

THE CHALLENGING BULGARIAN MODEL FOR OPTIMIZATION ACCOUNTING IN THE LIGHT OF DILEMMA “KANTHOROVITCH VERSUS MARX” AND NEOCLASSICAL ECONOMICS

Having ending with the command economy Bulgaria has undergone fundamental economical changes that strongly influenced its accounting theory. The present paper analyses some particularities of Bulgarian accounting research and teaching within the country's transition economy. For the purpose of accounting education's modernization in orthodox Bulgaria was introduced so called Optimization accounting. Lately it was fully developed on the basis of Russian mathematical economics and Anglo-Saxon theory of capital structure. Bulgarian founders of the adequate accounting model consider it as an alternative of Western management accounting. Characterized are the major features of the Optimization accounting for assets and liabilities, as a symbol of new Bulgarian accounting

Key words: accounting education, optimization accounting, transition economy; capital structure, Bulgaria

General characteristic of the economic theories impact on the accounting science development. The 100 years old development of the Bulgarian accounting knowledge is typical example of the saying: *The power of a scientific idea can be measured by the degree of resistance it attracts.* Under the command economy the subjective circumstances did not favored the advance of rational accounting ideas some of which met exclusive resistance. But wise accounting scholars put their trust in economic ideas and absolutely not in the circumstances because the sphere of the ideas is unlimited. The question is what was the main reason Bulgarian orthodox academicians not to understand the power of the basic accounting ideas of 20th century and caused great losses for the accounting profession and national economy? The short reply is: the non-recognition of the fundamental economic theories as a logic basis for development of highly qualitative accounting concepts and models!

Under the 20th century small Bulgaria underwent some basic directions in its social development that strongly influenced the evolution of its accounting science, including the forever theme of optimization the assets and liabilities. The contemporary investigation of this theme typically is realized with three approaches – advanced, conventional and balanced-sheet. The advanced one is realized through development of an integrated analytical system on the basis of modern theory of economic optimization, closely linked with the neo-classical economics. The conventional approach consists of the elaboration of updated models for the well-known financial ratios within the mercantile system of theirs, logically linked with the risk. The balanced-sheet approach is based on the clear understanding of the objective economic dependences (links) between the main groups of assets, equity capital and liabilities.

Up to 1945 in Bulgaria under conditions of less-developed capitalism had been followed the European accountancy without putting emphasis on the optimization but partially on the preventive managerial risk policy. During the period 1945-1990 under command system both the problems of optimization and risk management were almost completely abandoned due to the perception that planned socialist economy will always

survives without crisis, inflation and unemployment. Since 1990s under conditions of relative democratic market transition the problem of risk management received accelerated development connected with another qualitative development of Bulgarian accounting, namely its evolution in accordance with international theory of economic optimization. It could be said that the financial risk management knowledge is a sophisticated alloy of the ideas and methods, first, of the theory for economic optimization and second, the theory of risk in the process of corporate investment. The long-term contradictory development of this process finally resulted into development of a unified financial-accounting *Optimization Management Assets and Liabilities System*. Optimal and financial risk management is substantial part of it, but many methodological and organizational problems arise with its interpretation and application on the basis of the contemporary *institutional economics*.

The international economic optimization theory developed in two main directions – production and financial. The outstanding achievements in the relevant areas are as follows: a) Building of concept for company resources' optimization in the 1930 s by American and Russian economists. The Russian alternative was the Theory for Optimal Planning and Management (TOPM) with representatives: L. Kanthorovitch, A. Katzenelinboigen (1987), V. Novojilov, V. Nemchinov and others. The ideas and methods of the Russian TOPM were strongly confirmed and applied in East Europe and exercised great influence on Bulgarian accounting including the risk management into production area. b) The creation in the 1950 s of the Anglo-Saxon theory for optimization of the company capital sources, which nucleus is the Theory for Capital Structure (TCS), with main representatives F. Modigliany and M. Merton.

Taking into consideration the influence of the theories for economic optimization on the accounting it can be established that: the concept for production optimization undergoes the opportunity to optimize the company resources (assets); the concept for financial optimization undergoes the opportunity to optimize the company capital and liabilities. Today both directions for company's activity optimization are subject of study by disciplines, determined as *corporate* ones: Management Accounting, Corporate Accounting, Controlling, etc. labelled as *applied financial economics*. These disciplines have already strengthened their positions in Bulgarian economic teaching on university level. However the problem of clarifying the reasons for abandoning the corporate accounting knowledge in the near past arises in the light of the century old ideas and methods for economic optimization. In this aspect as basic reason outlines the embarrassment regarding the methodological fundament of the financial risk management's knowledge. Understood was that the theoretic enlightening of the applied financial economics methodology will have crucial role in the future accounting development. Generally said the base of the adequate methodology is the fundamental economics as a synthesis of the evolutionary created value doctrines. However one cannot say that the use of the ideas and methods of the world economics in Bulgarian university knowledge for the optimization and financial risk management had been satisfactory.

The impact of the economic theories on the accounting management is investigated by both methods of theoretical-value and the historical-logic one. The different economic schools emphasized the theoretic clarification of the value essence while the corporate disciplines accentuated on its quantitative measurement. Bulgarian economists endeavoured to study the link between the theoretic and applied economics in order to disclose their value unity. In this regard, they were facilitated by the option after the 1990 s freely to use Bulgarian pre-war accounting "bourgeois" heritage that

developed the problems for the impact of the value doctrines on the corporate accounting knowledge. The economic schools have had different effect on the corporate quantitative value measurement studied into directions: a) Clarification of the value thesis in connection with the development of the subject and methods of the applied financial economics; b) Research of the heritage in the accounting management area from the beginning of the 20th century up to nowadays according to the available economic theories; c) Formation of new concepts for the development of financial risk investigation according to the contemporary viewpoints about the value. Because few works of the pre-war Bulgarian applied economists were available, the succession in the corporate deed was embarrassed. However, even in their earlier works they endeavoured to clarify the value nature of the accounting discipline.

Since the midst of 20th century thoroughly pushed up was the financial economics influence on the risk management by the formation of TCS, initially the two papers about the so-called MM models (Modigliani, Merton 1958). Regretfully for Bulgarian accountants TCS was completely unfamiliar for a long period of time. The formal reason about this was that as based on the neoclassicism TCS did not correspond to the dogmas of the socialist political economy, for example concerning the different type of securities as a fictitious capital. With the democracy the TCS is already part of many of Bulgarian works in the economic field and the question is about its efficient future use on corporate level. The leading directions in the development during the last thirty years in the area of the applied financial knowledge are as follows.

1) The development of the accounting science can be interpreted by replacing the study of valuation impacts of alternative methods for distributing *given* net profit (incoming cash flow), by studying the impacts of used procedures for adequate distribution on the profit itself. This means reducing the typical hypothesis for *ceteris paribus* about MM models, particularly for the capital structure construction in the financial statements.

According to the authors of MM models, definitely known (given) is the net profit of the company. Therefore the problem is about the impact of its distribution (between the equity and foreign investors) on the total profit. The applied business economists emphasize the effect of the equity and the claims of the foreign investors on the incentives of the managers' decisions that influence the profit. The recognition of the role of investor's structure of expectations for the company profit led to the renewed interest in the significance of the different types of capital investments – equity or liability (debt) capital sources. In accordance to the MM models, however these significances largely concern business details that do not deserve careful study.

2) The accounting specialists had analyzed the distribution of control and responsibility between the two main types of investors with their risk claims, i.e. the internal problems in the right (liabilities, debt) side of the company balance sheet. Analyzed were the rules for decisions under the risk terms that different investors ought to follow keeping in mind their interests, which influenced the left (assets) side of the balance sheet. In addition, when comparing enterprises with different capital structures established was the old research method as the static one of its nature while the actual accounting was characterized by considerably stronger dynamism in this relation. Thus the dully studies within the corporate framework were concentrated on specific phenomena in the whole company activities like the subsequent delivering of equity and external capital to increase the general economic welfare.

3) The applied financial economics theory as conditioned by the different schools (particularly the neo-classical one) encompasses its specific researched objects in three main groups that correspond to the basic achievements of the world managerial thought: the theory of the efficient capital market; the basic dependence "risk – return" of the envisaged investments; the arbitrage pricing theory (the theory of option pricing). These basic achievements of the international applied financial economics have strong logical link among them. They compose chainlike connected components of the unified scientific theory for the financial and accounting analysis; consecutively build up and in a gradually ascending way in the process of the scientific knowledge for the financial-accounting activity¹.

For the Bulgarian optimization and risk managerial practice, a work of big significance is that based on the efficient capital market hypothesis it had been developed a concept for the objective dependence between the return (efficiency) on invested capital and the uncertainty that inevitably accompanies most of the investments. On the other hand the clarification of the relationship *Return - Risk* further positively reflected on the development of the theory for assets valuation (popularly known as Option Pricing). Taking into consideration these features a specific attention deserved the problem of updating the evergreen aims of the accounting science, namely the most efficient cost and the revenue matching in order to calculated precisely the company net profit.

Bulgarian accounting science in the light of economic theories. 1. Value model of the pre-war Bulgarian accounting (1900 – 1945). The necessity for development of modern accounting education in Bulgaria has sharply grown in the years of transition economy: were reassessed its traditions and searched possibilities for its onward perfection. The purpose was to unify the best characteristics of East- and West European accounting research and education. The particularities of Bulgarian accounting education are due to the different social stages under which it developed: a) pre-war capitalism (1900-1945), b) centralized planning (1945-1990) and c) contemporary transition. In Bulgaria under command regime was completely adopted the ex-Soviet system of *Operational accounting*². Specific causes that emanated from the deep economic crisis however conditioned the Bulgarian *Operational accounting* eagerly to look for its own face, respectively for its own solutions to the native financial problems³.

The previous socialist countries used considerably different models for accounting education, especially between the countries of Central Europe and orthodox East Europe, the last encompassing countries like Russia and Bulgaria, and partially Rumania. Ex-socialist Central Europe (Poland, Czech Republic, Hungary and ex-GDR) more or less realized accounting adjustments to the Western (mainly German) accounting. This is specified by the number of publications in western journals for the accountancy in orthodox Russia and Bulgaria and the other countries in Central Europe⁴.

¹ The corresponding knowledge had been based on the ideas of the efficient capital market, historically estimated as the first created hypothesis lately evolving in a regular scientific theory.

² Some contemporary Russian authors (Enthoven *et al*, 1993) exaggerate that under conditions of totalitarian economy Cost and management accounting of Western type were not interpreted separately but as inherent parts of unitary system of financial accounting.

³ As concerns the financial accounting its adjustment is relatively easy because it is unconditionally organized on the basis of International Accounting Standards. Accounting and financial reporting in Bulgaria are regulated by the Accountancy Act of 1991, several time amended. The introduced accounting principles are in general in accordance with Directive IV of the European Union and the IAS. The Accountancy Act establishes requirements for maintaining accounting records and for presentation of the financial information of enterprises. Requirements of the Act are applicable for all organizations.

⁴ In 1995 *The European Accounting Review* dedicated a special issue to East European accountancy that included papers investigating accountancy in Russia, Czech Republic, Hungary, Poland, Rumania,

Bulgarian accountancy is mentioned yet neither for its earlier, nor for its present state. Presently the nature of *Operational accounting* in orthodox East Europe is well popularized on West⁵. Not known are however the attempts made by Bulgarian freethinkers under command economy and contemporary transition to reform the operational accounting into a new system of *Optimization accounting* with its two stages:

a) Development in the period 1970-1990 s of *Optimization assets accounting*. Because the business use of assets led to bearing of their value in the form of costs, under the centralized planning for decades the main accounting task was to optimize the “costs – volume” matching. The theoretical model of Income statement was constructed on the basis of worldly recognized achievements of the Russian mathematical economics, headed by academic L.Kantorovitch and his disciples.

b) Efforts for further development under democracy in Bulgaria (after 1990 s) of an *Optimization liabilities accounting*. Its methodological foundation is the Anglo-Saxon theory of capital of J.Hicks (1939) and the optimum capital structure's theory, as part of the contemporary applied financial economics⁶.

The basic problems of the *Optimization assets accounting* under the centralized economy were in some degree solved (at least theoretically) in Bulgaria, but not so profoundly as it were done in Western accounting. However until now the Bulgarian freethinking scholars have no information that long existed Western management accounting includes concepts and methods for optimization of company's capital structure and costs. That is why in our humble opinion it is reasonable to speak for a specific and independent (if not unique) Bulgarian approach to the development of an *Optimization liabilities accounting* under transition economy. Will this accounting branch get a future recognition is not clear yet, but for the successful solution of some complex current accounting and financial reporting problems, it faces considerable approval from professional Bulgarian accountants. Because the accounting theory without experience is sterile, while the accounting practice without theory is blind.

The history of Bulgarian accounting education is relatively short – only 100 years. In the first half of 20th century (1900 – 1945) it developed under conditions of pre-war primitive capitalism, while in the second half of the century the adequate knowledge went ahead under the pressure of command ruling and some ideological dogmas. Up to 1945 Bulgarian educational model followed the principles and organization of West European accounting system⁷. Its essence has been more or less analogous initially to French *Comptabilite analytique*, lately to German *Interne Rechunswesen* and partially to Anglo-Saxon *Cost accounting*.

The matching “revenues – costs” principle at the beginning has been realized through the compulsory method of full costing. Lately with the extension of neoclassical economic knowledge (Cambridge school of Alfred Marshall) had been integrated the ideas and analytical techniques of Anglo-Saxon marginal costing. From this point of view in 1990s Bulgarian free-minded researchers regretfully (and even with a fury) found out, that under

Yugoslavia, Slovenia and the Baltic States. The only missing country was Bulgaria. During the period 1994-2001 in *Management Accounting Research* among the few papers interpreting the theory and practice of management accounting in Eastern Europe there was no one from Bulgarian author.

⁵ In this aspect are considered the papers of D. Bailey (1991, 1995) and A. Jaruga (1988).

⁶ Financial economics is characterized by Eatwell *et al.* (1989, preface) as follows: “Forty years ago primarily the province of business specialists who dealt descriptively with ‘corporate finance’ and ‘stock markets’, today it is a coherent branch of applied economics that among its other tools makes brilliantly perceptive use of value theory in order to understand the real workings of financial markets.”

⁷ In one of the first a pre-war works the founder of Bulgarian accounting theory D. Dobrev (1920) specifically described in details the British accountancy at this time, underlining the deference between book-keeping and accounting.

the country's pre-war capitalism had been created all conditions for a building of modern management accounting but the process failed due to the strong ideological resistance.

2. Optimization assets accounting under command regime in the light of dilemma “Kanthorovitch versus Marx” (1945 – 1990). The changing ideas for a rational costs and revenues' matching in Bulgarian accountancy under the centralized planning (1945-1990) led to the differentiation of its following stages:

a) *Averaging* accounting for the aims of state enterprises' internal control. Extensive development of production forces in orthodox East Europe and the primitive misunderstanding of the dominant Marxist political economy conditioned the only accounting measurement of full and average magnitudes of the matched costs and revenues. The officially imposed under the command ruling of the specific *Operational accounting*, originated from ex-USRR, today is considered as quite backward in comparison to the pre-war Bulgarian cost accounting⁸. Having been based on full costing for the aims of monopoly positioned centralized pricing until 1990 s it lacked substantial modeling approaches and researched techniques.

б) *Optimization* accounting for management decision-making, typical for the second half of 20th century. Since 1970 s the intensive economic growth and finally recognized Russian mathematical economics led to the integration of the ideas and methods of economic optimization. Bulgarian accounting theorists with liberate thought and good knowledge of the economic theories founded an *Optimization assets accounting*, completely based on the L. Kanthorovitch's theory for optimal planning and management. From one hand this theory was seen as continuation of the Marxist economics under conditions of the victorious socialism; on the other hand it was conceptualized as an alternative of the Anglo-Saxon marginal (variable) costing. The Income statement's format according to the non-conformist Bulgarian *Optimization assets accounting* is given in Table 1, column “a”.

In 1980 s the Bulgarian accounting researchers (Trifonov, 1981, 1982) that enthusiastically followed Kanthorovitch's investigation of the optimal economic plan's structure and internal laws for its building, advocated the *Optimization assets accounting* with the invented (together with T.Kupmans) dual theorems and the interpretation of the optimal plan's shadow prices. According to Katzenelinboigen (1997) in 1930s Kanthorovich and others successfully solved the state owned enterprises' local economic problems with relatively simple mathematics. Regretfully even up to 1990s the views of academic bureaucrats for Kanthorovitch's economic doctrine were negative because of the ideological prejudices that dual prices contradict to the abstract Marxist prices based on the so called “socially-necessary costs”⁹.

Table 1. The Income statement's format according to the non-conformist Bulgarian

a) Income statement format based on the Optimization assets accounting from 1970 s	b) Income statement based on the Optimization assets and liabilities accounting from 1990 s
1	2
1. Revenues from sales	1. Revenues from sales
2. Costs of goods sold	2. Costs of goods sold:
Direct materials	a) Progressive (over-proportional) costs
Direct labor	b) Proportional costs:
Variable indirect production costs	Direct materials and labor
Variable sales costs	Proportional indirect production costs
Variable administrative costs	Proportional sales and administrative costs

⁸ According to Bailey (1991) the Russian industrial accounting after 1917 did not reach any significant development. The merger of state and civil society and the formation of closed economy were the obstacles for the lack of knowledge about the accounting technology in the other countries.

⁹ In nowadays it became known that due to this ideological suspicion even the life of Kanthorovich had been endangered and only his engagement in mathematical modelling of nuclear reactions saved him.

Table 1.

1	2
3 Marginal profit (1 – 2)	c) Digressive costs
4. Fixed costs:	3. Marginal profit (1 – 2)
Indirect production costs	4. Fixed costs:
Sales and administrative costs	Fixed production indirect costs
Financial costs (Interests received and others)	Fixed sales & administrative costs
5. Accounting profit before taxes (3 – 4)	5. Counter-proportional production costs
6. Corporate taxes	6. Accounting profit before interests/taxes (3 – 4 – 5)
7. Net profit (5 – 6)	7. Financial costs (Interests paid and others)
	8. Corporate taxes
	9. Net profit (6 – 7 – 8)

Nevertheless during this time the ideas of Kanthorovich's school were successfully applied in Bulgarian *Optimization assets accounting*. A new philosophy for optimum accounting categories was introduced that meant substantial re-evaluation in all parts of the imposed orthodox theory of costing, including the full costing. The Russian mathematical economics conditioned a profound research for "costs – volume" dynamics and further perfection of their co-measurement. Thus the period of 1970-1990 s in Bulgaria could be characterized as a *new phase* of the conventional accounting research and education.

Well known fact is that one of the most hazardous of economist occupations is the transferring of substantial idea from one economic mind to another. That is why it is not strange that a sharp ideological antagonism emerged between the adepts of orthodox Full costing and the new *Optimization assets accounting*. This contradiction in reality was a natural continuity of the fundamental macroeconomic discussion, well known in the international literature as "*L.Kantorovich versus K.Marx*"¹⁰. The orthodox accounting scholars with ruling academic positions did not agree at all important issues of the abstract socialist political economy to be "victimized" in the name of Kanthorovich's optimization concepts. This had strongly impact on accounting research and education and provoked a heavy opposition between the opponents and adherents of the modern accounting teaching¹¹. Emblematic for the misunderstood orthodox negativism of leading ex-Soviet accountants to the achievements of their native mathematical economics were the advanced works of academics like Chumachenko (1971) and conventional works of Sheremet (1974). In this relation, however, is difficult to agree with some western researchers (Mueller *et al.*, 1994) that what is referred to as managerial accounting did not existed at all on the accounting scene in orthodox East Europe¹². It was naturally those alternative forms of Western management accounting in the region to be developed, but because of the ideological causes they faced no opportunities for world popularization.

¹⁰ Some Russian macroeconomists like Kotov (1972) vainly tried to reconcile Marxist political economy and the marginalism, stating: "*To oppose to the contemporary marginalism.... is lawfully and necessary, but at the same time it would be rough mistake to see.... in the methods of marginal analysis a contradiction with Marxism. The serious use of mathematics in economics is impossible without using marginal magnitudes.... the objective character of marginal utility estimations for input factors, their scientific Marxist economic interpretation gives additional information for argumented and strong scientific criticism of the contemporary marginalism.*"

¹¹ At this time the acquaintence of Bulgarian accountants with the achievements of world management accounting was not at all easy. Even in the middle of 1970s there was no almost any information of what was hapenning in the international accounting. In this aspect positive role played a conference in 1972 of the East-European countries, where were revealed some parts of the Anglo-Saxon marginal costing in the reports of ex-socialist theorists from Hungary and Poland. The Polish management accounting became known from the works of Yaruga (1976) and others, clearly outlining the difference between the Full and Marginal (Direct) costing.

¹² According to authors in the middle of 1990s the basic accounting systems in some socialist countries were fully consistent with Marxist principles and it was expected that the command economy accounting will start to wither away, if market economy concepts ever gain upper hand.

One of the formal reasons for the non-acceptance of the rational accounting ideas, especially in the field of product costing, was the consideration of the costs separation as variable and fixed as typical for the “bourgeois” Marginal costing or simply as completely useless. In this relation became strongly apparent the elementary non-recognition from the ruling part of orthodox accounting scholars of the Marxist creativity. In the first volume of the “Capital” of K.Marx (1958) it is clearly written: “*In a fabric there are different costs which remain constant nevertheless that the fabric works more or less time... and others different costs with relation to the profit that reduces with the same proportion of which grows the size of production.*” Thus there was nothing wrong to use the adequate costs dividing for modeling the “costs – revenues” matching in accordance with the Kanthorovich’s theory for economic optimization. Regretfully during the period 1970-1990 this very fruitful optimization modeling in orthodox East-Europe remained non-realized dream. May be due to this situation the Russian accounting scholars Sokolov and Bychkova (2004, p. 1-6) wrote that the artificially created discussion about the differences among the socialist and capitalist accountancy is the major negative consequence from the degradation of the ex-USSR under conditions of the personality cult.

Optimization assets’ accounting’s teaching in orthodox East-European countries was objectively conformed to the real business needs under the centrally planned economy. Its structure was built on the basis of costs diversification as progressive, proportional, digressive, fixed and counter-proportional. That was realized in works of accounting researchers from ex-USSR like V.Ivashkevitch (1974), from Hungary like R.Sholtz (1984), from Poland like A.Jaruga (1976) and others. Initially was searched complete construction of the optimization accounting model based on mathematical programming concepts not without some degree of economic naivety. But gradually in the postulates of the new *Optimization assets accounting* overcame a realistic vision for what contributed the conclusions of Kanthorovich (1972), made after his long efforts to expand his optimization theory for managerial needs of the state owned enterprises. He acknowledged the evergreen costing problem that is very difficult to realize theoretically irreproachable definitions in the real business activity. Since the production cost encompasses subjectively allocated indirect costs it is impossible to present the complex costs-revenues matching as a common Linear programming model. The variable and fixed costs’ apportioning reduces the negativism of the subjective indirect costs’ allocation but does not completely eliminate it¹³. Thirty years lately this view of Kanthorovitch was again confirmed in Russian mathematical economics. Astahov (2000) wrote that the direct effect in disciplines, where the Linear programming found practice, is expressed by quite modest results – no more than 5-10 %.

The final outcome from the involvement of mindful Bulgarian scholars within the mental power of Kanthorovitch’s school enriched the theory of costing, but under the command economy this had no any positive influence on accounting education and practice. Bulgarian *Optimization assets accounting* continued to develop unrecognizably as an alternative theoretical construction. But most dangerous for its founders was the perfidious critic from the orthodox accountants about its non-Marxist basement and contradiction to the principle of centralized pricing.

3. Optimization liabilities accounting under transitional economy. Economic theories are with mightiest impact on the accounting knowledge Historically proved is that the great economic theories like neoclassical economics from 19th century and

¹³ This promulgated the creation of the newest costing method – Activity Based Costing.

neoclassical synthesis in 20th century breathed into accounting scholars and strongly regenerated their scientific visions. In the current century the newest challenge (at least for Bulgarian accountants) is to develop the theory of banking accounting on the basis of the modern monetary economics (Trifonova, 2011). Bulgarian accounting science has always been developed in accordance with the dialectic methods for investigation, including analysis, synthesis and scientific deduction. Their use under the democracy (after 1990 s) has raised the hope and problem *to determine next accounting system for optimal value measurement*. In the beginning of 1990s this was viewed as new scientific challenge for Bulgarian accountancy of 21st century. And because the hope can always cope, the effect of Bulgarian scholars' efforts to cope with the respective challenge was the creation of *Optimization liabilities accounting* under the conditions of transition. This was a completely lawful phenomenon the emergence of whose was caused by the sharp country's economic crisis.

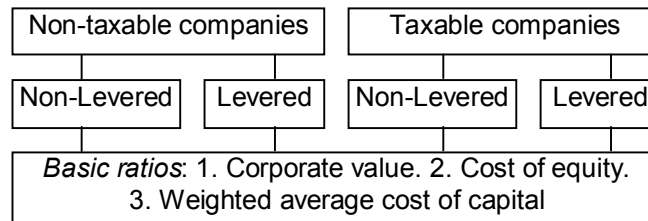
The first cause was the full carelessness of the orthodox researchers to the capital structure's problems in the state owned enterprises, i.e. for the leverage or relationship between the equity and debt into the balance sheet's right side. Emphasized was that "socialist" state will always ensure its enterprises with financial resources and will protect them in situations of liquid assets crisis and insolvency. The bank loans played minor role and the interest was a secondary financial instrument. That is why the totalitarian accounting education simply missed the complex topic for state enterprises' capital financing. Categories like equity costs, debt costs, weighted average capital costs or operational and financial leverage (gearing) were not integral part of the orthodox accounting vocabulary.

The next even more substantial and complex cause was the general and exclusively sharp inter-companies financial indebtedness in post-totalitarian Bulgaria. Unified the state and companies debts are \$35 billions, i.e. almost equal to the GDP. Precisely this great economic problem was the major cause for Bulgarian free-minded theorists to pay great attention on the accounting estimation of corporate capital structure and its costs. In nowadays the problem for optimum capital financing continues to be exclusively important and even far more meaningful for the financial managers, compared with the "costs – volume" optimization. And that is why since 1990 s Bulgarian accounting theory and education directed themselves mainly to the development of *Optimization liabilities accounting*. Its initial phase was the conventional explanation of how accountants should mix the available internal and external sources of capital to balance out expected risks and returns, leading to an understanding of the real forces that affect a company's value. The present state of sophisticated statistic methods use to analyze the dichotomy "risks – returns" in Bulgarian firms is the same (if not worse) as that described by Grinyer and Wooller (1975) in a study of major UK companies. They found out that only 25 % of the larger companies used statistic methods in their decision-making.

As it was shown a methodological basis for the *Optimization liabilities accounting* were defined the Anglo-Saxon theory of capital and the famous "MM" models for the optimum capital structuring from 1960 s as a nucleus of the applied financial economics. Bulgarian scholars under the democracy accepted the concepts of J.Hicks (1939) that: a) the category of capital is linked with the cash value, numerically fixed in the financial statements; b) the theory of capital and its accumulation should be regarded as optimization problem for the company. That has had a crucial meaning for the adoption of capital's financial concept, the maintaining of company's capital and the direction of researchers' attention towards the liabilities optimization. By this way after the contradictory and useless discussions about the accounting assets optimization in

1970 s, the advanced Bulgarian scholars during transition in 2000 s could turn face to capital structure's optimization without facing the brutal ideological obstructions.

Presently the accounting research of the liabilities in conformity with the "MM" models is realized regarding two kinds of companies: a) non-taxable and taxable; b) non-levered and levered. In those both aspects calculated are the three well known basic ratios: 1. Corporate value. 2. Cost of equity. 3. Weighted average cost of capital. Accounting analysis is made with the financial economics' formulae and graph, but using the specific category *Accounting Profit Before Interest and Taxes*. The adopted approach is presented in rys. 1.



Rys. 1. The adopted approach

The orthodox scholars oppose to the building of an *Optimization liabilities accounting* with the arguments: a) There is no information that such system exist at all in Western management accounting, nevertheless that the theory of capital and the applied financial economics were founded from Western macroeconomists; b) The problems of optimal capital structure and its inherent leverage should be part of financial reporting and ratio analysis; c) The hypothesis for optimal capital structure is valid for a perfect capital market, that does not exist in transition economy, so it has no effect on firm's market valuation.

The mentioned scholars however "modestly" ignore the problem of heavy capital costs for Bulgarian enterprises and their optimal parameters that should be treated within the company's accounting analysis. As concerns the lack of deep theoretic interpretation of capital's optimization aspects in Western accounting, the suggested explanation is that the problems of insolvency and indebtedness are not first-rate care for western companies. True is the fact that the Anglo-Saxon proposition of optimum capital structure in perfect capital market has no effect on company's market valuation.¹⁴ Moreover its founders (Modigliany, 1987) with sense of humor argued that the core issue that received biggest academic attention, namely finding out what exactly is the optimum capital structure, was not at all really an issue. But now judging impartially the humorous approach of considered founders it is estimated that almost 50-years old Anglo-Saxon theory of capital structure with the respective costs is quite perfection and practically proved. So its concepts and methods can properly be used as foundations of the *Optimization liabilities accounting*.

From this viewpoint the topic for accounting optimization of company's liabilities is an integral part of the last issue of adequate Bulgarian textbook (Trifonov, 2002) for accounting educational purposes. Suggested in it is also a new Income statement's format (Table 1, column "b") that corresponds to the idea of liabilities' optimization. In the respective scientific work the new *Optimization liabilities accounting* is elaborated as a conglomerate of the concepts of both Russian mathematical economics and Anglo-

¹⁴ Modigliany (1987) pointed out that his works in collaboration with M. Miller from 1957 has been meant to upset his colleagues in financial economics by arguing that the optimum capital structure was not really a methodological problem.

Saxon theory of optimum capital structure. The subtraction of external capital costs (interest paid) from the other production, selling and administration costs and their separate positioning is a core issue of the proposed statement. At the same time the proposition for a respective Income statement's practical implementation is accompanied by a complete explanation of its expected knowledgeable effects and utilities for the realization of a rational corporate financial management.

Having been taught for several years on academic level the *Optimization assets and liabilities accounting* is already substantial part of Bulgarian educational model. Now it is considered as deserving its appropriate use in the accounting practice and also to be subject of foreign competent evaluation. And remained the long suffered general conclusion that the real and unique fundament for successful accounting researches are the historically created economic theories. Or according to an old saying: *The economic science is one people divided it on different disciplines.*

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The article has been received on the dd. Mm. 2012 r.