WORKSHOP

MICROSOFT OFFICE EXCEL

SHIPPING, FINANCE AND MANAGEMENT SKILLS

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Investment Problems
A) Loan Payment Analysis
B) Optimization problem given restrictions

A) LOAN PAYMENT ANALYSIS
Please, proceed with the following loan payment analysis:

1. Using the PMT function, calculate the monthly payment of a $10,000 loan with an annual interest rate of 6% (0.5% per month) over 5 years (60 months). The payment remains constant throughout the life of the loan.

2. Calculate the principal and interest components per repayment period, using the PPMT and IPMT functions respectively.
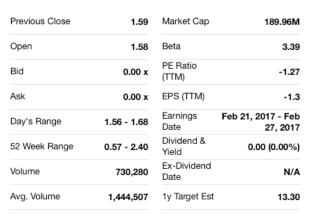
B) INVESTMENT PROBLEM
An investment trust needs to determine how to invest $100,000 in a collection of bonds to maximize the annual return. The manager of the trust wants to invest
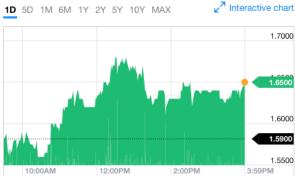
• at least 50% of the money in short term issues
• no more than 50% in high-risk issues
• at least 30% of the funds in tax-free investments.
• at least 40% of the total return should be tax free.

Calculate the optimal capital allocation that maximizes annual return, based on the restrictions described above.

C) CALCULATING THE BETA OF A STOCK

You have been asked to verify the value of the stock's beta for Navios Maritime Holdings Inc., as it appears in the following table.

Previous Close	1.59	Market Cap	189.96M	
Open	1.58	Beta	3.39	
Bid	0.00 x	PE Ratio (TTM)	-1.27	
Ask	0.00 x	EPS (TTM)	-1.3	
Day's Range	1.56 - 1.68	Earnings Date	Feb 21, 2017 - Feb 27, 2017	
52 Week Range	0.57 - 2.40	Dividend & Yield	0.00 (0.00%)	
Volume	730,280	Ex-Dividend Date	N/A	
Avg. Volume	1,444,507	1y Target Est	13.30	

Please, proceed with the following:

1.   Copy NYSE Composite (DJ) returns and paste them next to Navios Maritime Holdings returns.
2.   Add data bars to depict returns.
3.   Using regression analysis, calculate the beta of the stock.
4.   Calculate the average returns using the relevant AutoSum function shortcut.

Appendix:

Microsoft official support pages for the commands used in Part V

✓   Financial functions (reference)
✓   PMT function
✓   PPMT function
✓   Define and solve a problem by using Solver
✓   Add or remove add-ins in Excel
✓   Regression Analysis Using Excel