2025 CFA Program Level I Candidate Notice

28 JULY 2025

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. We do make it known in this notice when changes have been published in the curriculum and when they are still pending corrections. We release a new notice every two weeks.

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.

Quantitative Methods

Rates and Returns

Revised Date	Location	Page(s)	Replace	With
26 August 2024	Third Paragraph	9	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…	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…
1 November 2024	First sentence after Exhibit 2	10	Beginning with an initial investment of EUR1.0000, we will have a balance of EUR0.8573 at the end of the three-year period as shown in the fourth column of Exhibit 2.	Beginning with an initial investment of EUR1.0000, we will have a balance of **EUR0.8574** at the end of the three-year period as shown in the fourth column of Exhibit 2.
26 August 2024	Example 8, Solution 4	23	Replace the sum in the second calculation: 1.1471	1.147**6**
26 August 2024	In-text Equation callouts	29	Equation numbering in-text	Starting on page 29, in-text equation callouts mismatched. Starting on page 29, the equation is labeled as equation "7" but the text below it refers to it as "Equation 8." Throughout the rest of the LM, in-text callouts should be one less than the current number

Rates and Returns

Revised Date	Location	Page(s)	Replace	With
26 August 2024	First paragraph	33	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.
26 August 2024	Equation 14	34	$(1 + \textit{real return}) = \dfrac{(1 + \textit{real risk–free rate})(1 + \textit{risk premium})}{1 + \textit{inflation premium}}$.	$(1 + \textit{real return}) = (1 + \textit{real risk–free rate})(1 + \textit{risk premium})$

Time Value of Money in Finance

Revised Date	Location	Page(s)	Replace	With
26 August 2024	Example 2, Solution 1	51	$PV = EUR100 = \frac{2}{1.20} + \frac{2}{1.02^2} + \frac{2}{1.02^3} + \frac{2}{1.02^4} + \frac{2}{1.02^5} + \frac{2}{1.02^6} + \frac{2}{1.02^7}$	$PV = EUR100 = \frac{2}{1.20} + \frac{2}{1.02^2} + \frac{2}{1.02^3} + \frac{2}{1.02^4} + \frac{2}{1.02^5} + \frac{2}{1.02^6} + \frac{\mathbf{102}}{1.02^7}$
26 August 2024	Example 2, Question 2	51	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 Finance

Revised Date	Location	Page(s)	Replace	With
1 November 2024	Example 3, Question 3	52	Recalculate the discount bond price for the final principal payment in 20 years from Example 1 using a 6.70 percent semiannual discount rate.	Recalculate the discount bond price for **the single principal payment in 20 years from Example 1, where YTM = 6.70, and discounting is done semiannually.**
1 November 2024	Example 3, Solution 3	52	INR26.77 Note that the PV calculation using the same annual discount rate for 40 semiannual periods will differ slightly using Equation 5, as follows: PV = INR27.66 = $(PMT_{40} + FV_{40})/(1+r/2)^{40}$, $PV(PMT_{40})$ = INR0.90 = 3.35 / $(1.0335)^{40}$, $PV(FV_{40})$ = INR26.77 = 100 / $(1.0335)^{40}$. Compounding on a semiannual basis for 40 periods, $PV(FV_{40})$ of 26.77 is less than the original PV of 27.33 using 20 annual periods from Example 1 (since $1/(1+r)^t > 1/(1+r/2)^{2t}$ when $r \geq 0$).	INR26.77 **Using Equation 5:** ~~PV = INR27.66 = $(PMT_{40} + FV_{40})/(1+r/2)^{40}$,~~ ~~$PV(PMT_{40})$ = INR0.90 = 3.35 / $(1.0335)^{40}$,~~ $PV(FV_{40})$ = INR26.77 = 100 / $(1.0335)^{40}$. **Discounting** on a semiannual basis for 40 periods, $PV(FV_{40})$ of 26.77 is less than the original PV of 27.33 using 20 annual periods from Example 1 (since $1/(1+r)^t > 1/(1+r/2)^{2t}$ when $r \geq 0$).
31 January 2024	Exhibit 6	58	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: $D(1+g_s)^4 (1+g_l)^2$	$D(1+g_s)^3 (1+g_l)^2$

Time Value of Money in Finance

Revised Date	Location	Page(s)	Replace	With
31 January 2024	Example 7, Solution 2	59	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: $$\text{GBP}9.22 = \frac{1.894/(0.15-0.02)}{(1.15)^3}.$$	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: $$\text{GBP}9.22 = \frac{\mathbf{1.823}/(0.15-0.02)}{(1.15)^3}.$$
26 August 2024	Example 14, Solution 1	76	Foreign Strategy: Convert GBP1,000 at 1.2602 to receive USD1,260.20, which invested at the one-year US-dollar risk-free rate of 2.667 percent returns USD1,294.27 (=1,260.20 e(0.02667)) in one year.	Foreign Strategy: Convert GBP1,000 at 1.2602 to receive USD1,260.20, which invested at the one-year US-dollar risk-free rate of 2.667 percent returns **USD1,294.26** (=1,260.20 e(0.02667)) in one year.
26 August 2024	Solution 5	79	2.29 percent = $(92.25/89)^{(1/3)}$ – 1.	2.29 percent = (**95.25**/89)(1/3) – 1.

Statistical Measures of Asset Returns

Revised Date	Location	Page(s)	Replace	With
31 January 2024	Paragraph following Exhibit 2	91	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.	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.
26 August 2024	Question Set, Question 2	109	2. The fund with the mean absolute deviation (MAD) is Fund:	2. The fund with the **highest** mean absolute deviation (MAD) is Fund:
26 August 2024	Interpreting Skewness and Kurtosis – Question 2	115	2. Does the distribution displays kurtosis? Explain.	2. Does the distribution **display** kurtosis? Explain.

Probability Trees and Conditional Expectations

Revised Date	Location	Page(s)	Replace	With
11 April 2025	Question Set Solution	139	A. Outcomes associated with Scenario 1: With a 0.45 probability of a USD0.90 recovery per USD1 principal value, given Scenario 1, and with the probability of Scenario 1 equal to 0.75, the probability of recovering USD0.90 is 0.45 (0.75) = 0.3375. By a similar calculation, the probability of recovering USD0.80 is 0.55(0.75) = 0.4125. Outcomes associated with Scenario 2: With a 0.85 probability of a USD0.50 recovery per USD1 principal value, given Scenario 2, and with the probability of Scenario 2 equal to 0.25, the probability of recovering USD0.50 is 0.85(0.25) = 0.2125. By a similar calculation, the probability of recovering USD0.40 is 0.15(0.25) = 0.0375. B. E(recovery | Scenario 1) = 0.45(USD0.90) + 0.55(USD0.80) = USD0.845 C. E(recovery | Scenario 2) = 0.85(USD0.50) + 0.15(USD0.40) = USD0.485 D. E(recovery) = 0.75(USD0.845) + 0.25(USD0.485) = USD0.755 [Diagram]	[Reordered] A. E(recovery | Scenario 1) = 0.45(USD0.90) + 0.55(USD0.80) = USD0.845 B. E(recovery | Scenario 2) = 0.85(USD0.50) + 0.15(USD0.40) = USD0.485 C. E(recovery | Scenario 2) = 0.85(USD0.50) + 0.15(USD0.40) = USD0.485 D. [Diagram] E. Outcomes associated with Scenario 1: With a 0.45 probability of a USD0.90 recovery per USD1 principal value, given Scenario 1, and with the probability of Scenario 1 equal to 0.75, the probability of recovering USD0.90 is 0.45 (0.75) = 0.3375. By a similar calculation, the probability of recovering USD0.80 is 0.55(0.75) = 0.4125. Outcomes associated with Scenario 2: With a 0.85 probability of a USD0.50 recovery per USD1 principal value, given Scenario 2, and with the probability of Scenario 2 equal to 0.25, the probability of recovering USD0.50 is 0.85(0.25) = 0.2125. By a similar calculation, the probability of recovering USD0.40 is 0.15(0.25) = 0.0375.

Portfolio Mathematics

Revised Date	Location	Page(s)	Replace	With
31 January 2024	Equation 2	153	$\sigma^2(R_p) = E\{[R_p E(R_p)]^2\}.$	$\sigma^2(R_p) = E\{[R_p - E(R_p)]^2\}.$
31 January 2024	Equation 4	154	$\text{Cov}(R_i, R_j) = \sum_{n=1}^{n} (R_{i,t}, \bar{R}_i)(R_{j,t} - E\bar{R}_j)/(n-1).$	$\text{Cov}(R_i, R_j) = \sum_{n=1}^{n} (R_{i,t} - \bar{R}_i)(R_{j,t} - E\bar{R}_j)/(n-1).$
31 January 2024	Calculation under Equation 5	157	$= w_1^2\sigma^2(R_1) + w_1w_2\text{Cov}(R_1,R_2) + w_1w_3\text{Cov}(R_1,R_3)$ $+ w_1w_2\text{Cov}(R_1,R_2) + w_2^2\sigma^2(R_2) + w_2w_3\text{Cov}(R_2,R_3)$ $+ w_1w_3\text{Cov}(R_1,R_3) + w_2w_3\text{Cov}(R_2,R_3) + w_2^3\sigma^2(R_3).$	$= w_1^2\sigma^2(R_1) + w_1w_2\text{Cov}(R_1,R_2) + w_1w_3\text{Cov}(R_1,R_3)$ $+ w_1w_2\text{Cov}(R_1,R_2) + w_2^2\sigma^2(R_2) + w_2w_3\text{Cov}(R_2,R_3)$ $+ w_1w_3\text{Cov}(R_1,R_3) + w_2w_3\text{Cov}(R_2,R_3) + w_2^3\sigma^2(R_3)$

Hypothesis Testing

Revised Date	Location	Page(s)	Replace	With
26 August 2024	Exhibit 6	226	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%).	We reject the null hypothesis if the calculated χ2 statistic is **greater than** 13.09051. ――――――――――――――― “**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%).”
26 August 2024	Question Set, Solution 4	234	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.	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

Revised Date	Location	Page(s)	Replace	With
26 August 2024	Question Set, Solution 2	255	$r_s = 1 - \frac{6(144.5)}{9(80)} = -0.20416$	$r_s = 1 - \frac{6(144.5)}{9(80)} = -0.20417$
26 August 2024	Question Set, Solution 3	255	$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$ is $t = \frac{-0.2416\sqrt{7}}{\sqrt{1-0.041681}} = \frac{-0.540156}{0.978937} = -0.55177.$	$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$ is $t = \frac{-0.20417\sqrt{7}}{\sqrt{1-0.041681}} = \frac{-0.540183}{0.978937} = -0.55181.$
26 August 2024	Exhibit 9, Step 4	258	We reject the null hypothesis if the calculated ÷2 statistic is greater than 9.4877.	We reject the null hypothesis if the calculated **χ2** statistic is greater than 9.4877.

Simple Linear Regression

Revised Date	Location	Page(s)	Replace	With
1 November 2024	Exhibt 22, Step 5	289	= 4.00131	= **4.00163**
26 August 2024	Equation 20	290	$t_{intercept} = \frac{\hat{b}_0 - B_0}{s_{\hat{b}_0}} = \frac{\hat{b}_0 - B_0}{\sqrt{\frac{1}{n} + \frac{\bar{X}^2}{\sum_{i=1}^{n}(X_i - \bar{X})^2}}}.$	$t_{intercept} = \frac{\hat{b}_0 - B_0}{s_{\hat{b}_0}} = \frac{\hat{b}_0 - B_0}{\mathbf{S}\sqrt{\frac{1}{n} + \frac{\bar{X}^2}{\sum_{i=1}^{n}(X_i - \bar{X})^2}}}.$
26 August 2024	Exhibit 24, Step 5	290	$t_{intercept} = \frac{4.875 - 3.0}{\sqrt{\frac{1}{6} + \frac{6.1^2}{122.64}}} = \frac{1.875}{0.68562} = 2.73475$	$t_{intercept} = \frac{4.875 - 3.0}{\mathbf{3.4596} \times \sqrt{\frac{1}{6} + \frac{6.1^2}{122.64}}} = \frac{1.875}{\mathbf{3.4596} \times 0.68562} = \mathbf{0.7905}.$
26 August 2024	Exhibit 24, Step 6	290	Reject the null hypothesis. There is sufficient evidence to indicate that the intercept is greater than 3%.	**Do not** reject the null hypothesis. There is **not** sufficient evidence to indicate that the intercept is greater than 3%.

Simple Linear Regression

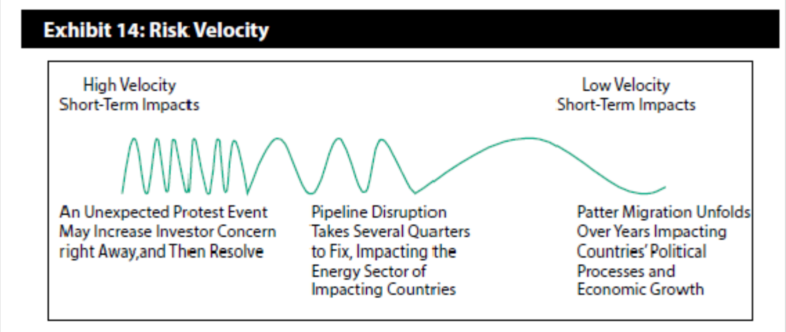
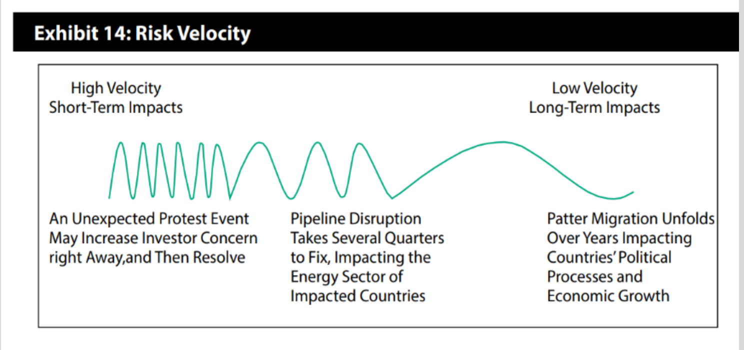
Revised Date	Location	Page(s)	Replace	With
26 August 2024	Test of Hypotheses: Level of Significance and p-Values, Second Sentence, Third Paragraph	293	The p-value corresponding to this test statistic is 0.016, which means there is just a 0.16 percent chance of rejecting the null hypotheses when it is true.	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**.

Economics

Monetary Policy

Revised Date	Location	Page(s)	Replace	With
31 January 2024	Practice Problem 7	137 - 138	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.	**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

Revised Date	Location	Page(s)	Replace	With
30 May 2024	Exhibit 14	183	Pipeline Disruption Takes Several Quarters to Fix, Impacting the Energy Sector of Impacting Countries Low Velocity/Short-Term Impacts 	Pipeline Disruption Takes Several Quarters to Fix, Impacting the Energy Sector of **Impacted** Countries Low Velocity/**Long**-Term Impacts 

Exchange Rate Calculations

Revised Date	Location	Page(s)	Replace	With
4 June 2025	Practice Problems, Solution 6	268	Ff/d/ Sf/d = (1+rfτ / 1+rdτ)	$F_{f/d} / S_{f/d} = (1+r_f\tau / 1+r_d\tau)$

Corporate Issuers

Working Capital and Liquidity

Revised Date	Location	Page(s)	Replace	With
4 March 2024	Question Set, Solution 3	109	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.	**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.

Capital Structure

Revised Date	Location	Page(s)	Replace	With
4 November 2024	Question Set, Solution 3	181	A is correct.	**C is correct.**
25 November 2024	Firm Value with Taxes (MM Proposition II with Taxes)	197	Firm Value with Taxes (MM Proposition II with Taxes)	**Firm Value with Taxes (MM Proposition I with Taxes)**
4 March 2024	Paragraph following Exhibit 7	204	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.	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.

Business Models

Revised Date	Location	Page(s)	Replace	With
4 April 2025	Paragraph 1	234	Network effects capitalize on both economics of scale and scope.	Network effects capitalize on both **economies of scale and economies of scope.**

Financial Statement Analysis

Analyzing Income Statements

Revised Date	Location	Page(s)	Replace	With
30 May 2024	Example 10, first sentence	71	1. Assume the same facts as Example 7 except that on 1 December 2018, a previously declared 2-for-1 stock split took effect.	1. Assume the same facts as **Example 9** except that on 1 December 2018, a previously declared 2-for-1 stock split took effect.

Analyzing Statements of Cash Flows I

Revised Date	Location	Page(s)	Replace	With
8 March 2024	Exhibit 4, table headers	128	Income Statement for year ended 31 December 20X1 ____ Statement of Cash Flows for year ended 31 December 20X1	Income Statement for year ended 31 December **20X2** ____ Statement of Cash Flows for year ended 31 December **20X2**
26 September 2024	Exhibit 5, table, last statement of cash flows item	128	Cash flows from operating activities increases by USD100	Cash flows from operating activities increases by **USD150**

Analyzing Statements of Cash Flows II

Revised Date	Location	Page(s)	Replace	With
8 March 2024	Paragraph under Exhibit 5	162 - 163	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.	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

Revised Date	Location	Page(s)	Replace	With
8 March 2024	Practice Problem 34	570	B is correct. ____________________ Explanatory text should read:	**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.

Analysis of Income Tax

Revised Date	Location	Page(s)	Replace	With
26 August 2024	First paragraph under Realizability of Deferred Tax Assets	288	Assume Pinto Construction (a hypothetical company) depreciates equipment on a straight-line basis of 10 percent per year. The tax authorities allow depreciation of 15 percent per year. At the end of the fiscal year, the carrying amount of the equipment for accounting purposes would be greater than the tax base of the equipment thus resulting in a temporary difference.	**Pinto Construction receives advance payments from customers that are immediately taxable but these payments are not recognized as accounting income until Pinto Construction fulfills its obligations in later reporting periods.**

Financial Analysis Techniques

Revised Date	Location	Page(s)	Replace	With
12 September 2024	Example 14, Solution last sentence	432	Choices B and C are incorrect because DOH and receivables turnover are misinterpreted.	**Choices A and C** are incorrect because DOH and receivables turnover are misinterpreted.

Introduction to Financial Statement Modeling

Revised Date	Location	Page(s)	Replace	With
12 September 2024	Example 8, Solution 3	489	The highest gross profit is projected by Analyst D.	The highest gross profit is projected by **Analyst C**.

Equity Investments

Company Analysis: Past and Present

Revised Date	Location	Page(s)	Replace	With
4 June 2024	Example 3, Solution 4	460	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	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

Company Analysis: Past and Present

Revised Date	Location	Page(s)	Replace	With
31 January 2024	Practice Problem, first passage	474	On average, NewShips' commission, which it receives as a broker from the customer, was 6% of the freight rate.	On average, NewShips' commission, which it receives as a broker from the customer, was **5%** of the freight rate.
31 January 2024	Practice Problem	475 - 476	Question should be disregarded as there is not sufficient information about Net Profit to provide a complete answer.	

Fixed Income

Yield and Yield Spread Measures for Fixed-Rate Bonds

Revised Date	Location	Page(s)	Replace	With
29 August 2024	Learning Module Self-Assessment – Question 3	157	The G-spread for Bond B is (0.01271-0.011) = 173bps.	The G-spread for Bond B is (**0.01213**-0.011) **= 11.3bps.**
26 August 2024	Question Set, Solution 4	171	*r* = 0.0762 × 2 = 0.1512. The yield-to-first call for the bond is 15.12%.	*r* = 0.0762 × 2 = **0.1525**. The yield-to-first call for the bond is **15.25**%.
1 November 2024	Example 9	177	$100.45 = \frac{0.375}{(1+r)^1} + \frac{0.375}{(1+r)^2} + \frac{0.375}{(1+r)^3} + \frac{100.375}{(1+r)^4}.$ $r = 0.0018662 \times 2 = 0.00373.$	$\mathbf{100.75} = \frac{0.375}{(1+r)^1} + \frac{0.375}{(1+r)^2} + \frac{0.375}{(1+r)^3} + \frac{100.375}{(1+r)^4}.$ $r = 0.0018662 \times 2 = 0.00373.$
26 August 2024	Example 9, Solution 1	177	R = 0.0018662 x 2 = 0.00373. 0.01271 – 0.00373 = 89 bps.	**R = 0.002618 x 2 = 0.005235.** **Therefore, the G-spread is 0.01271 – 0.005235 = 75 bps.**

Yield and Yield Spread Measures for Floating-Rate Instruments

Revised Date	Location	Page(s)	Replace	With
30 October 2024	Second equation from top	191	$PV = \frac{\frac{(0.0125+0.0050)\times 100}{2}}{\left(1+\frac{0.0125+0.040}{2}\right)^1} + \frac{\frac{(0.0125+0.0050)\times 100}{2}}{\left(1+\frac{0.0125+0.040}{2}\right)^2} + \frac{\frac{(0.0125+0.0050)\times 100}{2}}{\left(1+\frac{0.0125+0.040}{2}\right)^3} + \frac{\frac{(0.0125+0.0050)\times 100}{2}+100}{\left(1+\frac{0.0125+0.040}{2}\right)^4}$	$PV = \frac{\frac{(0.0125+0.0050)\times 100}{2}}{\left(1+\frac{0.0125+0.0040}{2}\right)^1} + \frac{\frac{(0.0125+0.0050)\times 100}{2}}{\left(1+\frac{0.0125+0.0040}{2}\right)^2} + \frac{\frac{(0.0125+0.0050)\times 100}{2}}{\left(1+\frac{0.0125+0.0040}{2}\right)^3} + \frac{\frac{(0.0125+0.0050)\times 100}{2}+100}{\left(1+\frac{0.0125+0.0040}{2}\right)^4}$
26 August 2024	Example 2	196	PV = 20,004,918 / (1 + 45/365 × 0.0006).	PV = **20,005,918** / (1 + 45/365 × 0.0006).
26 August 2024	Example 3	197 - 198	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. $PV = FV \times \left(1 - \frac{Days}{Year} \times DR\right).$ $PV = 100 \times \left(1 - \frac{90}{360} \times 0.0012\right).$ $PV = 99.970.$ Next, use Equation 5 to solve for *AOR* for a 365-day year, where Year = 365, Days = 90, *FV* = 100, and *PV* = 99.970. $AOR = \frac{Year}{Days} \times \frac{FV - PV}{PV}.$ $AOR = \frac{365}{90} \times \frac{100 - 99.970}{99.970}.$ $AOR = 0.00122.$ The 90-day commercial paper discount rate of 0.120% converts to an add-on rate for a 365-day year of 0.122%.	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**. $PV = FV \times \left(1 - \frac{Days}{Year} \times DR\right).$ $PV = 100 \times \left(1 - \frac{90}{360} \times \mathbf{0.0010}\right)$ $PV = \mathbf{99.975}$ Next, use Equation 5 to solve for AOR for a 365-day year, where Year = 365, Days = 90, FV = 100, and PV = **99.975**. $AOR = \frac{Year}{Days} \times \frac{FV - PV}{PV}.$ $AOR = \frac{365}{90} \times \frac{100 - \mathbf{99.975}}{\mathbf{99.975}}.$ $AOR = 0.00122.$ The 90-day commercial paper discount rate of **0.10%** converts to an add-on rate for a 365-day year of **0.1014%.**

Yield and Yield Spread Measures for Floating-Rate Instruments

Revised Date	Location	Page(s)	Replace	With
1 November 2024	Question Set, Question 6	201	6. A portfolio manager has asked you to evaluate the following Thai baht–denominated money market instruments with equivalent credit risk.	6. A portfolio manager has asked you to evaluate the following Thai baht–denominated **180 days** money market instruments with equivalent credit risk.
19 September 2024	Practice Problems, Solution 1	205	The estimated discount margin is 195 bps. $\frac{(MRR + QM) \times FV}{m} = \frac{(-0.0055 + 0.016) \times 100}{4} =$ 0.275. … DM=0.4525.DM=0.502144 The estimated discount margin is 50.2 bps.	~~The estimated discount margin is 195 bps.~~ $\frac{(MRR + QM) \times FV}{m} = \frac{(\mathbf{-0.055} + 0.016) \times 100}{4} =$ **0.2625**. … DM=0.4525.DM=**0.4525.** The estimated discount margin is **45.25 bps**.
26 August 2024	Practice Problems, Question and Solution 5	204 - 206	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: 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: 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

Revised Date	Location	Page(s)	Replace	With
25 September 2024	Learning Module Self-Assessment, Solution 3	209	*IFR*2,1 = 3.01%.	*IFR*2,1 = **2.50%.**
26 August 2024	Example 1, Solution 2	218	*PV* = 100.01	*PV* = **99.99**
26 August 2024	Example 2, Solution 1	218	$100 = \frac{PMT}{(1+z_1)^1} + \frac{PMT}{(1+z_2)^2} + \cdots + \frac{PMT+100}{(1+z_N)^N}$. $100 = \frac{PMT}{(1+0.003117)^1} + \frac{PMT}{(1+0.568)^2} + \frac{PMT+100}{(1+0.7977)^3}$. 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.	$100 = \frac{PMT}{(1+z_1)^1} + \frac{PMT}{(1+z_2)^2} + \cdots + \frac{PMT+100}{(1+z_N)^N}$. $100 = \frac{PMT}{(1+0.003117)^1} + \frac{PMT}{(1+\mathbf{0.00568})^2} + \frac{PMT+100}{(1+\mathbf{0.007977})^3}$. 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.

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

Revised Date	Location	Page(s)	Replace	With
26 August 2024	Example 3, Solution 1	220	Therefore, A = 1, B = 3, ZA is the two-year spot rate, and ZB is the three-year spot rate:	Therefore, **A = 2**, B = 3, ZA is the two-year spot rate, and ZB is the three-year spot rate:
26 August 2024	Example 3, Solution 1, Second from last equation	220	$(1 + 0.00568)^2 \times (1 + IFR2,1)^1 = (1 + 0.007977)^3$	$\mathbf{(1+0.0188) \times (1+0.0277)=(1+Z2)^2}$

Interest Rate Risk and Return

Revised Date	Location	Page(s)	Replace	With
26 August 2024	Equation 3	254	$MacDur = \left\{\frac{1+r}{r} - \frac{1+r+[N\times(c-r)]}{c\times[(1+r)^N - 1 + r}\right\} - \frac{t}{T}$	$MacDur = \left\{\frac{1+r}{r} - \frac{1+r+[N\times(c-r)]}{c\times[(1+r)^N - 1]+r}\right\} - \frac{t}{T}$
26 August 2024	Practice Problems, Solution 2	260	A is correct. The future value of reinvested coupon interest is = *FV*(0.054,6,6.4,0,0) = 46.245.	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

Revised Date	Location	Page(s)	Replace	With
26 August 2024	Learning Module Self-Assessment, Solution 3	265	C is correct. The money duration is 380: *MoneyDur* = 308. Δ*PVFull* ≈ −308 × 0.005.	C is correct. The money duration is 380: *MoneyDur* = **380**. Δ*PVFull* ≈ **−380** × 0.005.
26 August 2024	Example 1	269	Row in first table: Maturity 15 Oct. 2035 ——— Row in third table: Settlement date 15 Oct. 2025 Maturity 15 Oct. 2035	Maturity 15 Oct. **2030** ——— Settlement date **11 Dec.** 2025 Maturity 15 Oct. **2030**
24 September 2024	Equation 7	278	%Δ*PVFull* ≈ −*MoneyDur* × Δ*Yield*	***ΔPVFull* ≈ −*MoneyDur* × Δ*Yield***
26 August 2024	Lesson's first paragraph	284	$MacDur = \left\{ \frac{1+r}{r} - \frac{1+r+[N \times (c-r)]}{c \times [(1+r)^N - 1 + r]} \right\} - \frac{t}{T}$	$MacDur = \left\{ \frac{1+r}{r} - \frac{1+r+[N \times (c-r)]}{c \times [(1+r)^N - 1] + r} \right\} - \frac{t}{T}$

Yield-Based Bond Duration Measures and Properties

Revised Date	Location	Page(s)	Replace	With
26 August 2024	Question Set, Solution 1, last cell "Second Bond" column	287	4% coupon, paid semiannually, and five years to maturity, priced to yield 4%	4% coupon, paid semiannually, and five years to maturity, priced to yield **8%**

Yield-Based Bond Convexity and Portfolio Properties

Revised Date	Location	Page(s)	Replace	With
24 September 2024	Knowledge Check	305 - 306	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: $ApproxCon = \frac{103.6689 + 103.5662 - (2 \times 103.6175)}{(0.0001)^2 \times 103.6175} = 29.918.$	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: $ApproxCon = \frac{103.668868 + 103.566215 - (2 \times 103.617526)}{(0.0001)^2 \times 103.617526} = 29.918.$

Yield-Based Bond Convexity and Portfolio Properties

Revised Date	Location	Page(s)	Replace	With
26 August 2024	Question Set, Intro Text	307	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.	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.
26 August 2024	Question Set, Solution 4	307	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).	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).
24 September 2024	Practice Problems, Question 1	312	For a 5bps increase and decrease in yield-to-maturity, PV_+ and PV_- are 98.245077 and 101.792534, respectively.	For a **50bps** increase and decrease in yield-to-maturity, PV_+ and PV_- are **99.82283** and **100.177546**, respectively.
26 August 2024	Practice Problems, Question 2	312	A bond pays a semiannual fixed coupon of 4.75%.	A bond pays a semiannual fixed coupon of **4.70%.**

Yield-Based Bond Convexity and Portfolio Properties

Revised Date	Location	Page(s)	Replace	With
24 September 2024	Practice Problems, Solution 1	314	$\text{ApproxCon} = \frac{101.792534 + 98.245077 - (2 \times 100)}{(0.0005)\,2 \times 100}$ $= 15.044498$	$\text{ApproxCon} = \frac{100.177546 + 98.82283 - (2 \times 100)}{(0.005)\,2 \times 100}$ $= 15.04$
26 August 2024	Practice Problems, Solution 8	315	All else equal, the portfolio should outperform the lower-duration benchmark portfolio in both rising and falling interest rate environments.	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

Revised Date	Location	Page(s)	Replace	With
26 August 2024	Example 1	324	$EffDur = \frac{(PV_-) - (PV_+)}{2 \times (\Delta Curve) \times (PV_0)}.$ $EffDur = \frac{(102.891) - (99.050)}{2 \times (0.00025) \times (101.060)}.$ $EffDur = 7.601.$ $EffCon = \frac{[(PV_-) + (PV_+) - 2 \times (PV_0)]}{(\Delta Curve)^2 \times (PV_0)}.$ $EffCon = \frac{[(102.891) + (99.050)] - [2 \times (101.060)]}{(0.00025)^2 \times (101.060)}.$ $EffCon = -283.$	$EffDur = \frac{(PV_-) - (PV_+)}{2 \times (\Delta Curve) \times (PV_0)}.$ $EffDur = \frac{(102.891) - (99.050)}{2 \times (0.0025) \times (101.060)}.$ $EffDur = 7.601.$ $EffCon = \frac{[(PV_-) + (PV_+) - 2 \times (PV_0)]}{(\Delta Curve)^2 \times (PV_0)}.$ $EffCon = \frac{[(102.891) + (99.050)] - [2 \times (101.060)]}{(0.0025)^2 \times (101.060)}.$ $EffCon = -283.$
26 August 2024	Question Set, Solution 2	325	$EffDur = \frac{(PV_-) - (PV_+)}{2 \times (\Delta Curve) \times (PV_0)}.$ $EffDur = \frac{(103.891) - (100.004)}{2 \times (0.00025) \times (102.208)}.$ $EffDur = 76.061.$	$EffDur = \frac{(PV_-) - (PV_+)}{2 \times (\Delta Curve) \times (PV_0)}.$ $EffDur = \frac{(103.891) - (100.004)}{2 \times (0.0025) \times (102.208)}.$ $EffDur = 7.6061.$

Curve-Based and Empirical Fixed-Income Risk Measures

Revised Date	Location	Page(s)	Replace	With
26 August 2024	Question Set, Solution 4	326	**Solution:** $EffCon = \frac{[(PV_{-}) + (PV_{+})] - [2 \times (PV_0)]}{(\Delta Curve)^2 \times (PV_0)}.$ $EffCon = \frac{[(103.891) + (98.504)] - [2 \times (102.208)]}{(0.00025)^2 \times (102.208)}.$ $EffCon = -3{,}164.$	**Solution:** $EffCon = \frac{[(PV_{-}) + (PV_{+})] - [2 \times (PV_0)]}{(\Delta Curve)^2 \times (PV_0)}.$ $EffCon = \frac{[(103.891) + (98.504)] - [2 \times (102.208)]}{\mathbf{(0.0025)}^2 \times (102.208)}.$ $EffCon = -3{,}164.$
26 August 2024	Exhibit 5	331	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.	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**.

Curve-Based and Empirical Fixed-Income Risk Measures

Revised Date	Location	Page(s)	Replace	With
15 October 2024	Practice Problems, Solution 3	339	%Δ*PVFull* Bond A ≈ (–7.48621 × 0.0100) + [½ × 29.35972 × (–0.0100)2] = –7.33941%. %Δ*PVFull* Bond B ≈ (–7.23853 × 0.0100) + [½ × –321.75618 × (0.0100)2] = –8.84730%.	%Δ*PVFull* Bond A ≈ (–7.48621 × **0.0200**) + [½ × 29.35972 × (–**0.0200**)2] = –7.33941%. %Δ*PVFull* Bond B ≈ (–7.23853 × **0.0200**) + [½ × –321.75618 × (**0.0200**)2] = –8.84730%.

Credit Risk

Revised Date	Location	Page(s)	Replace	With
26 August 2024	Learning Module Self-Assessment, Question and Solution 2	342 - 343	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.	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)

Credit Risk

Revised Date	Location	Page(s)	Replace	With
26 August 2024	Question Set, Question and Solution 2	373 - 374	C. 54 bps. __________ 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%).	C. **0.54 bps** __________ 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%).
26 August 2024	Practice Problems, Solution 6	377 - 378	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.	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

Revised Date	Location	Page(s)	Replace	With
26 August 2024	Practice Problems 7 – 8	524	Practice Problems 7 and 8 should be together as 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 Instrument and Derivative Market Features

Revised Date	Location	Page(s)	Replace	With
4 June 2025	Paragraph under Exhibit 4	14	London Metals Exchange (LME)	London Metal Exchange (LME)

Forward Commitment and Contingent Claim Features and Instruments

Revised Date	Location	Page(s)	Replace	With
4 June 2025	Example 2 image, paragraph under Ex. 2 image, Paragraph under Ex. 2, Example 3 image	30, 31, 32	London Metals Exchange (LME)	London Metal Exchange (LME)

Derivative Benefits, Risks, and Issuer and Investor Uses

Revised Date	Location	Page(s)	Replace	With
26 August 2024	Question Set, Solution 2	66	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.	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

Revised Date	Location	Page(s)	Replace	With
31 January 2024	Example 6	90	$F_{0,(f/d)}(T) = 1.3325 = \frac{AUD1,333.80}{AUD1,001}$	$F_{0,(f/d)}(T) = 1.3325 = \frac{AUD1,333.83}{USD1,001}$
22 August 2024	Question Set, Question 2	93	B. A foreign currency forward where the domestic risk-free rate is greater than the foreign risk-free rate	B. A foreign currency forward where the **foreign** risk-free rate is greater than the **domestic** risk-free rate

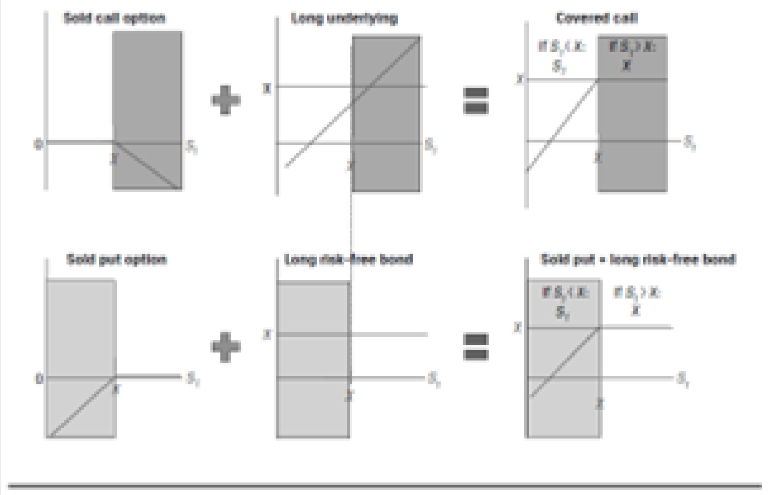
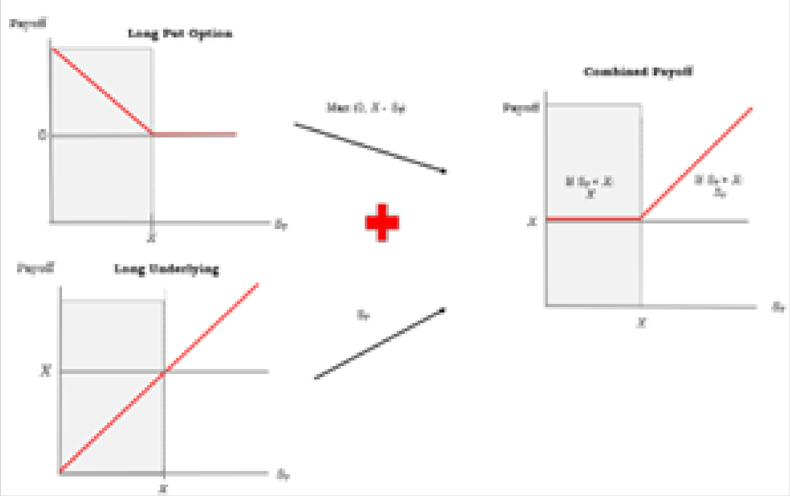
Pricing and Valuation of Forward Contracts

Revised Date	Location	Page(s)	Replace	With
8 March 2024	Solution 5	110-111	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-(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-(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-(0.035 – -0.005)×(0.5) − 16.5 = 16.909 − 16.5 = 0.4090

Pricing and Valuation of Forward Contracts

Revised Date	Location	Page(s)	Replace	With
15 October 2024	Exhibit 9	118	Mentions of the word "player"	The word "payer"
31 January 2024	Example 2, Solution 1	131	$f_0(T) = (\$1{,}770.00 + \$1.99)(1.02)^{-0.24982}$	$f_0(T) = (\$1{,}770.00 + \$1.99)(1.02)^{0.24982}$ = \$1,780.78 per ounce.

Option Replication Using Put-Call Parity

Revised Date	Location	Page(s)	Replace	With
8 March 2024	Exhibit 3	199		

Valuing a Derivative Using a One-Period Binomial Model

Revised Date	Location	Page(s)	Replace	With
23 September 2024	Second sentence	223	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.	**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.

Alternative Investments

Alternative Investment Features, Methods, Structures

Revised Date	Location	Page(s)	Replace	With
31 January 2024	Solution 6	32	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.	**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

Revised Date	Location	Page(s)	Replace	With
28 July 2025	Knowledge Check	38	IRR 20%	IRR **6.82%**
31 January 2024	Example 4, Question 2	47	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.	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.

Alternative Investment Performance and Returns

Revised Date	Location	Page(s)	Replace	With
8 March 2024	Example 4, Solution 2	48	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.	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 x r_m) + max {0,P_2(1-r_m) – P_{HWM}] x 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.

Alternative Investment Performance and Returns

<table>
<tr><th>Revised Date</th><th>Location</th><th>Page(s)</th><th>Replace</th><th>With</th></tr>
<tr>
<td>8 March 2024</td>
<td>Example 4, Solution 3</td>
<td>48 - 49</td>
<td>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 $122.7 million, the ending value in the first year, P1.
Kettleside Timberland LP Performance Fee Modifications
<table>
<tr><th>Year</th><th>Fund Value ($m), after Fees</th><th></th></tr>
<tr><td>0</td><td>100.00</td><td></td></tr>
<tr><td>1</td><td>122.70</td><td>← High-Water Mark</td></tr>
<tr><td>2</td><td>108.90</td><td></td></tr>
</table>
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.</td>
<td>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 $122.7 million, the ending value in the first year, P1.
Kettleside Timberland LP Performance Fee Modifications
<table>
<tr><th>Year</th><th>Fund Value ($m), after Fees</th><th></th></tr>
<tr><td>0</td><td>100.00</td><td></td></tr>
<tr><td>1</td><td>122.70</td><td>← High-Water Mark</td></tr>
<tr><td>2</td><td>108.90</td><td></td></tr>
</table>
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.</td>
</tr>
</table>

Investments in Private Capital: Equity and Debt

Revised Date	Location	Page(s)	Replace	With
4 November 2024	Self-Assessment, Question 4	67	As the loan amortizes, its outstanding principal declines, increasing LTV.	As the loan amortizes, its outstanding principal declines, **decreasing** LTV.
29 August 2024	Example 4	81	As Peterburgh amortizes the loan, the outstanding principal of the mortgages decline, which increases the LTV value.	As Peterburgh amortizes the loan, the outstanding principal of the mortgages decline, which **decreases** the LTV value.
8 March 2024	Solution 7	90	A is correct. While private capital can have overall positive contributions to diversification, direct lending can involve a large capital commitment to a single borrower, with increased concentration risk and reduced diversification. Investors attempt to protect against the risk of direct lending by having the debt itself classified as senior and secured with protective covenants in place to benefit from the associated higher interest rates while reducing non-diversifiable specific risk associated with a single borrower	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

Revised Date	Location	Page(s)	Replace	With
31 January 2024	Question 6	117	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.	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

Revised Date	Location	Page(s)	Replace	With
13 September 2024	Learning Module Self Assessment, Solution 4	123	A and B are both incorrect because interest and storage reflect costs associated with owning the physical commodity.	A and **C** are both incorrect because interest and storage reflect costs associated with owning the physical commodity.

Hedge Funds

Revised Date	Location	Page(s)	Replace	With
4 June 2025	Learning Module Self Assessment, Question/Solution 5	149 - 150	1. 16.38 Return to the investors = 20 million – 3.72 million = 16.38 million. Investors' return = 16.38%.	1. 16.28 Return to the investors = 20 million – 3.72 million = **16.28 million.** Investors' return = **16.28%.**

Portfolio Management

Portfolio Risk and Return: Part I

Revised Date	Location	Page(s)	Replace	With
8 March 2024	Example 5	28	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%.	Rp = w1 × R1 + (1 – w1) × R2 = 0.6 × 0.055 + 0.4 × **0.007** = 0.0358 ≈ 3.6%.

Portfolio Risk and Return: Part II

Revised Date	Location	Page(s)	Replace	With
31 January 2024	Example 8, Solution 1	91	Replace the second calculation under Solution: $E(Ri) = Rf + \beta i[E(Rm) – Rf]$ $= 0.04 + 1.30 \times (0.16 – 0.04)$ $= 0.196$ $= 19.6\%$	$E(\mathbf{R}_p) = R_f + \boldsymbol{\beta}_p[E(R_m) – R_f]$ $= 0.04 + 1.30 \times (0.16 – 0.04)$ $= 0.196$ $= 19.6\%$
1 November 2024	Example 10, paragraph after exhibit 8	101	Mˆ2 and αˆi are performance measures relative to the market, so they are both equal to zero for the market portfolio.	Mˆ2 **alpha** and αˆi are performance measures relative to the market, so they are both equal to zero for the market portfolio.

Glossary

Key Terms

Revised Date	Location	Page(s)	Replace	With
4 November 2024	Amortizing debt	G-1	A loan or bond with a payment schedule that calls for periodic payments of interest and repayments of principal.	A loan or bond with a payment schedule that calls for **the complete repayment of principal over the instrument's time to maturity.**
19 May, 2025	Hedge ratio	G-14	The proportion of an underlying that will offset the risk associated with a derivative position	The proportion of an underlying **investment position** that will offset the risk associated with a derivative position