



Company Case Study Form (WP3, Deliverable 3.1)

Explanation:

According to the Letters of Intent by the Associated Industry Partners, each university will be provided with **one practical company case study** for the courses which will start in the academic year 2019/2020.

Next steps:

- 1) Each university should **choose one course** for which it develops a case study together with a company representative (e.g. a practical problem/issue which companies in this area are facing and on which the students will work supervised by their lecturer).
- 2) Please fill in the form below

Please note: In case a company case study is developed for a course, only one additional assignment is required (see course package form, section 8).

General information:

Title of the course (as specified in the reformed curriculum)	Financial and Actuarial Calculations at the National and International Level / Corporate Finance					
Name of the teacher	Andrei Mulic, Cojocaru Maria					
Title of the case study	Development an optimal financial strategy in the context of the company's loan financing / Analysis of a potential purchase transaction					
Company with which the case study was developed	Joint Stock Company "Taraclia Wine Factory" "Purcari Wineries" Public Company Limited					

Practical case study:

Explanation: Please outline the practical case study that the students are going to work on.

1. Introduction of the case / problem:

This case study will be analysed at the seminar.

This case study is interdisciplinary and will be used in the development of individual works in two disciplines.

Refers to content units:

- 1) Financial and Actuarial Calculations at the National and International Level
- 2) Corporate Finance

The course notes, available online at www.moodle.usm, will be consulted.

The financial statements of Joint Stock Company "Taraclia Wine Factory" will also be downloaded from the platform.

The management's report (2018) and the financial statements of the group "Purcari Wineries Public Company Limited" will be accessed from the company's website.

Part I Case Study for the course of Financial and Actuarial Calculations at the National and International Level

Joint Stock Company "Taraclia Wine Factory" is located in the south of Moldova in the city of Taraclia, the form of ownership is joint-stock. There is no state share in the authorized capital.

Production began in 1948 on the basis of several farms that formed the artel, gradually expanding, transformed into "Taraclia Wine Factory", processing the entire volume of grapes grown in the region. In 1994, during privatization, the plant was transformed into Joint Stock Company "Taraclia Wine Factory", which includes three wineries: in the city of Taraclia, in the villages of Kopchak and Kairaklia.

The history of JSC "Taraclia Wine Factory" began with the organization on the basis of the artel "Krasnaya Artel" and continues every year with a new grape harvest.

Initially, it was a primitive wine processing center for grapes with semi-mechanical crushers and manual presses. Its main activity was the processing of grapes, the production of wine materials and their implementation. Over the 50-year period, the winery has undergone five reorganizations.

The enterprise JSC "Taraclia Wine Factory" is considered as continuously operating, the intention to stop or substantially reduce its activities in the foreseeable future is not

expected. The winery has all the necessary material resources for the implementation of normal financial and economic activities.

Taraclia Wine Factory specializes in the production of high-quality wines and wine materials, including: production of table vintage wines, champagne, raw dry and fortified wine-matrials, strong national, alcoholic beverages, the production of raw alcohol and tartaric lime from wine-making waste. In 1990, the bottling shop was put into operation and, since then, Tarakli Wine Factory JSC is a company with a full production cycle, namely, it is engaged in primary and secondary winemaking, i.e. The main types of activity of JSC "TVK" are the production, storage, bottling and wholesale sale of manufactured products.

The grapes of white and red varieties are supplied to the plant from villages in the Taraclia district. Where viticulture is traditionally highly rated. The main suppliers of grape raw materials are agricultural enterprises: JSC "May 1", JSC "Albota", JSC "Rodina", JSC "Bouquet", collective farm "Victory" and others. Relations with suppliers are stable, reliable and are based on the basis of contracts concluded annually.

The above suppliers supply the plant grapes, both red and white varieties. White grape varieties are represented by such varieties as: Aligote, Feteasca, Sauvignon, Chardonnay, Pinot, Rkatsiteli; Red grapes are represented by such names as Cabernet, Merlot, Pinot Fran, Malben, Saperavi and other varieties. They form the basis of the same wines.

It is important to note that JSC "Tarakli wine factory" creates its own raw material zone. Since 1999, the winery began producing grape saplings, for which in 1998 50 hectares of land were leased, on which the farm Allotha planted the mother grafts of grafted and stock grape vines from certified clone seedlings of Cabernet, Merlot, Pinot in 1997, Chardonnay, Sauvignon. These grape seedlings were bought in France by the state farm Albota at the expense of the loan Moldova-Agroinbank, which was decorated under the guarantee of Tarakli Wine Factory JSC.

As a result of the late repayment of the loan by the state farm of Albota, JSC "TKK" redeemed as a guarantor, said loan and on account of the debt accepted the specified grape plantations on the balance sheet. Speaking as a guarantor of the loan Tarakli wine factory, even then set out to develop its own commodity zone. These seedlings of the 1999 harvest were planted on the lands of the village of Salchiya on 81 hectares. In 2011, another 80 hectares of vineyards were planted, and in 2015-2017, the area of vineyards was 350 hectares under contracts with land owners, as well as on lands acquired by the combine.

Wines produced at the enterprise mainly receive the name of the variety from which they are made. Thus, the wines of JSC "TVK" bear such names as "Cabernet", "Chardonnay de Taraclia", "Pinot", "Merlot", "Aligote", "Auriou", "Taraclia" and many more.

But not only table wines are made from red grapes, many of which, such as Cabernet, Saperavi, are used to make strong and dessert wines, which are represented by such names as "Kagor", "Gratieshty", "Auriu", "Port", from the semi-sweet "Ruby Taraklia", "Pearls of Taraclia", as well as the strong national drink "Strelutitor", "Brandy Taur".

Table 1. The main indicators of the enterprise Joint Stock Company "Taraclia Wine Factory"

Indicators	2015	2016	2017	Deviation	Deviation
				2017-2016	2016-2015
Sales revenue	17955098	19507568	14522180	-4985388	1552470
Cost of sales	12049527	12729770	10690516	-2039254	680243
Gross profit	5905571	6777799	3831664	-2946135	872228
Net profit	-2580480	383719	-799016	-1182735	2964199
Average number of employees	309	287	236	-51	-22

Source: developed on the basis of the financial statements of Taraklia Wine Factory JSC

According to the considered indicators, it can be noted that in 2017 the income from sales was reduced by (4985388) lei compared to 2016. The cost of sales was also reduced by (2039254) lei; gross profit by (2946135) lei and net profit by (1182735) lei. Due to the reduction in sales volumes and the increase in costs and expenses of the enterprise, there is a significant decrease in the number of jobs 51 in 2016 and by 22 in 2015.

Table 2. Calculation of the coefficients of the structure of sources of funds of Joint Stock Company "Taraclia Wine Factory" for 2010-2017

Period Coefficient	2010	2011	2012	2013	2014	2015	2016	2017	Standard
Autonomy ratio	0,69	0,70	0,69	0,78	0,76	0,73	0,73	0,77	>0,6
Fundraising ratio	0,31	0,30	0,31	0,22	0,24	0,27	0,27	0,23	<0,4
Financial risk ratio	0,02	0,02	0,01	0,02	0,00	0,00	0,00	0,00	<0,2

Source: developed on the basis of the financial statements of Taraklia Wine Factory JSC

Table 3. Liquidity indicators of Joint Stock Company "Taraclia Wine Factory" for 2010 - 2017

Period Liquidity ratios	2010	2011	2012	2013	2014	2015	2016	2017	Standard
The absolute liquidity ratio	0,0021	0,0017	0,0120	0,00025	0,00017	0,00263	0,00109	0,00062	0,20-0,25
2. The ratio of intermediate coverage (urgent liquidity)	0,49	0,45	0,65	0,88	0,76	0,64	0,82	1,09	0,7-1,0
3. The ratio of total (current) liquidity	1,42	1,51	1,57	2,39	2,28	2,11	2,22	2,69	2,0-2,5

Source: developed on the basis of the financial statements of Taraklia Wine Factory JSC

Table 4. Profitability indicators of Joint Stock Company "Taraclia Wine Factory" for 2010-2017

				Per	iod				Deviations +, -						
									2017/	2017/	2017/	2017/	2017/	2017/	2017/
Indicators	2010	2011	2012	2013	2014	2015	2016	2017	2010	2011	2012	2013	2014	2015	2016
A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Return on sales,%	32,89	34,74	26,38	19,92	14,73	25,17	24,81	16,94	-15,95	-17,8	-9,44	-2,98	2,21	-8,23	-7,87
Growth rate in%	1	-	1		-	1		-	-48,49	-51,24	-35,78	-14,96	15,00	-32,70	-31,72
Return on assets,%	10,41	11,78	6,62	2,98	2,04	1,21	4,2	3,88	-6,53	-7,9	-2,74	0,9	1,84	2,67	-0,32
Growth rate in%	-	-	-	-	_	-	_	_	-62,73	-67,06	-41,39	30,20	90,20	220,66	-7,62
Economic profitability,%	14,72	16,59	9,43	3,78	2,69	1,67	5,76	5	-9,72	-11,59	-4,43	1,22	2,31	3,33	-0,76
Growth rate in%	-	-	-	-	_	-	-	-	-66,03	-69,86	-46,98	32,28	85,87	199,40	-13,19
Financial profitability,%	-6,57	0,95	-1,99	10,45	-7,42	-5,03	-2,7	1,08	7,65	0,13	3,07	-9,37	8,5	6,11	3,78
Growth rate in%	-	-	-	-	-	-	-	-	- 116,44	13,68	-154,3	-89,67	-114,6	-121,5	-140,0

According to the data obtained from the financial analysis carried out, in particular, the low values of liquidity and profitability indicators given in the tables, there is the task of improving its investment attractiveness (creditworthiness) in the long-term period.

Task I for the students

Next, to solve the problem of determining the optimal amount of the required loan, which would provide coverage for the lack of funds in the company, which is associated with the repayment of the loan, it is proposed to use the following formula:

$$SC = \frac{S(1)}{K2 - (r^*t/360)^*K1}$$
(1)

Where S © is the optimal loan amount;

- S (I) the amount of cash shortage (preliminary cash flow forecast);
 - r is the percentage of the loan in absolute terms (%);
 - t the number of days of the loan period.
 - n is the number of years of the period for which the loan is taken.
- p the number of periods for which the bank has provided holidays (holidays are granted for partial repayment of the loan in equal shares)
 - L the number of periods when there is a shortage of funds.

The calculation of the coefficients is carried out depending on the following conditions:

1. If
$$L \ge p+2$$
, that

$$K1 = \frac{L \times n \times 360 - 0.5 \times t \times (L^2 + p^2 - L + p)}{n \times 360 - p \times t} \tag{2}$$

$$K2 = \frac{n \times 360 - L \times t}{n \times 360 - p \times t} \tag{3}$$

2. If L = p+1, that

$$K1 = L$$

$$K2 = \frac{n \times 360 - L \times t}{n \times 360 - p \times t} \tag{4}$$

3. If $L \leq p$, that

$$K1 = L$$

$$K2 = 1 \tag{5}$$

This formula can be used to plan cash flow when an enterprise has a need for external financing. In the case when the lack of funds is covered by a loan (loan), there is an additional cash outflow in the form of interest and partial repayment of the loan. Therefore, it is necessary to take such a loan amount that would cover both the cash shortage and payments associated

with this loan, up to the period when the outflow of funds will not be compensated by the inflow from sources not related to borrowed funds.

The formula is well applied in cases when it is necessary to pay interest on a loan on a monthly basis, which is largely close to the current credit conditions in the Republic of Moldova. Commercial banks in Moldova, offering such conditions, seek to reduce the risk of default on the loan and interest on it.

The algorithm for calculating the required loan amount using the formula (1):

- 1) A preliminary cash flow forecast is made.
- 2) The number of periods of cash shortage (L) is determined.
- 3) The total amount of cash shortage (S (I)) is determined.
- 4) Lending conditions are established, and the number of credit vacation periods (p) is determined.
- 5) It is determined which of the conditions 1.2.3. This situation is suitable.
- 6) The coefficients K1, K2 are calculated on the basis of a suitable condition.

Task II for the students
Task III for the students

At the end of the project (case study), the group of students develop a presentation and show it to a financial manager, director of an investment fund or a partner of a Joint Stock Company "Taraclia Wine Factory" from Republic of Moldova. For example Purcari Wineries Public Company Limited Group, for the purpose of interdisciplinary practical correlation of the first and second section of Case Study).

Part II Case Study for the course of Corporate Finance

'Growth Through Procurement' is one of the strategic objectives of the Purcari Wineries Public Company Limited group

(https://purcari.wine/static/proiects/purcari.wine/dist/pdf/Raport Purcari Ro 2017.pdf).

As it results from the annual report of the leadership of this group, this field of activity still remains quite fragmented, so the aim is to strengthen the sector. The target purchase market is estimated by experts at 3.6 billion. Euro.

The International Purcari Wineries Public Company Limited Group in 2017 recorded large cash receipts from the sale of alcohol. That is why the top managers are considering the option to broaden the group with a wine company in the south of the Republic of Moldova. As a potential target company, the wine company "The Winery of Taraclia S.A." in Moldova, which has as main activity: The production, keeping and wholesale trade of the alcoholic production: wine is analysed. The form of ownership is collective and is located in the south of the Republic of Moldova. It was registered on 29.11.1994, it has a share capital of 16.23 million lei, which is divided into 1623377 ordinary shares with face value of 1 leu.

The international group of companies Purcari Wineries Public Company Limited was established in Cyprus on 12 June 2007 as a limited liability company in accordance with the provisions of the Cypriot Commerce Law, 113. The core activity of this group is the production and sale of wines and brandy.

The Group's structure on 1 January 2018 is the following:

• Purcari Wineries Ltd is a holding company based in Cyprus;

Vinorum Holdings Ltd is a holding with registered office in Gibraltar;

- West Circle Ltd is a holding company based in the British Virgin Islands;
- Ceptura Crama SRL has its registered office in Romania. Its main activity is the production, bottling and sale of wines;
- Bostavan SRL and Vinaria Purcari SRL are headquartered in Moldova. Their main activity is the production, bottling and sale of wines;
- Bardar Winery has its headquarters registered in the Republic of Moldova. Its main activity is the production, bottling and sale of brandy and brandy. The nominal holding held by the Group in Bardar Winery is 52.52%. However, because 3.83% of Bardar Winery's shares are treasury shares, so the Group's actual holding is 54.61%.

On 11.01.2018 Purcari Wineries Public Company Limited was transformed into a public company and its shares were traded on the Bucharest Stock Exchange on 15.02.2018. In chart no. 1 is the evolution of the share price

Purcari Wineries Public Company Limited in the last year. In connection with the Investment Agreement dated April 29, 2010, Lorimer Ventures Limited acquired 1,605,275 new shares issued in Purcari Wineries Ltd., with a nominal value of EUR 0,00171 per share at a price of 12,300,000 USD.

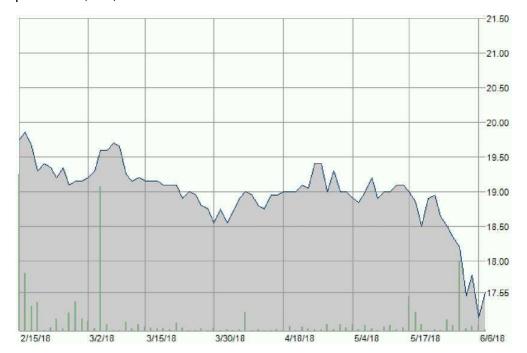


Chart no.1. Share price evolution S.A. Purcari Wineries Public Company Limited in 2018. Source: https://www.tradeville.eu/actions/actions-WINE [5]

Each Group entity establishes its own functional currency and the items included in its financial statements are measured using the functional currency. The currencies of the primary economic environment in which the Group operates are: Purcari Wineries Ltd, Vinorum Holdings Ltd, West Circle Ltd - US Dollar (USD); Crama Ceptura SRL - Romanian Leu (RON); Winery Bardar SA, Bostavan Winery SRL and Purcari Winery SRL - Moldovan Leu (MDL).

The Taraclia Wine Combinator (CVT S.A.) is a perfect target for acquisition by the Purcari Wineries Public Company Limited Group (PWPCL), as its sales are down 25.55%. At the same time, there is a substantial increase in depreciation and depreciation of fixed assets, which indicates that the company will have even higher costs in the coming years. Financial results of the Taraclia S.A. in 2017 they are negative and constituted 956.13 thousand lei up to tax and 799.01 thousand lei after tax. In contrast, the Purcari Wineries Public Company Limited Group of Companies registered an increase on all indicators:

Growth rates of key business activity indicators,%

Indicators	PWPCL	CVT S.A.
Asset Growth Index.	141,34	100,61
Index of equity growth.	146,53	99,63
Sales growth index.	137,70	77,33
Gross profit growth index.	120,84	57,04
Revenue growth index for the financial year.	137,18	2,99

Index of profit growth attributable to shareholders.	144,82	0
Global growth index.	154,84	-3,08
Growth of earnings per share.	145,06	0

The table data reflects the poor state of Joint Stock Company "Taraclia Wine Factory", in addition, the shareholders of this company, which for several years are not paid for the capital invested in the company, will be tempted to accept the offer of the PWPCL Group.

Task for the students.

2. Assignment / task for the students:

Part I Course of Financial and Actuarial Calculations at the National and International Level

Task I for the students

In this regard, it is necessary:

- 1) to develop an effective credit strategy, the main task of which would be to optimize the investment attractiveness.
- 2) one of the main factors in developing the financial strategy of an enterprise is to determine the basic investment needs, on the basis of which the need for resources is determined and, accordingly, it is necessary to develop an enterprise credit strategy.
- 3) Generate a Schedule of raising funds for the implementation of the investment program Joint Stock Company "Taraclia Wine Factory" (thousand lei)

Periods	2018	2019	2020
Amount			

Task II for the students

1) Calculate the amount of the optimal loan (Sc) by the formula (1).

$$SC = \frac{S(1)}{K2 - (r^*t/360)^*K1}$$
(1)

Where S © is the optimal loan amount;

- S (I) the amount of cash shortage (preliminary cash flow forecast);
 - r is the percentage of the loan in absolute terms (%);
 - t the number of days of the loan period.
 - n is the number of years of the period for which the loan is taken.
- p the number of periods for which the bank has provided holidays (holidays are granted for partial repayment of the loan in equal shares)
 - L the number of periods when there is a shortage of funds.

The calculation of the coefficients is carried out depending on the following conditions:

4. If $L \ge p+2$, that

$$K1 = \frac{L \times n \times 360 - 0.5 \times t \times (L^2 + p^2 - L + p)}{n \times 360 - p \times t} \tag{2}$$

$$K2 = \frac{n \times 360 - L \times t}{n \times 360 - p \times t} \tag{3}$$

5. If
$$L = p+1$$
, that

$$K1 = L$$

$$K2 = \frac{n \times 360 - L \times t}{n \times 360 - p \times t} \tag{4}$$

6. If $L \le p$, that

$$K1 = L$$

$$K2 = 1 \tag{5}$$

2) Using Excel Spreadsheets prepare a preliminary cash flow forecast of Joint Stock Company "Taraclia Wine Factory" for a monthly breakdown in 2018

period	january	february	march	april	may	june	july
operations							
influx							
outflow							
change							

Source: developed by the author

To cover the lack of funds, the company intentionally take out a loan on the following conditions: the loan is taken for 1 year; interest rate will be 24% per annum (r = 0.24); interest payments - monthly; holidays for partial repayment of the loan in equal shares - two months (p = 2). In this example, only the possibility of repaying the loan is considered, taking into account the necessary conditions, since the evaluation of the efficiency of investment of borrowed funds gave a positive assessment.

3) Using Excel Spreadsheets make a repayment schedule of the loan and interest

period	credit amount	Pay loan	%	% in lei	cumulative total
january					
february					

march			
april			
may			
june			
july			

4) Using Excel Spreadsheets generate a Planned Cash Flow Report of Joint Stock Company "Taraclia Wine Factory" in 2018

Period	january	february	march	april	may	june	july
operations							
the remainder							
influx							
credit							
outflow							
credit							
%							
change							

Task III for the students

The conditions are similar to the Task I, except for the following change - for example, the bank provided a 4-month vacation to partially repay the loan body.

- 1) Make a repayment schedule of the loan and interest
- 2) Create a planned cash flow report of Joint Stock Company "Taraclia Wine Factory" in 2018

Assignment of the case study

At the end of the project (case study), the group of students develop a presentation and show it to a financial manager, director of an investment fund or a partner of a Joint Stock Company "Taraclia Wine Factory" from Republic of Moldova. For example Purcari Wineries Public Company Limited Group, for the purpose of interdisciplinary practical correlation of the first and second section of Case Study).

Group task (Joint Stock Company "Taraclia Wine Factory")

Each group chooses different types of financial strategies (financing strategy, credit strategy, investment strategy). Using a financial calculator and Excel spreadsheets, a repayment schedule is drawn up).

Options to choose from:

- Total amount of financing and investment program: from 500.000 to 4.000.000 MDL;
- Discount rate: using the data from the site http://bnm.md/ to calculate the required discount rate for this company in the conditions of the Republic of Moldova, using the WACC method;
- Duration of investment and credit strategy: from 12 to 48 months;

Each group is requested to receive an advisory report on the financing plan, planned cash flows, the optimal amount of loan financing, the repayment schedule, which meets the following three conditions:

- 1. Verifying the correctness of the due date, the duration and amount of funding by calculating using the special financial calculation methods mentioned above. Also indicate the type of loan financing. Present all payments and interest payments per month using Excel's redemption schedule, columns should contain month, redemption amount, interest, total and residual debt.
- 2. A good visual representation of payments, equity and residual debt and their relationships. Select (appropriate type (s) of graphics for this. Also indicate what profit the company can extract from this.
- 3. The company's management also wants to see what the consequences of introducing a financial strategy are for a certain period. As an example, select a realistic period of loan depreciation (in years). Prepare a credit depreciation schedule.

Evaluation is carried out on the basis of (whole) assessment for each of the three parts mentioned, as well as report correctness indicators (Introduction - Main conclusions (s), Romanian / English / Russian, good argumentation, clarity of the material, contribution of each student in the overall task) and, finally, an indicator of originality. The final mark is the average of these five numbers, rounded to one decimal place. There may be deviations from the per student.

Part II Course of Corporate Finance

Task for the students:

- 1. We admit that you are a financial manager at Joint Stock Company "Taraclia Wine Factory", which defense tactics you could use to defend the company from a hostile takeover (at the pre-purchase stage).
- 2. Set out briefly what are the differences in hostile and amicable takeovers.
- 3. If you are a financial analyst at a business valuation consultancy, which valuation methods you will apply to your target company as its shares are not traded on the financial market.
- 4. What are the factors justifying the acquisition of wine companies?
- 5. Use the Annual Financial Reports of the Purcari Wineries Public Company Limited Group to forecast cash flows for the years 2020-2020, taking into account the acquisition of Joint Stock Company "Taraclia Wine Factory".
- 6. Justify the amount of the cash flow update rate you will use to update your cash flows.
- 7. How do you think, what amount must the buyer company pay to each shareholder of the target company?

INFORMATION SOURCES FOR THE SOLUTION OF THE CASE STUDY:

- 1. Financial statements of S.A. Taraclia Wine Combinate (copy: www.moodle.usm.md/
 Financial and Actuarial Calculations at the National and International Level)
- 2. NANCU, D. Evaluarea economică și financiară a întreprinderii. Universitatea Ovidius, 2012. Disponibil on-line pe http://nancu.ro/wp-uploads/2012/08/evaluarea-economica-si-financiara-aintreprinderii .pdf
- 3. UNITED Nations Evaluation Group (2016). *Norms and Standards for Evaluation*. New York: UNEG, 2016. Available at: http://www.unevaluation.org/2016-Norms-and-standards.
- 4. Purcari Wineries Public Company Limited (Wine). Raport Financiar Anual 2017 Situatii Financiare Consolidate & Situatii Financiare Individuale.
- 5. https://www.tradeville.eu/actiuni/actiuni-WINE/stiri-bvb-rasdaq-767438
- 6. https://purcari.wine/static/proiects/purcari.wine/dist/pdf/Raport Purcari Ro 2017.pdf
- Cojocaru, M., Ulian E. Business evaluation to substantiate the merger or acquisition decision: methodological-practical aspects. Studia Universitatis Moldaviae, 2018, no.2 (112) Series "Exact and Economical Sciences" ISSN 1857-2073 ISSN online 2345-1033 p.60-68 http://studiamsu.eu/wp-content/uploads/09.p.60-68Economie 112.pdf
- Mulic Andrei, Constantinescu Vladislav, Development of a strategy for financing investment projects of enterprises in the Republic of Moldova Scientific Annals of the State University of Moldova Volume IV Chisinau 2006 p. 242 – 248 ISBN 978-9975-70-025-2
- 9. Mulic Andrei Collection of scientific papers, article "Modern Trends in the Application of Chaos Theory and Neuromathematics in Economic and Financial Systems", International Scientific Conference "Innovations, Performance and Competitiveness in the Financial Sector" organized in partnership with "Alexandru Ioan Cuza" University of Iasi, Romania, Ivane Javakhishvili State University of Tbilisi, Georgia, National Commission of the Financial Market, Republic of Moldova 30-31 October 2015, Chisinau USM ISBN 978-9975-71-712-0;