Onix

OPRE 6301: Major Assessment 1

Question 1: (25 points)

Write a maximum one-page response with your excel documentation as support (appendices).

- **With your group**, use the 5 years' worth of data on multiple stocks (NASDAQ, NYSE, and TSE) provided in the excel files to choose either 3 or 4 different stocks in which to invest. Describe why your group chose those particular stocks. (Did your group take into account Risk? Return? Correlation between stocks?)
- **As an individual**, determine how to invest in the stocks to create a portfolio – what is the weight of each stock? Why did you choose that weight? What is your expected return on your portfolio and your standard deviation?
- Share your results with your group; include the weights, expected return and standard deviation. **As an individual** decide which portfolio you prefer as an investment and why.

Excellent	Good	Fair	Poor
Evidence of using return, risk and correlation in choosing the four stocks. (6 – 5 point)	Used two of the return, risk or correlation in choosing the four stocks. (4 – 3 points)	Used only one of the return, risk or correlation in choosing the four stocks. (2 – 1 points)	No evidence of using return, risk or correlation in choosing the four stocks. (0 points)
Evidence of checking minimum of four portfolio options and using the data to determine which to use as an individual. (6 – 5 points)	Evidence of checking minimum of 2 or 3 portfolio options and using the data to determine which to use as an individual. (4 – 3 points)	Evidence of checking minimum of 1 portfolio option. (2 – 1 points)	No rational given for portfolio weights. (0 points)
Use statistics correctly to defend the final decision. Explanation includes a comparison against the group's portfolio submissions. (7 – 6 points)	Use statistics correctly to defend the final decision. Explanation includes a partial comparison against the group's portfolio submissions. (5 – 4 points)	Use statistics somewhat correctly to defend the final decision. Explanation may include a partial comparison. (3 – 2 points)	Might not have either used statistics to defend the decision or did not include a comparison to the group data. (1 – 0 points)
Follows page requirements, has proper grammar and has all excel calculations as support. (6 – 5 points)	Meets two of the three requirements. (4 – 3 points)	Meets one of the three requirements. (2 – 1 points)	Does not meet any of the requirements. (0 points)

50-50 split → where are your calc of Exp Value + risk for this weight?

why?

where is your group data?

write in paragraph is better.

Part A: You gave me the goals → what did you do to choose the four ... more detail. Correlation?

what are your goals - how do they tie to the 50-50 option?

(410)

Question 2: (15 points)

Find an article with at least one statistical graph similar to what has been studied in class thus far; an article related to your industry is highly preferred but not required. In reading the article and reviewing the graph, write a maximum one-page (or shorter) summary on whether the graph(s) is/are misleading.

- Give a brief summary of the graph including and why you think it is or is not misleading. Why do you believe that? Is this the best way to show the data (based on what we've discussed in class)? Why or why not? If not, what would you suggest to better represent the data?
- The following article may be helpful in identifying misleading graphs: http://news.nationalgeographic.com/2015/06/150619-data-points-five-ways-to-lie-with-charts/
- Make sure to include either a full copy of the article or a link to the article.

Excellent	Good	Fair	Poor
Correct analysis of graph(s); addresses and uses information from the National Geographic article. (5 – 4 points)	Correct analysis of graph(s); does not refer to the National Geographic article. (3 – 2 points)	Analysis of graph is not correct. (1 point)	No analysis is given. (0 points)
Graph example is misleading and is in the student's industry. It is an example of a graph discussed in class. (5 – 4 points)	Graph is an example of one discussed in class. (3 – 2 points)	Graph is not an example of one discussed in class. (1 point)	No graph is in the article. (0 points)
Follows page requirements, has proper grammar and has all excel calculations as support. (5 – 4 points)	Meets two of the three requirements. (3 – 2 points)	Meets one of the three requirements. (1 point)	Does not meet any of the requirements. (0 points)

– Summary of graph? ~~You guys~~

– How is the gap misleading?

– what labels are missing on this series of graphs?

– Recommendations?

+11

Question 3: (20 points)

Identify a process, decision model, situation, etc... that you implement or utilize at work which can be visualized through a probability tree. Write up the entire description in a maximum one-page (or shorter) summary.

- Describe the situation.
- Create the probability tree and include the probabilities. Indicate where the probabilities came from.
- Explain how you can the tree relates back to the situation already described and how the tree is used and/or can be implemented?

I can't tell if you're referencing 3 or 5 options.

Excellent	Good	Fair	Poor
Clear description of the situation with proper grammar. (5 – 4 points)	Description is clear but may not have proper grammar. (3 – 2 points)	Description is not clear; hard to follow. (1 point)	No description is given or the description does not make sense. (0 points)
Probability tree appears to match and follow the description. (5 – 4 points)	Probability tree mostly matches the description. (3 – 2 points)	It is unclear how the probability tree matches the description. (1 point)	There is no probability tree given. (0 points)
Probabilities given in the tree follow general probability rules. (5 – 4 points)	Probabilities given in the tree follows most of the probability rules. (3 – 2 points)	Probabilities given in the tree follows a minimum of the probability rules. (1 point)	Probabilities given in the tree to do not appear to follow any of the probability rules. (0 points)
Clear description on how the tree and situation match with proper grammar; document follows the given requirements of 1 page max. (5 – 4 points)	Somewhat clear description on how the tree and situation match with minimal grammar mistakes; document follows the given requirements of 1 page max. (3 – 2 points)	Not a clear description on how the tree and situation match; the document may either have multiple grammar mistakes or may not adhere to the one page max requirement. (1 point)	No description given. (0 points)

~~Isn't Home win the same as~~

Why wouldn't you sep out home win vs lose
away win vs lose

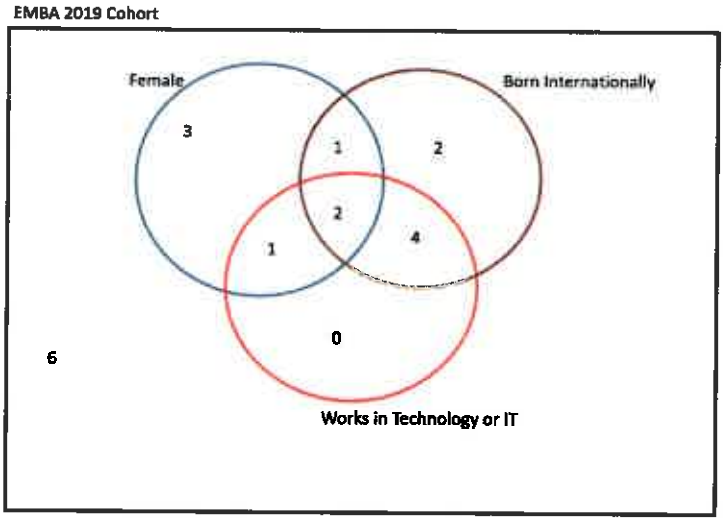
each of those are determined
both by team being played + the
ability to do well home/away.

14

Question 4: (15 points)

Use the venn diagram below to answer the following questions. This venn diagram represents the EMBA 2019 cohort in identifying "Female", "Born Internationally" and "Works in Technology or IT". (The diagram is also given in a power point file on eLearning if you'd like to work with the original document.)

- Part a: Give 1 – 2 sentences describing yourself in terms of the events of: Female (F), Born Internationally (B), and Working in IT (W). Identify yourself using AND, OR or NOT. Highlight the corresponding portion of the diagram below.
- Part b: Calculate the probability of being both female and born internationally.
- Part c: Calculate the probability of being either female or born internationally.
- Part d: Calculate the probability of being female in the IT/Technology industry, based on your cohort's data.



Part a	Description of self in sentence form Correct usage of AND, OR, NOT Portion colored in matches self-description	1 point ✓ 3 points ✓ 2 points ✓
Part b	Correct calculations	3 points ✓
Part c	Correct calculations	~~3 points~~ 0 /
Part d	Correct calculations	3 ~~points~~ 0

close

b)

c) 13/19

d) 3/7

+10

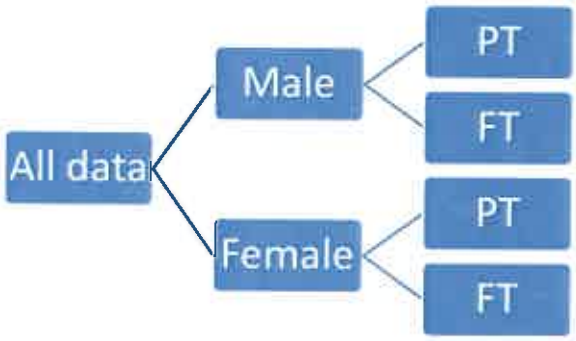
Question 5: (25 points)

Use the chart of data below to answer the following questions. This data represents the UTD enrollment over the last 5 years. (The data is also given in an excel file on eLearning if you'd like to work with the original document. Original data can be found: http://www.utdallas.edu/ospa/common-data-set/)

- Part a: Is being part time dependent upon gender?
- Part b: Is being probability of being a male enrolled student (or female) dependent upon year?

	Male Students		Female Students	
	M - PT	M - FT	F - PT	F - FT
Fall 2016	3,392	11,891	2,545	8,965
Fall 2015	3,271	10,656	2,386	8,241
Fall 2014	3,097	10,007	2,406	7,585
Fall 2013	2,957	8,998	2,230	7,008
Fall 2012	2,985	8,043	2,433	6,266

- Part c: Fill in the following probability tree, below, with the appropriate probabilities using the data from the above table.
- Part d: What is the probability that a part time student is female? Use the Bayes' theorem to answer the question (the tree should help). You can verify your answer using the table data if you like, but your work should follow Bayes' theorem for full credit.



Part a	Correct data being utilized Correct calculations	~~3 points~~ 1 ~~2 points~~ 0
Part b	Correct data being utilized Correct calculations	3 points 0 2 points
Part c	Correct data being utilized Correct calculations/probabilities	~~2 points~~ ~~6 points~~ filled in? (0)
Part d	Correct calculation using Bayes' Theorem Verification of data	5 points 2 points (0)

free?

independent?

+1