2020 CFA® Exam Prep

IFT Mock Exams

Level II

Mock Exam 1

Document Version: 1.0
Publish Date: Feb 12, 2020
Updated: Feb 12, 2020
Errata information can be found at https://goo.gl/cJBUV1

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Exam 1 Morning Session

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	Total:	**180**

Start time: 9:00 AM

End time: 12:00 PM

Allocate an average of 3 minutes per question for a total of 180 minutes (3 hours).

Minenhle Talbot Case Scenario (Questions 1 – 6)

Minenhle Talbot, CFA, a former employee of Dekso Chemicals Inc. (DCI), has recently joined Gold Crest Investment Advisors as the chief investment officer. She is informed by Gold Crest Investment Committee to look into the accounts of DCI, which is on their investment list but now will be put on hold due to an inquiry filed by the regulator yesterday against the company's investment bankers – Ackso Capital and its Chief Financial Officer (CFO). Talbot learns from the newspapers that the regulator has placed Ackso, the lead underwriters of the follow-on equity offering of DCI, under investigation for alleged price-setting and misleading of market participants by the CFO and his team. The inquiry amidst intense media coverage has been initiated one month after Ackso's CFO, Mike Vanlucker retired.

Talbot headed the treasury and investments department at DCI up until a month ago and knew nothing of any market fraud or price-volume distortion, despite being involved in the company's equity offering. Intrigued by these developments, she calls Kris Hoffman, a CFA candidate, who works in the Corporate Finance Department of Ackso. Hoffman headed the team of underwriters and acted as the investor relations officer of the issue. The offering, approved by the capital markets regulator, was hugely successful and oversubscribed.

Hoffman tells Talbot that he was shocked by the inquiry, as there was no suspicious activity of any kind when his team diligently worked on the offering documents and reminded Talbot that the compliance officer, along with her had signed off on all of the public marketing materials of the issue, after an extensive review and financial analysis. Hoffman states, "Issuance guidelines were followed as stipulated by the regulator, who reviewed the procedures and raised no objections at the time."

Concerned with the impact of the inquiry on its clientele, Ackso's management instructs Hoffman to issue a public statement regarding the capital market regulator's investigations for price-setting and involvement of the now retired CFO of the bank. Hoffman prepares the following three draft statements for the management.

Statement 1 "Ackso Capital is under investigation by the capital markets regulator because of illegal activity by Mr. Vanlucker, the retired CFO, and his underwriting team for Dekso Chemicals Inc."

Statement 2 "The capital markets regulator has placed Ackso Capital under investigation for the alleged involvement in illegal activity by its former senior manager and his team."

Statement 3 "Ackso Capital has been placed under investigation by the capital markets regulator as a result of illegal activity."

Following Ackso's press release, Hoffman receives inquiries and several phone calls from investment advisers who purchased the issue for their clients. One adviser, Raul Bhavin, threatens to report Hoffman to CFA Institute for violating his fiduciary duty. Hoffman responds, "You can report to CFA Institute if you like, because I haven't violated the Code of Ethics and Standards of Professional Conduct. As a Level III candidate in the CFA Program, I know my ethical responsibilities towards the clients because of the ethics portion covered in all of the three CFA exams. The CFA Program ensures one of becoming better at preserving the integrity of capital markets."

In view of Ackso's investigation, Talbot decides to go over her company's compliance policies and procedures to ensure they are in accordance with the CFA Institute Standards of Professional Conduct. She checks the firm's firewall elements involving interdepartmental communication of corporate finance department with sales and research departments. Talbot discovers gaps regarding communications of sensitive information across departments and firm's proprietary trading policies with respect to the recently implemented laws of the regulator. Worried that the firm could already be in trouble, Talbot elects to update them with the help of the compliance officer immediately.

Next Talbot reviews the firm's conflicts of interest policies and recommends changes to the firm's investment committee and board. Talbot makes the following revisions to the existing policy:

Revision 1: Materially beneficial ownership in stock by staff should be reported to both employer and clients with proper reporting requirements for personal transactions.

Revision 2: Any investment banking, underwriting and financial relationship with companies or issuer should be closely monitored by the firm when the investment advisory staff is recommending the securities of the same company or issuer to clients.

Following a complaint from one of the firm's potential clients – Avri Insurance, about the lack of information of the performance history of accounts and the absence of comparative data with similar portfolios under Gold Crest's management, Talbot calls them. During the phone conversation Talbot states, "We are reviewing and updating our compliance policies, including performance presentation reporting procedures. I can assure you that the new reporting requirements will meet your demands completely."

1. Based on the information given, are Hoffman and the compliance officer *most likely* in violation of the CFA Institute Standards of Professional Conduct regarding their role in Ackso's underwriting of DCI's issue?

A. Yes, with regard to market manipulation.
B. Yes, with regard to responsibilities of supervisors.

C. No.

2. Which statement would *least likely* violate any CFA Institute Standards of Professional Conduct when used as a press release?
A. Statement 1.
B. Statement 2.
C. Statement 3.

3. Does Hoffman *most likely* violate any CFA Institute Standards of Professional Conduct during his argument with the investment advisor?
A. No.
B. Yes, with regard to the CFA Program ensuring one of better preservation of capital markets' integrity.
C. Yes, with regard to the ethics portion of the CFA exam.

4. To comply with CFA Institute Standards of Professional Conduct, the action *most likely* required by Talbot regarding appropriate procedures for interdepartmental communications and proprietary trading policies is:
A. to ask the compliance officer to review all policies.
B. initiate training of the firm's key personnel in the new law.
C. to establish procedures by which employees are timely informed about changes in applicable laws.

5. Which of Talbot's revisions related to disclosure of conflicts of interest *most likely* conform to the CFA Institute Standards of Professional Conduct?
A. Revision 1.
B. Revision 2.
C. Both.

6. Which of the following should Talbot *least likely* consider when revising the performance presentation policy?
A. Presenting the performance of the weighted composite of similar portfolios in client presentations.
B. Disclosure explaining performance results and inclusion of terminated accounts as part performance history where necessary.
C. Performance presentation language to be in line with the knowledge of the audience.

Debra Spalding Case Scenario (Questions 7 – 12)

Debra Spalding, is a portfolio manager for Altvest Wealth Management (AWM), a boutique wealth management firm based in New York, U.S.A. which specializes in developing

17. The poor investment performance *most likely* caused the periodic pension cost (in $-millions) reported in the 2016 income statement (assuming no amortization of past service costs or actuarial losses) to be:
A. unaffected.
B. higher by $74.80 million.
C. higher by $340 million.

18. The *most* appropriate economic interpretation of Palladium Corp.'s contribution to the 2016 pension plan relative to its total pension cost (excluding income tax effects) is a(n):
A. financing cash outflow.
B. financing cash inflow.
C. operating cash inflow.

Pantax Chemical Inc. Case Scenario (Questions 19 – 24)

Pantax Chemical Inc. is a multidivisional company, manufacturing chemicals, plastics, performance chemicals, catalysts, and agri-based chemical products. Rana Haasim, a finance manager of a subdivision, is forecasting the profitability of a four-year project for the manufacturing of protective coatings for surface insulation and waterproofing. Pantax is introducing this as a new product and its manufacture will require new equipment. Exhibit 1 summarizes Haasim's forecasted financial projections for the project.

Exhibit 1 Protective Coatings Project Financial Projections
(Values are year-end totals in €' 000s)

	Year 0	Year 1	Year 2	Year 3	Year 4
Market Survey/Consultant Fee	8,250				
Fixed Capital	140,000				
Additional Net Working Capital	20,000				
Sales		100,000	125,000	156,250	195,300
Operating Costs		50,000	62,500	78,125	97,650
Depreciation		35,000	35,000	35,000	35,000
EBIT		15,000	27,500	43,125	62,650
Interest		6,500	5,057	3,500	1,817
EBT		8,500	22,443	39,625	60,833
Tax (34%)		2,890	7,631	13,473	20,683

Net Income before Salvage		5,610	14,812	26,153	81,516
Salvage Value					9,500
Tax on Salvage Value (34%)					3,230
After-Tax Salvage Value					6,270

Haasim discusses the project with Pantax's CFO, Ma Jun and outlines the following features:

I Project assumptions are based on the fact that the capital structure - the overall debt and equity mix of the project, will be the same as the firm as a whole. Pantax's debt-to-total assets ratio is 50%.

II However, instead of using Pantax's weighted average cost of capital (WACC) of 7.245%, the project should be evaluated with a project-specific discount rate as the risk of the project is not similar to any of the firm's current projects. The beta of the protective coatings project as determined by the pure play method is 1.2, the T-Bill rate is 3.0% and the market risk premium is 8.0%.

III. All additional working capital investments will be recovered in the final fourth year of the project.

Upon a query about the evaluation methods considered, Haasim replies that she has computed the NPV at the project-specific discount rate and the economic profit using Pantax's WACC of 7.245% as the discount rate. The NPV calculated at the project-specific discount rate is €30.1 million. Jun asks Haasim to consider the profit realized from this investment by calculating the economic income of the project as economic income is different from accounting income. Haasim makes the following computations shown in Exhibit 2:

Exhibit 2 Computations for Protective Coatings Project Economic Income (in €1,000)

Year	1	2	3	4
Beginning market value	190,086.5	169,137.4	137,298.7	91,135.9
Ending market value	169,137.4	137,298.7	91,135.9	0
Change in market value	-20,949.1	-31,838.7	-46,162.8	-91,135.9

After some discussion, Jun suggests that an alternative surface adhesive project will perform the same task as the protective coatings project. The surface adhesive project is for a six-year period. Haasim calculates its NPV with the same discount rate used for the original protective coatings project. Jun states, "The two projects are mutually exclusive, therefore it

is best to use the equivalent annual annuity approach to decide between them." The NPVs of the two projects are presented in Exhibit 3.

Exhibit 3 Comparison of Project NPVs

Project	Project Life	NPV
Protective Coatings	4 years	€30,086,521
Surface Adhesive	6 years	€38,210,000

19. Based on Exhibit 1, the total after-tax (operating and non-operating) cash flow in (€1,000) for Year 4 is *closest* to:
A. 96,349.
B. 76,349.
C. 102,619.

20. Based on Exhibit 1, the economic profit in (€1,000) for Year 1 is *closest* to:
A. -243.
B. -1,692.
C. -5,982.

21. Based on Exhibit 1 and Exhibit 2, the economic income in (€1,000) for Year 1 is *closest* to:
A. 9,900.
B. 23,950.
C. 20,949.

22. The *least likely* difference between economic income and accounting income is:
A. accounting income is the after-tax income remaining after paying interest expenses, whereas interest expenses are not included in economic income.
B. accounting depreciation is based on the current cost of the investment, whereas the economic income considers the historical cost of investment.
C. accounting income is the net income after tax, whereas economic income is the after-tax operating cash flow less the economic depreciation.

23. Based on the first conversation with Jun, the *most* appropriate cost of equity (%) for determining the net present value for the proposed new protective coatings project is:
A. 12.6%.
B. 10.2%.
C. 14.0%.

24. Based on the equivalent annual annuity method for the protective coatings and alternative projects, the *most appropriate* conclusion is to:

Exam 1 Morning Session Solutions

1	C	21	B	41	C
2	B	22	B	42	A
3	B	23	A	43	B
4	C	24	C	44	B
5	A	25	A	45	B
6	B	26	B	46	B
7	B	27	B	47	C
8	B	28	C	48	C
9	C	29	A	49	B
10	C	30	C	50	A
11	A	31	A	51	C
12	B	32	A	52	B
13	B	33	B	53	A
14	B	34	C	54	C
15	C	35	B	55	A
16	A	36	C	56	C
17	A	37	B	57	A
18	B	38	A	58	A
19	C	39	C	59	B
20	B	40	B	60	C

Value of invested capital	$50,568,000
Less: debt value	$15,170,400
Indicated value of equity	35,397,600

Private Company Valuation. Section 4.3.1. LO.i.

31. A is correct. A residual income model is applied when a company does not pay dividends, or its dividends are not predictable; a company's expected free cash flows are negative within the forecast period; significant departures from clean surplus accounting do not exist; great uncertainty exists in forecasting terminal values using other valuation approaches, and inputs of the RI model such as book value and ROE are predictable. Hence Sedgwick's comment I is incorrect. *Section 4.2. LO.j. Residual Income Valuation*.

32. A is correct. Sedgwick correctly states that asset-based valuation is used for companies that control resources. Sum-of-the-parts valuation approach is typically used for companies with various businesses considered as independent, going-concern entities. A sum-of-the-parts valuation sums the estimated values of each of the company's businesses as if each business were an independent going concern. When a company is in financial distress, its **liquidation value** which is its value if it were dissolved and its assets sold individually is estimated. *Section 3.3. LO.f. g. Equity Valuation: Applications and Processes*.

33. B is correct. There is no residual income after year 4, the residual income valuation model is: $V_0 = B_0 + \sum_{t=1}^{\infty} \frac{RI_t}{(1+r)^t}$.

$V_0 = 25.00 + PV\ of\ RI(year\ 1-4)\ at\ 10\% =$ €38.0252.

Where V_0 is calculated by using the CF editor of the Financial Calculator: CF0 = 25; CF1 = 5.20, CF2 = 4.4. CF3 = 3.25, CF4 = 3.25, I = 10, NPV CPT = 38.0252. *Section 3. LO.c. Residual Income Valuation*.

34. C is correct. Based on the relationship $RI_t = E_t - rB_{t-1} = (ROE_t - r) \times B_{t-1}$. Besides calculating the current rate of abnormal earnings, $(ROE_t - r)$, one must calculate the beginning of year book values, B_{t-1}. As the table shows, $B_t = B_{t-1} + E_t - D_t$. Using the information of Exhibit 2:

Year$_t$	**1**	**2**	**3**	**4**
B_{t-1}	€25.00	€31.75	€37.69	€43.23
$E_t = ROE_t \times B_{t-1}$	8.75	7.94	7.54	6.49
D_t	2.00	2.00	2.00	2.00
$B_t = B_{t-1} + E_t - D_t$	31.75	37.69	43.23	47.72
ROE_t	35%	25%	20%	15%
$(ROE_t - r)$	25%	15%	10%	5%
$RI_t = (ROE_t - r) \times B_{t-1}$	€6.25	€4.76	€3.77	€2.16

Using the equation: $V_0 = B_0 + \sum_{t=1}^{\infty} \frac{RI_t}{(1+r)^t}$ Using the FC: $V_0 = 25 + PV\ of\ RI_t\ Yr\ 1-4 =$ €38.9235. *Section 3.1. LO.c. d. Residual Income Valuation*.

35. B is correct. Sedgwick incorrectly states assumption 2, because a persistence factor of one implies that residual income will not fade at all; but will continue indefinitely. The higher the value of the persistence factor, the higher the residual income in the final stage, and the higher the valuation, all else being equal. *Section 3.4. LO.h. Residual Income Valuation*.

36. C is correct. Pairs trading is based on buying an undervalued stock and shorting an overvalued stock in the same industry. Krishan should buy Palmer Consumer Company (18% undervalued) and short Colby Inc. (14% overvalued). *Section 3.3. LO.f. Equity Valuation: Applications and Processes*.

37. B is correct. Valuation of WSB three-year 5.25% annual coupon Bond A callable at par one year and two years from now at 15% interest rate volatility is as follows:

Valuation as at:

Year 2: $\frac{105.25}{1.074832} = 97.9223 + 5.25 = 103.1723$

$\frac{105.25}{1.055437} = 99.7217 + 5.25 = 104.9717$

$\frac{105.25}{1.041069} = 101.098 \rightarrow$ *Call at 100:* 100+5.25=105.25

Year 1:0.5 x $\left(\frac{103.1723}{1.057678} + \frac{104.9717}{1.057678}\right) = 98.3967 + 5.25 = 103.6467$

0.5 x $\left(\frac{104.9717}{1.042729} + \frac{105.25}{1.042729}\right) = 100.8036 \rightarrow$ *Call at 100:*100+5.25=105.25

Year 0: 0.5 x $\left(\frac{103.6467}{1.044} + \frac{105.25}{1.044}\right) = 100.0463$ per cent of par. *Valuation and Analysis: Bonds with Embedded Options. Section 3.5.1. LO.f.*

38. A is correct. Valuation of a three-Year 4.75% annual coupon Bond C Putable at par one year and two years from now at 15% interest rate volatility:

Valuation as at:

Year 2: $\frac{104.85}{1.074832} = 97.5501 \rightarrow$ *Put at 100:* 100+4.85 = 104.85