

The Accounting Dimension to the Explanation of Financialisation: A Literature Survey in the Case of Merchant Shipping

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Abstract

This article aims to conduct a historic and scientific research concerning the manifestation and development of the financialisation phenomenon and its socio-economic impacts through a survey on prestigious international relevant publications. The research pioneers the literature in terms of the analysis, interpretation and depiction of the phenomenon function mechanism, based on the logic and philosophy of the financial/capital flows (influxes-outflows) of enterprises' accounting statements. The researched relevant literature was organized into seven distinct levels of approaching gnostic sectors on the basis of the material of the research topics and its characteristics. In the field of global merchant shipping the research conducted led to the identification of a research gap. A comprehensive overview on the relevant articles concerning the evolutionary route of various worldviews

involving class systems, social organisations and schools of economic thought dealing with the conceptual formation of the term, the substance of the phenomenon and its evolution is provided in this study. The scientific contribution of this study lies in the fact that: a) the survey covers the whole period (1980-2023) during which the phenomenon was manifested, with various frequencies of rise and fall of its intensity, b) a coherent classification of the relevant articles material, in relation to this concept, the function of financialisation and the sectors it affects is suggested, c) the direct and indirect tracing of the phenomenon manifestation, based on the capital flows of enterprises' accounting statements is defined methodologically and depicted and d) enriches international literature with a pioneering work, providing an additional academic research-oriented tool for the solution of theoretical and empirical issues but also with outlining or correcting policy issues.

Keywords: financialisation, financialisation in shipping, financialisation and capital flows,

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JEL: F65, G15, G34, M41, O16

1. Introduction

1.1. The concept of the term

The term “financialisation” comprises a conceptual approach of a technical-financial phenomenon prevailing internationally in economic science during the last decades, namely, the 1970s. A clear definition of this term does not exist in general. However, we could, on the basis of international literature, define it as a modern alternative form of placement or use of capitals in a corporation’s liabilities or assets items. More analytically speaking, it is about a transition or crowding-out of a corporation’s activities from the production of common material commodities or services in institutionalised sectors of intangible financial (stock exchange or off-stock exchanges-oriented) assets aiming at seeking higher profits mainly in a short-term period. Therefore, “financialisation” could be considered as also the increasing role or prevalence of entrepreneurial money from the traditional real productive activities of corporations in other modern forms of financial and stock-exchanged-oriented activities, which generate profit without real productive activity—that is, without new value flows—and exert a decisive influence on corporations’ entrepreneurial administration and management strategic options. Corporations’ new orientation is explained by the pursuit of continually obtained higher yields in favour of the increase in shareholder’s value in a direction favouring short-term profits in the position of a long-term development. The new tendency leads to the alignment with shareholders’ preferences and the managing

executives, due to the attractive revenues and rights on the basis of the high yields of financial assets, affecting, thus, also the reorientation of corporations’ entrepreneurial behavior (of corporate governance). The circle is broadened by a regulatory provisions series concerning the deregulation of financial institutions in force, as well as the further evolution and mutation of international recognition of market-oriented mechanisms (debt rating agencies) playing a frequently ambivalent role and facing objections in terms of their ontological presence and rational function concerning the formation of influences and effects on markets, in favour of a new standard financial capital management and funding of the current investments of a profit-oriented character. Regarding the role of credit rating agencies and corporate governance as key factors influencing the financialisation mechanism see Thanos and Karafolas (2024).

1.2. Evolutionary conceptual course

A historic sociological, scientific perspective concerning the evolutionary course of financialisation in the context of the Marxist, Keynesian and post-Keynesian institutional thought schools lead us to approach the financialisation concept as a recent manifestation of neocapitalism (Lapavitsas, 2013, pp. 259-264), under the modern effects of neoliberalism and its various tendencies that were spawned in the framework of globalisation and are its tools, their rival being, of course, the various anti-globalisation as well as anti-liberalisation policies and fronts (Mavroudeas, 2016). In this sense, financialisation has acquired a multi-sided role in global economy with critical and decisive effects in institutions as well as in social life in all of its (economic, social,

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political, civilisational, moral, traditional etc.) manifestations.

The term “financialisation”, with regard to its origin and conceptual essence, has been the scientific field of historic philosophical discussion and confrontation in the academic and public speeches about issues referring to economic, social and political sciences.

The classic Marxist notion about political economy claims the origin of this term on the basis of the broader theory about capital and its distinctions, categorising it into productive (industrial), financial and commercial capital. The neo-Marxist notion converges into the predominance of monetary capital, that is, in essence, the capital of the financial system (financial capital) upon the productive and commercial capital, where the financial capital is characterised on the basis of two structural elements: firstly, of the super profits gained through investments on financial products of money and capital markets substituting the investments of the productive (real) capital and, secondly, of incomes redistribution gained through embezzlements (augmented interests) from loans to households and corporations. The neo-Marxist theories, that is, accept a new era of capitalism, in which the financial system (financial capital) is reinforced against the productive capital or breaks away from its dependence on the productive capital, safeguarding its domination. Thus, according to Fine (2009), the term financialisation characterises a particular phase of neo-liberalism and of its institutional interventions in order that capital, with various operational forms and resourceful solutions, may overcome the problems and contradictions threatening it. On no account will it provide an independent concept and function, that is, autonomy, in terms of the financial capital as a distinct stage

of capitalism. Bryan (2010) characterises financialisation as a phenomenon entailing a series of new evolutions and effects in the financial system, like the intensification of the debt mechanism by over-borrowing and the intense use of leverage and, through it, the exploitation of workers (working class) with the increase in housing and consumer loans as well as with the over-charge of households. Bryan points out, furthermore, that the developments occurring in the financial system are innate in modern financial products and, mainly, in the derivative ones, which are not related to the specific property assets but remain wholly in the financial (non-productive) sphere (Bryan and Rafferty, 2006). On the contrary, Lapavitsas (2008, 2009, 2013, pp. 35-38) accepts that the term “financialisation” has defined since the 70s a new stage of capitalism—namely, a new historical period characterised by a high level of capitalist accumulation of profits by large industrial and commercial capital, a view that is also adopted by Marxist and post-Keynesian strands of thought. According to him, financial capital is autonomised from and dominates over the productive capital, a part of whose profits it exploits. Consequently, by means of the same mechanisms it develops, it also exploits workers (working class) and the small-medium income strata as well as households through usurious loans to them. In comparison to the past, the explosive rise and penetration of financialisation capital has been expanded to also every sector of economic and social life. Mavroudeas (2014) takes a different view from Lapavitsas, arguing that financialisation as a theory, as developed by Lapavitsas, is highly problematic, because: a) ascribes short-term concurrent phenomena to long-term structural changes as if capitalism returns to the pre-capitalist

period (feudal economy), b) maintains that, in today's capitalism, the financial capital is autonomised, exploiting completely the productive capital and, certainly workers, however, without any explanation about the long-term survival of such deformed capitalism, which is not supported on real productive bases, c) raises questions about the autonomisation of the financialisation theory in the context of the traditional bourgeoisie. However, if this assertion is tenable, it should be proved that the capitalist class has been fragmented and that a new capitalist, financial class exploiting the traditional capitalist one as well as workers has occurred.

Hilferding (1910), ch. 14 especially, with reference to the transformation of capital into a financial one and to the role of banks' cartels, supports the transformation of modern capitalism in relation to that of Marxism with the addition of a new basic element he calls financial or financial-economic capital, which is a whole of banking and productive capital in which the banking capital dominates. This undertakes, according to the writer, a hegemonic role in the function of the system, decreasing, at the same time, the role of commercial capital. Sweezy (1994) also accepts this stance in terms of its main points. Therefore, these two writers agree on the substantial principle of Marxist theory, where, so to speak, interest, as the fee of the financial capital, is also part of the work overvalue derived from the control of the productive capital. Sweezy presents financialisation as an escape or runaway or absorption procedure of the surplus capital of entrepreneurial activity due to the malfunction of the productive sector, channeled into financial economy. Krippner (2005) was the first person to come out with a systematic and documented analysis of the

financialisation phenomenon in the context of USA's economy during the time period 1970-2000. She ascertained in this research that USA's economy experienced dramatic postwar changes, particularly during the 70's and thenceforward that caused enormous competitive contrasts and mutations in the nature of modern capitalism, which generated a new standard of wealth accumulation not derived from productive activities but from other out-production financial channels. Orhangazi (2008) as well, in his study on the USA's economy of the period 1973-2003, pinpoints a negative correlation between real investments and financialisation, which he attributes to the occasionally increased opportunities of gaining profit provided by the financial assets of capitals in relation to real investments, which is a cause changing also the motives of managerial executives. Van Treeck (2009), provides a significant contribution to the literature of political economy, projecting the new changes in the financial sector as well as is concerned about the driving forces of the recent transforming tendencies of capitalism in rich countries. Van der Zwan (2014), examines the function of financialisation in modern capitalism by means of three approaches, that is, the accumulation status, the corporate attitude and the effects on daily life. She ascertains that the concept of financialisation is almost identical to the concept of globalisation or, otherwise, they are the two sides of the same coin. Pariboni & Tridico (2019) stress that financial capitalism, which was reinforced also by the activities of globalisation, has appeared as a new unstable macroeconomic model since the 80s and thenceforward, governed by the element of the strategic attack of advanced countries' predominant classes so that they could usurp continually higher dividends of other social

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classes' incomes with the aim to exercise their control on the political procedure. Soener (2020), on the basis of his findings (upon publicly listed NFCs in 37 states of the USA during the period 1991-2017), suggests that, in the non-financial sector (productive sector), financialisation is connected to structural changes in the global capitalism, which allows a small number of powerful international corporations to recycle the surpluses of their profits in financial capital.

Furthermore, Stockhammer (2004), refers to the crowding-out effect authority from the traditional ownership establishment to shareholders and managers who change the financing priorities of investments and corporations' management leading countries' economies to undesirable development rates. Lazonick & O'Sullivan (2000), examining the phenomenon of financialisation, support the prevalence of a new ideological orientation of the USA's entrepreneurial strategy from the 80s, its predominant element being corporate governance based on the maximization of shareholders' value and the stock broking speculation in contrast with the traditional capitalistic way of management based on the re-investment of profits. Hein (2013) maintains that capitalist countries in which financialisation prevails are characterised by long-term imbalances in incomes fuelling economic crises and, in this case, like the economic crisis broken out in 2007 in the USA that made this economic power be unable to restart global demand. Durand & Gueuder (2018) assert that financialisation and globalisation are phenomena connected inseparably with the applied neoliberal policies centered in entrepreneurial behavior in terms of profits and investments. Lechevalier et al. (2016) ascertain in their research that, during the last 40 years, the phenomenon of

financialisation has attenuated the evolution of the development-oriented state and weakened state's potentials as concerns the application of individual development policies of state's targets and maintenance of governmental control. Financialisation, so to speak, in the face of markets onslaught, affects negatively economic mechanisms and social institutions, changing critically their structures. Bogdan & Lomakovych (2021), point out that the acceleration and development of financialisation involves immense risks threatening global economy and states' prosperity due to the accumulation of debts, containment of investments and disintegration of economy that could become more fragile owing to the effect of casual events and turbulences. Besedovsky (2018) examines, from the late 80s to 2015, the role played by the novelties in calculating methodological and evaluative financial practices in monetary and capital markets in relation to the financialising function and the credit-taking procedures on the part of private and state agents with a principal reference to credit rating agencies, like Moody's, Standard & Poor's and Fitch Ratings. In particular, the writer stresses that the changes occurred in the philosophy and perceptiveness of these agencies' practices in terms of the speculative incorporation and reallocation of credit risk from the creditor to the financed entity as well as to third parties through the channelling into market modern financial products the functionality of which is based on complicated mathematic as well as exponential and structured models. Buchanan (2017), in the context of a parallel research of his in terms of securitisation as an implication of financialisation, which implies a global market of multi-trillion US dollars, although there are serious questions about its sustainability, provides a critical perspective about the role

and ethics of risks management in relation to the recent financial crisis that broke out in 2007. In another alternative approach, Lysandrou (2016) asserts that financialisation is a useful operational means of modern capitalism priding a time-lasting dimension in economy in terms of trading claims emanating from future revenues-oriented flows. Davis & Williams (2017) present financialisation as a modern capitalist concurrence allowing for multiple approaches of entrepreneurial elites to authority. Davis & Walsh (2017) as well point out the differentiation between financialisation and neoliberalism concepts during the 70s in the United Kingdom through a broad socioeconomic transition from Keynesianism to the fundamentalism of free market.

In any case, the essence of “financialisation” will not change in terms of the negative effects of this phenomenon in relation to the traditionally prevailing postwar development-oriented productive direction as well as of the function normality of global economy. Financialisation, as a phenomenon, in our opinion, of a new alternative mechanism or tool of the technocratic financial function in the context of an extreme capitalist, globalised neoliberalism, appears to be juxtaposed, against the real productive and investment-oriented procedure, markets speculation, the gradual disinvestment of national economies, concentration and rearrangement of global wealth in an oligarchic elite of politically almighty financial players. It also opposes pre-planned financial crises and turbulences in markets, leading them to inefficient function, which pushes the borrowing cost to prohibitive heights, which results in the reversion of states’ balanced productive order and normality, unemployment, stagnancy, poverty and backwardness.

1.3. The research environment and a methodological proposal to approach the problem

In this article, we provide an extensive and consistent overview about the evolution in literature by the main pioneer researchers of the subject worldwide, as presented in the conclusions of the paper, in the areas where financialisation is applied, in order to identify the sectors or fields of its application. It is particularly emphasized that the specific phenomenon shows complexity and diversity and touches a multitude of economic dimensions and consequences in every sector of economic, social and political life, difficult to understand scientifically, technically and empirically. The literature survey is focused, nevertheless, also on the shipping sector in order that arthographies may be investigated in any existing researches attempt to approach the issue of the financialisation application and its impacts on the field in question or individual scientific fields, subjects or sectors thereof.

The literature review carried out results in the identification of a research gap for the sector in question, which will concern future research. The contribution of the article is, we believe, self-evident, since in addition to the systematic and methodological research on the existing research activity of the period (classification of this in specific material categories), it is proposed in the part of the methodology (development of the model), which takes into account the main internationally methodological approaches, and for the in-depth understanding and approach of the problem, the explanation of the mechanism of operation and detection of the phenomenon, through the accounting dynamics of capital flows (influxes-outflows) with a diagrammatic presentation of capital

movement. Thus, the functionality of the built model for solving financialisation problems is interpreted with a significant approach. This theoretical and empirical approach, as a scientific consideration and a tool for interpreting the phenomenon, is used for the first time in the international literature, contributing with our own reinforcement, since at least from our research no similar or relevant accounting approach to the problem emerges. Next, the conclusions of the research are presented and the relevant bibliographic references are included.

2. Literature survey and scientific gap for research

2.1. Introductory elements on literature research and classification suggestion

Our research, in order that it may examine the reviewed literature by means of methodological consistency, proceeds to a content grouping of the research sectors where financialisation is applied with the coherence and conceptual relevance of the literature contributing, thus, to its further utilitarian investigation by also other researchers. In consequence, we attempt the classification of the relevant literature on the basis of the research fields and contents of the material according to the following research axes and categories: 1) *Financialisation, functions, planning and exercise of policy*, 2) *Financialisation, investments, capital accumulation and corporate governance*, 3) *Financialisation, research, development and innovation*, 4) *Financialisation and merchandise prices*, 5) *Financialisation, work, living conditions, institutions and pathogeneses* 6) *Financialisation, markets, products, risks and evaluation firms*. In addition, just because a relevant research arthrography

on the financialisation of the shipping sector did not exist, we also include category "7": *Research activity referring to financialisation and the shipping sector*", in order that we may investigate international literature related to financial issues in the shipping sector for the potential finding of works that are relevant to financialisation in the shipping sector or the existence of a research gap in this scientific field. Graphically, the suggestion about the most comprehensive, in our opinion, classification of the research-oriented literature is presented in diagram 3 provided below.

2.2. As concerns the suggestion of survey arthrography classification

1. *Financialisation, Functions, Planning and Policy Exercise*

Van der Zwan (2014), examines, on the basis of the American economy and EU's economies through a copious selection of 140 articles during the period 1980-2014, the function of financialisation conceptually and substantially in modern capitalism. Approaching the issue is performed on the basis of three levels or functions, that is, as a new accumulation status, as a new orientation in favour of shareholder value against corporation's traditional value (differentiation of corporate attitude) and as a financialisation mechanism of daily life. The writer uses the determining analysis method (determinism) to interpret the determining relevance of the concepts contained in the three aforementioned functions on the basis of the economic, sociological and scientific evolutionary course of financialisation in the post-Keynesian institutional schools of thought. Van der Zwan, ascertains: in terms of the first function, the shift of investments from productive to financial activities, as well

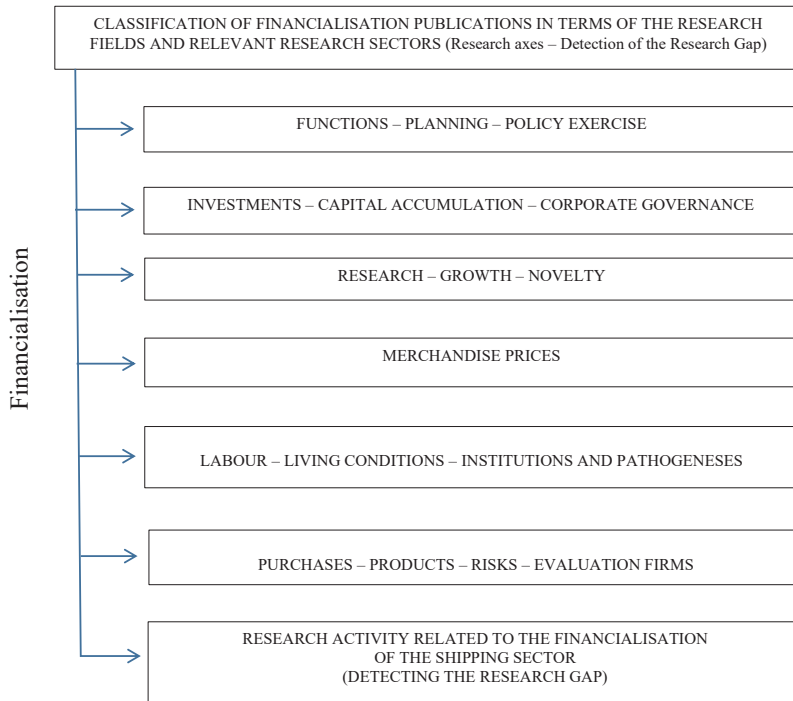


Diagram 1. Research axes of the scientific research classification about financialisation on the basis of fields and relevant research sectors as well as detection of the “Research Gap”.

Source: Author’s systematization

as the transfer of capital from productive to non-productive corporations. In terms of the second function she refers to the broader one: the imposition of pressure from financial corporations to the productive one in favour of shareholders' value. In terms of the third function, she deals with the provision of financial products to the broader public (low income households, middle class), which plays now the role of the investor as concerns pension projects, consumer faith, housing loans and a large number of other financial products, like derivatives, securities, risk management securities etc. Van der Zwan and a significant number of economists (Lechevalier et al., (2016); Bogdan and Lomakovych, (2021); Sokol, (2017); Sawyer, (2017); Karwowski and Stockhammer, (2017);

Lagoarde-Segot, (2017)), agree that, the displacement of the philosophy of economy, according to the aforementioned functions of financialisation entails socioeconomic effects on and changes in the structure of real economy as well as in terms of daily life, like: capital is confined in productive investments, capital accumulation is slowed down, conflict of interest results within corporations due to the re-distribution of sources and, in consequence, the substance of the traditional corporate governance is altered, administrative concentration and decrease in corporations' branches set in, productive activities are assigned to external cooperators, responsibility assumption is transferred to and imposed on private individuals, daily life is transformed into

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a property asset to manage, international competitiveness is decreased and profiteering tendencies prevail in the aftermath of low income classes' over-borrowing in favour of a predominant economic elite. In general, the above researchers ascertain: a) contradictions regarding the state's possibilities of planning and implementing industrial policies (loss of governmental authority and control), b) the necessity of protective policies (fiscal, monetary, investment and financial), due to the negative economic and social consequences of financialisation, c) the relationship of financialisation with uneven geographical development, but also the speed and quality of development for each country and d) that the gap between global economic structures and societies is deepening.

2. *Financialisation, Investments, Capital Accumulation and Corporate Governance.*

Krippner (2005), examines the phenomenon of financialisation and its significance in USA's economy during the postwar era, mainly, from the 70s until the middle of the year 2000, using a copious arthrography from 78 prestigious scientific articles. In her article, Krippner focuses on the post-war period, on the crowding-out of investments from traditional productive financing to modern forms of non-productive financing of the money open markets and capital. It is also mentioned how the characteristics of USA's economy are altered in the course of these two phases, which are the consequential impacts as well as from whom and how the control on modern American company is exercised but also to which degree globalisation has corroded the state's economic autonomy and not only it. The employed methodology is sociological and empirical on the basis of diachronic financial elements and, in particular, the comparison of revenues, profits and indices from productive

and non-productive activities developed within the USA as well as abroad. More specifically, the writer examines the oncoming changes along with their characteristics in three basic sectors of the GDP, that is, construction, weapons industry and services. She maintains that the analysis of the existing elements leads to the interpretation that dramatic changes causing enormous competitive contrasts and mutations in the nature of modern capitalism have occurred in USA's economy during the postwar era. In consequence, she defines financialisation as a standard of wealth accumulation in which profits are obtained also through other channels existing beyond industrial production and trade. The basic ascertainments of this research show that USA's economy since 1970 and henceforward has been characterised by a particular form of financialisation (change in the structure from traditional to financial), which signals the fact that the economy is going through a new phase of capitalism with a swift to modern financial products and means. Stockhammer (2004) and Orhangazi (2008), in the same spirit, maintain that the more financialisation is increased in productive corporations the more the accumulation of capital goods is decreased (negative relationship between financialisation and real capital accumulation). Also, with financialisation, the power of the shareholders is strengthened, with the result that the priorities of the management are also shifted, with the consequence of reducing the desired growth rate, due to the increasing financial payments to the shareholders and managers, which, however, imply a reduction of the available internal funds for productive investments. They develop their theory with economic time series of total entrepreneurial investments for the USA and other European economies (United Kingdom, France and

Germany). Alexiou & Nellis (2016) refer to decisions on investments in the context of financialisation by using time series from 1971 to 2012 for the United Kingdom, concluding that the distribution of profits between the productive sector of industry and financialisation, in combination with corporations' policies targets, appears to play a critical role in capital accumulation, maintenance of demand are at satisfactory levels as well as employment. Fiebiger (2016) suggests a re-examination in his article, of the financialisation of USA's non-financial corporations and a re-assessment of its impacts in terms of shareholders' values as well as the assertion that the accumulation of fixed assets is hindered by the increased financial outflows for the payments of interests and dividends. The contribution of the article lies in the presentation of another dimension regarding financialisation that sets a scientific debate in the context of the existing considerations concerning its impacts. Davis (2016), Barradas (2017), Tori and Onaran (2020) and Svilkos and Burin (2017) explore the existence of financialisation in recent decades, the first in the US economy, while the next in the economy of EU countries, coming to similar conclusions that financialisation is associated with the crowding out of capital from real investment, the increase in debt, the maximization of shareholder value, which is directly related to the corporate governance philosophy of businesses, the increase in equity repurchases, deindustrialization and the reduction of employment. Durand & Gueuder (2018) are focused in the study of the investment-oriented attitude and of the capitalist accumulation of the non-financial corporations in relation to the level of their profits at a macroeconomic level ever since 1970 and thenceforward, which is a time

period regarded by writers as bearing intensely the characteristics of neoliberal policies applied at a national and international level and playing a central role in the promotion of financialisation and globalisation. The study refers to the tendency shown by five of the largest high income economies (USA, United Kingdom, France, Germany and Japan) presenting a reduction in investments in relation to profitability with some variety according to the country and time. Lazonick & O'Sullivan (2000), point out the change in USA's entrepreneurial strategy from the 80s and thenceforward that is related to the reinforcement of shareholders' value as a principle of corporate governance with reference to the traditional way of management with the target of re-investment of profits. Moreover, they still wonder about the future of global economy and corporations' competitive performance without productive investment and in the face of constantly decreasing development rates. Clarke & Gholamshahi (2017) are focused on the increase in extreme inequalities existing among advanced economies as well as on the causes resulting in these inequalities. They think that the largest part of wealth is transferred continuously and systematically from the low income classes to the much richer ones. An important factor of inequalities generation is the pursuit of functioning in favour of shareholders' value, which means a change in corporations' corporate governance. The research in question is based on current statistical data of top authorities, like USA's Federal Bank and examines the policy of shareholders' value and the mechanisms of corporations' distribution of profits. The article, finally, ends up in the fact that the Anglo-American world has experienced for the last decades, due to the onslaught of an extreme financialisation,

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a progressive deterioration at the expense of its incomes and life quality.

3. *Financialisation, Research, Development and Innovation*

Xu & Xuan (2021) are focused on their article referring to the relation existing between financialisation and future basic entrepreneurial performance in Chinese publicly-listed non-financial corporations participating intensively in financialisation activities that have taken place in the last decades. The evidence that financialisation acts negatively in terms of corporations' future performance as well as that it is responsible for the reduction in corporations' support with research and development expenses is provided. Yang (2021), attempts to analyse the effect of shareholding structure in the financing research and development (R&D) investments of the small and medium corporations with the use of a regression model in the financial figures of 260 publicly listed corporations in China for the years 2013-2017, which means that the model interprets how financialisation, through a specific shareholding structure, affects more mildly corporations' research and development investments. Huang et al. (2021) examine the effect of financialisation in green technology and novelty-oriented corporations through a regression panel model of 3,493 publicly listed green non-financial corporations in China during the period 2007-2018. The main conclusions of the research are that the tendency is shown as intensely speculative in favour of financialisation while the strategy in favour of productive investments is inadequate. The financialisation degree depends on these corporations' special characteristics as well as on the extraneous funding environment. For example, contamination of high corporations tend more to financialisation contrary to these

of low contamination. In addition, private corporations show a higher tendency for financialisation than state-owned ones and moreover, corporations with easier access to banking loaning show a more developed tendency for profiteering.

4. *Financialisation and Merchandise Prices*

Davila & Punzo (2020), examine the development of the relation existing between productive activities and financialisation ones in terms of USA's and Brazil's economies during the periods 1947-2015 and 1995-2011 respectively, introducing the novelty in this research concerning the study on financialisation as a percentile change in the produced product per unit. The results for the USA demonstrate a very high increase in financial activities in sectors related to information, like the sector of services or service-led ones mainly after the 80s, which is not corroborated in terms of the construction sector. On the contrary, in Brazil, the presence of financialisation was looser, which is attributed, to the control of the inflation ensuing the macroeconomic stability of "Plano Real". Ederer et al. (2016), examine the degree up to which the prices of coffee, cotton, wheat and petroleum were affected internationally due to the financialisation of derivative products, that is, by the position of indices in the price of commodities for the period 2006-2012. The results show that the issue concerning the financialisation of the derivative merchandise markets can be supported by capitals managers for all products except crude oil. Pradhananga (2016) studies the determining bonds developed during the period 1995-2012 among the prices of the unrelated merchandise, that is, the merchandise that is not complementary or substituting among them in the production procedure or consumption. The results of the

research corroborate the fact that the entry of more traders into the market of commodities futures has caused an increase in the liquidity of several commodities futures market, resulting in the synchronised rise and fall in the prices of unrelated products.

5. *Financialisation, Work, Living Conditions, Institutions and Pathogeneses*

Pariboni & Tridico (2019) stress that financial capitalism has appeared for the last three or four decades as a new macroeconomic phenomenon aiming at the restoration of the control on the political procedure by the dominating classes that were threatened by the generalised domination of the labour movement during the 70s. The development of the capitalist model in question, reinforced also by the onslaught of globalisation, affected not only the OECD's countries-members but also other countries under the powerless reaction of labour syndicates against capital, which resulted in the advent of critical changes in the labour sector (application of extreme labour flexibility) in salaries and employment (reductions in salaries as well as increase in unemployment), reinforcement of services against the productive and constructing labour as well as in the reduction in households' incomes with the parallel reinforcement of income-oriented inequalities. In the same vein are moving the researches of Ozdemir (2019); Hein et al., (2017); Cushen and Thompson (2016); Bryan et al. (2017), who emphasize the positive correlation of financialisation with income inequalities, the effect of financialisation on the share of labor as a percentage of GDP, depending on labor union pressures, as well as the causality and parallel interconnection of liquidity and risk, between financial innovations and the reorganization of the logic of the labor structure. Ma et al. (2021) examine with an empirical study, the

negative effect of remittances in economic development in relation to globalisation and the financialisation for economies that are rich in resources, like Australia, Brazil, Canada, China, India and the USA. It is shown in the study that globalisation favours the promotion of financialisation, which affects negatively economic growth both in short and long-term periods in contrast to the positive effect of remittances in development, which was in force evidently during the postwar era also until the 80s with all the positive advantages aiming at the decrease in poverty, the increase in the GDP and in the amelioration of the standard of living. Appley et al. (2021) maintain that neoliberal policies of fiscal austerity affect health and the possibility of covering man's basic needs. The research allows the examination of situations and the generation of notions concerning the ways in which financialisation affects negatively people's lives in times of economic insecurity and governing austerity. Poppe et al. (2016) examine the loaning risks in times of financialisation and, in particular, how financial problems among households can crop up even when favourable economic conditions prevail, studying the case of Norway due to the exceedingly stable economy she prides.

6. *Financialisation, Markets, Products, Risks and Evaluation Firms*

Besedovsky (2018), through a socioeconomic historic, diachronic investigation on the basis of the determining analysis method (determinism), examines, during the period 1980-2018, the evolutionary course of innovative evaluation financial practices of Moody's, Standard & Poor's and Fitch Ratings evaluation firms. The writer pinpoints particularly the prevailing scientific notions in the daily evaluative practices of financings, the new concepts of rating

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agencies and the philosophy of credit risk transfer of a financial act. In terms of this issue, she points out, moreover, also the way of exploiting the credit risk, as a profit item in the context of financing operation by working out complicated mathematic, exponential and structured models. Therefore and in conclusion, financialisation, according to Besedovsky, is related directly to the financial practices and innovations of evaluation firms, concerning estimation, value status and the entry of the risk as a profit item in favour of the receiver in the context of credit acts. Buchanan (2017) maintains that securitisation is a manifestation of financialisation as well as a new, many trillions global market, which triggered the non-sustainable increase in house loaning credits known by the recent financial crisis in the USA in 2007. The research provides a critique about the role and the moral side of risks management of securitisation in the context of the financial crisis. The article mentions that today's financial system barely reminds of the traditional. This phenomenon of financialisation was characterised by Paul Volcker, the former manager of USA's Federal Bank, as a modern alchemy of the financial machine both at macroeconomic and microeconomic levels. Theoretically, anything is expected to bring about a steady flow of revenues, such as mortgages, accounts requirements, leasing of entrepreneurial equipment, entrepreneurial loans, student loans, credit cards requirements, automobile loans and other banks' rights, can be securitised. Greece, according to the writer, is an example of high liquidity security and low precarity of high security property assets securitisation, like tolls, airport landing fees, future national lottery markets receipts and even subsidies from the EU as a result of globalisation.

7. *Research-oriented Activity Referring to Financialisation and Shipping*

The scientific interest in reviewing and investigating literature ought to turn and be extended also to the research of financialisation involving shipping. This sector has played a substantial role diachronically in international maritime transports as well as in the transportation of trade, being the pillar of growth in every country's economy but it also acts in favour of global economy. This specific chapter includes: i) a survey of the published research-oriented activity in the financial issues of shipping for the period 1979-2018, carried out by Alexandridis et al. (2018). The studies survey carried out by the said writers is based on the classification structure referring to four research sectors on the basis of works object, the fields for a future research also included and ii) a writers' review of this study referring to the published researches of the period 2018-2023 in order that also this period may be covered as concerns financial issues referring to shipping for investigating the existence of potential recent research-oriented approaches related to the financialisation in shipping. Our research, in a respective way, classifies the works of the period 2018-2023 into four classification categories of Alexandridis et al. (2018). In addition, in the general category (e), it embodies and evaluates also the rest works of a relative object that do not belong, however, to the aforementioned four categories. They are studies that are relevant to issues referring to software systems of managing and extracting a large volume of information derived from international arthrography related to shipping and seas as well as studies on the viable, environmental and sustainable development of harbours with reference to their lifespan as well as to

studies related to the optimal connectivity of harbours and the development of appropriate complicities aiming at their most efficient and competitive management and operation.

i) Alexandridis et al. (2018) provide a comprehensive and structured survey on all the published researches in the financing sector and the investments in shipping, extended throughout about four decades (1979-2018) and including 162 academic studies published in 48 prestigious scientific periodicals. This is a comprehensive synthesis of almost the entirety of international arthrography and selected literature. The classification of articles monitors four research-oriented sectors selected by the writers that are compatible with the corporate financial literature, that is: a) *sources of finance and capital structure in shipping*, b) *maritime investments and assessment methods*, c) *corporate governance of maritime corporations* and d) *risks calculation and shipping management*. In terms of the first research-oriented sector, it is pointed out that, apart from governmental subsidies, maritime corporations' recent tendency lies in relying also on global capital markets for finding investment capitals in parallel with the main financing source based traditionally on banks' loaning. In relation to capital structure, it is inferred that maritime corporations, in comparison to industry, have a higher leverage index as well as the tendency to secure high liquidity levels by means of withholding significant cash holdings. In terms of the second research-oriented sector, freight rates prices, expectations, the size of the fleet, the volume of global trading, the construction cost and construction time of the ships, the acquisition cost of second

hand ships, the loaning cost as well as entrepreneur's tendency or aversion against risk are included in the factors affecting the decisions on investments. In relation to the assessing methods, these of investments in shipping, that is, NPV, IRR, ARR, multiple criteria decisions (MCDM), ROA analysis, invoicing models (closed form solutions, dynamic programming and simulations) are pointed out. In terms of the third research-oriented sector referring to corporate governance in shipping, literature converges as concerns the effectiveness of governance characteristics also mainly to the positive relation between family ownership and financial yield (Chief Executive Officer/Chairman) assigned by the family group with the low independence of Directors' Board). In terms of the fourth research-oriented sector, it is pointed out that the freight rate in shipping depends on macroeconomic factors, like the situation of global economy, fuels prices, international maritime trading, shipyards deliveries, ships tonnage, ships scrapping, alteration in capacity, currency equivalences, shipbuilding cost etc. as well as on microeconomic factors, like freight rates, transport period, ship's size, the relation existing between the freight rate and the period, ship's hull type, age of the ship, voyage routes etc. That is, a differentiated fleet has a positive effect on the relation of freight rates yield and risk. In addition, with reference to risks management in shipping (mainly in terms of freight rates and fuels), the use of future contracts, exchange contracts, off-stock exchanges derivatives, FFA contracts, contracts for difference (CFDs) etc., which, however, have been used very limitedly due to the lack of their preference on the

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part of maritime corporations due to low negotiating capability and to their high credit risk, has recently been performed since 2002.

- ii) ***In terms of the first research sector:*** Yoon et al. (2021), investigate maritime corporations' motives in using sales releasing (SLBs) transactions in order that they may find a short-term financing for working capitals but also accomplish a long-term development. Kotcharin & Maneenop (2020) examine the decisions on cash holding (liquidity levels) of international maritime corporations in relation to the geopolitical risk (GPR), that is, the risk related to tensions and wars menacing among countries or terrorist and other activities disturbing the normal course of international relations. Mantzari et al. (2023) study the factors affecting the commercial credit in shipping (profitability, liquidity, financial leverage, company's size, ownership etc.) as an alternative form of short-term financing. Moreover, Pangalos (2023) examines funding as a factor of applying basic changes aiming at reducing mainly a maritime enterprise's energy cost and viable development. Su et al. (2021) examine the causal relation existing between financial and maritime economic development. They ascertain that for economic development, heterogeneities and regional inequalities existing among various transport hubs may be mitigated. Jin & Schinas (2019) focus as well on the development of China's innovation financing policies, in the context of national targets for shipping. Alexandridis et al. (2020) provide evidence in terms of the fact that maritime corporations' capital structures can affect their corporate investment-oriented

decisions and, especially, mergers and acquisitions. Yu et al. (2018), study, by means of a data envelopment approach, the yield and cost low volume transports performed between the continental country and the offshore islands that are necessary to be performed for social reasons. ***In terms of the second research group:*** Kanamoto et al. (2020) assess the global influxes of dry bulk cargo (iron ore, carbon, seeds, fertilisers etc.) from harbour to harbour that form quantitatively a relation existing between this merchandise and the size of the transport vessel. Kyriakou et al. (2018) ascertain that the long-term freight rate and its variability have an impact on the decision-taking time and on the investment value, which is reduced by the increase in the age of ships. Girgin et al. (2018) analyze the relationship between maritime markets (newly-built or second hand ships, freight rates, and scrap) and the effect they have in relation to the assessment of property assets, the time chart of investments and entry-exit conditions in market. ***In terms of the third research sector:*** Drobetz et al. (2021a) examine the effect of institutional investors on the assessment of the publicly listed maritime corporations they think of being positive as concerns the market value of maritime corporations. It is ascertained, therefore, that institutional ownership is a catholic mechanism of corporate governance, especially, in terms of corporations dominated by institutional investors of a short-term investment-oriented horizon possessed by easily-liquefied shares. Katsaros et al. (2020) investigate the effect of leadership in terms of corporations' financial performances as well as on the readiness

of workers for changes. Andrikopoulos et al. (2018) are focused on investigating the effect of directions' interconnections as concerns conflicts of agencies and the corporate performances in terms of maritime industry. The main findings of the study are that the corporate leadership directed towards the internal interconnection of directions can contribute to the settlement of the conflicts with agencies and the cost reduction of representation. ***In terms of the fourth research sector:*** Laopodis (2022) investigates empirically the probable micro and macro determining factors in terms of the performances of maritime corporations' shares with reference to the international risks of American factors. It is shown in the study that the shares of the NYSE stock market are affected significantly by native risks factors, such as unemployment, inflation and industrial production. Drobetz et al. (2021b) examine the impacts of the geopolitical risk-GPR (war conflicts affecting oil prices and undesirable events, like closing the Suez canal) and of the financial political uncertainty-EPU. The findings show that freight rates are affected differently from the two risk kinds. Liu et al. (2021) examine the prognostic ability of predicting the variability in the maritime market by means of the SVR-GARCH and SVR-GJR models approximation, stressing that these models have a better capability of predicting the variability of maritime markets during the period of the economic crisis. Tianming et al. (2021), taking into account the percentage of about 80% of the international mercantile traffic of maritime supply chains, emphasize that stability is of primary importance for global

connectivity. Marobhe (2021) examines as well the impact of the Covid-19 pandemic on the performances of publically-listed maritime cargo transport corporations' stocks. The results show that Greece's, Singapore's and Taiwan's maritime stocks were affected less than other countries' ones. Giamouzi & Nomikos (2021) examine the risk-return offset in the bulk dry cargo market through various scenarios, like measures of risk, risk attitude and variables control related to the chartering cycle. Chen et al. (2021) investigate, under the increasing uncertainty of global economy, the non-linear dynamic relation of adaptation among the global oil market, global maritime bulk cargoes market, stock market and China's economic development. Haider et al. (2018) stress that maritime industry, which is capital-intensive, has exceedingly unstable freight rates and ships' prices, showing, in addition, an intense cyclicity and seasonality while it is based on the traditional debt financing to a high degree. This article examines the overall failure in relation to economic performance at a maritime corporation's level globally. Bai et al. (2022) examine the operational risk management strategies of fuel price and freight rates, categorized into short-term, medium-term and long-term, concluding that with specific alternative strategies both of the above risks can be effectively reduced. Venkadasalam et al. (2020) perform as well a comprehensive research about the effectiveness of maritime industry in five Asian countries, that is, Malaysia, Singapore, Philippines, Thailand and Vietnam, using a data and stochastic analysis about the dynamic comparison of the performance referring to 45

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international offshore maritime providers. Moutzouris & Nomikos (2018) examine the formation of forward prices in the bulk dry cargo shipping. They show that the largest part of the basis variability can be attributed to the expectations of future market conditions and not to expectations of future risk premiums. Pelagidis & Karaoulanis (2021) examine the volatile and many-particularities-presenting attitude of the capesize market (index), focused on expectations and time. Expectations play a critical role in terms of merchandise market in view of taking short-term and long-term decisions. Wu et al. (2021) focus on the construction of a fear index in terms of the dry cargo maritime market. The basic findings are related to the role of the fear index as concerns the forecast of the freight price and the financial risk for great events. Barrot et al. (2019) examine how globalisation impacts property asset prices as well as how investors conceive the domestic consequences of the abrupt changes in foreign productivity, through a risk premium rationalization model. Andrikopoulos et al. (2021) examine the factors to which the declinations appearing between the market capitalisation and the property assets assessment in maritime industry are owed. The findings imply that declinations are connected to specific factors, like the institutional ownership, the capital cost, the corporate governance, etc.. Moutzouris & Nomikos (2020) develop a model of property assets behavioral pricing of shipping companies. ***In terms of the fifth research sector:*** Zhu & Wang (2021) are focused on the reduction in contamination as well as on its damage on health due to sea transports. Jeevan et al.

(2021) investigate the structure of sea harbours lifespan (SLC) of Malaysia aiming at restructuring the plan of their development. Gaidelys & Benetyte (2021) study the competitive environment in the area of the Baltic Sea among the harbours of Lithuania, Latvia and Estonia through the grouping and systematisation of scientific literature. Zhao et al. (2021) stress that the Maritime Silk Road (MSR) is the road of the 21st century, bound to provide a new high quality direction for the development of China and the maritime economy existing along its route and contribute to its sustainable development. Bao & Wang (2020) stress that maritime corporations affect the environment and international human community's health due to the emissions of greenhouse gases as well as other contaminants and provide, at the same time, feasible suggestions for the reinforcement of workers, sensitisation for sustainable development as well as the use of advanced technologies. Geerts et al. (2021) focus on the problem of port authorities related to the management of ports. Alexandrou et al. (2021) examine empirically the relation existing between the provisions of the green strategic chain and maritime corporations' financial performances. Tsiulin et al. (2020) examine the categorisation of the tendencies based on blockchain applications in maritime corporations and their supply chain, while Papathanasiou et al., (2020) focus on the adoption of blockchain in the Greek shipping industry. Zhou et al. (2021) investigate the effect of sea knowledge groups with the maritime corporations. The results showed that there was a positive relation between the groups possessing sea knowledge and maritime

corporations' performance. Nowinska (2019) examines the relation existing between the geographic closeness of destinations and the maritime industrial closeness, finding a positive correlation as well as results about various closeness types and relations bonds formations and laying emphasis on the generated competitive relations. Kim B-S & Kim B-Y (2020) maintain that selection coefficients (criteria) of services have changed according to the intensifying competition in terms of sea transports and of changes in the environment of transports. Bai et al. (2021) aim at presenting a comprehensive review of arthrography in relation to the development of the research on sea transports on 3,199 published research articles in 23 scientific periodicals during the period 1991-2020. The results show that the most significant academic worries concern sea issues of sustainability of maritime transport, related to the management of harbours, the operation of containers and maritime lines management.

2.3. Summary of the research and the existing research gap

After the extended survey carried out, according to the aforesaid items, on the overall, according to our estimation, relevant and valid international literature, the well-known academic historic think tanks related to the publications that have been issued about the specific field for the last decades, also included, we identified a significant research gap in the literature regarding the financialisation of global merchant shipping for further investigation. The extent of our research on the practiced international scientific researches in articles, periodicals and other studies is exposed analytically

below in the conclusions section in this study. With regard to the existing gap, a future survey is bound to take this matter in its stride.

3. Methodology

3.1. Accounting explanation of the mechanism of the phenomenon

In order that the financialization phenomenon may be understood and to interpret in depth the mechanism of its function, as well as its multiform accounting/ financial effects and consequences on an enterprise, we suggest the definition of financialization as a problem of financial/ capital flows (influxes/outflows) in the context of the common conceptuality, reasoning and technical philosophy of enterprises' accounting situations since the phenomenon is manifested in its substance through a whole of alterations and interactions of elements in an enterprise's property structure. The effect of these alterations cause disorders in the normal operation of the enterprise's productive and transactional circuit with adverse consequences in terms of the adequacy of investment-oriented capitals (reduction in the capital accumulation rate or disinvestment). More specifically, the alterations occurring in the normality of an enterprise's investment-oriented and financial capital flows (reduction in investment placements with a respective increase in financial placements), which lead to casual (short-term) profits in favour of the increase in shareholder's value (high dividends) and managing executives' profits (capitals outflow) at the expense of the real (productive) capital with chain adverse impacts on the cost of the loaning capital, operating costs and on enterprise's productive operation in general, express the concept of the financialization phenomenon existence and of its intensity degree. Thence, by means

of the proposed diagrams 1 and 2, we present our approach concerning the appearance and development of this phenomenon graphically on the basis of the company's financial situations. The use of the three kinds of the Memorandum lines in the diagrams expresses the crowding-out of capital flows from their normality (see the double line in diagram 1) in the decreasing (see a line in diagram 2) or the

increasing tendency of flows (see three lines in diagram 2).

3.2. Detection and resolution proposal (model)

The phenomenon of financialisation is traced on the basis of: a) assessing the displacement in the reviewed time period (diachronically) of corporation's policy from its real assets productive investments to investments in assets financial items, b)

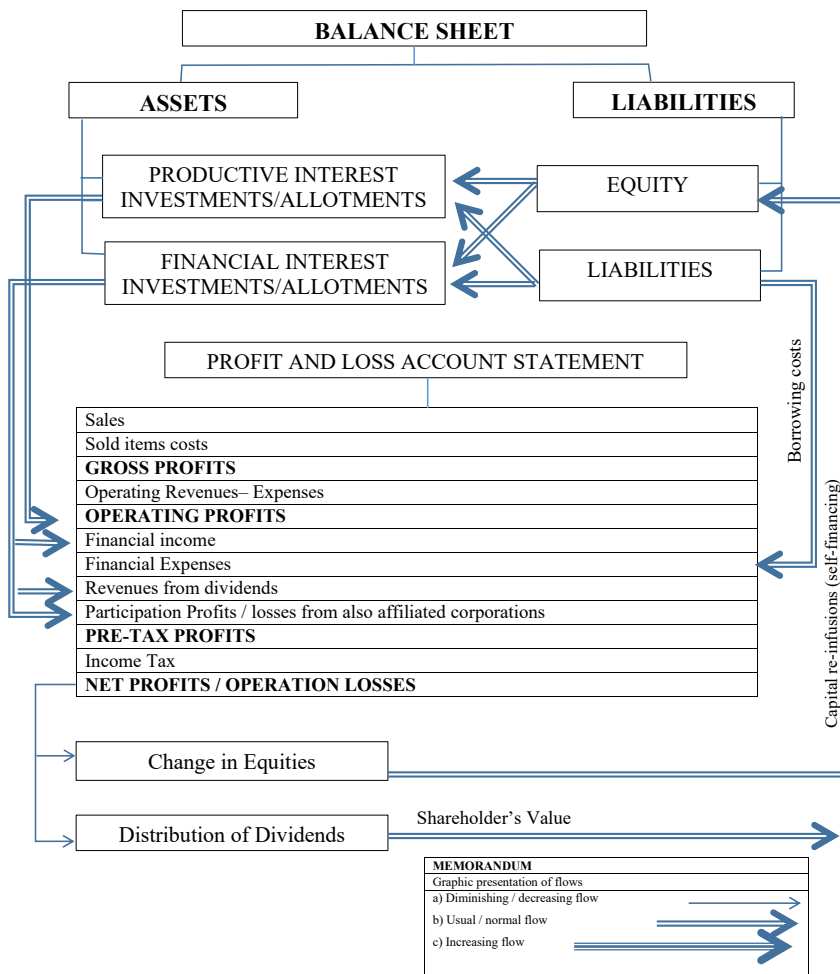


Diagram 2. Approximation of usual/normal flow of investment and financial capitals between company's Balance Sheet and Profit and Loss Account.

Source: Author's systematization

assessing shareholder's position in terms of his value (increase in distributed profits) and c) assessing potential changes in acquiring loan capitals (increase in loaning cost). Particularly, as concerns the (a) and (b) cases, the displacement is owed to the change in the corporation's management philosophy and practice, which means that it is endogenous and deliberate. As concerns case (c), the rise in the loaning cost is exogenous and

undeliberate. The aforementioned issues are traced (assessed quantitatively) on the basis of a specific diachronic financial analysis with the application of appropriate indices, that is, for the change in capital accumulation with the use of capital structure indices and viability ("fixed assets/total assets", "financial investments/total assets", "fixed assets/financial investments") to assess shareholder's position as concerns indices ["(total turnover

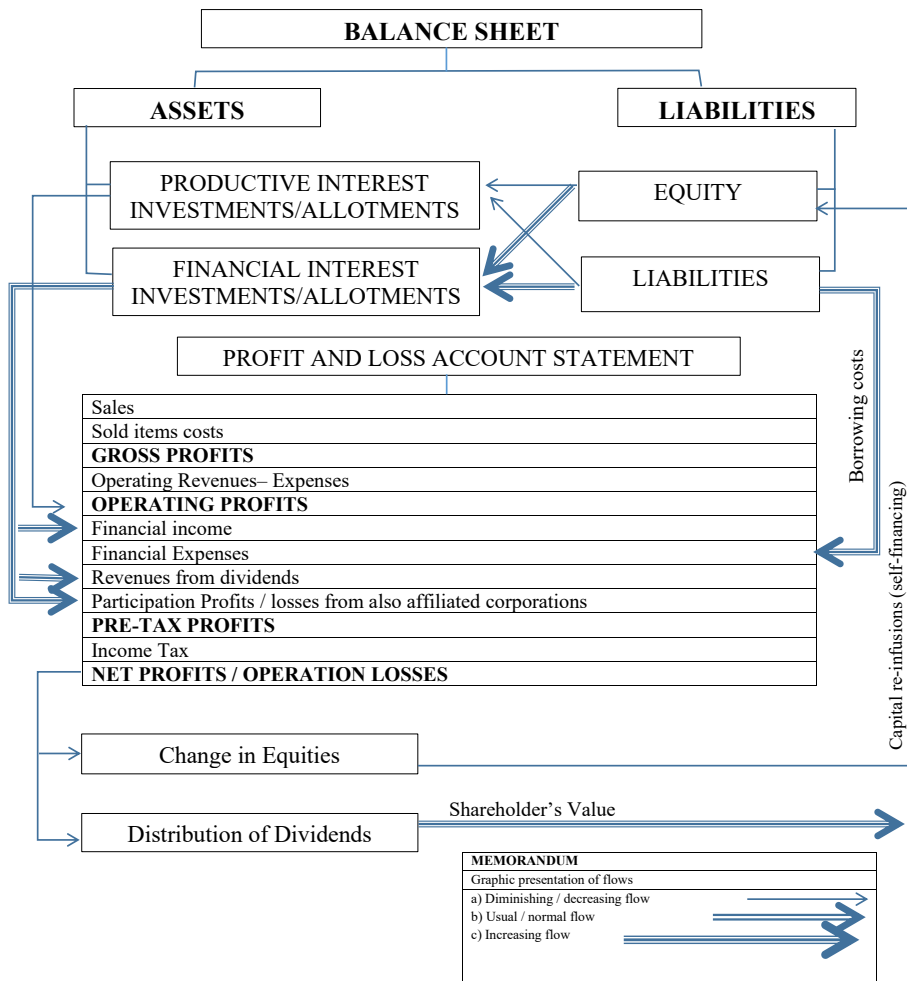


Diagram 3. Approximation of alteration in investments-oriented and financial flows between company's Balance Sheet and Profit and Loss Account due to financialisation.

Source: Author's systematization

dividends/net profits of the turnover) *100”, “distributed profits/deducted profits”] and, as well, the increase in loaning cost with the indices (“financial expenses/foreign capitals”, “financial expenses/turnover”). Complementarily, also the development of the index “non-financial revenues/financial revenues” and the development of the index “non-financial profits/financial profits” are also examined diachronically for a further detection of the financialisation phenomenon of the aforementioned displacement. Graphically, the suggestion of the steps for the detection of financialisation phenomenon at a corporation level is shown in diagram 4 as it is stated below.

Furthermore, in terms of the investigation of the casual link (cause and result) diachronically of financialisation and for the commercial shipping industry, that is, on which macroeconomic, entrepreneurial and other factors this phenomenon depends and by which intensity is evolved, “panel data models” (multi-variable models) will be used in the form of co-affecting variables independent and dependent functions (regression and co-regression) according to Granger for pinpointing the directions of the causative relations among variables.

Therefore, on the basis of the theory axioms concerning the empirical estimations and hypotheses of the problem, whose function in its general form is expressed as follows:

$$K = f(OP, S, CS, D, FP, P, E\dots)$$

Where:

K = Capital Accumulation (Property, Plant and Equipment - Total [Net]),

OP = Operating Profits (Income Before Extraordinary Items),

S = Freight rates (Sales/Turnover (Net)),

CS = Cost of Goods Sold,

D = Long-Term Debt – Total,

FP = Financial profits,

P = Financial payments,

E = Staff Expense – Total

The items that will be introduced into our model, as concerns their largest part, were drawn from the global data basis of Standard and Poor’s Compustat Global, which draws and processes data taken from annual balance sheets and financial situations of enterprises’ groups without, of course, the exclusion of the data use by the researchers of also other data bases.

4. Conclusions

In this article, the concept of financialisation is analysed theoretically as well as the empirical effects and multi-complexity impacts of this phenomenon are examined on the basis of literature according to the deterministic method which has penetrated and affected, apart from the economic sector, also every institutional, civilisational and cultural manifestation of modern societies. In consequence, this phenomenon demonstrates an inexhaustible theoretical and empirical interest in terms of its operational dimension and effects, attracting the interest of academic community but also of independent researchers showing a special interest in investigating it through various scientific perspectives due to the multiformity and gravity of its impacts on institutions as well as on socioeconomic formations and mechanisms. The research conducted, more specifically in the field of financialisation in global merchant shipping, is, to the best of our knowledge, the first attempt in the field, thereby highlighting the existing research gap. More analytically, it includes 100 references by means of 94 articles published in 62 prestigious international periodicals, 3 articles

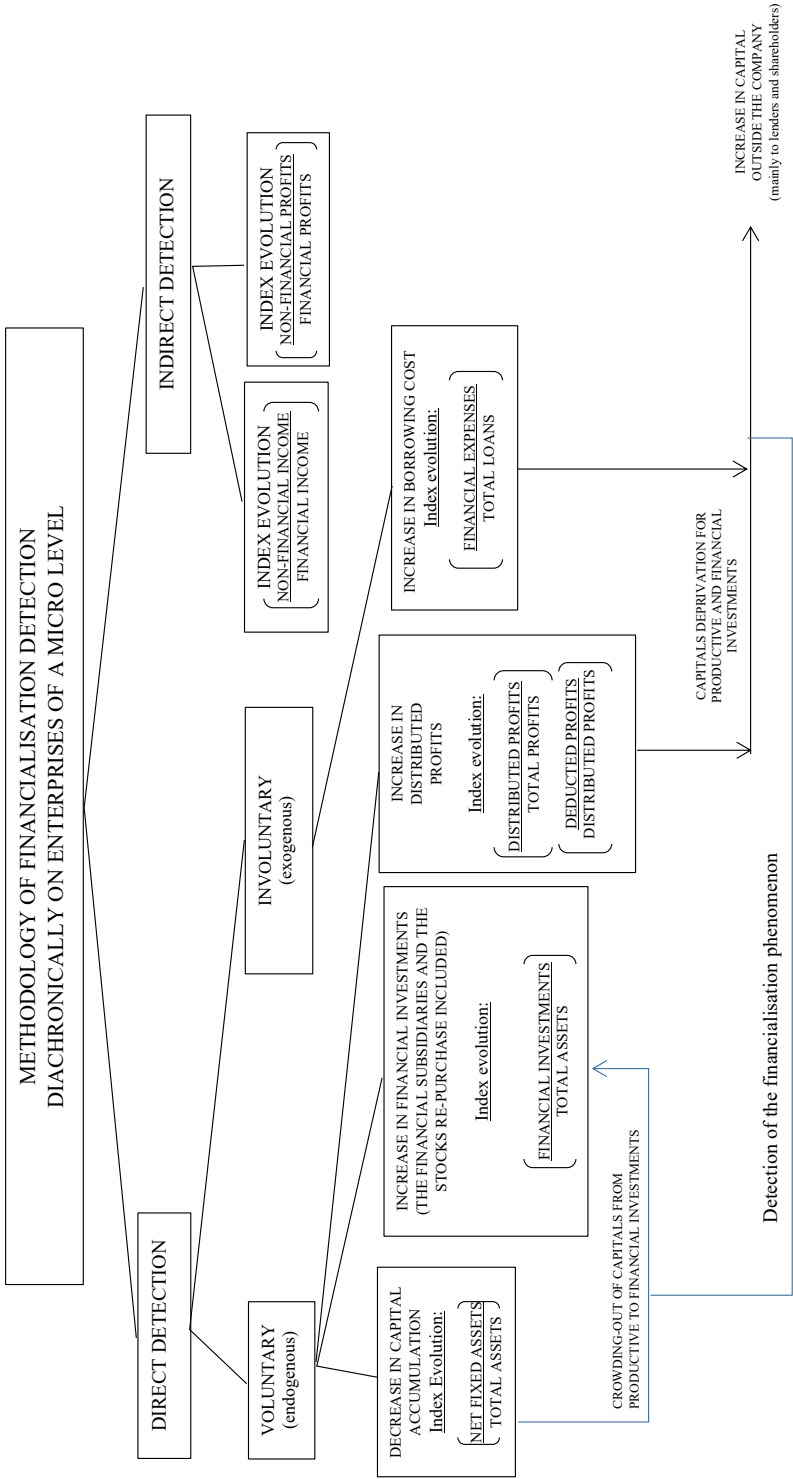


Diagram 4. Detection of financialisation diachronically on a micro-level corporation.

Source: Author's systematization

in the context of international conferences, 1 article in newspaper and 2 famous writers' scientific issues works in the financialisation sector. In terms of financialisation in the field of the global merchant shipping, our research detected the absence of a comprehensive theoretical and empirical approach as concerns the specific cognitive sector founding and interpreting fully and thoroughly this phenomenon and its effects. The indisputable significance of focusing research interest on merchant shipping in the future, which is an economic sector of immense range and international development-oriented performances, for the global, as well as the Greek economy, is worth noting. The most principal findings of this study are summarised in: a) the conceptual evolution of the term through philosophic doctrines, social theories and schools of economic thought, b) pinpointing the mostly prevailing theories of approaching this issue in international arthrography, c) detecting the research gap as concerns the investigation in the field of shipping and d) in the research areas (fields of activity) of manifestation of the financialisation phenomenon. The scientific significance and contribution of this study is evident by means of the aforementioned items since it: a) covers a long four-decade (1980-2023) period of monitoring the relevant research, b) contributes to the detection of a research-oriented gap in the field of shipping, c) contributes to the classification of arthrography per direction of the research-oriented field with consistency and conceptual relevance and d) innovates scientifically to the interpretation and explanation of this phenomenon function mechanism from the viewpoint of financial/capital flows (influxes/outflows) on the basis of the reasoning and philosophy of enterprises' accounting

situations and e) the direct and indirect tracing of the phenomenon manifestation on the basis of enterprises' accounting/financial statements is approached methodologically. This work provides an additional aid in the endeavour aiming at a further investigation of the problem, which is an ambiguous one with multiple penetration in every dimension and fold of human activities. In this sense, the article enriches international literature by providing a prototypical, extensive research, offering an additional academic tool that is useful for solving theoretical and practical problems and forwarding further concerns about the cognitive space of these things more thoroughly.

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