Financial Markets I Final Project Rubric

% Pts	<69%	70- 89%	>90%
	Need Improvement	**Meets Expectations**	**Exceptional**

Option Pricing in Excel *150 pts*	**Black Scholes Model** 1. Basic knowledge about Excel (open/close/save a file). 2. Introduce data into the Excel file 3. Introduce data about the parameters of Black-Scholes model: stock price, exercise price, volatility, risk free rate and maturity 4. Obtain d1 and d2 parameters dynamically by using a formula that includes the following Excel functions: LN, SQRT, / and +. **5.** Incorrect or incomplete information about N(d1), N(d2), N(-d1) and N(-d2). Does not know NORM.S.DIST Excel function **6.** Incorrect or incomplete formulas about call and put option prices. **7.** Search Microsoft stock price information on Yahoo Finance **8.** Introduce the specified parameters in Excel (point 2) **9.** Incorrect or incomplete information about call and put option price **Binomial Option Pricing Model in Excel** **1.** Introduce the parameters of BOPM in Excel: stock price, exercise price, volatility, risk free rate and maturity **2.** Calculate upward movement (u) and downward movement (d) using EXP and SQRT and / functions.	**Black Scholes Model** 1. Basic knowledge about Excel 2. Introduce data into the Excel file 3. Introduce data about the parameters of Black-Scholes model: stock price, exercise price, volatility, risk free rate and maturity **4.** Obtain d1 and d2 parameters dynamically by using a formula that includes the following Excel functions: LN, SQRT, / and +. 5. Obtain N(d1), N(d2), N(-d1) and N(-d2) parameters using NORM.S.DIST Excel function 6. Obtain the call and put option prices by applying the formula in Excel. Know how to use EXP function. **7.** Search Microsoft stock price information on Yahoo Finance **8.** Introduce the specified parameters in Excel (point 2) **9.** Obtain the call and put option prices as required in point 2 **Binomial Option Pricing Model in Excel** **1.** Introduce the parameters of BOPM in Excel: stock price, exercise price, volatility, risk free rate and maturity **2.** Calculate upward movement (u) and downward movement (d) using EXP, SQRT and / functions.	**Black Scholes Model** 1. Basic knowledge about Excel 2. Introduce data into the Excel file 3. Introduce data about the parameters of Black-Scholes model: stock price, exercise price, volatility, risk free rate and maturity **4.** Obtain d1 and d2 parameters dynamically by using a formula that includes the following Excel functions: LN, SQRT, / and +. 5. Obtain N(d1), N(d2), N(-d1) and N(-d2) parameters using NORM.S.DIST Excel function 6. Obtain the call and put option prices by applying the formula in Excel. Know how to use EXP function. **7.** Search Microsoft stock price information on Yahoo Finance **8.** Introduce the specified parameters in Excel (point 2) **9.** Obtain the call and put option prices as required in point 2 **10.** Provides other solution for implementing Black-Scholes Model than the one indicated the example file **11.** Implements Black Scholes Model in VBA **Binomial Option Pricing Model in Excel**

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	3. Calculate probability of upward movement (Pu) and probability of downward movement (Pd) using EXP, * and – functions 4. Calculate the simulated stock price considering the upward movement. Use EXP function 5. Calculate the simulated stock price considering downward movement. 6. Calculate payoffs. Use MAX function 7. Incorrect or incomplete call and put option price according to BOPM model	3. Calculate probability of upward movement (Pu) and probability of downward movement (Pd) using EXP, * and - functions 4. Calculate the simulated stock price considering the upward movement. Use EXP function 5. Calculate the simulated stock price considering downward movement. 6. Calculate payoffs. Use MAX function 7. Obtain call and put option price using BOPM 8.	1. Introduce the parameters of BOPM in Excel: stock price, exercise price, volatility, risk free rate and maturity 2. Calculate upward movement (u) and downward movement (d) using EXP, SQRT and / functions. 3. Calculate probability of upward movement (Pu) and probability of downward movement (Pd) using EXP, * and - functions 4. Calculate the simulated stock price considering the upward movement. Use EXP function 5. Calculate the simulated stock price considering downward movement. 6. Calculate payoffs. Use MAX function 7. Obtain call and put option price using BOPM 8. Implements BOPM in VBA

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Forecast Oil Price Evolution *150 pts*	1. Download data about oil price evolution from Quandl. Download in Excel format. 2. Make an Excel graph with oil price evolution 3. Identify a possible trend 4. Calculate MIN, MAX and AVERAGE oil price 5. Incorrect or incomplete information about factors that influenced oil price evolution 6. Incomplete strategy for projecting oil price evolution 7. Does not provide forecasts based on his expert judgement 8. Does not provide a final forecast using Excel models or functions 9. The final forecast is far from the real value. 10. ((forecasted value – real value)/forecasted value) > 0.25	1. Download data about oil price evolution from Quandl. Download in Excel format 2. Make an Excel graph with oil price evolution 3. Identify a possible trend 4. Calculate MIN, MAX and AVERAGE oil price 5. Factors that influenced oil price evolution 6. Strategy for oil trading 7. Provides forecasts based on its expert judgement 8. Forecasts oil price evolution using Excel. Implements a regression, moving average, trendline or other statistical methods 9. 0.10< ((forecasted value – real value)/forecasted value) < 0.25	1. Download data about oil price evolution from Quandl. Download in Excel format. 2. Make an Excel graph with oil price evolution 3. Identify a possible trend 4. Calculate MIN, MAX and AVERAGE oil price 5. Factors that influenced oil price evolution 6. Strategy for oil trading 7. Provides forecasts based on its expert judgement 8. Forecasts oil price evolution using Excel. Implements a regression, moving average, trend line or other statistical methods 9. ((forecasted value – real value)/forecasted value) < 0.10 10. Combines with success its expert judgment and Excel forecasts 11. Forecasts oil price using VBA