guidance Next 12 months' sales: 167.197 × $62.50 = $10,450 Next 12 months' operating profit: $10,450 – (167.197 × 17.34) – 1,565 = 5,986 Degree of operating leverage: (5,986/1,244 – 1)/(10,450/7,688 – 1) = 1.85	With: C is correct. Last 12 months' sales: $7,688 Last 12 months' operating profit: **$3,594** Low end of guidance Next 12 months' sales: 156.360 × $62.50 = $9,773 Next 12 months' operating profit: $9,773 – (156.360 × 17.34) – 1,565 = 5,496 Degree of operating leverage: (5,496/**3,594** – 1)/(9,773/7,688 – 1) = 1.95 High end of guidance Next 12 months' sales: 167.197 × $62.50 = $10,450 Next 12 months' operating profit: $10,450 – (167.197 × 17.34) – 1,565 = 5,986 Degree of operating leverage: (5,986/**3,594** – 1)/(10,450/7,688 – 1) = 1.85
Practice Problems	Paragraph intro text	474	31 Jan 2024	Replace the sentence before Practice Problem 1: On average, NewShips' commission, which it receives as a broker from the customer, was 6% of the freight rate.	With: On average, NewShips' commission, which it receives as a broker from the customer, was **5%** of the freight rate.
Practice Problems	Question 4	475 and 476	31 Jan 2024	Question should be disregarded as there is not sufficient information about Net Profit to provide a complete answer.	

Equity Valuation: Concepts and Basic Tools

Lesson	Location	PDF Pg	Revised	Correction	
Method of Comparables and Valuation Based on Price Multiples	Example 14	596	31 Jan 2024	Replace: Thus, total revenues for Boeing are expected to be about a fifth higher than those for Boeing.	With: Thus, total revenues for Boeing are expected to be about a fifth higher than those for **Airbus**.

Fixed Income

Fixed Income Bond Valuation: Prices and Yields

Lesson	Location	PDF Pg	Revised	Correction	
Bond Pricing and the Time Value of Money	Example 2	157	24 September 2024	Replace: Actual/actual bond:AI = (43/184) × (4.625/2) = 0.540421 per 100 of par value. 30/360 bond:AI = (42/180) × (4.625/2) = 0.539583 per 100 of par value.	With: Actual/actual bond:AI = (43/184) × (**4.375**/2) = **0.511209** per 100 of par value. 30/360 bond:AI = (42/180) × (**4.375**/2) = **0.510417** per 100 of par value.

Yield and Yield Spread Measures for Fixed-Rate Bonds

Lesson	Location	PDF Pg	Revised	Correction	
Introduction	Learning Module Self-Assessment – Question 3	157	28 August 2024	Replace: The G-spread for Bond B is (0.01271-0.011) = 173bps.	With: The G-spread for Bond B is (**0.01213**-0.011) **= 11.3bps.**
Other Yield Measures, Conventions, and Accounting for Embedded Options	Example 5	166	26 August 2024	Replace: When the yields-to-maturity for the Antelas AG and BRWA bonds are stated on a common periodicity, the additional yield that the buyer of the BRWA bond receives to compensate for its higher risk, compared to the Antelas AG bond,	With: When the yields-to-maturity for the Antelas AG and BRWA bonds are stated on a common periodicity, the additional yield that the buyer of the **Antelas AG bond** receives to compensate for its higher risk, compared to the **BRWA** bond,
Other Yield Measures, Conventions, and Accounting for Embedded Options	Question Set	171	31 Jan 2024	Replace the solution to question 4: $r = 0.0762 \times 2 = 0.1512$. The yield-to-first call for the bond is 15.12%.	With: $r = 0.0762 \times 2 = \mathbf{0.1525}$. The yield-to-first call for the bond is **15.25**%.
Yield Spread Measures for Fixed-Rate Bonds and Matrix Pricing	Example 9, Solution 1	177	8 March 2024	Replace the G-spread of: R = 0.0018662 x 2 = 0.00373. 0.01271 – 0.00373 = 89 bps.	With: **R = 0.002618 x 2 = 0.005235.** **Therefore, the G-spread is 0.01271 – 0.005235 = 75 bps.**
Solutions	Solution to 5	184	26 August 2024	Replace: r = 0.1548 × 2 = 0.031497 r = 0.14626 × 2 = 0.029253 r = 0.13499 × 2 = 0.026998	With: r = **0.015748** × 2 = 0.031497 r = **0.014626** × 2 = 0.029253 r = **0.013499** × 2 = 0.026998

Yield and Yield Spread Measures for Floating-Rate Instruments

Lesson	Location	PDF Pg	Revised	Correction	
Yield Measures for Money Market Instruments	Example 2	196	29 May 2024	Replace: PV = 20,004,918 / (1 + 45/365 × 0.0006) .	With: PV = **20,005,918** / (1 + 45/365 × 0.0006) .
Yield Measures for Money Market Instruments	Example 3	197-198	31 Jan 2024	Replace the first equation and preceding text: The price of the commercial paper is 98.560 per 100 of face value, calculated using Equation 2 and entering *FV* = 100, Days = 90, Year = 360, and *DR* = 0.0012. $PV = FV \times \left(1 - \frac{\text{Days}}{\text{Year}} \times DR\right).$ $PV = 100 \times \left(1 - \frac{90}{360} \times 0.0012\right).$ $PV = 99.970.$ Next, use Equation 5 to solve for *AOR* for a 365-day year, where Year = 365, Days = 90, *FV* = 100, and *PV* = 99.970. $AOR = \frac{\text{Year}}{\text{Days}} \times \frac{FV - PV}{PV}.$ $AOR = \frac{365}{90} \times \frac{100 - 99.970}{99.970}.$ $AOR = 0.00122.$ The 90-day commercial paper discount rate of 0.120% converts to an add-on rate for a 365-day year of 0.122%.	With: The price of the commercial paper is **99.975** per 100 of face value, calculated using Equation 2 and entering FV = 100, Days = 90, Year = 360, and DR = **0.0010**. $PV = FV \times \left(1 - \frac{\text{Days}}{\text{Year}} \times DR\right).$ $PV = 100 \times \left(1 - \frac{90}{360} \times \mathbf{0.0010}\right)$ $PV = \mathbf{99.975}$ Next, use Equation 5 to solve for AOR for a 365-day year, where Year = 365, Days = 90, FV = 100, and PV = **99.975**. $AOR = \frac{\text{Year}}{\text{Days}} \times \frac{FV - PV}{PV}.$ $AOR = \frac{365}{90} \times \frac{100 - \mathbf{99.975}}{\mathbf{99.975}}.$ $AOR = 0.00122.$ The 90-day commercial paper discount rate of **0.10%** converts to an add-on rate for a 365-day year of **0.1014%**.

Lesson	Location	PDF Pg	Revised	Correction	
Solutions	Solution to 1	205	19 September 2024	Delete the first sentence: The estimated discount margin is 195 bps. Replace the calculation: $\frac{(MRR + QM) \times FV}{m} = \frac{(-0.0055 + 0.016) \times 100}{4} = 0.275.$ … DM=0.4525.DM=0.502144 The estimated discount margin is 50.2 bps.	~~The estimated discount margin is 195 bps.~~ With: $\frac{(MRR + QM) \times FV}{m} = \frac{(\mathbf{-0.055} + 0.016) \times 100}{4} = \mathbf{0.2625}.$ … DM=0.4525.DM=**0.4525.** The estimated discount margin is **45.25 bps**.
Yield Measures for Money Market Instruments	Practice Problems, question and solution 5	204, 205-206	31 Jan 2024	Replace the answer C: 0.28%. Replace the solution: C is correct. The bond equivalent yield is closest to 0.28%. The present value of the banker's certificate of deposit is calculated as follows: $PV = FV \times (1 - \frac{\text{Days}}{\text{Year}} \times DR).$ $PV = 100 \times (1 - \frac{90}{360} \times 0.0055).$ $PV = 99.865.$ The bond equivalent yield (AOR using a 365-day year) is calculated to be approximately 0.28%: $AOR = \frac{\text{Year}}{\text{Days}} \times \frac{FV - PV}{PV}.$ $AOR = \frac{365}{90} \times \frac{100 - 99.8625}{99.8625}.$ $AOR = 0.0028.$	With: **0.56%**. With: C is correct. The bond equivalent yield is closest to **0.56%.** The present value of the banker's certificate of deposit is calculated as follows: $PV = FV \times (1 - \frac{\text{Days}}{\text{Year}} \times DR).$ $PV = 100 \times (1 - \frac{90}{360} \times 0.0055).$ $PV = 99.865.$ The bond equivalent yield (AOR using a 365-day year) is calculated to be approximately 0.56%: $AOR = \frac{\text{Year}}{\text{Days}} \times \frac{FV - PV}{PV}.$ $AOR = \frac{365}{90} \times \frac{100 - 99.8625}{99.8625}.$ $AOR = 0.0056.$

The Term Structure of Interest Rates: Spot, Par, and Forward Curves

Lesson	Location	PDF Pg	Revised	Correction	
Introduction	Learning Module Self Assessment Solution to 3	209	25 September 2024	Replace: *IFR*2,1 = 3.01%.	With: *IFR*2,1 = **2.50%.**
Maturity Structure of Interest Rates and Spot Rates	Example 1, question 2	215	31 Jan 2024	Replace solution of: *PV* = 100.01	With: *PV* = **99.99**
Par and Forward Rates	Example 2, Solution to question 1	218	8 March 2024	Replace: $100 = \frac{PMT}{(1+z_1)^1} + \frac{PMT}{(1+z_2)^2} + \cdots + \frac{PMT+100}{(1+z_N)^N}$. $100 = \frac{PMT}{(1+0.003117)^1} + \frac{PMT}{(1+0.568)^2} + \frac{PMT+100}{(1+0.7977)^3}$. We can factor out *PMT* and then solve for it: $100 = PMT \times \left(\frac{1}{(1+0.003117)^1} + \frac{1}{(1+0.568)^2} + \frac{1}{(1+0.7977)^3}\right) + \frac{100}{(1+0.7977)^3}$. *PMT* = 0.7952.	With: $100 = \frac{PMT}{(1+z_1)^1} + \frac{PMT}{(1+z_2)^2} + \cdots + \frac{PMT+100}{(1+z_N)^N}$. $100 = \frac{PMT}{(1+0.003117)^1} + \frac{PMT}{(1+\mathbf{0.00568})^2} + \frac{PMT+100}{(1+\mathbf{0.007977})^3}$. We can factor out *PMT* and then solve for it: $100 = PMT \times \left(\frac{1}{(1+0.003117)^1} + \frac{1}{(1+\mathbf{0.00568})^2} + \frac{1}{(1+\mathbf{0.007977})^3}\right) + \frac{100}{(1+\mathbf{0.007977})^3}$. *PMT* = 0.7952.
Par and Forward Rates	Example 3, Solution	220	31 Jan 2024	Replace: Therefore, A = 1, B = 3, ZA is the two-year spot rate, and ZB is the three-year spot rate:	With: Therefore, **A = 2**, B = 3, ZA is the two-year spot rate, and ZB is the three-year spot rate:
Par and Forward Rates	Example 3. Solution	220	31 Jan 2024	Replace second from last equation: $(1 + 0.00568)^2 \times (1 + IFR2,1)^1 = (1 + 0.007977)^3$	With: **$(1+0.0188) \times (1+0.0277)=(1+Z2)^2$**

Interest Rate Risk and Return

Lesson	Location	PDF Pg	Revised	Correction	
Macaulay Duration	Equation 3	254	8 March 2024	There is a missing bracket in the denominator of the second term, after subtracting 1. Replace: $MacDur = \left\{\frac{1+r}{r} - \frac{1+r+[N\times(c-r)]}{c\times[(1+r)^N-1+r}\right\} - \frac{t}{T}$	With: $MacDur = \left\{\frac{1+r}{r} - \frac{1+r+[N\times(c-r)]}{c\times[(1+r)^N-1]+r}\right\} - \frac{t}{T}$
Practice Problems	Solutions, solution 2	258	31 Jan 2024	Replace: A is correct. The future value of reinvested coupon interest is = *FV*(0.054,6,6.4,0,0) = 46.245.	With: A is correct. The future value of reinvested coupon interest is = FV(**0.074**,6,6.4,0,0) = 46.245.

Yield-Based Bond Duration Measures and Properties

Lesson	Location	PDF Pg	Revised	Correction	
Introduction	Learning Module Self Assessment, Solution to 3	265	8 March 2024	Replace two instances in calculation that says "308" with "380": C is correct. The money duration is 380: *MoneyDur* = 308. Δ*PVFull* ≈ −308 × 0.005.	With: C is correct. The money duration is 380: *MoneyDur* = **380**. Δ*PVFull* ≈ −**380** × 0.005.
Modified Duration	Example 1	269	31 Jan 2024	Replace row in first table: Maturity 15 Oct. 2035 ——————————— Replace row in third table: Settlement date 15 Oct. 2025 Maturity 15 Oct. 2035	With: Maturity 15 Oct. **2030** ——————————— With: Settlement date **11 Dec.** 2025 Maturity 15 Oct. **2030**

Lesson	Location	PDF Pg	Revised	Correction	
Money Duration and Price Value of a Basis Point	Equation 7	278	24 September 2024	Replace: $\%\Delta PVFull \approx -MoneyDur \times \Delta Yield$	With: $\boldsymbol{\Delta PVFull \approx -MoneyDur \times \Delta Yield}$
Properties of Duration	Following first paragraph	284	8 March 2024	There is a missing bracket in the denominator of the second term, after subtracting 1. Replace: $MacDur = \left\{\frac{1+r}{r} - \frac{1+r+[N\times(c-r)]}{c\times[(1+r)^N-1+r}\right\} - \frac{t}{T}$	With: $MacDur = \left\{\frac{1+r}{r} - \frac{1+r+[N\times(c-r)]}{c\times[(1+r)^N-1]+r}\right\} - \frac{t}{T}$
Properties of Duration	Question Set, solution to 1	287	31 Jan 2024	Replace last cell in "Second bond" column: 4% coupon, paid semiannually, and five years to maturity, priced to yield 4%	With: 4% coupon, paid semiannually, and five years to maturity, priced to yield **8%**

Yield-Based Bond Convexity and Portfolio Properties

Lesson	Location	PDF Pg	Revised	Correction
Bond Risk and Return Using Duration and Convexity	Question Set	305-306	24 September 2024	Replace:

1. Calculate the full price of the bond per 100 of par value.

Solution:

Because Excel's PRICE function does not work for negative yields, the equation for *PV* of a zero-coupon bond must be used. There are five annual periods, settlement is 30 days into the 365-day year, and because $1 + r = 1 + (-0.0072) = 0.9928$, the full price of the bond is 103.6175 per 100 of par value:

$$PV_0 = \left[\frac{100}{(0.9928)^5}\right] \times (0.9928)^{\frac{30}{365}}$$

$$PV_0 = 103.6175.$$

2. Calculate *ApproxModDur* and *ApproxCon* using a 1 bp increase and decrease in the yield-to-maturity.

Solution:

$PV_+ = 103.5662$, and $PV_- = 103.6689$:

$$PV_+ = \left[\frac{100}{(0.9929)^5}\right] \times (0.9929)^{\frac{30}{365}}$$

$$PV_+ = 103.5662.$$

$$PV_- = \left[\frac{100}{(0.9927)^5}\right] \times (0.9927)^{\frac{30}{365}}$$

$$PV_- = 103.6689.$$

The approximate modified duration is 4.9535:

$$ApproxModDur = \frac{103.6689 - 103.5662}{2 \times (0.0001) \times 103.6175} = 4.9535.$$

The approximate convexity is 29.918:

$$ApproxCon = \frac{103.6689 + 103.5662 - (2 \times 103.6175)}{(0.0001)^2 \times 103.6175} = 29.918.$$

With:

1. Calculate the full price of the bond per 100 of par value.

Solution:

Because Excel's PRICE function does not work for negative yields, the equation for *PV* of a zero-coupon bond must be used. There are five annual periods, settlement is 30 days into the 365-day year, and because $1 + r = 1 + (-0.0072) = 0.9928$, the full price of the bond is 103.6175 per 100 of par value:

$$PV_0 = \left[\frac{100}{(0.9928)^5}\right] \times (0.9928)^{\frac{30}{365}}$$

$$PV_0 = 103.617526.$$

2. Calculate *ApproxModDur* and *ApproxCon* using a 1 bp increase and decrease in the yield-to-maturity.

Solution:

$PV_+ = 103.566215$, and $PV_- = 103.668868$:

$$PV_+ = \left[\frac{100}{(0.9929)^5}\right] \times (0.9929)^{\frac{30}{365}}$$

$$PV_+ = 103.566215.$$

$$PV_- = \left[\frac{100}{(0.9927)^5}\right] \times (0.9927)^{\frac{30}{365}}$$

$$PV_- = 103.668868$$

The approximate modified duration is 4.9535:

$$ApproxModDur = \frac{103.668868 - 103.566215}{2 \times (0.0001) \times 103.617526} = 4.9535.$$

The approximate convexity is 29.918:

$$ApproxCon = \frac{103.668868 + 103.566215 - (2 \times 103.617526)}{(0.0001)^2 \times 103.617526} = 29.918.$$

Lesson	Location	PDF Pg	Revised	Correction	
Bond Risk and Return Using Duration and Convexity	Question Set	306-307	31 Jan 2024	Replace Question Set introductory text: An investor purchases a €10 million semi-annual 3.75% coupon bond with a yield-to-maturity of 2.95%, settling 30 June 2025 and maturing 30 June 2032. _____ Replace Solution to 4: PV^{Full} = PRICE(DATE(2025,6,30),DATE(2032,6,30),0.0295,0.0345,100,2,0) = 103.198. The actual increase in the bond price is 3.1984%: ΔPV^{Full} = 3.1984% × $10,000,000 = EUR319,840. The difference between the actual and the estimated price change is EUR73 (= 319,840 – 319,767).	With: An investor purchases a €10 million semi-annual **2.95%** coupon bond with a yield-to-maturity of 2.95%, settling 30 June 2025 and maturing 30 June 2032. _____ With: PV^{Full} = PRICE(DATE(2025,6,30),DATE(2032,6,30),**0.0246**,0.0345,100,2,0) = **103.1333**. The actual increase in the bond price is **3.1333%**: ΔPV^{Full} = **3.1333%** × $10,000,000 = **EUR313,330**. The difference between the actual and the estimated price change is **EUR6,437** (= **313,330** – 319,767).
Practice Problems	Question 1	312	24 September 2024	Replace: PV+ and PV– are 98.245077 and 101.792534, respectively.	With: PV+ and PV– are **99.82283** and **100.177546**, respectively.
Practice Problems	Question 2	312	31 Jan 2024	Replace text in question: A bond pays a semiannual fixed coupon of 4.75%.	With: A bond pays a semiannual fixed coupon of **4.70%.**
Solutions	Solution to 1	314	24 September 2024	Replace: $\text{ApproxCon} = \frac{101.792534 + 98.245077 - (2 \times 100)}{(0.0005)\ 2 \times 100} = 15.044498$	With: $\text{ApproxCon} = \frac{\mathbf{100.177546} + \mathbf{98.82283} - (2 \times 100)}{(0.0005)\ 2 \times 100} = \mathbf{15.04}$
Practice Problems	Solution to 8	315	31 Jan 2024	Replace last sentence of solution text: All else equal, the portfolio should outperform the lower-duration benchmark portfolio in both rising and falling interest rate environments.	With: All else equal, the portfolio should outperform the **lower-convexity** benchmark portfolio in both rising and falling interest rate environments.

Curve-Based and Empirical Fixed-Income Risk Measures

Lesson	Location	PDF Pg	Revised	Correction
Curve-Based Interest Rate Risk Measures	Example 1	324	5 June 2024	Replace: $EffDur = \frac{(PV_-) - (PV_+)}{2 \times (\Delta Curve) \times (PV_0)}.$ $EffDur = \frac{(102.891) - (99.050)}{2 \times (0.00025) \times (101.060)}.$ $EffDur = 7.601.$ $EffCon = \frac{[(PV_-) + (PV_+) - 2 \times (PV_0)]}{(\Delta Curve)^2 \times (PV_0)}.$ $EffCon = \frac{[(102.891) + (99.050)] - [2 \times (101.060)]}{(0.00025)^2 \times (101.060)}.$ $EffCon = -283.$ With: $EffDur = \frac{(PV_-) - (PV_+)}{2 \times (\Delta Curve) \times (PV_0)}.$ $EffDur = \frac{(102.891) - (99.050)}{2 \times \mathbf{(0.0025)} \times (101.060)}.$ $EffDur = 7.601.$ $EffCon = \frac{[(PV_-) + (PV_+) - 2 \times (PV_0)]}{(\Delta Curve)^2 \times (PV_0)}.$ $EffCon = \frac{[(102.891) + (99.050)] - [2 \times (101.060)]}{\mathbf{(0.0025)}^2 \times (101.060)}.$ $EffCon = -283.$
Curve-Based Interest Rate Risk Measures	Question Set – Solution 2	325	5 June 2024	Replace: $EffDur = \frac{(PV_-) - (PV_+)}{2 \times (\Delta Curve) \times (PV_0)}.$ $EffDur = \frac{(103.891) - (100.004)}{2 \times (0.00025) \times (102.208)}.$ $EffDur = 76.061.$ With: $EffDur = \frac{(PV_-) - (PV_+)}{2 \times (\Delta Curve) \times (PV_0)}.$ $EffDur = \frac{(103.891) - (100.004)}{2 \times \mathbf{(0.0025)} \times (102.208)}.$ $EffDur = \mathbf{7.6061.}$

Lesson	Location	PDF Pg	Revised	Correction	
Curve-Based Interest Rate Risk Measures	Question Set – Solution 4	326	5 June 2024	Replace: **Solution:** $EffCon = \frac{[(PV_-) + (PV_+)] - [2 \times (PV_0)]}{(\Delta Curve)^2 \times (PV_0)}$. $EffCon = \frac{[(103.891) + (98.504)] - [2 \times (102.208)]}{(0.00025)^2 \times (102.208)}$. $EffCon = -3{,}164$.	With: **Solution:** $EffCon = \frac{[(PV_-) + (PV_+)] - [2 \times (PV_0)]}{(\Delta Curve)^2 \times (PV_0)}$. $EffCon = \frac{[(103.891) + (98.504)] - [2 \times (102.208)]}{\mathbf{(0.0025)}^2 \times (102.208)}$. $EffCon = -3{,}164$.
Key Rate Duration as a Measure of Yield Curve Risk	Exhibit 5	331	8 March 2024	Replace: Assume the portfolio is weighted by the prices of the respective 2-, 5-, and 10-year bonds for a total portfolio value of $293 million, or $1 million × (99.50 + 98.31 + 95.43). The portfolio's modified duration is calculated as 5.345 = [1.991 × (99.5/293.2)] + [4.869 × (98.3/293.2)] + [9.333 × (95.4/293.2)]. Alternatively, we could calculate each key rate duration by maturity. For example, the two-year key rate duration (KeyRateDur2) is 0.676 = 1.991 × (99.5/293.2). Note that the three key rate duration values sum to the portfolio duration value of 5.345.	With: Assume the portfolio is weighted by the prices of the respective 2-, 5-, and 10-year bonds for a total portfolio value of **$277 million, or $1 million × (99.006 + 93.96 + 81.01).** The portfolio's modified duration is calculated as **5.368 = [1.990 x (99.006/277)] + [4.938 x 93.96/277)] + [9.828 x (84.01/277)]** Alternatively, we could calculate each key rate duration by maturity. For example, the two-year key rate duration (KeyRateDur2) is **0.711 = 1.990 x (99.006/277).** Note that the three key rate duration values sum to the portfolio duration value of **5.368**.

Lesson	Location	PDF Pg	Revised	Correction	
Curve-Based Interest Rate Risk Measures	Example 1	324	8 March 2024	Replace: $EffDur = \frac{(PV_-) - (PV_+)}{2 \times (\Delta Curve) \times (PV_0)}$ $EffDur = \frac{(102.891) - (99.050)}{2 \times (0.00025) \times (101.060)}$ $EffDur = 7.601.$ $EffCon = \frac{[(PV_-) + (PV_+) - 2 \times (PV_0)]}{(\Delta Curve)^2 \times (PV_0)}$ $EffCon = \frac{[(102.891) + (99.050) - [2 \times (101.060)]}{(0.00025)^2 \times (101.060)}$	With: $EffDur = \frac{(PV_-) - (PV_+)}{2 \times (\Delta Curve) \times (PV_0)}$ $EffDur = \frac{(102.891) - (99.050)}{2 \times (\mathbf{0.0025}) \times (101.060)}$ $EffDur = 7.601.$ $EffCon = \frac{[(PV_-) + (PV_+) - 2 \times (PV_0)]}{(\Delta Curve)^2 \times (PV_0)}$ $EffCon = \frac{[(102.891) + (99.050) - [2 \times (101.060)]}{(\mathbf{0.0025})^2 \times (101.060)}$
Curve-Based Interest Rate Risk Measures	Example 1, Solution to question 2	325	8 March 2024	Replace: $EffDur = \frac{(PV_-) - (PV_+)}{2 \times (\Delta Curve) \times (PV0)}$ $EffDur = \frac{(103.891) - (100.004)}{2 \times (0.00025) \times (102.208)}$ $EffDur = 76.061.$	With: $EffDur = \frac{(PV_-) - (PV_+)}{2 \times (\Delta Curve) \times (PV0)}$ $EffDur = \frac{(103.891) - (100.004)}{2 \times (\mathbf{0.0025}) \times (102.208)}$ $EffDur = \mathbf{7.6061}.$
Curve-Based Interest Rate Risk Measures	Example 1, Solution to question 4	326	8 March 2024	Replace: $EffDur = \frac{(PV_-) + (PV_+) - [2x (PV_0)]}{(\Delta Curve)^2 \times (PV_0)}$ $EffDur = \frac{[(103.891) + (98.504)] - [2 \times (102.208)]}{(0.00025)^2 \times (102.208)}$ $EffDur = -3,164.$	With: $EffDur = \frac{(PV_-) + (PV_+) - [2x (PV_0)]}{(\Delta Curve)^2 \times (PV_0)}$ $EffDur = \frac{[(103.891) + (98.504)] - [2 \times (102.208)]}{(\mathbf{0.0025})^2 \times (102.208)}$ $EffDur = -3,164.$

Credit Risk

Lesson	Location	PDF Pg	Revised	Correction	
Introduction	Learning Module Self Assessment, Question and Solution2	342	8 March 2024	Replace question: A EUR500,000 loan has the following characteristics: • Probability of default 5% • Collateral EUR100,000 • Recovery rate 90% • Expected exposure EUR400,000 The expected loss for this loan in event of default is: **A.** EUR1,500 **B.** EUR2,000 _____ Replace solution: The correct answer is A. We solve for expected loss (EL) as follows: EL = POD × (EE – Collateral) × (1 – RR). Since probability of default (POD) is 5%, expected exposure (EE) is EUR400,000, collateral is EUR100,000, and the recovery rate (RR) is 90%: EL = EUR1,500 = 0.05 × (400,000 – 100,000) × (1 – 0.9). B is incorrect as it fails to reduce the expected exposure by the collateral, while C is incorrect as it simply multiplies EE and POD.	With: A EUR500,000 loan has the following characteristics: • Probability of default 5% • ~~**Collateral EUR100,000**~~ • Recovery rate 90% • Expected exposure EUR400,000 The expected loss for this loan ~~**in event of default**~~ is: **A.** EUR1,500 **B.** EUR2,000 _____ With: The **correct answer is B.** We solve for expected loss (EL) as follows: EL= POD **× LGD = POD × EE × (1 – RR)**. Since probability of default (POD) is 5%, expected exposure (EE) is EUR400,000, ~~**collateral is EUR100,000**~~, and the recovery rate (RR) is 90%: EL = **EUR2,000** = 0.05 × (400,000-~~**100,000**~~) × (1 – 0.9)

Lesson	Location	PDF Pg	Revised	Correction	
Factors Impacting Yield Spreads	Question Set, question and solution 2	373	31 Jan 2024	Replace option C in question: C. 54 bps. _____ Replace solution: Bid yield: 93.75 = 100 / (1 + *r*) 5 r_{bid} = 1.2937% Offer yield: 93.75 = 100 / (1 + *r*) 5 r_{offer} = 1.2991% The liquidity spread of 54 bps (0.0054%) is equal to the difference in the bid yield and the offer yield (= 1.2991% − 1.2937%).	With: C. **0.54 bps** _____ With: Bid yield: 93.75 = 100 / (1 + *r*) 5 r_{bid} = **1.2991%** Offer yield: **93.7755** = 100 / (1 + *r*) 5 r_{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%).
Practice Problems	Solutions, solution to 6	375	31 Jan 2024	Replace: ΔSpread =-0.015 = -1.5%. Lower spreads make the first expression in the equation positive, along with the equation's second convexity-based term. The answer must therefore involve a decline in spreads as in answers A and B. However, B is incorrect since it fails to rescale convexity.	With: ΔSpread = **-0.0135** = **-1.35%** Lower spreads make the first expression in the equation positive, along with the equation's second convexity-based term. The answer must therefore involve a decline in spreads as in answers A. ~~and B. However, B is incorrect since it fails to rescale convexity.~~

Mortgage-Backed Security (MBS) Instrument and Market Features

Lesson	Location	PDF Pg	Revised	Correction
Practice Problems	Practice Problem 7 – 8	524	31 Jan 2024	Practice Problems 7 and 8 should be together one question. The solution to this Practice Problem appears as the solution to 7, and the subsequent solutions are all off one number: (Solution to 8 in print is actually the solution to Practice Problem 9, solution to 9 is actually the solution to Practice Problem 10, etc.)

Derivatives

Derivative Benefits, Risks, and Issuer and Investor Uses

Lesson	Location	PDF Pg	Revised	Correction	
Derivative Risks	Question Set – Derivative Risks – Solution to 2	66	26 August 2024	Replace: The seller of a call option receives an upfront premium in exchange for the right to purchase the underlying at the exercise price at maturity. Once the seller of a call option receives the premium from the option buyer, it has no further counterparty credit risk to the option buyer.	With: The seller of a call option receives an upfront premium in exchange for the **obligation to sell the underlying asset at the exercise price if the option is exercised**. Once the seller of a call option receives the premium from the option buyer, it has no further counterparty credit risk to the option buyer.

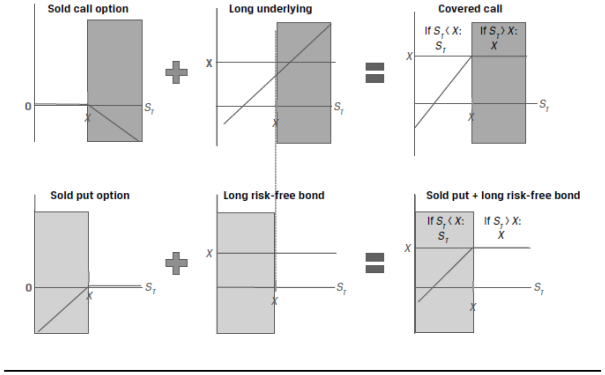
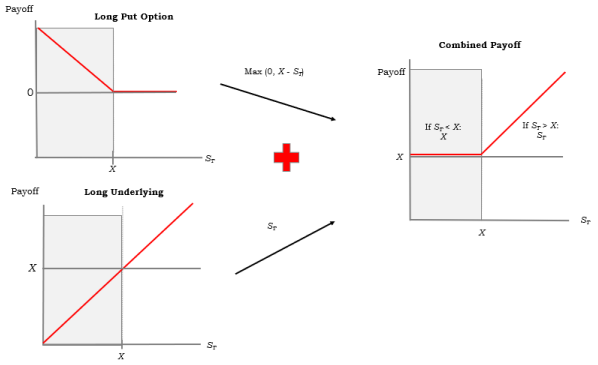
Arbitrage, Replication, and the Cost of Carry in Pricing Derivatives

Lesson	Location	PDF Pg	Revised	Correction	
Costs and Benefits Associated with Owning the Underlying	Example 6	90	31 Jan 2024	Replace the formula: $F_{0,(f/d)}(T) = 1.3325 = \frac{AUD1,333.80}{AUD1,001}$	With: $F_{0,(f/d)}(T) = 1.3325 = \frac{\mathbf{AUD1,333.83}}{\mathbf{USD1,001}}$
Costs and Benefits Associated with Owning the Underlying	Question Set, Question #2	93	22 August 2024	Replace: B. A foreign currency forward where the domestic risk-free rate is greater than the foreign risk-free rate	With: B. A foreign currency forward where the **foreign** risk-free rate is greater than the **domestic** risk-free rate
Costs and Benefits Associated with Owning the Underlying	Question Set, Question #2	93	8 March 2024	Replace: B is correct. The FX forward rate is greater than the spot rate if the domestic risk-free rate is greater than the foreign risk-free rate.	With: B is correct. The FX forward rate is greater than the spot rate if the **foreign** risk-free rate is greater than the **domestic** risk-free rate.

Pricing and Valuation of Futures Contracts

Lesson	Location	PDF Pg	Revised	Correction	
Pricing and Valuation of Interest Rate Forward Contracts	Solution 5	110-111	8 March 2024	Replace all references to "gain" in the answer with "loss"	An immediate appreciation in the ZAR/EUR spot price after contract inception will result in an MTM **loss** from Rook Point's perspective as the forward seller of ZAR/EUR. The FX forward MTM from Rook Point's perspective equals the present value of the forward price discounted at the interest rate differential between the foreign currency and the domestic currency minus the spot price: $V0(T) = F0,f/d\ (T)\ e\text{-}(r\ f\ –r\ d\ )T\ –\ S0,f/d$ Note that ZAR is the price, or foreign, currency and EUR is the base, or domestic, currency, so we can rewrite the equation as: $V0(T) = F0,ZAR/EUR\ (T)\ e\text{-}(r\ ZAR–r\ EUR)T\ –\ S0,ZAR/EUR$ If the ZAR price (S0,ZAR/EUR) appreciates from 16.909 to 16.5, we can show that Rook Point would have a 0.4090 **loss**, as follows: $Vt\ (T) = 17.2506e\text{-}(0.035 – \text{-}0.005)\times(0.5) – 16.5$ $= 16.909 – 16.5$ $= 0.4090$
Pricing Futures of Contracts at Inception	Example 2	131	31 Jan 2024	In the last two calculations, remove the negative sign from the exponent to replace: $PV_0(C) = \$1.99 = [\$2(1.02)^{-0.24982}]$. and $f_0(T) = (\$1{,}770.00 + \$1.99)(1.02)^{-0.24982}$	With: $PV_0(C) = \$1.99 = [\$2(1.02)^{0.24982}]$. and $f_0(T) = (\$1{,}770.00 + \$1.99)(1.02)^{0.24982}$ $= \$1{,}780.78$ per ounce.

Option Replication Using Put–Call Parity

Lesson	Location	PDF Pg	Revised	Correction
Put-Call Parity	Exhibit 3	199	8 March 2024	Replace:  With: 

Valuing a Derivative Using a One-Period Binomial Model

Lesson	Location	PDF Pg	Revised	Correction	
Pricing a European Call Option	Second sentence	223	23 September 2024	Replace: Equation 4 gives us the hedge ratio of the option, or the proportion of the underlying that will offset the risk associated with an option.	With: **Equation 6** gives us the hedge ratio of the option, or the proportion of the underlying that will offset the risk associated with an option.
Pricing a European Call Option	Equation 8	224	31 Jan 2024	Replace: *V*1 = €12 = €11.43	With: *V*1 = €12 = €11.43 **(1 + 0.5)**

Alternative Investments

Alternative Investment Features, Methods, Structures

Lesson	Location	PDF Pg	Revised	Correction	
Practice Problems	Solution to 6	268	Jan 2024	Replace: A. 2 is correct. In alternative fund investing, the fund manager pays the net return (gross return less management fees) to investors. B. 3 is correct. The returns generated by fund investments are gross returns. From these, management deducts its fees, paying the remainder (net fees) to fund investors. C. 1 is correct. Management fees and performance fees are how alternative fund managers are compensated for managing the fund and its investments.	With: **A. 3 is correct. The returns generated by fund investments are gross returns. From these, management deducts its fees, paying the remainder (net fees) to fund investors.** **B. 2 is correct. In alternative fund investing, the fund manager pays the net return (gross return less management fees) to investors.** C. 1 is correct. Management fees and performance fees are how alternative fund managers are compensated for managing the fund and its investments.

Alternative Investment Performance and Returns

Lesson	Location	PDF Pg	Revised	Correction	
Alternative Investment Returns	Example 4, Question 2	283	31 Jan 2024	Replace: In the second year, Kettleside fund value declines to $110 million. The fee structure is as specified in Question 1 but also includes the use of a high-water mark (PHWM) computed net of fees.	With: In the second year, Kettleside fund value declines to $110 million. The fee structure is as specified in Question 1 **of Example 3** but also includes the use of a high-water mark (PHWM) computed net of fees.

Lesson	Location	PDF Pg	Revised	Correction	
Alternative Investment Returns	Example 4, Question 2	283-284	8 March 2024	Replace solution: We must again alter Equation 4 to include the high-water mark (P_{HWM}) provision, as follows: $R_{GP(Net\ with\ High\text{-}Water\ Mark)} = (P_2 \times r_m) + \max[0, (P_2 - P_{HWM}] \times p\}$ where P_{HWM} is defined as the maximum fund value at the end of any previous period net of fees. We may solve for investor return ri in Period 2 as follows: $r_i = (P_2 - P_1 - R_{GP})/P_1$, $R_{GP(Net\ with\ High\text{-}Water\ Mark)}$ = \$110 million × 1% + max[0, (\$110 million – \$122.7 million) × 20%] = \$1.1 million. r_i = (\$110 million – \$122.7 million – \$1.1 million)/\$122.7 million = –11.247%. The beginning capital position in the second year for the investors is \$130 million − \$7.3 million = \$122.7 million. The ending capital position at the end of the second year is \$110 million − \$1.1 million = \$108.9 million.	With: We must again alter Equation 4 to include the high-water mark (P_{HWM}) provision, as follows: $R_{GP(Net\ with\ High\text{-}Water\ Mark)}$ **$= (P_2 \times r_m) + \max\{0, P_2(1-r_m) - P_{HWM}] \times p]$** where P_{HWM} is defined as the maximum fund value at the end of any previous period net of fees. We may solve for investor return r_i in Period 2 as follows: $r_i = (P_2 - P_1 - R_{GP})/P_1$, $R_{GP(Net\ with\ High\text{-}Water\ Mark)}$ **= \$110 million x 1% + max[0,[\$110 x 0.99 - \$124.16] x 20%]** = \$1.1 million. r_i = (\$110 million - **\$124.16 million** - \$1.1 million)/**\$124.16 million** **= –12.291%** **The beginning capital position in the second year for the investors is \$130 million – \$5.84 million = \$124.16 million**. The ending capital position at the end of the second year is \$110 million − \$1.1 million = \$108.9 million.

Lesson	Location	PDF Pg	Revised	Correction	
Alternative Investment Returns	Example 4, Question 3	284	8 March 2024	Replace the Solution: We amend Equations 8 and 9 to reflect returns for the third period and calculate as follows: $R_{GP(\text{High-Water Mark})} = (P_3 \times r_m) + \max[0, (P_3 - P_{HWM}) \times p]$. ri = (P3 – P2 – RGP)/P2. Note that the high-water mark, PHWM, is the highest value of the fund after fees in all previous years. In Kettleside's case, it was $122.7 million, the ending value in the first year, P1. **Kettleside Timberland LP Performance Fee Modifications** Year / Fund Value ($m), after Fees 0 / 100.00 1 / 122.70 ← High-Water Mark 2 / 108.90 RGP(High-Water Mark) = $128 million × 1% + max[0, ($128 million – $122.7 million) × 20%] = $2.34 million. r_i = ($128 million – $108.9 million – $2.34 million)/$108.9 million = 15.39%. The beginning capital position in the third year for the investors is $110 million − $1.1 million = $108.9 million. The ending capital position for the third year is $128 million – $2.34 million = $125.66 million, which represents a new high-water mark to be applied the following year for this investor.	With: We amend Equations 8 and 9 to reflect returns for the third period and calculate as follows: $R_{GP(\text{Net with High-Water Mark})} = (P_3 \times r_m) + \max[0, P_3(1-r_m) - P_{HWM}) \times p]$ ri = (P3 – P2 – RGP)/P2. Note that the high-water mark, PHWM, is the highest value of the fund after fees in all previous years. In Kettleside's case, it was $122.7 million, the ending value in the first year, P1. **Kettleside Timberland LP Performance Fee Modifications** Year / Fund Value ($m), after Fees 0 / 100.00 1 / 122.70 ← High-Water Mark 2 / 108.90 RGP(High-Water Mark) **= $128 million × 1% + max[0, ($128 x 0.99 – $124.16) × 20%]** **= $1.792 million.** **$r_i$ = ($128 million – $108.9 million – $1.792 million)/$108.9 million** **= 15.89%.** The beginning capital position in the third year for the investors is $110 million − $1.1 million = $108.9 million. **The ending capital position for the third year is $128 million – $1.792 million = $126.208 million,** which represents a new high-water mark to be applied the following year for this investor.

Investments in Private Capital: Equity and Debt

Lesson	Location	PDF Pg	Revised	Correction	
Private Debt Investment Characteristics	Example 4	315	29 August 2024	Replace: As Peterburgh amortizes the loan, the outstanding principal of the mortgages decline, which increases the LTV value.	With: As Peterburgh amortizes the loan, the outstanding principal of the mortgages decline, which **decreases** the LTV value.
Diversification Benefits of Private Capital	Solution 7	324	8 March 2024	The Solution to Practice Problem 7 on page 324 should be changed to:	C is correct. Private capital can have overall positive contributions to diversification. Note, however, that direct lending can involve a large capital commitment to a single borrower, with increased concentration risk and reduced diversification.

Real Estate and Infrastructure

Lesson	Location	PDF Pg	Revised	Correction	
Infrastructure Investment Characteristics	Practice Problems	351	31 Jan 2024	Replace: Akasaka Investment Company established a portfolio of warehouse properties with a total market value of THB3.60 billion. It secured mortgage financing of THB2.61 billion. The terms of the mortgage required Akasaka to maintain a loan-to-value ratio of 0.725. After 18 months, the portfolio value had dropped to THB2.23 billion and the mortgage liability was THB2.35 billion.	With: Akasaka Investment Company established a portfolio of warehouse properties with a total market value of THB3.60 billion. It secured mortgage financing of THB2.61 billion. The terms of the mortgage required Akasaka to maintain a loan-to-value ratio of 0.725. After 18 months, the portfolio value had dropped to **THB3.23** billion and the mortgage liability was THB2.35 billion.

Natural Resources

Lesson	Location	PDF Pg	Revised	Correction	
Introduction	Learning Module Self-Assessment – Solution to 4	357	13 September 2024	Replace: A and B are both incorrect because interest and storage reflect costs associated with owning the physical commodity.	With: A and **C** are both incorrect because interest and storage reflect costs associated with owning the physical commodity.

Ethical and Professional Standards

Guidance for Standards I-VII

Lesson	Location	PDF Pg	Revised	Correction	
CFA Institute Code of Ethics and Standards of Professional Conduct	After D. Misconduct	217	29 August 2024	Replace: Add after D. Misconduct	**E. Competence Members and Candidates must act with and maintain the competence necessary to fulfill their professional responsibilities**

Guidance for Standards I-VII

Lesson	Location	PDF Pg	Revised	Correction	
Standard IV(A): Recommended Procedures	Text under Incident-Reporting Procedures	323	31 Jan 2024	Part of the print page 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

Lesson	Location	PDF Pg	Revised	Correction	
Responsibilities as a CFA Institute Member or CFA Candidate	Conduct as Participants in CFA Institute Programs	460	31 Jan 2024	Replace under Analysis: B is correct. C is incorrect.	With: **C is correct.** **B is incorrect.**