



**STRATHMORE UNIVERSITY BUSINESS SCHOOL
BACHELOR OF FINANCIAL SERVICES
AMS 3202: VENTURE CAPITAL AND PRIVATE EQUITY
END OF SEMESTER EXAM**

Date: 7th December, 2022

Time: 2 Hours

INSTRUCTIONS:

- 1. Question One is compulsory**
- 2. Answer any TWO questions choosing from question two to five**

QUESTION ONE (30 Marks)

- a) Distinguish between private equity investing/financing and public equity investing. **(10 Marks)**
- b) Medex Startup is seeking financing from a venture capital fund by the name of Culture Ventures. Studying their crystal ball, the founders of Medex expect to be able to sell the company for \$40 million in five years. At this point they need to raise \$5 million. Culture Ventures considers this a risky business and wants to apply a discount rate of 40% to be adequately compensated for the risk they will bear. The entrepreneurs own 1 million shares.

Required

- i. Discuss FIVE factors that Culture Ventures will evaluate when carrying due diligence on Medex startup. **(10 Marks)**
- ii. Compute the following:
 - a) The Post-Money Valuation **(2 Marks)**
 - b) The Pre-Money Valuation **(2 Marks)**
 - c) The Ownership Fraction **(2 Marks)**
 - d) The Number of Shares **(2 Marks)**
 - e) The Price per Shares **(2 Mark)**

QUESTION TWO (20 Marks)

- (a) Explain the FIVE stages of Private Equity funding **(10 Marks)**
- (b) The GP for Excel Private Equity Fund charges a management fee of 2% and carried interest of 20%, using the first total return method. The total committed capital for the fund was sh.15 billion. The statistics for years 2016-2021 are shown in the following table:

Year	Capital Called down	Paid-n Capital	Management Fees	Operating results	NAV Before Distributions	Carried Interest	Distributions	NAV after Distributions
	sh.m	sh.m	sh.m	sh.m	sh.m	sh.m	sh.m	sh.m
2016	5,000	5,000	?	-1,000	?	?		?
2017	2,000	7,000	?	-2,500	?	?		?
2018	3,000	10,000	?	2,500	?	?		?
2019	2,000	12,000	?	5,000	?	?	2,000	?
2020	1,000	13,000	?	6,000	?	?	4,000	?
2021	1,000	14,000	?	11,000	?	?	8,000	?

Required

Compute the following for each year:

- i. Management Fees **(2 Marks)**
- ii. NAV Before Distributions **(2 Marks)**
- iii. Carried interest **(2 Marks)**
- iv. NAV after Distribution **(2 Marks)**
- v. Distributed to Paid (DPI) and Residual Value to Paid In (RVPI) for 2021. **(2 Marks)**

Hint: For (i) to (iv) present a complete table.

QUESTION THREE (20 Marks)

- a) Suppose Medsup Fund has a committed capital of \$100 million and carried interest of 20%. An investment of \$40 million is made. Later in the year, the fund exits the investment and earns a profit of \$22 million.

Required:

Determine whether the GP receives any carried interest under the three distribution waterfall methods **(5 Marks)**

- b) Continuing with Medsup, assume in the second year, another investment of \$25 million is exited and results in a loss of \$4 million. Assume the deal-by-deal method and a claw-back with annual true-up apply. Determine whether the GP must return any former profits to the: LPs **(3 Marks)**
 - i. Distinguish between equity sponsored buyout and leveraged buyout as strategies that the PE fund can use to exit a PE company. **(4 Marks)**
 - ii. Provide FOUR benefits and FOUR limitations of Management Buyout (MBO) as an exit strategy from a PE company **(8 Marks)**

QUESTION FOUR (20 Marks)

- a) Discuss THREE reasons to justify PE Investing and Financing **(6 Marks)**
Highlight FOUR issues that a PE Investor will likely evaluate before using a PE fund for PE investing **(8 Marks)**
- b) Explain the meaning of the following risk factors that a PE investor faces:
 - (i) Agency Risk **(2 Marks)**
 - (ii) Capital Risk **(2 Marks)**
 - (iii) Market Risk **(2 Marks)**

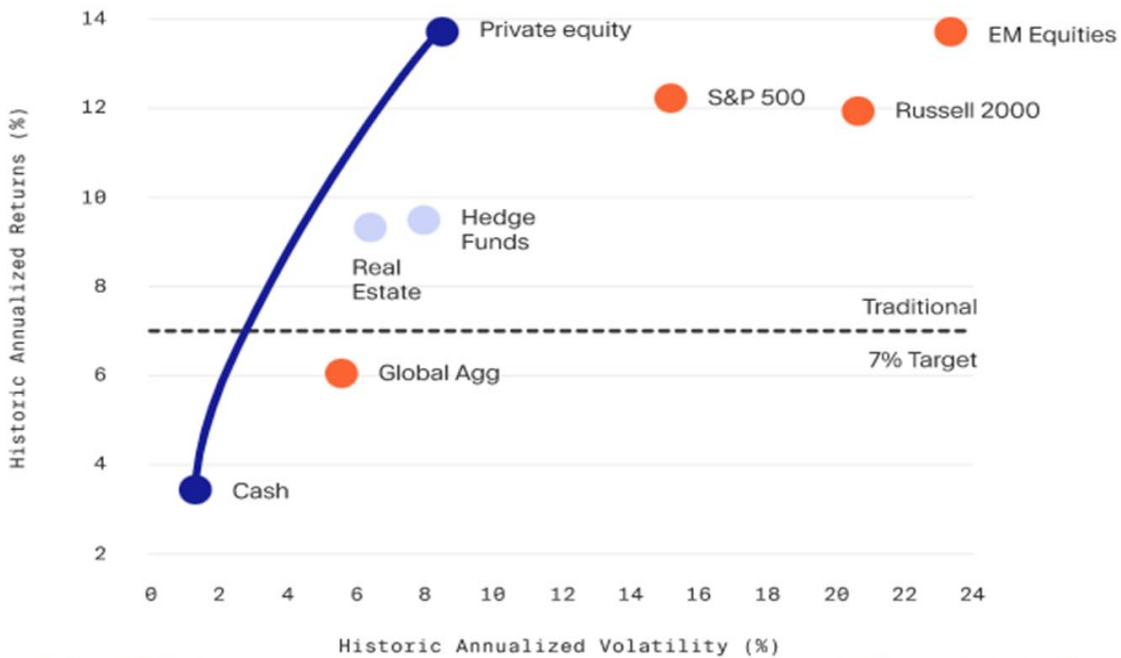
QUESTION FIVE (20 Marks)

(a) Distinguish between Artificial Intelligence and Machine Learning and highlight their use in Private Equity Investing/Financing **(6 Marks)**

(b) A PE Investor is evaluating various data and charts on PE Investing. The following three charts are available:

Chart 1:

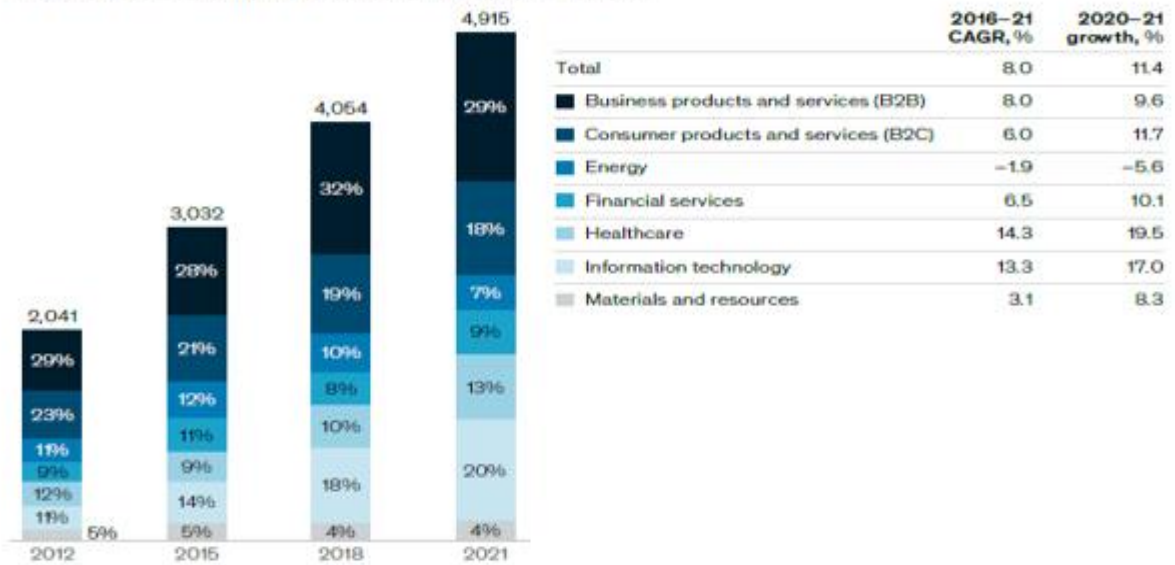
Historic Annualized Returns vs. Risk, %



From 1Q86 to 4Q20 where data is available, deemphasizing 2008 and 2009 returns at one-third the weight due to the extreme volatility and wide range of performance, which skewed results. Using MSCI AC World Gross USD for Listed Equities; Barclays Global Agg Total Return Index Unhedged USD for Fixed Income; Cambridge Associates Global Private Equity for Private Equity; HFRI Fund Weighted Composite Index for Hedge Funds; and Barclays US T-Bills 3-6 Months Unhedged USD for Cash. Source: Bloomberg, MSCI, Cambridge Associates, KKR Global Macro & Asset Allocation analysis.

Chart 2

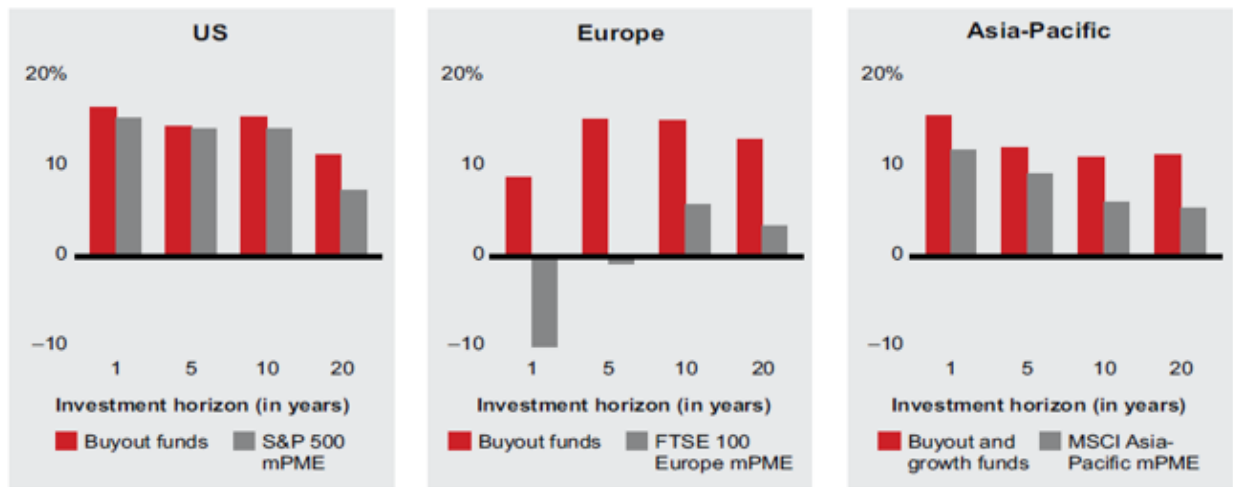
Global PE deal volume by sector, trailing 3 years,¹ \$ billion



Notes: Figures may not sum precisely, because of rounding.
¹Includes PE buyout/LBO (add-on, asset acquisition, carve-out, corporate divestiture, debt conversion, distressed acquisition, management buyout, management buy-in, privatization, recapitalization, public-to-private, secondary buyout); PE growth/expansion (recapitalization, dividend recapitalization, and leveraged recapitalization); platform creation.
 Source: PitchBook.

Chart 3

End-to-end pooled net IRR as of Q3 2020 for ...



Notes: Data for US and Asia-Pacific calculated in US dollars; data for Europe calculated in euros; Europe includes developed economies only; Cambridge Associates Modified Public Market Equivalent (mPME) replicates private investment performance under public market conditions
 Source: Cambridge Associates

Required:

For each chart, what can the investor infer about PE Investing? (9 Marks)

(c) Explain the meaning of financial distress in a PE Company and the reason why a PE fund/PE investor opt for financial restructuring as opposed to liquidating a financially distressed PE Company (5 Marks)