Date of Receipt: March 13, 2015

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APPLICATION SOFTWARE FOR MEASURING THE CAPITAL RETURN RATE BY SUCCESSIVE COMPANY VALUATION*

Softverska aplikacija za merenje stope prinosa na kapital sukcesivnim vrednovanjem preduzeća

Abstract

The capital increase is the focal point of every company management. The standard accounting procedures often do not give up-to-date and precise answers to the questions related to tracking the level and increase/ decrease of capital during the year. An alternative way, starting from the accounting records but passing also by some limitations imposed by the accounting regulations, is achieved by evaluating once a month the real, actual market value of all the positions in the company's balance sheet. Based on these estimated values, by subtracting the value of liabilities from the value of assets one can obtain the amount of money employed in the company — the capital. The article describes how to carry out this procedure using the original application software that allows us to follow up every month of the year not only the flows of the total capital but of all the relevant positions in the balance sheet.

Key words: measuring capital return, company valuation

Sažetak

Ostvarenje prinosa na kapital je u fokusu svakog upravljanja preduzećima. Standardni računovodstveni postupci često ne daju ažurne i precizne odgovore na pitanja vezana za praćenje nivoa i uvećanja/umanjenja kapitala tokom godine. Alternativni način, koji polazi od računovodstvenih evidencija ali i zaobilazi neka ograničenja koja nameću računovodstvenih propisi, se sastoji u tome da se jednom mesečno proceni stvarna, realna, tržišna vrednost svih pozicija u bilansu stanja preduzeća. Na osnovu tih procenjenih vrednosti se oduzimanjem vrednosti obaveza od vrednosti sredstava dobija iznos novca koji je angažovan u preduzeću — kapital. U članku je opisano kako se taj postupak može sprovesti uz upotrebu originalne softverske aplikacije koja omogućava i da se svakog meseca tokom godine prati, ne samo kretanje ukupnog kapitala, nego i svih bitnih pozicija u bilansu stanja.

Ključne reči: merenje uvećanja kapitala, procena vrednosti kompanija

^{*} The author was hired in 1998 by AD Sintelon to define and implement the methodology of creating business plans in all the organizational parts of the company. With this project, which lasted till 2002, the author came up with new solutions in the area of writing financial plans, coordinating the nonfinancial and financial parts of business plans and in the area of measurement of the realization of business plans, meaning the measurement of the realized return rate of capital in a defined period.

Introduction

"In order to successfully manage companies in times of an accelerated transformation to the information society, apart the already classic theoretical and practical knowledge, it will be necessary to: build up an information system which will permit to have an instant overview of all the relevant parameters of the company, to define the strategy concerning the relevant networks which will carry all the influences from the area, including the strategy for incorporation in the chosen networks, and to organize the company in such a way to permit a simple rearrangement of the company as an answer to the area influences. An indispensable condition for reacting, especially for quick reacting, is a reporting system that permits at least once a month to compare and analyze the realization of the financial and non financial goals in the previous month, but as part of the realization of the annual (by month) business plan." [12]

In the distant 1988, the management of the ABB company created a reporting system ABACUS permitting to create each month and for every part of this huge company a balance sheet and income statement with the intent to make the return of the capital employed become the basic measurement method of performance. The goal was to push the responsibility for the balance sheet as deep as possible into the organization and they succeeded in running a complex organizational task based on the monthly system of reporting.

It is possible today to create a financial report of the company every day but it does not mean it has to be done. In most cases, it is enough and optimal to review every month what was done in the previous month and compare it with the yearly business plan (monthly and year to date). Considering this, it seems that the ABB approach from 1988, to create once a month a income statement and a balance sheet for all the parts of the company, has stood up the test of time and showed itself valid today as well. In the same time, the return on capital employed represents the best measurement not only for the realization of the financial part of the business plan [4] but also of the total business activity of the company in a defined period of time [10, pp. 62-67]. Although it is

inarguable in theory and in practice that the net actual value is the base criterion for taking investment decisions [5, p. 30] it should be noted that this criterion is not opposed to the goal of achieving a maximum return of funds, it is just the fact that the price of money should be taken into consideration when investing.

The financial reports are prepared by the company management based on positive accounting regulations, and this most commonly twice a year. The shareholders hire certified accountants to get an independent opinion on whether the financial reports prepared by the management are objective when it comes to funds, sources of funds and return shown. The full definition of auditing is: "An audit is an independent review and opinion expressed on financial reports of a company by an appointed auditor performing the duties relevant to that appointment in accordance with the statutory regulations" [1, p. 10].

Despite their insufficient credibility, the financial reports of the company offer a large array of information that can be used during the process of making various business decisions. These data can hardly be employed in their original form so they need to be transposed first in a form suitable for drawing conclusions and various financial factors calculated.

In every textbook, one can find a different selection of basic accounting ratios and none can be said to be the best and most complete¹. The accounting ratios can be divided e.g. on ratios of return, flows or funds [6].

Although the auditing knowledge² and techniques can be efficiently used in other business areas, and it is best to consult literature from countries with long tradition in auditing [2], it should be said that auditing cannot prevent accounting values to correspond to market values. This can occur due to: inflation, variation of the official from the market rate of the local currency to the convertible ones, variation of the "official" from the real inflation rate, variation of the real value of the invoiced from the payable realization, changes in purchasing and

Submission made by Roger Adams, head of ACCA technical sector and director of the training course for certified accountants in march 1992, Sava Center, Belgrade.

² ACCA (The Chartered Association of Certified Accountants) from London organized 1992 in Belgrade a training for the "certified auditors" taken by the author.

retail prices, changes of real estate prices and other fixed assets and so on.

"The managers and shareholders of companies are not required to think that the values from the official financial reports are realistic and no one can forbid them to create different financial reports for internal use. The best way to find out how much was earned in a defined period is to perform a valuation of the company capital at the beginning and at the end of the period. If money has been earned, then it will be shown at the end of the period somewhere in the balance sheet as an increase in assets, a reduction in liabilities or combined" [10, pp. 62-67].

The question of evaluating the values of different positions in the balance sheet of the company is founded in this text on the literature, personal consulting and valuation experiences and techniques of independent audit. [9]

In order to evaluate the value of the capital of the company at the beginning and at the end of the period defined, it is necessary to create balance sheets for both dates in the same way it is done when creating official financial reports. It is understood, of course, that all business changes have been promptly and accurately recorded. After that, the bookkeeping values of the assets and liabilities are replaced with other (estimated) values and this by the ones considered being realistic. The difference between such new (realistic) values of assets and liabilities of the company is representing the realistic value of the capital, meaning the amount of money employed by the company in a growth purpose. The same applies to the balance sheet at the beginning of the period and for the balance sheet at the end of the period. The difference between the estimated value at the end of the period and at the beginning of the period is the revenue on initial capital, meaning an increase of the absolute value of the capital. The relative relation between this augmentation of the capital and the initial capital represents the obtained rate of growth of the capital for the period defined.

The basic question to be considered in the process of evaluation is with how much Euros on evaluation day one can express the value of each position of the balance sheet. For each individual position of assets and liabilities one needs to choose the method that will express the best the market value in Euros.

The following will show an example of the process of measuring the obtained rate of growth. The application software that was used in the example is an original design of the author [11] and was used in several tens of cases in local companies, together with the application software for executing annual (by month) business plans³.

The process of measuring financial success as described can be considered as "counting" money. If an exchange office owner starts a day with a certain amount of dinars, Euros and dollars and during the course of day handles a lot of transactions and there are several changes in currency rates during the day, in order to see how much he has earned, the owner does not have to do anything else but to count the different currencies and compare the total (calculated) amount in Euros with the amount (calculated) in Euros from the start of the day. The currency rate fluctuations during the day are not relevant and the gain/loss on any particular transaction is also not relevant.

The financial success in the previous period and the financial balance on a specific day can quickly be defined, almost exactly, which is not possible with the future yield. It is possible to have an idea of what to do to increase the capital to the maximum, but it is uncertain what will happen.

It is to be said here that in theory and in practice, there have been different attempts to introduce objective criterions in the evaluation of the business performance of managers, e.g. EVA (economic value added). This assessment method of manager's performance is considered even as a ground for bonuses payment [7, p. 1]. *Alfred Rappaport* said on this matter that there is no universal answer to the question what is the percentage of yield to achieve before rewarding the managers [13, p. 132].

The increase of value of company stock can be another option for introducing objective criterion in the assessment of manager's performance. That would be in fact the application of the "value based management" which is one of the newest approaches to company management, based on the fact that the value of the company is determined by the discounted future net money flows [8, p. 83].

³ The application software used can be downloaded in Excel format from the site: www.nebojsamrdja.com

Even if the shareholders and the managers choose such approach, it would be useful for them to know the flow of the liquidation value of capital. *Brian Forst* begins his paper [3, p. 45, p. 75] on the use of quantitative methods in company management by claiming that the numbers are the fundamental language of business, among other reasons because the bottom line of the balance sheet is a number, but at the end of his paper he highlights the fact that an efficient management is much more than working with numbers. In any case, for management purposes, we need numbers as accurate and "realistic" as possible.

Materials and methods

In order to evaluate the liquidation value of the company's capital at the end of each month of the year, the application software has been created in Excel with the following elements:

- Successive monthly balance sheets accounting and estimated values (assets, liabilities and capital)
- Successive monthly balance sheets estimated values (assets, liabilities and capital)
- Monthly changes in estimated values of assets, liabilities and capital
- Cumulative changes in estimated values of assets, liabilities and capital
- Summary of measuring monthly and cumulative rate of return

The first part "Successive monthly balance sheets – accounting and estimated values" is composed from cells where to enter the accounting values of all the positions

from the balance sheet at the end of the month and the estimated values of certain positions. Table 1 shows the first part of the application software⁴ and the cells where to enter the figures are lightly shaded. For a better overview, Table 1 contains only the columns for three successive months, and the application software has thirteen columns.

The evaluation of different positions is performed individually, in accordance with the characteristics of each position and those values can be lower than the accounting ones by e.g. 50% for the buildings, 70% for the equipment, 30% for the inventory and 10% for the receivables.

As a result of inputting accounting and estimated values of different positions from the balance sheet in the first part of the application software, successive estimated balance sheets are obtained (automatically, using the Excel formulas) at the end of each month (part two of the application software) that are used for further calculations and analysis.

The third and fourth part of the application software "Monthly changes in estimated values of assets, liabilities and capital" and "Cumulative changes in estimated values of assets, liabilities and capital" are also automatically (by formulas) derived from the second part and they represent just the difference between different positions in two consecutive months or from the beginning of the year. Tables 2 and 3 represent an example of monthly and cumulative changes of different positions of the balance sheet. For a better overview also, the example has only the first five columns.

Table 1: Successive monthly balance sheet with accounting and estimated value

		Value	31.12.	Value	31.1.	Value	28.2.
Cod	Description	Accounting	Estimated	Accounting	Estimated	Accounting	Estimated
		000 RSD	EUR	000 RSD	EUR	000 RSD	EUR
	Assets						
001	A. Permanent assets	644,127	10,182,569	636,476	10,193,576	632,609	10,242,301
002	I. Subscribed capital unpaid	0	0	0	0	0	0
003	II. Goodwill	0	0	0	0	0	0
004	III. Intangible assts	0	0	0	0	0	0
005	IV. Property, plants, equip.,	565,608	10,182,569	558,117	10,193,576	554,418	10,242,301
006	1. Property, plants and equip.	565,608	10,182,569	558,117	10,193,576	554,418	10,242,301
007	2. Investment property	0	0	0	0	0	0
008	3. Biological assets	0	0	0	0	0	0
009	V. Long-term fin. investments	78,519	0	78,359	0	78,191	0
010	1. Shares	0	0	0	0	0	0

⁴ The application software examined in this article can be downloaded from the author's site www.nebojsamrdja.com

Table 1: Successive monthly balance sheet with accounting and estimated value /continuous/

		Value	31.12.	Value	31.1.	Value	28.2.
Cod	Description	Accounting	Estimated	Accounting	Estimated	Accounting	Estimated
		000 RSD	EUR	000 RSD	EUR	000 RSD	EUR
	Assets						
011	2. Other long-term fin. inv.	78,519	0	78,359	0	78,191	0
012	B. Current assets	444,581	6,059,455	477,534	6,313,950	510,428	6,755,515
013	I. Inventory	211,148	3,613,150	240,850	3,844,758	240,890	3,953,568
014	II. Permanent assets for sale	0	0	0	0	0	0
015	III. Short-term receivables, investments and cash	233,433	2,446,305	236,684	2,469,192	269,538	2,801,947
016	1. Receivables	41,705	632,510	41,861	634,307	48,018	732,717
017	2. Income tax	0	0	0	0	0	0
018	3. Short-term investments	800	7,568	800	7,535	20,800	194,294
019	4. Cash and cash equivalents	190,642	1,803,521	192,971	1,817,443	198,089	1,850,360
020	5. VAT and prepayments	286	2,706	1,052	9,908	2,631	24,576
021	IV. Postponed tax assets	0	0	0	0	0	0
022	V. Operating assets	1,088,708	16,242,024	1,114,010	16,507,526	1,143,037	16,997,816
023	G. Loss over capital	0	0	11,647	0	0	0
024	D. Total assets	1,088,708	16,242,024	1,125,657	16,507,526	1,143,037	16,997,816
025	Dj. Off-balance assets	0	0	0	0	0	0
	Capital & liabilities						
101	A. Capital	947,352	15,566,978	947,352	15,487,486	960,231	15,944,089
111	B. Long-term res. and liab.	141,356	675,046	178,305	1,020,040	182,806	1,053,727
112	I. Long-term reserves	60,000	0	60,000	0	60,000	0
113	II. Long-term liabilities	10,000	0	10,000	0	10,000	0
114	1. Long-term credits	10,000	0	10,000	0	10,000	0
115	2. Other long-term liabilities	0	0	0	0	0	0
116	III. Short-term liabilities	71,356	675,046	108,305	1,020,040	112,806	1,053,727
117	1. Short-term fin. liabilities	0	0	0	0	0	0
118	2. Liab. about assets for sale	0	0	0	0	0	0
119	3. Short-term liabilities from business operation	70,777	669,568	107,253	1,010,132	110,176	1,029,160
120	4. Other liabilities	579	5,477	1,052	9,908	2,630	24,567
121	5. VAT and other taxes	0	0	0	0	0	0
122	6. Tax on profit	0	0	0	0	0	0
123	V. Postponed tax liabilities	0	0	0	0	0	0
124	G. Capital and liabilities	1,088,708	16,242,024	1,125,657	16,507,526	1,143,037	16,997,816
125	D. Off-balance liabilities	0	0	0	0	0	0

Table 2: Monthly changes in estimated values of assets, liabilities and capital (EUR)

Cod	Description	I	II	III	IV	V
	Assets					
001	A. Permanent assets	11,007	48,725	10,014	3,071	6,114
002	I. Subscribed capital unpaid	0	0	0	0	0
003	II. Goodwill	0	0	0	0	0
004	III. Intangible assts	0	0	0	0	0
005	IV. Property, plants, equip. and biol. assets	11,007	48,725	10,014	3,071	6,114
009	V. Long-term financial investments	0	0	0	0	0
012	B. Current assets	254,495	441,565	591,481	373,429	-288,247
013	I. Inventory	231,608	108,810	341,541	459,667	-403,852
014	II. Permanent assets for sale	0	0	0	0	0
015	III. Short-term receivables, inv. and cash	22,887	332,755	249,940	-86,238	115,605
016	1. Receivables	1,797	98,410	6,321	160,325	120,470
017	2. Income tax	0	0	0	0	0
018	3. Short-term investments	-34	186,759	87,532	-5,449	-269,139
019	4. Cash and cash equivalents	13,922	32,917	139,890	-227,126	72,594
020	5. Value added tax and prepayments	7,202	14,668	16,197	-13,988	191,680

Table 2: Monthly changes in estimated values of assets, liabilities and capital (EUR) /continuous/

Cod	Description	I	II	III	IV	V
	Assets					
021	IV. Postponed tax assets	0	0	0	0	0
022	V. Operating assets	265,502	490,290	601,495	376,500	-282,133
023	G. Loss over capital	0	0	0	0	0
024	D. Total assets	265,502	490,290	601,495	376,500	-282,133
025	Dj. Off-balance assets	0	0	0	0	0
	Capital and liabilities					
101	A. Capital	-79,492	456,603	564,875	536,640	-287,465
111	B. Long-term reserves and liabilities	344,994	33,687	36,619	-160,140	5,332
112	I. Long-term reserves	0	0	0	0	0
113	II. Long-term liabilities	0	0	0	0	0
116	III. Short-term liabilities	344,994	33,687	36,619	-160,140	5,332
117	1. Short-term financial liabilities	0	0	0	0	0
118	2. Liabilities connected with assets for sale	0	0	0	0	0
119	3. Short-term liab. from business operation	340,564	19,028	13,038	-111,992	5,332
120	4. Other liabilities	4,430	14,659	23,581	-48,148	0
121	5. Value added tax and other taxes	0	0	0	0	0
122	6. Tax on profit	0	0	0	0	0
123	V. Postponed tax liabilities	0	0	0	0	0
124	G. Capital and liabilities	265,502	490,290	601,495	376,500	-282,133
125	D. Off-balance liabilities	0	0	0	0	0

Table 3: Cumulative changes in estimated values of assets, liabilities & capital (EUR)

Cod	Description	XII - I	XII - II	XII - III	XII - IV	XII - V
	Assets					
001	A. Permanent assets	11,007	59,732	69,746	72,817	78,931
002	I. Subscribed capital unpaid	0	0	0	0	0
003	II. Goodwill	0	0	0	0	0
004	III. Intangible assts	0	0	0	0	0
005	IV. Property, plants, equipment,	11,007	59,732	69,746	72,817	78,931
009	V. Long-term financial investments	0	0	0	0	0
012	B. Current assets	254,495	696,060	1,287,541	1,660,969	1,372,723
013	I. Inventory	231,608	340,418	681,959	1,141,626	737,774
014	II. Permanent assets for sale	0	0	0	0	0
015	III. Short-term receivables, inv. and cash	22,887	355,642	605,582	519,343	634,949
016	1. Receivables	1,797	100,207	106,528	266,853	387,323
017	2. Income tax	0	0	0	0	0
018	3. Short-term investments	-34	186,726	274,258	268,809	-330
019	4. Cash and cash equivalents	13,922	46,839	186,728	-40,398	32,196
020	5. Value added tax and prepayments	7,202	21,871	38,068	24,080	215,759
021	IV. Postponed tax assets	0	0	0	0	0
022	V. Operating assets	265,502	755,792	1,357,287	1,733,786	1,451,654
023	G. Loss over capital	0	0	0	0	0
024	D. Total assets	265,502	755,792	1,357,287	1,733,786	1,451,654
025	Dj. Off-balance assets	0	0	0	0	0
	Capital and liabilities					
101	A. Capital	-79,492	377,111	941,986	1,478,626	1,191,161
111	B. Long-term reserves and liabilities	344,994	378,681	415,301	255,160	260,492
112	I. Long-term reserves	0	0	0	0	0
113	II. Long-term liabilities	0	0	0	0	0
116	III. Short-term liabilities	344,994	378,681	415,301	255,160	260,492
117	1. Short-term financial liabilities	0	0	0	0	0
118	2. Liabilities about assets for sale	0	0	0	0	0
119	3. Short-term liab. from business op.	340,564	359,592	372,630	260,638	265,970

Table 3: Cumulative changes in estimated values of assets, liabilities & capital (EUR) /continuous/

Cod	Description	XII - I	XII - II	XII - III	XII - IV	XII - V
	Assets					
120	4. Other liabilities	4,430	19,089	42,671	-5,477	-5,477
121	5. Value added tax and other taxes	0	0	0	0	0
122	6. Tax on profit	0	0	0	0	0
123	V. Postponed tax liabilities	0	0	0	0	0
124	G. Capital and liabilities	265,502	755,792	1,357,287	1,733,786	1,451,654
125	D. Off-balance liabilities	0	0	0	0	0

The last part of the application software contains the previous calculation in short and the one that was the final goal – the measuring of the rate of return. Table 4 shows an example of that summary. It shows the basic positions of the balance sheet including the accounted net current assets (difference between current assets and short-term liabilities) and then, based on changes in the

estimated value of capital the return rate for each month and cumulatively is calculated. All the figures shown in Table 4 are also obtained automatically from the previous parts of the application software except for position 4 (return in month) where data is input on different money transfers to/from the company based on dividends withdrawal, capital increase by shareholders et al.

Table 4: Summary of measuring monthly and cumulative rate of return (EUR)

31.1	28.2	31.3	30.4	31.5.
				10,261,500
				6,496,640
				4,350,924
				3,081,254
		-	-	0
				935,538
		-	-	0
				16,758,140
I				V
11,007				6,114
-90,499	407,878	554,861	533,569	-293,579
231,608	108,810	341,541	459,667	-403,852
22,887	332,755	249,940	-86,238	115,605
0	0	0	0	0
344,994	33,687	36,619	-160,140	5,332
0	0	0	0	0
-79,492	456,603	564,875	536,640	-287,465
XII - I	XII - II	XII - III	XII - IV	XII - V
11,007	59,732	69,746	72,817	78,931
-90,499	317,379	872,240	1,405,809	1,112,230
231,608	340,418	681,959	1,141,626	737,774
22,887	355,642	605,582	519,343	634,949
0	0	0	0	0
344,994	378,681	415,301	255,160	260,492
0	0	0	0	0
-79,492	377,111	941,986	1,478,626	1,191,161
I	II	III	IV	V
-79,492	456,603	564,875	536,640	-287,465
0	0	0	-201,979	-913,133
-79,492	456,603	564,875	738,619	625,668
XII - I	XII - II	XII - III	XII - IV	XII - V
-79,492	377,111	941,986	1,478,626	1,191,161
0	0	0	-201,979	-1,115,112
	11,007 -90,499 231,608 22,887 0 344,994 0 -79,492 XII - I 11,007 -90,499 231,608 22,887 0 344,994 0 -79,492 I -79,492 VII - I -79,492 XII - I	10,193,576 10,242,301 5,293,910 5,701,788 3,844,758 3,953,568 2,469,192 2,801,947 0 0 1,020,040 1,053,727 0 0 15,487,486 15,944,089 I II 11,007 48,725 -90,499 407,878 231,608 108,810 22,887 332,755 0 0 344,994 33,687 0 0 -79,492 456,603 XIII - I XIII - II 11,007 59,732 -90,499 317,379 231,608 340,418 22,887 355,642 0 0 344,994 378,681 0 0 -79,492 377,111 I II -79,492 456,603 0 0 -79,492 456,603 XII - I XII - II </td <td>10,193,576 10,242,301 10,252,315 5,293,910 5,701,788 6,256,650 3,844,758 3,953,568 4,295,109 2,469,192 2,801,947 3,051,887 0 0 0 1,020,040 1,053,727 1,090,346 0 0 0 15,487,486 15,944,089 16,508,965 I II III 11,007 48,725 10,014 -90,499 407,878 554,861 231,608 108,810 341,541 22,887 332,755 249,940 0 0 0 344,994 33,687 36,619 0 0 0 -79,492 456,603 564,875 XII - I XII - II XII - III 11,007 59,732 69,746 -90,499 317,379 872,240 231,608 340,418 681,959 22,887 355,642 605,582 0</td> <td>10,193,576 10,242,301 10,252,315 10,255,386 5,293,910 5,701,788 6,256,650 6,790,219 3,844,758 3,953,568 4,295,109 4,754,776 2,469,192 2,801,947 3,051,887 2,965,649 0 0 0 0 0 1,020,040 1,053,727 1,090,346 930,206 0 0 0 0 0 15,487,486 15,944,089 16,508,965 17,045,605 1 III IIII IV 11,007 48,725 10,014 3,071 -90,499 407,878 554,861 533,569 231,608 108,810 341,541 459,667 22,887 332,755 249,940 -86,238 0 0 0 0 344,994 33,687 36,619 -160,140 0 0 0 0 -79,492 456,603 564,875 536,640 XII - I XII<</td>	10,193,576 10,242,301 10,252,315 5,293,910 5,701,788 6,256,650 3,844,758 3,953,568 4,295,109 2,469,192 2,801,947 3,051,887 0 0 0 1,020,040 1,053,727 1,090,346 0 0 0 15,487,486 15,944,089 16,508,965 I II III 11,007 48,725 10,014 -90,499 407,878 554,861 231,608 108,810 341,541 22,887 332,755 249,940 0 0 0 344,994 33,687 36,619 0 0 0 -79,492 456,603 564,875 XII - I XII - II XII - III 11,007 59,732 69,746 -90,499 317,379 872,240 231,608 340,418 681,959 22,887 355,642 605,582 0	10,193,576 10,242,301 10,252,315 10,255,386 5,293,910 5,701,788 6,256,650 6,790,219 3,844,758 3,953,568 4,295,109 4,754,776 2,469,192 2,801,947 3,051,887 2,965,649 0 0 0 0 0 1,020,040 1,053,727 1,090,346 930,206 0 0 0 0 0 15,487,486 15,944,089 16,508,965 17,045,605 1 III IIII IV 11,007 48,725 10,014 3,071 -90,499 407,878 554,861 533,569 231,608 108,810 341,541 459,667 22,887 332,755 249,940 -86,238 0 0 0 0 344,994 33,687 36,619 -160,140 0 0 0 0 -79,492 456,603 564,875 536,640 XII - I XII<

Table 4: Summary of measuring monthly and cumulative rate of return (EUR) /continuous/

6. Rate of return in month	I	II	III	IV	V
1. Return in month	-79,492	456,603	564,875	738,619	625,668
2. Average capital employed	15,527,232	15,715,788	16,226,527	16,777,285	16,901,872
3. Rate of return in month (1/2x12)	-6%	35%	42%	53%	44%
7. Rate of return in period	XII - I	XII - II	XII - III	XII - IV	XII - V
1. Return in period	-79,492	377,111	941,986	1,680,605	2,306,273
2. Average capital employed	15,527,232	15,666,185	15,876,880	16,110,625	16,218,544
3. Rate of return in period $(1/2/no. of months x 12)$	-6%	14%	24%	31%	34%

Results and discussion

A picture is worth a thousand words is a well known saying. In this case, it is possible to represent with charts the results obtained by using the application software for measuring the capital return rate.

The following four charts are also output from the application software but they are representing data for all 12 months. The elements of such a report on return rate realized can be directly compared with the financial parts of the company's business plan, unlike the standard approach based on the balance of success and calculation of the accounting ratios.

Figure 1: Successive monthly balance sheet – estimated values (EUR)

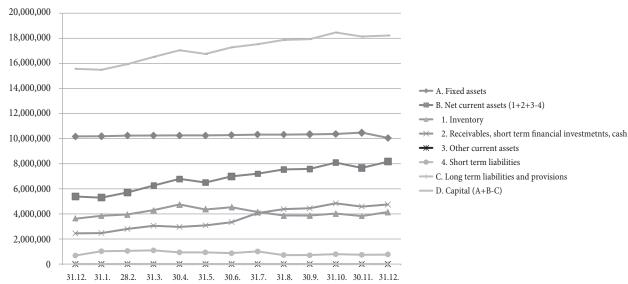
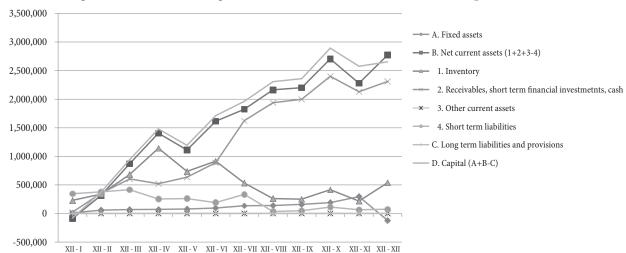


Figure 2: Cumulative changes in estimated values of asets, liabilties & capital (EUR)



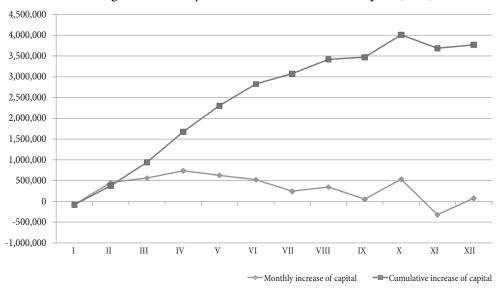
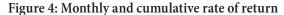
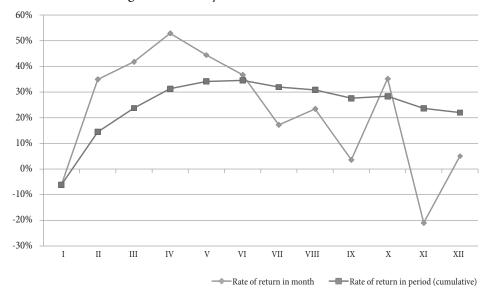


Figure 3: Monthly and cumulative increase of capital (EUR)





Conclusions

For tracking the realization of the business plan and decision making about correcting the business plan it is useful, among other actions, to review once a month all the positions of the balance sheet and evaluate them based on the latest information on market in and out prices in Euros. The application software for measuring the return rate described above can be used in that process. The readers of this article have to decide themselves if it is better to start the analysis of a company's business with the charts shown above or based on the standard financial reports (that include

amortization, revaluation reserves, dinars...) and the accounting ratios derived.

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