



Co-funded by the
Erasmus+ Programme
of the European Union



Reforming Master Programmes in Finance in Armenia and Moldova / REFINE

An Erasmus+ Capacity Building Project (2017-2020)

THE COURSE «COMPUTER SOFTWARES OF FINANCIAL PLANNING» OVERVIEW

University ASUE

Teacher Mare Khachatryan



BASIC INFORMATION



| TITLE OF THE COURSE | COMPUTER SOFTWARES OF FINANCIAL PLANNING |
|-------------------------------|---|
| TEACHERS | MARE KHACHATRYAN PhD in Economics, Assistant Professor at the Chair of Finance /ASUE/ |
| YEAR OF THE COURSE | 1 st |
| SEMESTER OF THE COURSE | 2 nd |
| LANGUAGE | Armenian/English |
| NUMBER OF ECTS CREDITS | 5 |

LEARNING OUTCOMES



- Analyze and understand an income statement (even if they have no experience with income statements), build a complete valuation model of any company, build historical financial statements, analyze the Annual Report by using tools of Excel program.
- Interpret financial statements - the Balance Sheet, Income Statement and Statement of Cash Flows, calculate the sustainable rate of growth at which a company can grow without external financing.
- Forecast a company's sales, planned level of production, various types of expenditures, which could be done by using Excel program, especially Sales analysis, Data tables, Power BI, Linear Equal analysis and Regression analysis.
- Create a budget plan, build an Integrated Financial Model, produce an Income Statement and Balance Sheet, which students can do using Pivot table, Optimization function, VaR model of Excel program.

SYLLABUS OF THE COURSE



| WEEK | TOPIC |
|------|--|
| 1 | Analysis companies business plan |
| 2 | Assessment of companies financial situation |
| 3 | Assessment of companies financial situation |
| 4 | Financial statement analysis |
| 5 | Financial statement analysis |
| 6 | Analysis and planning companies expenditures |
| 7 | Analysis and planning companies expenditures |
| 8 | Forecast companies incomes |
| 9 | Forecast companies incomes |
| 10 | Assessment of an optimal sales volume by managing risks |
| 11 | Assessment of an optimal sales volume by managing risks |
| 12 | Investment and portfolio organization and analysis |
| 13 | Securities and options valuation |
| 14 | Securities and options valuation |

WEEK 1

Analysis companies business plan



- What is business plan, its usage, structure and importance
- Types of business plan
- Analysis the finance section of companies business plan.

WEEK 1

Analysis companies business plan



Company Name

Business Planning Checklist

Using the Strength, Weakness, Opportunity, and Threat (SWOT) analysis framework, develop a checklist of the key activities that need to be performed when preparing a formal business plan in the table, below.

| Activity | Owner | Completion Date |
|---|-------|-----------------|
| Strengths: Define the company's current mission statement. | | |
| Strengths: Identify market segments in which the company will participate by conducting primary and secondary market research. | | |
| Strengths: Identify the company's value proposition and how it will differentiate itself within the marketplace. | | |
| Weaknesses: Identify any barriers to market entry (for example, capital requirements, technical barriers, patents, and process barriers) that the company needs to overcome. | | |
| Weaknesses: Identify any risks inherent to the organization that need to be mitigated so that the company can realize the business plan. | | |
| Opportunities: Identify areas where the current market is underserved that provide an opportunity for the company. | | |
| Opportunities: Identify any key processes, intellectual capital, or other resources that the company can use to its advantage in the marketplace. | | |
| Threats: Identify primary competitors, and then | | |

Outline of a business plan

- Cover page
- Executive summary
- Environment & industry analysis
- Company summary
- Production plan
- Marketing plan
- Organizational plan
- Risk evaluation
- Financial plan
- Supporting documents

Business Plan Outline

- Executive Summary
- Company Description
 - Including product/service & technology/core knowledge
- Industry Analysis & Trends
- Target Market
- Competition
- Strategy/Business Model
- Marketing and Sales Plan
- Production/Operations Plan

Technology Plan
 Management & Organization
 Social Responsibility
 Development & Milestones
 Financials
 Including Capital Requirements & Financial Statements
 Appendix

WEEK 2 Assessment of companies financial situation



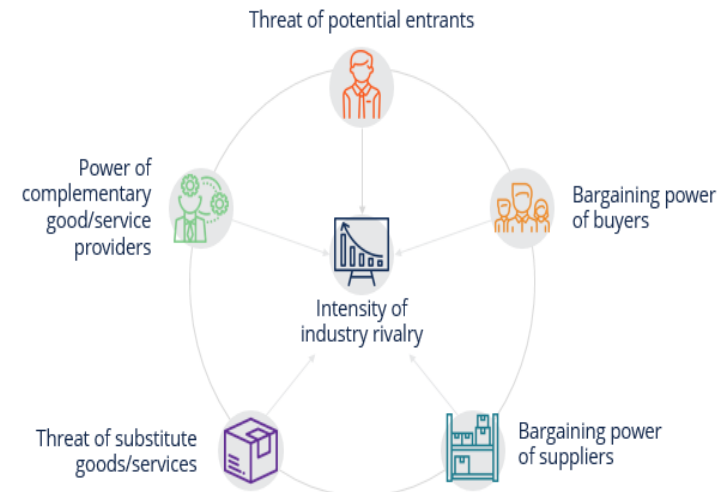
- External and internal factors which influence on companies activity
- Controlling and planning a company's activities
- Analysis of a company's financial position

WEEK 3

Assessment of companies financial situation



Competitive forces model



WEEK 4

Financial statement analysis



- Financial statement, its importance and structure
- Common methods of financial statement analysis ([fundamental analysis](#), [DuPont analysis](#), horizontal and vertical analysis and the use of financial ratios)
- Usage of Excel tools for making the mentioned analysis

WEEK 5

Financial statement analysis



Basics of Financial Statement Analysis

Analyzing financial statements involves:

| Characteristics | Comparison Bases | Tools of Analysis |
|--|---|---|
| <ul style="list-style-type: none"> Liquidity Profitability Solvency | <ul style="list-style-type: none"> Intrarcompany Industry averages Interecompany | <ul style="list-style-type: none"> Horizontal Vertical Ratio |

| Other Indicators | Formula |
|---|---|
| EPS (Chapter 15: Amount of earnings attributable to each share of common stock) | $\frac{\text{Income Available to Common}}{\text{Weighted-Average Number of Common Shares}}$ |
| P/E (Chapter 15: The price of the stock in relation to earnings per share) | $\frac{\text{Market Price Per Share}}{\text{Earnings Per Share}}$ |
| Dividend Rate/Yield (Chapter 15: Direct yield to investors through dividend payments) | $\frac{\text{Annual Cash Dividend}}{\text{Market Price Per Share}}$ |
| Dividend Payout Ratio (Chapter 15: Proportion of earnings distributed as dividends) | $\frac{\text{Annual Cash Dividend}}{\text{Earnings Per Share}}$ |
| Book Value (Chapter 15: The amount of stockholders' equity per common share outstanding) | $\frac{\text{"Common" Equity}}{\text{Common Shares Outstanding}}$ |

| FINANCIAL STATEMENTS | | | | | | | | | | |
|-----------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
| Balance Sheet Check | OK | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| Assumptions | | | | | | | | | | |
| Income Statement | | | | | | | | | | |
| Revenue | 102,007 | 118,086 | 131,345 | 142,341 | 150,772 | 158,311 | 165,435 | 172,052 | 178,074 | 183,416 |
| Cost of Goods Sold (COGS) | 39,023 | 48,004 | 49,123 | 52,654 | 56,710 | 58,575 | 61,211 | 61,939 | 64,107 | 64,196 |
| Gross Profit | 62,984 | 70,082 | 82,222 | 89,687 | 94,062 | 99,736 | 104,224 | 110,113 | 113,967 | 119,220 |
| Expenses | | | | | | | | | | |
| Salaries and Benefits | 26,427 | 22,658 | 23,872 | 23,002 | 25,245 | 26,913 | 28,124 | 29,249 | 30,273 | 31,181 |
| Rent and Overhead | 10,963 | 10,125 | 10,087 | 11,020 | 11,412 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 |
| Depreciation & Amortization | 19,500 | 18,150 | 17,205 | 16,544 | 16,080 | 15,008 | 15,005 | 15,003 | 15,002 | 15,001 |
| Interest | 2,500 | 2,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 500 | 500 | 500 |
| Total Expenses | 59,390 | 53,433 | 52,664 | 52,066 | 54,237 | 53,421 | 54,629 | 54,752 | 55,774 | 56,682 |
| Earnings Before Tax | 3,594 | 16,649 | 29,558 | 37,622 | 39,825 | 46,314 | 49,595 | 55,361 | 58,193 | 62,539 |
| Taxes | 1,120 | 4,858 | 8,483 | 10,908 | 11,598 | 12,968 | 13,887 | 15,501 | 16,294 | 17,511 |
| Net Earnings | 2,474 | 11,791 | 21,075 | 26,713 | 28,227 | 33,346 | 35,708 | 39,860 | 41,899 | 45,028 |
| Balance Sheet | | | | | | | | | | |
| Cash Flow Statement | | | | | | | | | | |
| Supporting Schedules | | | | | | | | | | |

Tools of Analysis

Horizontal Analysis

Comparing a company's financial condition and performance across time.

Vertical Analysis

Comparing a company's financial condition and performance to a base amount.

Ratio Analysis

Measurement of key relations between financial statement items.

WEEK 6 Analysis and planning companies expenditures



- The role of capital expenditures for companies improve
- The importance of ROI and risk evaluation measures for companies future activity
- Calculation of asset turnover by using DuPont System and ROI-ROE Analysis in Excel program

WEEK 7 Analysis and planning companies expenditures



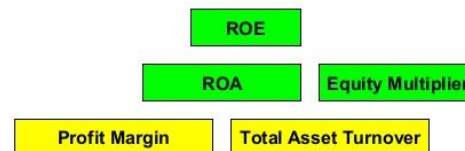
Asset turnover

$$\text{Asset turnover} = \frac{\text{Revenue (sales)}}{\text{Net assets}}$$

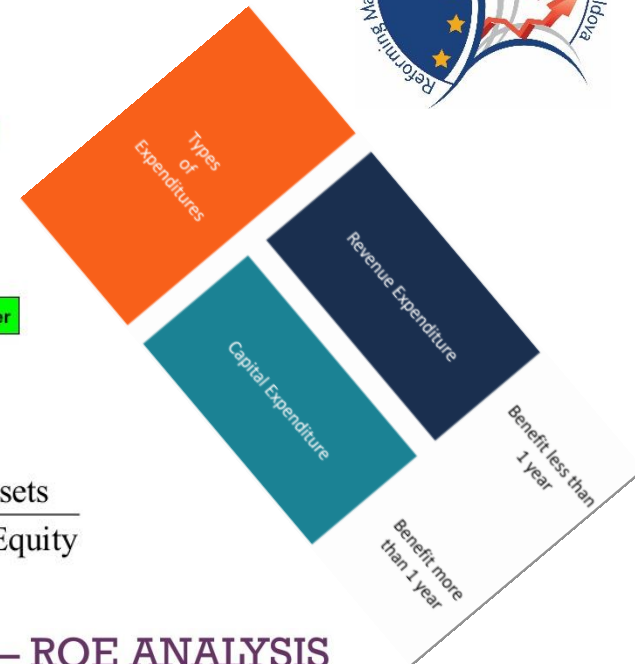
Example

Revenue = £21,450k
Net assets = £4,455k
Asset turnover = 4.8 times

The DuPont System



$$\begin{aligned} \text{ROE} &= \text{ROA} \times \text{Equity Multiplier} \\ &= \frac{\text{Net Income}}{\text{Total Assets}} \times \frac{\text{Total Assets}}{\text{Common Equity}} \end{aligned}$$



ROI – ROE ANALYSIS

$$\text{ROE} = [\text{ROI} + (\text{ROI} - r) D/E] (1 - t)$$

where ROE = return on equity

ROI = return on investment

r = cost of debt

D/E = debt-equity ratio

t = tax rate

The Capital Agenda

- ▶ Stress and distress – e.g., liquidity issues and turnaround plans
- ▶ Customer and supplier analysis
- ▶ Preserving tax assets and minimizing costs
- ▶ Refinancing or restructuring debt, equity and other obligations
- ▶ Dealing with stakeholder relationships and pressure
- ▶ Dispute resolution

- ▶ Optimizing asset portfolio
- ▶ Delivery of synergies and effective integration
- ▶ Improving working capital and releasing cash
- ▶ Optimizing capital structure
- ▶ Optimizing tax and corporate structure

- ▶ Acquisitions and alliances
- ▶ Planning and structuring transactions to optimize stakeholder return
- ▶ Focused due diligence to mitigate risk and drive value
- ▶ Asset valuations
- ▶ Cost- and tax-efficient structures

- ▶ Fundraising (equity and debt) - IPO readiness, rights issues, PE, private placement and capital markets
- ▶ Optimizing funding structures
- ▶ Asset divestment
- ▶ Infrastructure projects
- ▶ Cost- and tax-efficient structures

WEEK 8

Forecast companies incomes



- Analysis companies revenues for a certain period by using Excel Data tables
- Future growth modelling
- Forecasting companies product price and future unit sales by using Pivot tables and Sales analysis of Excel program

WEEK 9

Forecast companies incomes



Valuing a business
or asset

Cost
approach

Cost to build

Replacement cost

Market approach
(relative value)

Public company
comparables

Precedent
transactions

Discounted
cash flow
(intrinsic value)
approach

Forecast future cash
flows

Forecast revenues down to operating income

Income statement

Revenues

Direct operating costs

Indirect operating costs

Operating profit
(EBIT)

Costs of debt finance

Taxes

Net income

Forecasting operating revenues and profits

WEEK 10 Assessment of an optimal sales volume by managing risks



- CVP analysis
- Inbound and outbound types of sales strategies
- Forecast companies optimal sales volume by managing risk, which could be done using St.Dev function of Excel

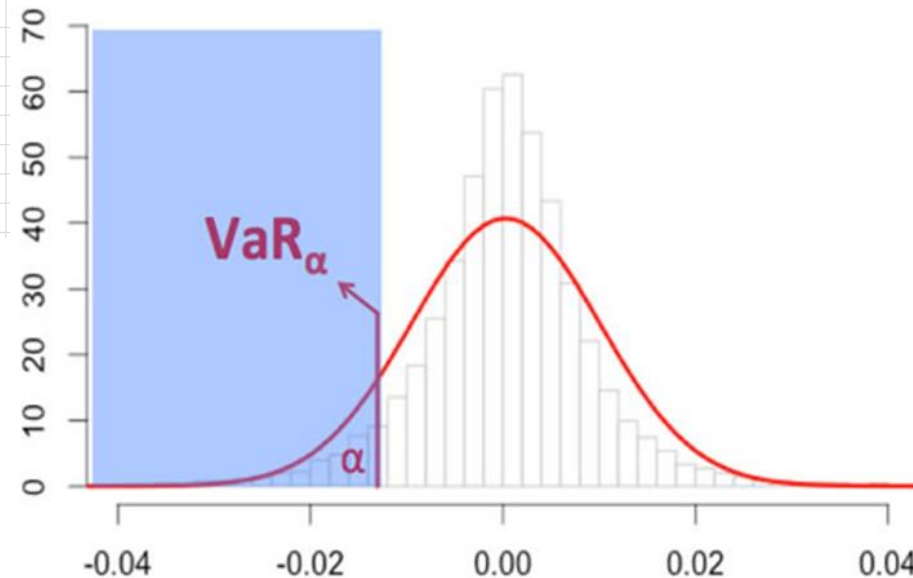
WEEK 11 Assessment of an optimal sales volume by managing risks



| Date | Adj Close | Daily Return | Normal | | |
|-----------|-----------|--------------|---|----------|----------------------|
| 3.31.2009 | 44,48 | 0,00042 | | | |
| 3.30.2009 | 44,19 | 0,00657 | Mean = | 0,00017 | AVERAGE(C2:C254) |
| 3.27.2009 | 44,88 | (0,01541) | St. Dev = | 0,022281 | STDEV(C2:C254) |
| 3.26.2009 | 45,04 | (0,00360) | | | |
| 3.25.2009 | 44,12 | 0,02090 | | | Risk \$ |
| 3.24.2009 | 43,61 | 0,01175 | Bottom 10% | -0,02838 | (1,26) |
| 3.23.2009 | 43,95 | (0,00777) | Bottom 5% | -0,03648 | (1,62) |
| 3.20.2009 | 42,34 | 0,03811 | Bottom 1% | -0,05166 | (2,30) |
| 3.19.2009 | 42,65 | (0,00721) | | | |
| 3.18.2009 | 43,06 | (0,00971) | | | |
| 3.17.2009 | 42,69 | 0,00880 | Historical | | |
| 3.16.2009 | 41,66 | 0,02459 | Lowest 2nd, 3rd return | | |
| 3.13.2009 | 42,00 | (0,00793) | -0,07490098 | (3,04) | 99% Confidence Level |
| 3.12.2009 | 41,78 | 0,00511 | -0,06254113 | -0,06835 | |
| 3.11.2009 | 40,52 | 0,03118 | Lowest 12th, 13th return | | |
| 3.10.2009 | 41,32 | (0,01936) | -0,03365766 | (1,49) | 95% Confidence Level |
| 3.9.2009 | 40,33 | 0,02442 | -0,03324333 | -0,03345 | |
| 3.6.2009 | 41,52 | (0,02862) | Lowest 25th return | | |
| 3.5.2009 | 42,24 | (0,01688) | -0,02437046 | (1,08) | 90% Confidence Level |
| 3.4.2009 | 41,17 | 0,02598 | | | |
| 3.3.2009 | 40,22 | 0,02343 | Interpolation = MIN+(MAX-MIN)*Fractional part | | |
| 3.2.2009 | 40,78 | (0,01374) | | | |
| 2.27.2009 | 41,80 | (0,02437) | | | |
| 2.26.2009 | 40,96 | 0,02052 | | | |
| 2.25.2009 | 41,78 | (0,01951) | | | |
| 2.24.2009 | 42,46 | (0,01600) | | | |
| 2.23.2009 | 41,50 | 0,02312 | | | |



| |
|--|
| With 253 trade days |
| Lower 10% would be day 25 (253*10%) |
| The lower 5% would be day 12.5 (253*5%) |
| And the lowest 1% would be day 2.53 (253*1%) |



VaR at $\alpha\%$

WEEK 12 Investment and portfolio organization and analysis



- How to manage the stocks, bonds, and investments of companies
- Investment and portfolio management strategies, debt and equity securities, securities markets, and risk management. and trends in investing
- Determining final price and annual revenues of bonds, stocks, state stocks, predicting annual expected returns by using Solver function of Excel and doing Regression analysis

WEEK 12 Investment and portfolio organization and analysis



| Բաժնետոմս | Գանձ. Պարտ. | Պարտատոմս | Ընդամենը |
|-----------|-------------|-----------|----------|
| 24% | 76% | 0% | 100% |

=SUM(C3:E3)

| Փորձ# | 5 տր բաժն | 5 տր գանձ | 5 տր պարտ | Վերջնական գին | Տարեկան եկամու. |
|-------|------------|-------------|-------------|---------------|-----------------|
| 1 | 1,50885382 | 1,406814232 | 1,78943729 | 1,431565254 | 0,074390674 |
| 2 | 1,05455596 | 1,35434563 | 1,615355617 | 1,281627768 | 0,050878197 |
| 3 | 1,65413508 | 1,539939612 | 1,271061018 | 1,567639199 | 0,094080362 |
| 4 | 1,86949471 | 1,336880728 | 1,499898391 | 1,466073139 | 0,07952108 |
| 5 | 2,29959891 | 1,430581184 | 2,044567791 | 1,641372675 | 0,104183975 |
| 6 | 1,49751057 | 1,603381601 | 1,310182359 | 1,577701212 | 0,095481258 |
| 7 | 2,09047806 | 1,170533474 | 1,34925063 | 1,393677934 | 0,068642605 |
| 8 | 0,93637124 | 1,327780659 | 1,124364581 | 1,232839241 | 0,04275262 |
| 9 | 1,33498867 | 1,49805592 | 1,383271881 | 1,458501849 | 0,078403768 |
| 10 | 2,52076338 | 1,430607817 | 1,273802936 | 1,695039151 | 0,111311854 |
| 11 | 0,91872243 | 1,295592471 | 1,084439121 | 1,204177766 | 0,037858439 |
| 12 | 2,40218874 | 1,450859703 | 1,519204385 | 1,681616867 | 0,109546253 |
| 13 | 2,2723491 | 1,021342983 | 1,306061354 | 1,324790699 | 0,057863065 |
| 14 | 0,88448895 | 1,523322267 | 1,637786035 | 1,368364982 | 0,064732205 |
| 15 | 1,91090169 | 1,52855529 | 1,47024187 | 1,621298355 | 0,101469785 |
| 16 | 1,05596598 | 1,666821712 | 1,258946692 | 1,518650753 | 0,087155286 |
| 17 | 1,31283832 | 1,496902368 | 1,352798945 | 1,452255251 | 0,077478446 |
| 18 | 2,73221032 | 1,476796777 | 2,727992953 | 1,781313572 | 0,122401079 |
| 19 | 0,94067162 | 1,723751303 | 1,60861822 | 1,533805196 | 0,089316397 |
| 20 | 2,13728756 | 1,057358544 | 1,694993753 | 1,319309297 | 0,056986218 |
| 21 | 1,33602321 | 1,591339329 | 1,529371003 | 1,529409101 | 0,088691254 |
| 22 | 1,68907276 | 1,582100785 | 2,065998561 | 1,608048221 | 0,099663509 |
| 23 | 2,38647535 | 1,291398132 | 1,147028838 | 1,557023276 | 0,092594528 |
| 24 | 1,79669753 | 1,343019053 | 1,119823938 | 1,453064637 | 0,077598521 |
| 25 | 2,76758238 | 1,327433672 | 1,635492849 | 1,676760372 | 0,108904639 |
| 26 | 1,17254028 | 1,317047163 | 1,032606151 | 1,281995149 | 0,050938437 |
| 27 | 0,57744139 | 1,853420534 | 1,570943852 | 1,543915286 | 0,090748673 |
| 28 | 1,80584467 | 1,416966689 | 1,559974992 | 1,511294075 | 0,086099956 |
| 29 | 0,46286768 | 1,305090325 | 1,005424344 | 1,100798327 | 0,019392777 |
| 30 | 0,92998757 | 1,704875564 | 1,324592433 | 1,516916457 | 0,086906867 |
| 31 | 1,49774041 | 1,101948932 | 1,503194145 | 1,197953276 | 0,036783259 |
| 32 | 2,9694815 | 1,263884221 | 1,950228466 | 1,677598905 | 0,109015527 |
| 33 | 2,354036 | 1,346397324 | 1,29348052 | 1,59081312 | 0,097296093 |
| 34 | 2,44601755 | 1,324985381 | 1,502495548 | 1,596906235 | 0,098135378 |
| 35 | 1,22619509 | 1,299919381 | 1,643953069 | 1,2820366 | 0,050945233 |
| 36 | 1,19552495 | 1,624133246 | 1,790646751 | 1,52016876 | 0,087372538 |
| 37 | 3,1246285 | 1,366783007 | 1,352224092 | 1,79317117 | 0,123891404 |
| 38 | 1,44479614 | 1,531319322 | 1,417989328 | 1,510332005 | 0,085961641 |
| 39 | 1,99319502 | 1,564337043 | 1,440743396 | 1,668362094 | 0,107791587 |
| 40 | 1,53064414 | 1,378302071 | 1,496832631 | 1,415254612 | 0,07193121 |
| 41 | 1,4781613 | 1,330821772 | 1,259487586 | 1,36656088 | 0,0644513 |
| 42 | 1,69675029 | 1,507080953 | 1,57170214 | 1,553087704 | 0,092041634 |
| 43 | 1,11881365 | 1,694457556 | 1,628578227 | 1,528347387 | 0,088535784 |

Միջին 0,08 =AVERAGE(returns)

Ստ. Շեղում 0,02255 =STDEV.S(returns)

=(F9/1)^(1/5)-1

=SUMPRODUCT(C13:E13,\$C\$3:\$E\$3)

1. What asset allocation over a five-year planning horizon will yield an annual expected return of at least 8 percent and

2. The changing cells are the asset allocation weights (cells C2:E2).

3. Use Solver with the following parameters:

Solver Parameters

Set Objective:

\$J\$6

To:

☐ Max

☒ Min

☐ Value Of:

0

By Changing Variable Cells:

\$C\$3:\$E\$3

Subject to the Constraints:

\$F\$3 = 1

\$J\$5 >= 0.08

Add

Change

Delete

Reset All

Load/Save

☒ Make Unconstrained Variables Non-Negative

Select a Solving

GRG Nonlinear

Method:

Options

WEEK 12 Investment and portfolio organization and analysis



Return on Investment

We want to calculate our return on an investment but also take into consideration the cost of inflation and taxes to our investment.

This sheet simulates the return on investment (ROI) when buying bank CDs for a certain amount of money (B1), with the assumption that these have a fixed interest rate (B2), a certain fixed inflation rate (B4), and that we are taxed at 25% for CD profits (B3).

We also assume that we want to keep our CD value at its original power by, at least theoretically, putting in more money each year (B8).

We do all of this for a certain number of years (B6). In the what-if table to the right, we can see at what return rates and inflation rates our investment becomes profitable.

The core part of this simulation is calculating the return on investment (ROI) in cell B11, based on all the cells above it.

We also use that same calculation to create a two-dimensional what-if table based on a variable for CD interest and a variable for the inflation rate.

1. In cell B7: $=B1*(1-B4)^{B6}$.

2. In cell B8: $=B1-B7$.

3. In cell B9: $=B1*B2*B6$.

4. In cell B10: $=B9*B3$.

5. In cell B11: $=(B9-B8-B10)/(B1+B8)$.

6. In cell D6: $=B11$.

7. Select D6:J12 and start a Data Table with B2 for row input and B4 for column input.

8. Place Conditional Formatting in the Data Table: Highlight Cell Rules | Less than 0.

9. In 20 years, the overall results would be a bit better—that is, fewer negative numbers.

WEEK 13

Securities and options valuation



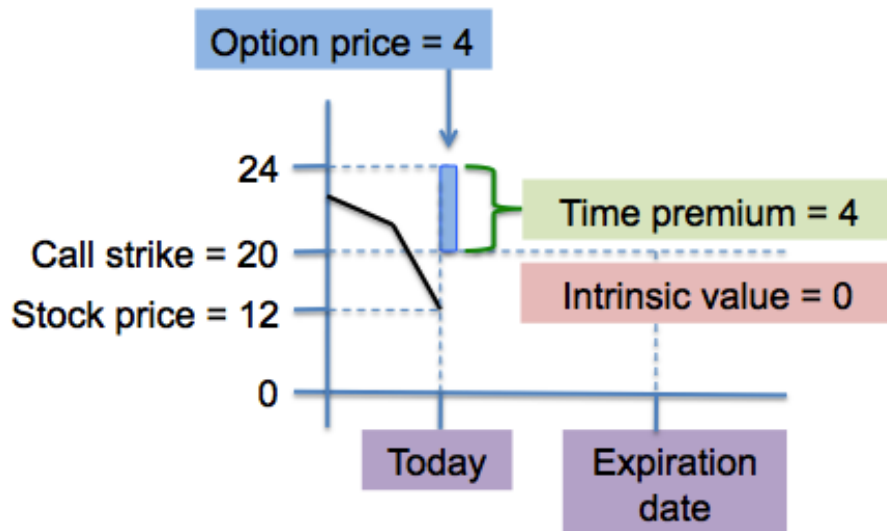
- Types of options, their difference and usage advantages
- Value of an option
- Forecast options future value by doing Linear equal analysis and VaR analysis in Excel

WEEK 14

Securities and options valuation



Out of the money call, prior to expiration



- Binomial Option Pricing Model
 - A technique for pricing options based on the assumption that each period, the stock's return can take on only two values

The Binomial Option Pricing Model

- Binomial Tree Model
 - A timeline with two branches at every date representing the possible events that could happen at those times

American Put Options

Exercise before expiry day

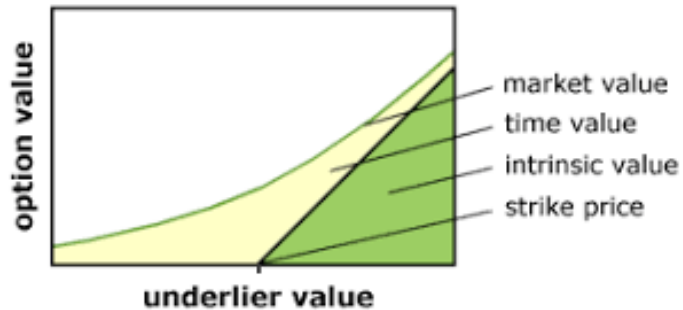


European Put Options

Cannot exercise before expiry day, only on expiry date



Securities and options valuation



$N(x)$ = The cumulative normal distribution function.

| | |
|----------------|--------|
| Costproject | 25 000 |
| Cost bid | 1 000 |
| Number bidders | 4 |
| Mybid | 40 000 |

| Bidder # | In | Bid |
|----------|-----|------------|
| 1 | yes | 55 594,99 |
| 2 | yes | 40 208,22 |
| 3 | yes | 56 755,04 |
| 4 | yes | 60 819,01 |
| 5 | no | 100 000,00 |
| 6 | no | 100 000,00 |

Do I win? Yes

Profit 14 000

MAX

| Mean | 3 640 | 6 820 | 7 430 | 5 800 | 2 775 | 1 160 | 190 |
|--------|--------|--------|--------|--------|--------|--------|--------|
| 14 000 | 30 000 | 35 000 | 40 000 | 45 000 | 50 000 | 55 000 | 60 000 |
| 1 | 4 000 | 9 000 | 14 000 | -1 000 | -1 000 | -1 000 | -1 000 |
| 2 | 4 000 | 9 000 | 14 000 | -1 000 | -1 000 | -1 000 | -1 000 |
| 3 | -1 000 | 9 000 | 14 000 | -1 000 | -1 000 | -1 000 | -1 000 |
| 4 | 4 000 | -1 000 | -1 000 | -1 000 | -1 000 | -1 000 | -1 000 |
| 5 | 4 000 | 9 000 | 14 000 | -1 000 | -1 000 | -1 000 | -1 000 |
| 6 | 4 000 | 9 000 | 14 000 | -1 000 | -1 000 | -1 000 | -1 000 |
| 7 | 4 000 | 9 000 | -1 000 | -1 000 | -1 000 | -1 000 | -1 000 |
| 8 | 4 000 | 9 000 | 14 000 | 19 000 | -1 000 | -1 000 | -1 000 |
| 9 | 4 000 | 9 000 | -1 000 | -1 000 | -1 000 | -1 000 | -1 000 |
| 10 | 4 000 | 9 000 | 14 000 | -1 000 | 24 000 | -1 000 | -1 000 |
| 11 | 4 000 | 9 000 | 14 000 | -1 000 | -1 000 | 29 000 | -1 000 |
| 12 | 4 000 | 9 000 | -1 000 | -1 000 | -1 000 | -1 000 | -1 000 |
| 13 | 4 000 | -1 000 | -1 000 | -1 000 | -1 000 | -1 000 | -1 000 |
| 14 | -1 000 | 9 000 | -1 000 | 19 000 | 24 000 | -1 000 | -1 000 |
| 15 | 4 000 | 9 000 | 14 000 | -1 000 | -1 000 | -1 000 | -1 000 |
| 16 | 4 000 | 9 000 | 14 000 | -1 000 | -1 000 | -1 000 | -1 000 |
| 17 | 4 000 | 9 000 | 14 000 | -1 000 | -1 000 | -1 000 | -1 000 |
| 18 | 4 000 | 9 000 | 14 000 | 19 000 | -1 000 | -1 000 | -1 000 |
| 19 | 4 000 | 9 000 | -1 000 | 19 000 | -1 000 | -1 000 | -1 000 |

TEACHING METHODOLOGY



- 1: Interactive approach for the learning procedures (lectures, seminars, workshops).
- 2: Availability of computer room with projectors, possibility to the data bases of different companies.
- 3: Improvement of students analytical thinking by analysing the actual results of companies activities.
- 4: Case studies, intellectual games for separate groups of students about situational analysis, risk overcoming, hasty and accurate decision-making.
- 5: Practical trainings in a certain company, which could help to improve theoretical knowledge and learn more in the profession.

LABOUR MARKET RELEVANCE



1: This study program should be enriched with practical seminars, which will allow students to experience the practical application of obtained knowledge with specific examples on RA and international companies.

2: Modern world is going to IT technologies, to the usage of Now-how-s and learning all these the financier could do different analysis, forecasts, which would help to identify the companies future activity. Students, studying this subject would be able easily use computer skills in financial planning (the course includes both modelling and finance) and as a result they would be high demanded by a labour market.

3: After finishing the course, students will be able to analyse financial risks, to do forecasts and as a result try to increase companies profitability and to grow the company at an optimal rate by using tools of Excel program.

4: At last, when finishing studying this course, it will assure a win-win situation for the students and employees.

ASSESSMENT AND GRADING



- Class participation – 20%
- Assignments (group works, individual analysis, special games, which are assigned to the students by lecturer) – 30%
- Mid Term exam- 20%
- Final exam – 30%

ASSESSMENT AND GRADING



Class participation – 20%

This includes both class attendance and participation. At the end of the semester the student may be assessed for activity (for assigned tasks which he had done during the semester), taking into account the attendance. And if the absence will be more than 20%, it would mean that the student wouldn't be able to get the maximum score for activity, even if he had high marks.

Assignments – 30% (group works, individual analysis, case study presentations (individual and group), special games, which are assigned to the students by lecturer)

The assessment will be made as follows: for example, in case of individual analysis the lecturer will assess the relevance of analysis to the topic, will also assess its annotation, technical parts, in one word: form of the paper – 15%, paper content – 35%, oral presentation – 50%.

Mid Term exam- 20%

The main aim of mid term exam is to discover how much the student has mastered the subject and if the majority of students will bad present any topic, then the lecturer should provide at least one lesson to that topic, should present the sections that are incomprehensible for the students

Final exam – 30%

Presentation of the whole material studied within the subject during the semester. There will be examination tickets, each student will get one ticket in accidental principle. The student will have approximately 20-30 minutes for preparing and then will orally answer the questions included in his examination ticket.

REFERENCES



- **«Microsoft Excel Data Analysis and Business Modelling»** (5th Edition), Wayne L. Winston, Washington 2016
- **«Financial Modelling For Equity Research»** : A Step-by-Step Guide to Earnings Modelling. John Moschella, Gutenberg 2017
- **«Financial Modeling in Excel “For Dummies”»**
Danielle Stein Fairhurst, New Jersey, 2017
- **«Financial Forecasting, Analysis, and Modeling: A Framework for Long-Term Forecasting»** (The Wiley Finance Series) 1st Edition. Michael Samonas, 2015
- **«Financial Analysis, Planning and Forecasting: Theory and Application»**
Cheng F Lee, John Lee, 3rd edition. October 16, 2016

COURSE ASSIGNMENT 1



Group work – to make financial statement analysis for a certain company, which could be done by using different tools of Excel program (Pivot table, Power BI, VaR model, Regression, Sales analysis, and so on), as without those tools it is impossible to do financial modelling or to make the accurate financial planning for companies. In scopes of group work students will do the following:

- to calculate its profitability,
- to forecast companies sales,
- to predict future revenues,
- create a budget plan,
- build a financial model

COURSE ASSIGNMENT 2/OR CASE STUDY DESCRIPTION



After studying responsibilities that lie on the shoulders of financial planning and analysis, we are expected to provide upper management with analysis and advice regarding how to most effectively utilize the company's financial resources to increase profitability and grow the company at an optimal rate, while avoiding putting the company at serious financial risk. After all students will try to create a company's financial statements – [balance sheets](#), [cash flow statements](#), [income statements](#), and in the case of public companies, shareholders' equity statements. For mentioned they have to create and analyze reports. Performing corporate financial analysis includes doing a great deal of data collection and data consolidation, and then generating numerous reports with lots of variables. A lot of the work of financial analysis involves examining key financial metrics, such as profit margins, sales volume, and inventory turnover, and then utilizing the analysis to create strategic financial planning to move the company forward to the next level of profitability.

THANK YOU FOR ATTENTION

(khachatryanmare@mail.ru)

MARE KHACHATRYAN

PhD in Economics,
Assistant Professor at the Chair of Finance