
ABOUT CAPITAL TURNOVER AND THE METHODOLOGY OF ITS ANALYSIS

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Abstract: Capital turnover is constantly repeating process of capital transformation from one to another form and turning it in its initial form. This process comprises capital advance for acquisition of production means and manpower, the use of the resources in the production of finished goods, sale of finished goods, and the return of capital in its original form.

We will study the capital turnover with view of the stages of its movement. During the first stage, the capital is transformed from monetary into product form, as production means (long-term tangible assets and material resources) and manpower that are required for the enterprise's business. The second stage – the stage of the production process, capital is transformed from one commodity form (production resources) in another commodity form (finished goods). During the third stage, the capital is transformed from commodity to monetary form, i.e. it recovers its original form.

The issue of capital turnover is topical at all phases and stages of enterprise's development. The acceleration of capital turnover results in release of capital embodied in different resources that can be advanced in appropriate activities, thus to increase the enterprise's gains, and therefore – the capital return. The deceleration of capital turnover results in shortage of means required for the normal course of the enterprise's business, and in its turn the enterprise is thus forced to raise additional funds in order to operate. This increases the share of borrowings and the level of financial risk the enterprise is exposed to.

The interest to capital turnover is due to the insufficient understanding of the importance of this issue both for the successful and efficient development of enterprises' business, as well as for the prosperity of economy as a whole. This is one of the most important issues – driver of business and economy, which is topical, irrespective of the type of ownership of the production means, the organization of the economy and the specific public and political environment. As a result of the insufficient understanding of the importance and significance of capital turnover, some thoughts exist that these are obsolete, archaic and all but unnecessary methodologies for analysis of capital turnover in the conditions of market competition.

Capital turnover may be analyzed and assessed from different points of view. For example: according to the sources of its formation (equity and borrowings); according to the duration of capital involvement in the enterprise's turnover (fixed capital and short-term borrowings); according to the resources in which the equity is embodied (share equity and working equity), etc.

The object studied in this publication is the capital turnover of enterprises with industrial principal business, and the subject matter of the study covers the methodology for analysis of equity turnover with view of the resources it is embodied in.

The aim of this publication is to reach a methodology for analysis and assessment of equity turnover, which is feasible for the economic practice and useful for the industrial enterprises' management to make proper and reasonable decisions for the business development in operational and strategic aspect.

Keywords: analysis, capital, turnover, development, management

1. INTRODUCTION

A fundamental question of the economy at all phases and stages of its development and regardless of the form of ownership of the manufacturing facilities is the question of the capital circulation and turnover.

The online glossary defines that circulation is essentially a „process of one rotation and a return to the initial position.”¹² Based on this, at first glance, broad definition of circulation in general, we would deepen our considerations on the circulation and turnover of the capital. The aim is to present the essence of the capital circulation, to outline the phases through which this circulation is passing and to understand in detail the forms of capital transformations during the circulation and turnover.

¹² Dictionary, <http://talkoven.onlinerechnik.com>

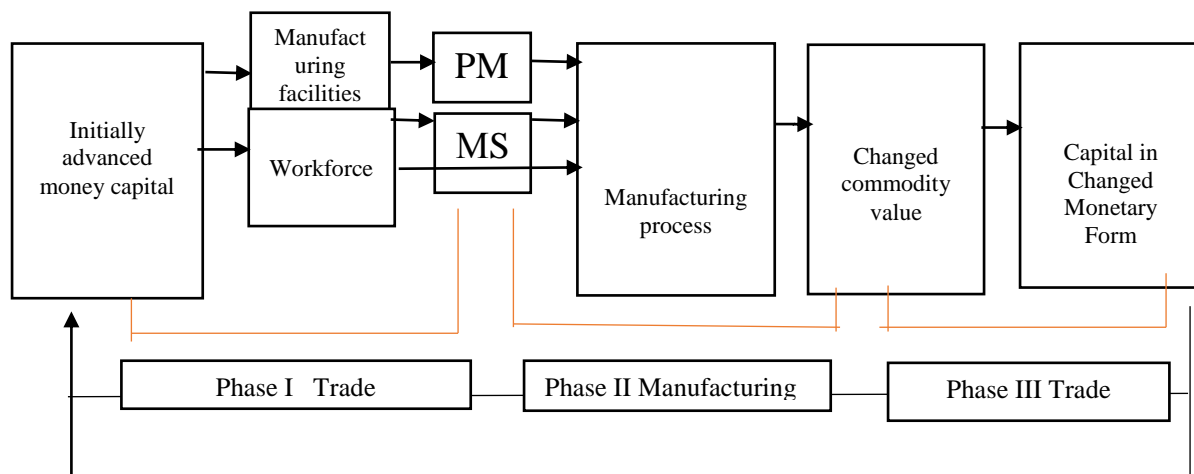
Such an approach makes it possible to highlight the importance of the capital turnover concept both in general and individually of the elements of its composition. In addition, the parameters needed for analysis can be derived and the methodology for capital turnover analysis can be justified.

2. CAPITAL CIRCULATION AND TURNOVER

The turnover and turnover of the capital „describe the stages in the movement of capital (purchase, production, sale) and the functional forms accepted by it (monetary, productive and commodity capital).”¹³ It is one of the „peculiarities of capital that it is in constant motion, passing through the different phases of reproduction – production and reversal, and the different stages – purchase, production and sale, i.e. the capital (added by R. I.) particular circular rotation.”¹⁴

Kristalina Georgieva notes that the horizon of capital is „the process of capital movements from its emergence in a functional form to its return to it.”¹⁵ Economists are of the opinion that the turnover of the capital is the „succession of capital from one form to another (monetary, industrial, commodity and monetary increased) and its return to the original form.”¹⁶ Here we would say only that in the transformation of capital from one form to another it returns to its original monetary form, but in a changed value.

The turnover of the capital can be presented in the following way (see Scheme 1).



Scheme 1. Capital circulation

where:

PM – plant and machinery;

MS – materials and supplies.

During its circulation, the capital passes through three phases. The first is the phase of the trade, where the initially advanced monetary capital is converted from cash into a commodity form. Through the purchase of means of production (plant and machinery and materials and supplies) and hiring of the workforce, capital is reflected in the resources needed by each enterprise to run their business. Either the plant and machinery (fixed tangible assets), materials and supplies (material resources) and manpower are the production factors necessary for the business to be carried out. In our opinion, increasing the efficiency of the use of long-term tangible assets, material resources and workforce are the important and driving factors for the acceleration of capital turnover.

The second phase of the capital circulation is the implementation of the production process, where the capital in a commodity form is being converted into productive capital. It is exactly the production where the actual linking of the workforce and the plant and machinery is carried out, resulting in the final product – the finished products manufactured. It essentially is the transformed productive capital in a commodity form.

The third phase of the capital circulation is again in the area of sale. Here, during the sale of the finished goods the transformation of capital from a commodity into monetary form takes place. Or alternatively, the capital returns

¹³ Georgieva, K., (1991). Microeconomics - part one. ed. EF Invest Kinov. S. p.142

¹⁴ Popov, G., & Marinova, Y. (2006). Economics and Organization of the Company. GorexPres. S. p.57

¹⁵ Georgieva, K., (1991). Microeconomics - part one. ed. EF Invest Kinov. S. p.142

¹⁶ Popov, G., & Marinova, Y. (2006). Economics and Organization of the Company. GorexPres. S. p.58

back in its initial monetary form, but with a changed value. In other words, „the three stages of capital movement — purchasing, producing and selling, bring it back with a changed amount in its original monetary form.“¹⁷ This movement of capital in manufacturing enterprises and its conversion from one form into another is an ongoing process, and „constant movement and continuous repetition of the circulation gives an idea of the capital turnover.“¹⁸ Or „the turnover of capital is a continuous resumption of its circulation.“¹⁹ We share the opinion that, from economic point of view, capital turnover has „some boundaries within which the initially advanced monetary (added by R. I.) capital gets fully returned to its owner.“²⁰

Here, at least in our opinion, two issues are important.

The first is the value of the capital, which is returned to its owner. It is the owners (investors) who are interested in the rate of return on the capital initially invested by them. But we should not easily ignore the second circumstance. This is the time of circulation of the capital both in general and of its constituent parts individually. Unfortunately, some economists share the idea that the only important thing for investors is the rate of return on the invested capital, i.e. the money capital initially advanced by them. From the comparison between the profitability of the invested capital and its weighted average price, investors get important information about whether their investments are profitable or not, or alternatively the investment they are about to make.

We do not ignore the importance and the significance of this issue. We even believe that this is extremely important and useful in the conditions of market economy. We maintain that, in addition to the rate of return on the invested capital, investors need information also about the time of capital circulation. This refers to the time within which the initially advanced monetary capital carries and returns its value to its owner. Given that the capital carries its value to the value of the finished product and restores its original monetary form within a shorter period of time, the owners of the capital would have free capital, which could be advanced in the business and get returned even with a higher value.

We believe that the issue of return on capital should be considered as a complex, analyzing and evaluating both the rate of return and the time of circulation of the invested capital.

The capital invested in the activity of the enterprise can be analyzed and evaluated against different criteria. For instance:

- 1) According to the sources of generation, the capital can be distinguished as equity capital and borrowed capital.
- (2) According to the time of carrying and return of capital in its original form, it can be a capital stock and working capital.
- 3) According to the time of operation in the undertaking operations, the capital is distinguished as fixed capital and variable capital.

It should be noted that, to a certain extent, these criteria for distinguishing the capital complement each other. For example, equity can be distinguished by company own capital stock and company own fixed capital. Also, the fixed capital can be formed by both equity and borrowed resources (long-term liabilities). Or the working capital of the enterprise can be both equity and borrowed capital.

It is necessary to clarify that the concept of „fixed capital“ viewed from different perspectives, is different in nature and content. For example, as a source of funds for the business, the fixed capital is the one generated upon the establishment of the enterprise and is an element of its equity. However, from the point of view of the time of carrying and recovery of its value, the fixed capital transfers its value into the value of the finished product by „performing a full cycle of movement from advancing to recovery within several (n) circulations.“²¹

3. FIXED AND WORKING CAPITAL

According to the capital specifics in the process of production and interaction with labor, it is distinguished by plants and machinery and materials and supplies. Capital is therefore regarded as a „production factor which is a set of plants and machinery and materials and supplies used in the production of goods and services.“²² The capital, advanced in the different resources – production factors, has different behavior over time. Some of the elements of capital are manifested in one way over time, and other elements – in other ways. Or different elements of capital in different times transfer and recover their value. The capital embodied in plants and machinery (long-term tangible

¹⁷ Georgieva, K., (1991). Microeconomics - part one. ed. EF Invest Kinov. S. p.142

¹⁸ Popov, G., & Marinova, Y. (2006). Economics and Organization of the Company. GorexPres. S. p.57

¹⁹ Georgieva, K., (1991). Microeconomics - part one. ed. EF Invest Kinov. S. p.143

²⁰ Popov, G., & Marinova, Y. (2006). Economics and Organization of the Company. GorexPres. S. p.57

²¹ Georgieva, K., (1991). Microeconomics - part one. ed. EF Invest Kinov. S. p.143

²² Spasov, T. & college. (2011). Microeconomics. IM Economy. S. p.66

assets and material resources in their capacity as production factors) show different behavior over time. For example, the capital embodied in fixed tangible assets transfers its value in parts in the value of the finished product - over several accounting periods. However, the behavior over the time of the capital invested in the purchase of material resources (raw materials and supplies needed for the business of the enterprise), as well as in the workforce (salaries of staff) is quite different. This capital recovers entirely its value after each sale of the finished product. From an economic point of view, the capital circulation time is of a particular interest. This is about the time within which the initially advanced monetary capital transfers its value into the value of the finished product and returns to its original monetary form with its owner. It is from this point of view that the capital is distinguished by fixed and working capital. It is stated that in „dependence on capital involvement in the production process and the way in which its value is to be translated into the value of the finished products, the productive capital is divided into fixed and working.“²³

The fixed capital is used in many „production and technological cycles, while retains its original form, but is worn out morally and physically.“²⁴ Substantially, it is part of the physical property, which is embodied in long-term tangible assets – buildings, plant and equipment, facilities, transport vehicles, computer equipment, office equipment, etc. The fixed capital transfers its value in parts into the value of the finished product over several accounting periods. As K. Georgieva suggests, „the fixed capital transfers its value in parts and gets its value recovered in parts, and also loses its consumer value in parts.“²⁵ In the modern world, the capital, embodied in long-term intangible assets, is becoming more important – intangible assets, so much needed for the successful development of the business.

The working capital is used within the „limits of one production and technological cycle, it loses its original form and provides the material basis of the manufactured product.“²⁶ K. Georgieva suggests that the working capital „fully transfers and fully recovers its value within the limits of one circulation cycle. It also fully realizes its user value within the one-off act of its productive consumption in a single circulation cycle.“²⁷ The working capital includes part of the physical property (raw materials, supplies, finished products, goods, work in progress), as well as the cost of labor (salaries and wages of personnel).

Why is it necessary to repeat once again well-known concepts, having been studied widely in the microeconomics and these issues are discussed by many authors. We would like to remind all this being entirely aware that they are known to the esteemed readers. The classification of capital as fixed and working is made by us in order to facilitate the presentation of our views on the turnover of the capital in general and of its individual elements, on the applicability and the importance of this issue in any socio-economic unit. Last but not least, this issue is also important in terms of the formation of an appropriate capital structure, the achievement and maintenance of financial stability of the enterprise, and the development of a modern methodology for the analysis of capital turnover in the context of financial equilibrium of the enterprise.

We believe it is necessary to emphasize that the concept of K. Marx, as K. Georgieva notes „of the capital circulation and turnover is (added by R.I.) one of the least ideological concepts in Marxism.“²⁸

4. COMPANY FIXED AND WORKING CAPITAL

In terms of the duration of participation in the business turnover, the equity of the enterprise is differentiated by company fixed capital and company working capital. An important task of the business analysis is to ascertain how much of the enterprise's own resources are used to form its fixed assets. Essentially, this means determining the company fixed capital. The amount of company fixed capital is determined as the difference between the fixed assets and the undertaking's long-term liabilities.

The calculation of the amounts of company fixed and company working capital makes it possible to determine the structure of the equity in terms of the duration of the involvement of assets in the company business in which it is used. The financial flexibility index can also be determined by the data of company working capital. Its amount is

²³ Popov, G., & Marinova, Y. (2006). *Economics and Organization of the Company*. GorexPres. S.

²⁴ Spasov, T. & college. (2011). *Microeconomics*. IM Economy. S. p.66

²⁵ Georgieva, K., (1991). *Microeconomics - part one*. ed. EF Invest Kinov. S. p.143

²⁶ Spasov, T. & college. (2011). *Microeconomics*. IM Economy. S. p.66

²⁷ Georgieva, K., (1991). *Microeconomics - part one*. ed. EF Invest Kinov. S. p.143

²⁸ Georgieva, K., (1991). *Microeconomics - part one*. ed. EF Invest Kinov. S. p.143; second edition (1993). p.143; third edition. ed. Thrace – M. (1999). p.101

calculated as the relationship between the company working capital and the entire equity of the enterprise. It shows how many levs of the current assets correspond to one lev of company equity.²⁹

An important task of the analysis is also to establish the amount of the current assets formed from company working capital and possibly from long-term sources. Essentially, this means establishing the net working capital available to the enterprise.

The amount of the net working capital can be defined as the difference between the enterprise's current assets and the short-term liabilities. The net working capital can also be defined as the difference between the fixed capital and the fixed assets of the enterprise. Where the fixed capital – these are the permanent means used in the business of the enterprise. Its amount is defined as the sum of the equity and the long-term liabilities (debts).

Given that all long-term liabilities are used as a source for the formation of fixed assets (golden rule in business financing³⁰), the net working capital essentially expresses the company current assets (company working capital) of the enterprise.

5. METHODOLOGY FOR ANALYSIS

The methodology for the analysis of the equity turnover is presented based on data about the business of PRIMA company. Table 1 shows the input data of the company business and some additional parameters. Table 2 shows the calculated parameters for capital turnover - separately for company fixed capital and for company working capital.

Table 1

Indicators	Previous year	Current year	Deviation
I. Source data, BGN'000			
1. Capital, including:	27483	26922	-561
1.1. Equity	6856	6456	-400
1.2. Attracted capital (liabilities), of which:	20627	20466	-161
a) long-term liabilities	19073	18847	-226
б) short-term liabilities	1554	1619	65
2. Assets, including:	27483	26922	-561
2.1. Fixed assets, of which:	24678	24531	-147
a) tangible assets	24637	24491	-146
2.2. Short-term assets	2805	2391	-414
3. Net sales revenue	7327	7115	-212
4. Depreciation costs	670	674	4
II. Additional calculated indicators			
5. Own equity (п.2.1 - п.1.2.a)	5605	5684	79
6. Own working capital (п.1.1 - п.5)	1251	772	-479
7. Coefficient of maneuverability equity (п.6 : п.1.1)	0,1825	0,1196	-0,0629
8. Permanent capital (п.1.1 + 1.2.a)	25929	25303	-626
9. Net working capital:			
a) model 1 (п.2.2 - п.1.2.б)	1251	772	-479
б) model 2 (п.8 - п.2.1)	1251	772	-479
10. Turnover time of tangible fixed assets (core capital), years (п.2.1.a : п.4)	36,7716	36,3368	-0,4348

²⁹ Chukov, K., P., Ivanova, P., (2017). Financial and Economic Analysis. S. IC – UNWE. p.330

³⁰ Chukov, K., P., (2011). Financial and Economic Analysis. S. Economics. p. 167. Cit. Danailov D., (1994). Company Financial Management. S. ed. Lyren. p. 110

11. Turnover rate of tangible fixed assets, turnover (п.4 : 2.1.a)	0,0272	0,0275	0,0003
12. Turnover time of short-term assets (working capital), days (п.2.2 : п.3)	137,8190	120,9782	-16,8408
13. Turnover of short-term assets, turnover (п.3 : п.2.2)	2,6121	2,9757	0,3636
14. Employment rate of short-term assets, BGN (п.2.2 : п.3)	0,3828	0,3361	-0,0468

The turnover of the fixed capital has accelerated (-0.4348 years), due to the acceleration of the turnover of the borrowed fixed capital (-0.5043 years) and the deceleration of the turnover of company fixed capital (0.0676 years). The turnover rate of the fixed tangible assets shows the proportion of the turnover of these assets in the corresponding reporting period in the total turnover of the capital embodied in the fixed tangible assets throughout the entire depreciation period. The parameters of the rate of turnover of fixed capital and its sources of formation confirm the results obtained above.

The turnover of working capital has accelerated (-16.8408 days) due to the acceleration of the turnover of the company working capital (-22.4047 days) and deceleration of the turnover of the borrowed working capital (5.5639 days). „Analysis processes, will contribute to the comparability, the precise and correct presentation of accounting information in the organization’s financial statement, to its asset and liability and to the establishment of precise risk management systems.“³¹

6. CONCLUSIONS

The analysis of capital turnover, both as a whole and by individual types of capital, classified according to different criteria, provides important and useful information to the financial management for making sound and informed decisions about capital management and the capital structure of the undertaking. Provision of relevant information for the analysis is particularly important. „It is important to note that the reliability of the analysis indicators is determined by the reliability of the information used for their calculation.“³²

Table 2

Indicators	Previous year	Current year	Deviation
I. Source data, BGN'000			
1. Equity (fixed assets), including:	24678	24531	-147
1.1. Own equity	5605	5684	79
1.2. Attracted fixed capital (long-term liabilities)	19073	18847	-226
2. Turnover (short-term assets), including:	2805	2391	-414
2.1. Own working capital	1251	772	-479
2.2. Attracted working capital (short-term liabilities)	1554	1619	65
3. Net sales revenue	7327	7115	-212
4. Depreciation costs	670	674	4
II. Additional calculated indicators			
5. Turnover time:			
a) own capital, years (п.1.1 : п.4)	8,3657	8,4332	0,0676
б) attracted fixed capital, years (п.1.2 : п.4)	28,4672	27,9629	-0,5043
в) own working capital, days (п.2.1 : п.3) x 360	61,4658	39,0611	-22,4047

³¹ Natchkova, M., Y., (2019). Specific issues of the accounting and the financial audit in the pension funds. Knowledge – International Journal. Vol.31.1. IKM – Skopje. Macedonia. p.41

³² Petrova, D., D., (2017). Accounting in the Context of Global Corporate Management – Contemporary Requirements and Problems. Knowledge – International Journal. Vol.23.1. IKM – Skopje. Macedonia. p.298

г) attracted working capital, days (п.2.2 : п.3) x 360	76,3532	81,9171	5,5639
6. Turnover speed, turnover:			
а) own capital, years (п.4 : п.1.1)	0,1195	0,1186	-0,0010
б) attracted fixed capital, years (п.4 : п.1.2)	0,0351	0,0358	0,0006
в) own working capital, days (п.3 : п.2.1) x 360	5,8569	9,2163	3,3594
г) attracted working capital, days (п.3 : п.2.2) x 360	4,7149	4,3947	-0,3202

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