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SUMMARY

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Doctoral thesis title: **THE INTERACTION BETWEEN INTERNAL AND EXTERNAL FINANCIAL REPORTING IN THE PRODUCTIVE SECTOR UNDER INTERNATIONAL FINANCIAL REPORTING STANDARDS IAS1 AND IAS2. APPLICATION PARTICULARITIES: ROMANIA AND GERMANY**

INTRODUCTION

Current context of research

Starting from the premise, according to which accounting developed first as a practice, and later as a science, we aim to capture some practical aspects regarding the interconnection of internal and external reporting in the practice of the productive sector, in general, and of the machine building industry, in particular, through the implementation of following international accounting referentials: Presentation of financial statements in accordance with International Reporting Financial Standards (IAS1) and Inventories (IAS2). International and local standards make increasing and demanding demands on the form of presentation of accounting information, indispensable both for the preparation of external reports in accordance with statutory reporting frameworks and for internal reporting necessary to perform management functions within an entity. In this thesis we show, through provided information at both levels of internal and external reporting, respectively at the level of gross profit line of the profit and loss account by destination, that German accounting can be perfectly identified with the recommendations of IAS2 "Inventories" and IAS1 ″ Presentation of financial statements″. Then we aim to investigate the situation of internal and external reporting at same level - gross profit line of P&L by function in Romania in the productive sector of the selected industry.

At beginning, we emphasize the similarities in the presentation of the profit and loss account (P&L) in Germany with the IAS1 referential, "Presentation of financial statements". For the case of Germany, according to the German Commercial Code (HGB) § 275 and in the IAS1 referential "Presentation of financial statements", the profit and loss account can be classified by

nature or by purpose (function). In Romania, M.F.P. Order no. 1802/2014 on the approval of the Accounting Regulations on individual annual financial statements and individual annual financial statements and consolidated annual financial statements and Ministry Public Finance Order no. 2844/2016 on the approval of the Accounting Regulations in accordance with the International Financial Reporting Standards specify that the accounting of expenses will be kept according to their **nature**. The presentation of the profit and loss account by destination must be done only in explanatory note no.4 to the financial statements, called the analysis of the operating result, by small and respectively medium and large entities, and may be a presentation option, at present, in Romania, for entities reporting in accordance with International Financial Reporting Standards (IFRS).

Based on the recommendation of the Federation of German Industries (IKR) to use mainly in industry the profit and loss account by function, otherwise regulated in Germany together with the profit and loss account by nature, at the discretion of the entities, we consider it of great importance the disclosure of the **gross margin line (income from turnover – cost of products sold [1]) out of the profit and loss account (**P&L) by function, illustrated in figure no.1.

Among the first translations of this English term in Romanian we find the term value added (VAD) in Petrescu Silvia[2] (2005) and the term gross margin and gross profit in Gîrbina Maria Mădălina and Bunea Ștefan (2007). Popescu Lucian and Băluță Aurelian Virgil[3] (2007) define this gross profit margin, general gross margin or fixed cost margin. Body of Expert and Licensed Accountants of Romania (CECCAR) mentioned it as "Gross margin (of contribution)"[4]. We agreed that in this thesis we will refer to the gross profit line of P&L by function as gross margin contribution or contribution margin. It refers to economic efficiency, i.e. the difference between outputs – income from turnover and inputs – cost of goods sold and represents the total contribution[5] to cover fixed costs. In order to identify the gross contribution margin in the financial

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[1] Girbina, M.M., Bunea, S., 2007, Syntheses, case studies and grid tests on AI application (revised) -IFRS, third edition, Vol, 1, p.53, 55, CECCAR Publishing House. The term is known in American literature as Margin Contribution and in German literature as Deckungsbeitrag II.
[2] Petrescu, Silvia, 2005, In-depth financial analysis, Petrescu, S.. 2005, Analiză financiară aprofundată, Concepte, Metode, Studii de caz, Studii aprofundate, Audit și management contabil, Iași
[3] Popescu, L., Băluță, A.V.,2007, Cost calculation methods and procedures, Romania de Maiine Foundation Publishing House, ISBN 978-973-725-844-1, p162-164.
[4] Translation taken from Summaries, Examples and Case Studies for preparing candidates for the aptitude exam for obtaining the quality of expert and licensed accountant, 2019, CECCAR, National Institute for Continuous Professional Development;
[5] revenue from turnover — the cost of products sold or rendered services, according to IAS1

statements under the Romanian accounting system, we further illustrate explanatory note number 4 and find its equivalent, as defined above, the **gross result related to net turnover.**

Figure no.1: **Gross contribution margin in the profit and loss account (P&L), by function, according to the IAS1 implementation guide "Presentation of financial statements" and in German system and, respectively, explanatory note no.4 Analysis of operating result, according to Romanian regulations**

Romania		**IAS 1 / IFRS**		**Germany**
Explanatory note no4.		para 102, para 103, 4.111		Art.275 HGB p.3
1. Income from turnover		Revenue		1. Turnover
2. Cost of goods sold and provided services (3 + 4 + 5)		- Cost of sales		2. Cost of sales
3. Expenditure on core business				
4. Auxiliary activities Expenses				
5. Indirect production Expenses				
6. Gross result related to net turnover. (1 - 2)		**= Gross profit**		**3. Gross profit (1-2)**
7. Distribution costs		+ Other Income		4. Distribution costs
8. Administrative Expenses (do not contain distribution costs)		- Distribution costs		5. Administrative Expenses
9. Variation of Production (711 credit)		- Administrative Expenses		
10. Production from own fixed assets				
11. Other Income		***- Other expenses***		6. Other Income
				7. ***Other expenses***
12. Operating Result (6 - 7 - 8 + 9 + 10 + 11)		= Profit before tax (EBIT)		....

Sources: Explanatory Note no.4 to the annual financial statements at 31.12.2022, available at https://static.anaf.ro/static/10/Anaf/Declaratii_R/1002_5_2018.html, translation from IAS1, "Presentation of financial statements" para 103 Girbina, M.M., Bunea, S., 2007 and Summaries, case studies and grid tests on the application of IAS (revised) -IFRS, third edition, Vol, 1, p.53, 55, CECCAR Publishing House, and German Commercial Code (HGB) Art.275 para.3 available at https://www.gesetze-im-internet.de/hgb/__275.html

This gross result from German financial accounting and profit and loss account by destination, in accordance with IAS1 "Presentation of Financial Statements", is also found in German marginal cost management accounting under the name of fixed cost contribution no no.2 ("Deckungsbeitrag / DB2)"[6], when translated literally[7]. In other words**, the gross contribution margin** is recorded, on the one hand, in financial accounting and on the other hand in cost accounting, as the sum of all gross results across all responsibility centers, and constitutes according to IFRS, the total contribution[8] to cover fixed costs. Thus, the interaction of internal and external reporting happens at the level of gross contribution margin, both in German and IFRS, under IAS2 "Inventories", as we will show below in the content of the thesis.

In the Romanian accounting system, however, we investigate if the gross margin (contribution) line respectively **the gross result related to net turnover,** as a line of the profit and loss account by destination, taken over in Romania in explanatory note no.4, it is identical with one of the two referentials, reflecting the interaction of internal and external reports, by the triple identity of the result of marginal accounting concomitantly with that of cost and financial accounting[9].

In the dualistic conception[10] according to which accounting information is recorded separately in two distinct information circuits, management accounting and financial accounting information flows are not only delimited "inside" or "outside" of the reporting entity, depending on the destination of the information, but also reciprocally, between the two circuits.

On the one hand, financial accounting[11], which provides mandatory statutory external reporting, "must ensure chronological and systemic recording, processing, publication and maintenance of information on financial position, financial performance and other information related to the activity carried out, in order to meet internal needs for real and certain information", especially for the external environment represented by: present and potential investors, financial

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[6] Friedl, G.; Hofmann, Ch.; Pedell, B., 2010, Kostenrechnung - Eine entscheidungsorientierte Einführung, München, Vahlen

[7] Kilger, W., Pampel ,R.J., Vikas,K., 2012, Flexible planned cost accounting and contribution margin accounting, 13th edition, Springer Gabler;

[8] ACCA Performance Management, Paper F5, Course Notes ACF5CN07(D), BPP Learning Media, p.1.9.

[9] Schmidt Andreas, 2008, Cost Accounting: Fundamentals of Full Cost, Contribution Margin and Planned Cost Accounting as well as Cost Management, 5th edition Verlag W.Kohlhammer

[10] Partenie Dumbravă, Atanasiu Pop, 1997, Management accounting in industry, Intelcredo Deva Publishing House, pg.13

[11] Law no. 82/1991, republished with amendments and additions to date

and commercial creditors, customers, public institutions and other users"[12]. This requirement applies to both Romania and Germany as well as to reporting in accordance with international financial reporting standards. Obviously, reporting requirements in accordance with international standards in general and IAS2 in particular impose specific reporting requirements. In order to comply with these requirements, we will pursue in thesis the interconnection of financial accounting reports with those of cost accounting under IFRS and German system (HGB),

On the other hand, the organization and management of cost accounting adapted to the specifics of the activity **is mandatory in Romania for some economic entities, "**as the case may be" according to the provisions of Article 1 paragraphs 1 and 2 of the Accounting Law no. 82/1991[13], republished and **in Germany it is mandatory** according to the German Commercial Code (HGB) art.255 para.2[14] on the balance sheet, respectively the Tax Directive on income taxation[15], **within the limits specified** by those regulations. That means for some economic entities also. According to German accounting regulations, it is up to the entity to choose, depending on the accounting policies to which it adheres, respectively the presentation of a higher or lower profit, to what extent the management of each type of production cost remains optional.

Therefore, the organization of cost accounting is at the discretion of the persons responsible for presenting the financial statements, in Romania, in full, and in Germany, within certain limits.

Given the nature of the activities carried out, the most complex form of organization of cost accounting can be found in the production activity, where any management structure is interested in cost management, respectively in determining costs at certain levels, even up to the level of a product. The purpose of cost accounting shall be to reflect all operations for the collection and distribution of expenditure by purpose, namely: products, works, orders [...], settlement of the obtained production and calculation of the production cost of manufactured products[16].

From the point of view, we see the following relationship between cost accounting[17] and managerial accounting, respectively, the former is the source of information for the latter. Cost accounting is different from management accounting in that the former provides only the basis and information for ascertaining costs, according to The Chartered Institute of Management

[12] Todea, N., Cenar, I., 2001, Financial accounting, Practical applications, Didactic seriesv
[13] https://static.anaf.ro/static/10/Anaf/legislatie/Legea_contabilitatii.htm
[14] https://www.gesetze-im-internet.de/hgb/__255.html
[15] https://datenbank.nwb.de/Dokument/Anzeigen/126764_33/
[16] Eşanu, N., 2003, Management Accounting, Continent Publishing House, Sibiu
[17] Cost management accounting is found in the literature also as cost accounting

Accountants (CIMA[18]) in England. Once cost accounting information is made available to management accounting, management can apply cost calculation methods agreed at management level. The principles of cost accounting have evolved over the years to meet the needs of management, which is the first user of cost (and revenue) information, at the level of each entity.

The importance of the topic and the motivation for carrying out the research

Due to the complexity of the informational content of accounting data and amid the pressure of the current, cosmopolitan market to capitalize on opportunities and minimize risks, there has been a need for a thorough analysis of financial and accounting information flows, where the interactive interconnection **of financial accounting with management is carried out**, particularly in the production sector, with the help of technology and implementation of digitization, increasingly. In this respect, it was aimed to develop a strategic toolkit to support the management of economic entities to identify ideal accounting options for financial reporting. Economic and financial data can be analyzed on several levels, namely through financial accounting, which is mandatory by legal regulations, provides external reports and assumes a passive role[19] of information and, respectively, through cost accounting, whose organization is optional at entity level, provides information for internal reporting, as an integral part of managerial accounting and has the role of identify and prove "revenue expenditure"[20] even before month closing activities. In this context, we can say about cost accounting that it has become the indispensable tool on the basis of which short-term decisions are made.

In other words, the age of digitalization opens up new perspectives for the collection and processing of accounting information within companies. In this sense, it can be said that the digitization of information flows in companies is of real use to all users and offers a competitive advantage[21] difficult to recover. From the point of view of cost accounting, as the main provider of information, it fully benefits from the advantages of modern technology, performing automatic distributions of indirect, variable and fixed costs and various allocations and reallocations on a

[18] available at https://www.cimaglobal.com/
[19] Briciu, S.; Căpușneanu, S.; Rof, L.,M.; Topor, D., 2010, Accounting and management control, Ed. Aeternitas
[20] Idem 13
[21] McKinsey study, 2015, Accelerating the digital transformation of French businesses: A source of growth and competitiveness for France, Available at: https://www.mckinsey.com/industries/high-tech/our-insights/closing-frances-100-billion-digital-gap, [accessed 8 August 2019]

systematic and consistent basis depending on the actual level of production achieved during the reference period, in accordance with the provisions of international accounting standards, in particular IAS2 'Inventories'.

Gross profit or Gross contribution margin is, from the point of view of internal reporting at entity level, a first result of the system of calculating variable costs (direct costing), and represents the basic concept in marginal cost calculations, which arose from the interpretation of the principle of causality of cost[22] allocation and which in Germany is practiced on several levels of reporting, as detailed in the chapter on internal reporting, regarding cost allocation principles.

The marginal contribution reflects profitability per unit produced, i.e. revenues after deduction of variable costs, available to cover fixed costs, starting from the variable cost method[23]. The marginal contribution is extremely important for analysis and planning, as it shows the amount of disposable income to cover fixed costs, such as rent and utilities, which must be paid even if production stagnates and for the cost-benefit inflection point analysis. The total contribution is the contribution per unit multiplied by the number of units sold[24]. The marginal contribution, however, does not include all indirect costs in unit cost, but declares unallocated costs directly in the cost of the period. In this way, inventories will be measured at variable cost of production in marginal accounting, which IAS2 "Inventories" does not accept. In accordance with IAS2, 'Inventories', the use of marginal cost system is not accepted[25] by IAS2 as the sole system for calculating costs at entity level because it is a method of calculating partial cost, that evaluate stock on variable costs level. Therefore, in order to comply with IAS2 Inventories, **marginal partial cost accounting can only be used in conjunction with one of the absorbent methods** to reap the benefits of using incremental analysis, provided that adjustments are subsequently made to comply with the requirement of IAS2 "Inventories" for the calculation of full cost[26]. For this purpose, absorption rates will be calculated according to the formula expected indirect costs / expected normal production capacity[27]. Therefore, internal reports on partial cost calculations, mandatory within

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[22] Bramsemann, R., 2005, Systems of Cost and Performance Accounting, p.21, si idem 31p.1.11
[23] Eşanu, N., 2003, Management Accounting, Continent Publishing House, Sibiu
[24] ACCA Management Accounting, Paper F2, International, Essential Text, 2008, Kaplan Publishing UK, ISBN 978-1-84710-535-6, pg. 150
[25] ACCA Performance Management, Paper F5, Course Notes ACF5CN07(D), BPP Learning Media
[26] ACCA Advanced Performance Management, Paper P5, Essential Text, 2008, Kaplan Publishing UK, ISBN 978-1-84710-552-3
[27] ACCA Performance Management, Paper F5, Course Notes ACF5CN07(D), BPP Learning Media, pg.1.5

certain limits, in German but also international marginal accounting[28], are in fact a **complement** to the full cost calculations, recommended by IAS2 "Inventories". Therefore, verifying the assumption of gross contribution margin in internal reporting implies confirming the current trend of using a hybrid[29] of costing systems in practice to reap the benefits conferred by each. This peculiarity of the use of a combination of cost systems in global manufacturing, in conjunction[30] with IAS2 'Inventories' recommendations for the use of P&L by function in the manufacturing sector and gross contribution margin in reporting, internal and external, indicates that this gross margin of marginal accounting is a wonderful tool for analysis, control and forecasting.

Therefore, **the gross contribution margin** as a result of marginal accounting, within cost accounting, reflected in financial accounting, represents **a bridge between external and external reports, respectively between financial and cost accounting and** is extremely useful in internal reporting. It also has great use internationally, according to Horngren[31] (2012) and Kilger (2012[32]) and Horvath[33] (2019), due to the fact that it has the ability to facilitate planning, control but especially short-term decision-making.

In the same vein, the calculation of absorption costs complies with IAS2 recommendations “Inventories" on inventory accounting, according to which the value of stocks must include an appropriate amount of fixed manufacturing overheads, thus becoming part of the cost of the product. In addition, IAS2 'Inventories' explicitly recognizes that the selling price shall cover all costs. Problems can arise because it is assumed that overheads are related to volume and also that profits can be manipulated by simply changing production levels. So in the case of partial cost calculations, the increase in the value of inventories will lead to a lower profit and vice versa, while in the case of full cost calculations, it will lead to a higher profit. The figure below shows the impact of absorption cost and variable cost on profits, according to a comparative study of different cost techniques and their application in pharmaceutical companies. This further underlines the idea that the method of valuing stocks has an impact on gross earnings. In this context, **changes in**

[28] See ACCA manuals, ACCA Management Accounting, Paper F2, International, Essential Text, 2008, Kaplan Publishing UK, ISBN 978-1-84710-535-6
[29] Cokins,G, 2013, Top 7 Trends in Management Accounting, *Strategic Finance* (December): 21–29.
[30] Horngren et.al. 2012, Kilger et.al. 2012
[31] Horngren T.C., Datar, C.T., Foster, G., 2012, Cost Accounting- A Managerial Emphasis, 14th Edition, Prentice Hall
[32] Kilger, W., Pampel,R.J., Vikas,K., 2012, Flexible planned cost accounting and contribution margin accounting, 13th edition, Springer Gabler
[33] Horvath, P.; Gleich, R.;Seiter, M., 2019, Controlling, 14. Auflage, Vahlen, ISBN 978-3-8006-5869-5

output of stock levels (inventory) play an important role in declaring profit. As we see in the table below**, there is an inverse relationship between gross profit or gross contribution margin and the respective value of stock changes.** As a rule, there are changes in stocks, with few exceptions, such as non-storable products such as electricity or transport services. When we talk about stocks, we differentiate between the **costs of manufacturing production and cost of production sold** or services rendered, which we find in the specialized literature under the name cost of sales or cost of turnover. Therefore, a distinction must be made between the cost of production and the cost of sales.

We note that the method of stock valuation has an impact on the financial result, and we resume this topic in the current state of knowledge.

Figure no.2: **Impact of marginal costing method for stock valuation on gross profit**

Stock valuation method	Increase in stock	Decrease in stock
Marginal Costing	Less Profit	More Profit
Absorption Costing	More Profit	Less Profit

Source: Aleem,M, Khan, MH și Hamad,W., 2016, Audit Financiar XIV Nr.11(143) ISSN:1583-5812, ISSN online:1844-8801 disponibil la AF 11 2016 - Site.pdf (cafr.ro)

With respect to operating result, the IAS1 implementation guide "Presentation of Financial Statements" states that the use **of the classification of expenses by nature would increase operating profit compared to the classification by purpose,** due to the capitalization of financing costs in the former case. [IAS1 para 99 FAQ4.111.3]. From the perspective of financial reporting in accordance with international accounting standards, following the harmonization process carried out in recent years, it is noticed that there are cases in which the results presented, within the two reporting standards, national and international, may be similar, but also, in many cases, they may be completely different. With respect to IAS1 International Reporting Reference "Presentation of Financial Statements", with respect **to the Amount of operating result** there **are no differences**, regardless of the presentation structure approached - of the profit and loss account by nature or by destination[34].

[34] Summaries, Examples and case studies for preparing candidates for the aptitude exam for obtaining the quality of expert and licensed accountant, 2019, CECCAR, National Institute for Continuous Professional Development, p.177-187;

Internal cost reporting is one area of internal control (controlling), respectively, and includes planning and control in order to achieve expected results and added value, as well as coordination of the system for providing internal accounting information. The need for stability, precision in forecasting, flexibility and permanent updating of planning, and especially analysis and **reporting** in decision-making processes have led to the increasing cooperation of cost accounting with financial accounting through internal reporting. Therefore, starting from the Total contribution (contribution per unit multiplied by the number of units sold[35]) we can quickly calculate the operating profit according to the formula: Operating profit[36] = total contribution (gross contribution margin) – Indirect fixed expenses. In this way we can track both in ante and post-calculations deviations from the target profit, at any level agreed by controls, based on information gathered from cost accounting.

In conclusion, in the practice of the manufacturing sector there is**, in fact, an interaction between financial accounting and management accounting** and the connection between them can be made in the International Reporting System (IFRS) as well as in the German system, **through the gross contribution or coverage margin,** as a line of P&L by destination, in a first stage and subsequently at **operating result, in a second step. Operating result is the same regardless of whether the classification of expenses by purpose or by nature is used** in financial accounting. But as the marginal contribution margin has no direct equivalent in the profit and loss account by nature, but only in the one by functions, in the Romanian reporting system we cannot match the gross contribution margin with the gross result of net turnover, unless it represents the result of marginal accounting to cover fixed overhead costs. In this regard, we strive to show in the thesis that the gross margin in financial accounting and P&L by function represents a marginal contribution margin in internal reporting according to IAS2, "Inventories" as well as in the German reporting system. We chose the German reporting system as basis for comparison, because in Germany P&L by destination and implicitly marginal accounting is widely used in industry to determine the gross contribution margin line (coverage), in parallel with full cost calculations. Contribution margin, the central concept of marginal cost accounting[37] is largely used

[35] ACCA Management Accounting, Paper F2, International, Essential Text, 2008, Kaplan Publishing UK, ISBN 978-1-84710-535-6, pg. 150
[36] EBIT (Earnings before Income and Taxes)
[37] Kilger,W., Pampel,J.,R., Vikas, K.,2012,Flexible plan cost accounting and cover contribution accounting13th edition, Springer Gabler

by German firms in fixed cost budgeting (70%) and operational budgeting (94.8%). The gross contribution margin is important for analyzing the evolution of any company because it tells us exactly to what extent it can cover fixed indirect costs or overheads related to production, in each given period, before the month close. Fixed costs can be adjusted by management in short-term decision-making processes and are a lever to control the operating result, having a significant influence on it: the operating result changes to the same extent as fixed production costs. The lower the fixed costs, the higher the operating result. So thorough information about fixed costs is relevant. Gross margin and operating result are always present in the annual reports, as we show in our scientific study, being of great interest to investors, because they are basic indicators of the company's "health". So regardless of whether companies are required to disclose gross margin or not, it remains an important control and budgeting tool, widely used internationally.

The harmonization of accounting systems is a great challenge of our time. Managers need to take the time to understand rules and regulations and develop practices that meet standards at the lowest possible cost. The need to have an internationally comparable accounting system for reporting has increased over time in Romania, especially in certain categories of public-interest entities, but also for performance evaluation for valuation purposes. The most commonly used reporting framework that ensures this comparability is International Financial Reporting Standards (IFRS). In this respect, we intend to present, in the following, to what extent the Romanian financial accounting system has reached a comparable framework of compliance with IFRS, in terms of internal and external reporting in the production sector. In addition, we take a look at the German financial accounting system to highlight the similarities between the indigenous reporting system and the IFRS framework.

We consider it important to identify the gross margin over costs (contribution) in Romanian financial reports, given that it appears only in the explanatory note to the situations Financial No.4 Analysis of operating result and we see that the structure of it differs in fact from that proposed by IAS1 "Presentation of Financial Statements". In conditions of convergence towards IFRS, it is necessary to prove the comparability of the same economic – financial term, i.e**. gross margin and gross result of net turnover (Revenue from turnover – Cost of sales)** in each of the harmonized accounting systems.

Current state of knowledge

From the study of the literature on gross margin, as a line of P&L by function according to IFRS, it represents a margin of contribution of marginal accounting[38] to cover fixed costs and is a vital indicator for the health of an enterprise, not only in the manufacturing sector, but also in the service sector. In addition, it is a first bridge between external and internal reporting, and between financial and cost accounting.

Taking into account the harmonization of IFRS, it becomes necessary to identify this contribution margin in each accounting system. From this perspective, we can research and conclude that there is no clear equivalent in the Romanian accounting system, because P&L by destination is not regulated in Romania. In our argument, we take a look at the German accounting system to determine to what extent that margin of contribution would be reflected. In the German case, this correspondence may be perfect, but in Romanian accounting it remains unclear.

The requirements of IAS1 "Presentation of Financial Statements" provide comprehensive guidance on what items the financial reporting statements should contain, without a special binding framework. However, there are clear recommendations for the profit and loss account by nature and function. For mini, respectively micro-entities, the simplified profit and loss account (and simplified balance sheet) is prepared in Germany (HGB 275), similar to in Romania for micro-entities (F20). However, these small entities are usually not subject to IFRS reporting in Romania in general, and in Germany there is a right of option.

In Germany and Romania, the reporting framework for financial statements is regulated by law. While in Romania, the presentation of the income and expenditure statement is made by nature, according to the legislation in force (Ministry Public Finance Order no. 2844/2016 for the approval of Accounting Regulations in accordance with International Financial Reporting Standards), in Germany, there is freedom of choice regarding presentation by nature or by function. The translations of the two classifications in German legislation are **the total cost method,** for classification by nature and **the cost of sales method**, respectively function (267HGB). The first 7 rows of the profit and loss account by function in Germany are similar to those recommended by IFRS/IAS1 "Presentation of Financial Statements", as shown in Table no. 2 and the calculation

[38] Idem 24

of the gross margin line is similar, because although the organization of cost accounting is not regulated by law in Germany either, German companies must disclose their accounting policies including analysis of results in management reports or in annual reports, where appropriate, with freedom of choice for reporting entities of the calculation method adopted. At first glance, it can be seen that the structure of the profit and loss account by functions in Romania, according to explanatory note no. 4, Analysis of operating result, also appears to be similar. To be sure that the way of calculating the gross profit line is the same, we need to further investigate the indirect production cost line. Variable indirect costs of production should be clear as they are proportional to production, but the allocation of fixed manufacturing overheads on a **systematic and consistent basis and in relation to usual levels of production** should also be ensured under IAS2 "Inventories". However, this is only possible by implementing the agreed allocations. Compliance with the implementation of systematic and consistent distributions of management accounting can only be proven at the level of internal reporting, which is generally not transparent to the general public. In other words, it is precisely here, at the level of apportionments of common, indirect cost allocations, where the distinction **between the cost of production and the cost of sales** is made**.** This distinction is important because most companies use production costs of turnover as a basis for allocating fixed overheads (administrative and sales)[39]. The justification lies in the sales department: the more is sold, the higher the related costs will be. This dependence is not so clear for administrative expenses, so in this case the manufacturing costs of the product can be used as a distribution basis, at the discretion of management. In Romanian accounting we will talk about the cost of goods sold to the extent that the share of indirect, common costs is allocated to production in the given period, on a systematic and consistent basis and in relation to the usual levels of production. In particular, it is necessary to check the allocations of Romanian cost accounts, 924, "General administrative expenses" and 925 "Selling expenses", which guarantee that we have taken over in the cost of production or production sold, the corresponding share of common costs. These allocations of common selling costs (924) must be made at the cost of sales and not at the cost of production, since they are proportional to sales in the given period, and not to the production achieved. The cost of sales includes, in addition to the cost of production,

[39] Schnepf Friedrich, 25 9 2022, Change in stocks: Difference between manufacturing costs of production and turnover, , available at [Bestandsveränderungen: Unterscheidung zwischen Herstellkosten der Produktion und Herstellkosten des Umsatzes (controllingportal.de)]

movements (increases generated by manufactured finished products and/or decreases generated on discharge by sale) from stock. As regards general government common cost allocations (925), they can be made at both production cost and sales cost, as decided by management because dependence on sales is not clear. The systematic and consistent implementation of these common cost allocations leads to the cost of production sold.

In German cost accounting, indirect cost allocation rates are calculated monthly, than compared with precalculated apportionment rates and deviations for the month are recorded into accounts. Hence the name marginal accounting, because every month only deviations of the achived to plan are posted in the given period and monthly precalculated distribution rates are adjusted, with the help of the used software program. The distribution and allocation of indirect costs is done in Germany in every month close. In Romania, the actual allocation of indirect costs is done similarly every month, based on the effective distribution rates calculated, with the help of cost accounts, but it is still necessary to prove this **marginal reporting of the pre-calculated distribution rates to those actually achieved respectively calculated in the month, at each predetermined level, generally at the level of each cost center or cost centers pool.** By checking this condition, it is possible that precisely the verification of the achievement allocations on a systematic and consistent basis is missing. These deviations planned to actual achieved are reported in internal cost reports at cost center level, of cost accounting, in the over- or under-absorption line.

Before analyzing the different allocation of indirect costs, it is necessary to specify the indirect costs to be allocated, in particular the “indirect production costs", recorded in account 923 in the Romanian cost accounting. In order to clearly expose their reallocation, it is necessary to delimit fixed indirect costs from variable indirect costs of production according to the **interdependence between cost attribution and the degree of dependence on production capacity,** as detailed in subchapter 3.2. Cost approach under IAS2 "Inventories" and the German accounting system.

Variable indirect costs will be allocated on the basis of distribution rates according to the actual level achieved, as they are proportional to it. Redistribution itself takes place at the difference value between the planned distribution rates and the actual achieved distribution rates, both calculated at level of actual production capacity, in order to highlight normal consumption, i.e. the usual level of production. For **fixed indirect** costs of production, however, the allocation basis must be different from the former, as these costs **are not proportionate to production capacity.** Therefore, fixed indirect costs will be allocated with other distribution base(s). IAS 2 "Inventories" insists on distinguishing fixed indirect costs from variable indirect costs, but does not determine on what basis the allocation is to be made, but merely specifies that the allocation of indirect variable and fixed production costs shall be on a systematic and consistent basis and according to **usual levels of production**;. Therefore, a usual basis of distribution in practice will be the normal level of production, where the normal level must be the average of a certain number of months and must be continuously adjusted to comply with the consistent basic condition, i.e. at the end of each period taken into account, with the level actually achieved. Therefore, the "manufacturing overheads" recorded in management account 923 will be broken down under IFRS/IAS2 "Inventories" according to two apportionment criteria: actual realized level for fixed variable indirect production costs and usual production level for indirect, fixed production-related costs.

It is important to mention regarding IFRS harmonization, namely IAS2, "Inventories" in Romanian legislation that the latter faithfully specifies the IFRS requirements mentioned above. Therefore, **theoretically, the harmonization of IAS2 "Stocks" is perfect in Romania as well**. In practice, however, the implementation method must be checked in more detail, because the implementation and monitoring methodology is not legislated, neither in Romania nor in Germany, but in Germany internal control has developed both as an object of study in all universities in the field, but especially within the International Institute of Controlling (ICV)[40] and the International Controlling Organization (IGC)[41] and internationally recognized software accounting programs ensure compliance with the provisions actually concerned.

Allocation criteria are of particular importance in IFRS. If production is lower than expected, the resulting excess overheads should be considered an expense of the period and should not be capitalized. Where production is abnormally high, the fixed overheads allocated to each unit must be reduced so as not to overstate stocks. The financial position[42] of a company depends on the capitalization of costs, which becomes increasingly important when translating from one accounting system to another, especially given the increasing intensification of globalization and,

[40] The International Association of Controllers at a glance (icv-controlling.com)
[41] IGC: Members (igc-controlling.org)
[42] Popescu, L., Băluță, A.V.,2007, Cost calculation methods and procedures, Romania de Maâine Foundation Publishing House, ISBN 978-973-725-844-1

implicitly, on the accepted costs underlying the recognition and registration of assets. In this context, we are interested in consumption, which can be capitalized on the basis of professional judgements, such as the provisions of IAS2, "Inventories", in the cost of goods sold line of the profit and loss account by destination.

IAS2 'Inventories' recommends full cost calculation. **The value of stocks must include a corresponding amount of fixed manufacturing overheads, thus becoming part of the cost of the product.** In addition, this absorption method of the full cost calculation explicitly recognizes that the selling price must cover all costs.

Inventory measurement methods are very important because **the way inventories are valued have an impact on increasing or decreasing the operational results**[43] of one entity. The choice of an inventory valuation method is left to management and will be recorded in the accounting policy manual, which in Romania remains confidential, while in Germany it is disclosed in the management report and under IFRS in the annual report. Among the methods agreed and recommended by both IFRS and Romanian regulations[44] and German regulations[45], we mention: FIFO, where we find the higher stock value, which implicitly leads to a higher result and the weighted average cost (CMP) method, which involves ease of application and can be easily used in Excel calculations.

The annual inventory of the company's assets is mandatory both in Romania and Germany. Regarding the inventory, it should be mentioned that in Romania, in order to record in the accounts, the equivalent value of the finished production, 931 and of the one in progress, 933 it is first determined quantitatively, by **inventory**[46], and then its actual cost is calculated according to the agreed calculation method.

Among the regulated methods of inventory valuation[47] in Germany, we mention: the inventory method[48], little used[49] in fact because it does not track consumption at the level of the responsibility

[43] Costi Boby, 2017, Ceccar Business Magazine. Business Expertise and Audit, No.3 31 Jan-6 Feb. 2017, Available at https://www.ceccarbusinessmagazine.ro/impactul-metodei-de-evaluare-a-stocurilor-asupra-rezultatului-financiar-a1530/

[44] Order 1802 / 2014 approving the Accounting Regulations on individual annual financial statements and consolidated financial statements, with subsequent updates

[45] Available at § 240 HGB - Einzelnorm (gesetze-im-internet.de)

[46] Accounting Law no. 82/1991

[47] § 240 para. 2 HGB and. § 241 HGB

[48] In this method consumption is calculated according to the formula: initial stock + inputs -final stock = consumption.

[49] Inventory Method | Cost Accounting - World of Business Administration (welt-der-bwl.de)

center and involves factual inventory at the end of the month; the update method that requires a lot of effort and time, for registering consumption vouchers and discharging at the exit of stocks, but it is accurate and the retrograde method. In Germany we find the same marginal calculation for highlighting the inventory with the retrograde method[50]: the inventory is evaluated based on inventory valuation methods and the differences found during the inventory are recorded in the accounts, according to the recommendations of the German Commercial Code annually but at least every three years. Therefore, in the retrograde method of inventory valuation, the classical method of annual inventory (counting, measuring, weighing) is no longer necessary. The starting point for calculating consumption according to the retrograde method shall be based on average target consumption[51], which is derivate from usual consumption pondered with an waste rate. **The retrograde method applied in production includes the gross profit margin (contribution)** and the extrapolated formula for calculating[52] the cost of sales will be: turnover – gross profit margin = cost of goods sold.

With respect to inventory record-keeping, IFRS specifies that an entity may choose to keep inventory records continuously throughout the year or to count inventory only at the end of the period—intermittent inventory[53].

The **retrograde method is also recognized**[54] for determining costs **by** IFRS/**IAS2** ″Stocks″ alongside the standard cost method, provided that the results are close to actual purchase or production costs [IAS2 para 21- 22]. Thus, IAS2 allows the retrograde (backward-looking) method for the recognition of inventories.

In this thesis we argue that **P&L by functions gross profit margin is a contribution margin of** marginal accounting under IAS2 "Inventories". This fixed cost coverage margin represents the selling price minus variable costs and can be calculated using the formula fixed

[50] In accordance with Article 252(1) para 3 of HGB, assets and liabilities must be accounted for individually. For tax purposes, the valuation of inventory assets is regulated by § 6 para. 1 no. 2 EStG and R 6.8 EStR 2012. Group valuation of similar inventory items is permitted under Article 240(4) HGB (for tax purposes this is permitted under R 6.8 (4) EStR 2012).

[51] The calculation formula is: **Average consumption quantity (per piece) + surcharge (stock reduction due to scrap) = target consumption**

[52] Dr. Carola Rinker, Prof. Dr. Harald Kessler Inventories: Determination of acquisition costs by commercial ... / 3.2 Retrograde method, disponibil la https://www.haufe.de/finance/haufe-finance-office-premium/vorraete-ermittlung-der-anschaffungskosten-nach-handels-32-retrograde-methode_idesk_PI20354_HI3269207.html

[53] ACCA, Financial Accounting, Paper F3, The Essential Text, 2008, Kaplan Publishing UK, ISBN 978-1-84710-537-0.

[54] (IAS 2.21-22) available at IAS 2 (iasplus.com)

costs + profit in order to reconcile marginal accounting with full cost accounting[55]. In the argumentation of this hypothesis, in figure no.3 we can see how to calculate the gross contribution margin in full cost system and partial marginal respectively. The result obtained in both calculation systems will be the same and this equality highlights the fact that the gross profit margin can be a contribution margin or a fixed cost coverage margin, i.e. the marginal accounting result[56]. The gross profit declared in the P&L by destination can be analysed by means of this parallel breakdown of costs within the marginal (partial) calculation. The role of marginal calculations is to identify differences between realized and predicted, exactly where they occur, with the help of responsibility centers. Deviations between actual costs and normal costs can be analyzed in cost accounting at the level of cost centers.

Figure no.3.: **Full and partial cost calculation at gross contribution margin level**

Full absorbtion				
	Cost objects			
	A	B	C	Total
Turnover	24	24	42	90
Cost of sales	19	27	35	81
Gross margin	5	-3	7	9

Marginal absorbtion				
	Cost objects			
	A	B	C	Total
Turnover	24	24	42	90
Variable costs	16	20	26	62
Margin 1	8	4	16	28
Fixed costs of products				19
Gross margin				9

Source: Schmidt, A., 2008, Kostenrechnung,Grundlagen der Vollkosten-, Deckungsbeitrags-und Plankostenrechnung sowie des Kostenmanagements, 5. Auflage Verlag W.Kohlhammer, ISBN 978-3-17-020417-1, p-162

Thus, we can generalize - methods for calculating partial costs can be practiced only in addition to methods for calculating full costs to generate accounting information necessary for internal control and for making management accounting decisions, according to IFRS. The contribution margin is the key concept of marginal cost calculation, so partial marginal cost calculation can be seen as a necessity in internal reporting and be carried out only in addition to the full cost calculation.

Therefore, this contribution margin is an excellent control tool, as well as for documenting transfer

[55] ACCA Performance Management, Paper F5, Course Notes ACF5CN07(D), BPP Learning Media, pg.1.9
[56] Idem 55

pricing with the cost plus (CPM) method. An important aspect to note regarding the use of the cost-plus method is that the financial statements prepared according to Romanian accounting regulations present expenses according to their nature and not according to destination, which means that they do not allow a clear delimitation between the cost of goods sold, respectively the cost of services rendered and the other operational expenses of entities. Thus, if there is no proper internal reporting, the correct application of the cost-plus method becomes impossible. In financial accounting, it is a line of the income statement (P&L) by function in accordance with the expense's classification by purpose, exactly as in IAS1, 'Presentation of Financial Statements'. In cost accounting, the same gross contribution margin is calculated as the difference between turnover income and cost of sales, where the cost of sales includes all expenses directly related to the final product: all direct costing - direct or indirect and a calculated and allocated part of fixed manufacturing overheads in accordance with IAS2 "Stocks".

Starting from the variable cost method, the distinction between the variable **cost margin (Revenue — Variable costs)** and the gross contribution margin on **fixed costs** (Variable cost margin — Fixed product costs as required by IAS2 "Inventories") shall be stated. The latter is, in fact**, the gross contribution margin overtaken into financial accounting, in P&L by purpose according to IAS1 "Presentation of financial statements" and IAS2 "Inventories" respectively and into the German harmonized reporting system, on the one hand, and constitutes gross operating result at profit center level in cost accounting, on the other hand.**

In this connection, it is necessary to highlight **the difference between gross** contribution margin presented in financial accounting, in profit and loss account by purpose and in cost accounting at the level of centers of responsibility and **strictly the concept of marginal contribution**[57] (= fixed costs + profit), e.g. in German and Romanian cost accounting[58]. The contribution to cover overheads has a direct equivalent in financial accounting in the context of reporting under IAS1 "Presentation of Financial Statements" and IAS2 "Inventories" and reporting in the German system.

The interconnection of the marginal contribution presented in financial accounting in the gross contribution margin line of P&Ls by destination with that presented in cost management

[57] ACCA Advanced Performance Management, Paper P5, Essential Text, 2008, Kaplan Publishing UK, ISBN 978-1-84710-552-3
[58] CECCAR, Profit volume and performance cost analysis (II), No.42, 5-11 11 2019, available at https://www.ceccarbusinessmagazine.ro/analiza-cost-volum-profit-si-performanta-ii-a5513/

accounting happens precisely under the treatment of fixed costs and including fixed production costs under IFRS&IAS2 'Inventories'**.** This identity can be found in the German reporting system, with the specification that Germany almost legislates cost accounting because it leaves it up to entities to choose, within certain limits, to what extent certain types of costs are processed distinctly. General considerations regarding the treatment of costs in the German reporting system compared to IFRS we present in the chapter on the identification of gross margin in internal reporting.

At first glance one may say about indirect costs in the Romanian system that they are completely included in the cost of sales or goods sold, because under IFRS and German system appears the line "other expenses", which in the Romanian system is missing. In this P&L line, other expenses, will contain unallocated overheads according to fixed overheads allocation rates. These are considered cost of period and flow direct into P&L, into the calculation of the operating result, so that the operating result will always be the same, regardless of whether marginal calculations take place or not. Therefore, the operating result will be the same regardless of the classification by nature or functions, but the result of the gross contribution will only be reported only in P&Ls by function. In other words, we cannot say about the gross result of turnover in the Romanian accounting system that represents the equivalent of gross profit in the German accounting system or IFRS, because we encounter structural differences. We can certainly rule on this equivalence only if we document the calculation method, which is unlikely as we do not have access to the internal reports of companies in general. Administration and distribution costs are disclosed in accordance with IAS1 "Presentation of Financial Statements" regulations in both Romanian and German accounting systems, as shown in Table no.1.

In conclusion, gross profit from P&L by function in the Romanian accounting system may not necessarily be equivalent to gross profit from the same P&L by function in the German accounting system or under IFRS, because it is not clear that it represents a gross margin of contribution or coverage fixed costs.

Objectives of the research paper

In this thesis we treat the interconnections between financial accounting and management accounting at the level of related external and internal reporting, in terms of gross contribution margin or coverage of fixed production costs, from the perspective of IAS2 "Inventories", with emphasis on highlighting its use also in the machine building industry in Romania, even if the profit and loss account by destination, where we find gross margin in financial reporting according to IAS1, "Presentation of financial statements", is not regulated in the Romanian accounting system.

In approaching the research, we proceeded with the deductive exposure of the interactions between financial and cost accounting, through the implementation of the international reporting standards IAS1 "Presentation of financial statements" and IAS2, "Inventories", with a comparison between the related national regulations in Romania and Germany. In this respect we intend to analyze some theoretical aspects and to present practical cases regarding:

- the impact of financial reporting standard IAS "Inventories" in financial accounting and cost accounting, especially on cost formation in production units;

- justification for the use of **responsibility centers** to comply with the requirements of IAS2 reporting standard "Inventories" regarding the tracking and adjustment of normal production capacity as well as the allocation of indirect, fixed or semi-fixed and variable costs on a systematic and consistent basis; provided that they are not regulated in any way neither in Romania nor in Germany. Order 1826/2003[59] approving the Specifications regarding certain measures regarding the organization and management of cost accounting mentions in art.3 in general that production centers, profit centers or other responsibility centers can be set up in relation to which the delimitation of expenses deepens. The German Commercial Code (HGB) in § 275 para.3[60] specifies only the elements necessary in the presentation of the profit and loss account by destination, respectively the cost of sales method, which implicitly requires extensive accounting of cost centers and cost objects[61].

- the interconnection of cost and financial accounting at the level of gross contribution margin in terms of reporting in accordance with IAS1 "Presentation of financial statements" and IAS2 "Inventories", as well as at the level of operating result, how this interconnection is achieved in accounting system in Germany compared to Romania, given that in Romania the identity of the term gross contribution margin or cost coverage fixed cost does not necessarily have traceability.

[59] https://legislatie.just.ro/Public/DetaliiDocumentAfis/49002
[60] https://www.gesetze-im-internet.de/hgb/__275.html
[61] https://hackmd.okfn.de/s/Sy_plcRGP

- the usefulness of the gross contribution margin over costs in internal reporting in order to establish transfer pricing with one of the most common methods, namely the cost plus method (CPM). The conclusions of our case study for establishing the market value without access to internal or external reporting on gross contribution margin will be summarized according to certain criteria such as the range accepted by the transfer pricing regulations in force, the level of profit margin obtained by affiliated persons, etc.

The main objective of the thesis is to identify and determine by theoretical, methodological and especially applicative study the possibilities of using marginal analysis and gross contribution margin, as a working tool frequently used in German accounting, for the preparation of internal and external reports, in accordance with IAS2 "Inventories", in compliance with the requirements of IAS1 referential "Presentation of financial statements", in the productive sector of the machine building industry in Romania.

The operational objectives of scientific research are:

1.Identification **of costing systems** , combinations of calculation methods used in sampled production entities.

2. Evaluation of the use **of responsibility centers in** internal and intragroup reporting activity in the practice of multinational companies in the production sector in Romania.

3. Identify the relevance of gross **contribution margin reporting** at group level of companies.

4. Expressing an opinion on **the importance of cost accounting** versus financial accounting, within internal and external reporting.

5. Evaluation of entities positioning in the productive sector of the machine building industry in Romania, from complaince with the requirements of international accounting norms, regarding internal and external reporting point of view.

Research hypotheses

In the research approach, we started from the study of specialized literature and legislation in the studied field and carried out the verification of the research hypotheses formulated, in order to identify in practice, the theoretical notions presented regarding the reporting systems concerned, in order to anticipate new trends of development and improvement within the analyzed field.

Starting from the premise of using to a large extent the internal intragroup reporting on gross margin in the transnationals in the productive sector of the machine building industry in Romania, we formulated the following **general hypothesis**:

In the practice of the manufacturing sector, there is an **interdependence between financial and cost accounting,** and the connection between them can be achieved at several levels.

For each of the stated operational objectives we have synthesized the following **working hypotheses**:

- use of marginal partial costing by choice, in parallel with full cost calculation, in accordance with IAS 2 "Inventories" recommendations and harmonized domestic regulations;
- reports gross profit margin (Income from turnover — Cost of sales), also referred to as contribution margin or coverage of fixed costs in the company's external reporting or to the parent company, as applicable.
- collects overheads (administration and distribution costs) to a significant extent separately under indigenous legislation respectively harmonized with IFRS/IAS2 "Inventories", even when they do not report under IFRS;
- the interconnection of cost and financial accounting occurs at the level of gross contribution margin in terms of reporting in accordance with IAS1 "Presentation of financial statements" and IAS2 "Inventories", through responsibility centers;
- uses gross margin coverage in internal reporting to establish transfer pricing with one of the most common methods, namely the cost-plus method (CPM).

Verification of working hypotheses

Starting from the general assumption formulated, namely that in the practice of the production field, there is an **interdependence between financial accounting and cost accounting** and this connection can be made at several levels, we proceeded in this research with the identification of in practice using possibilities of on one hand the gross contribution margin in intragroup reporting and on the other hand, marginal analysis respectively marginal coverage **margin** (income from turnover - cost of sales) in internal and external reporting of the machine building and manufacturing industry in Romania, respectively, in the context of harmonizing accounting reporting systems to international accounting standards, in particular within referential IAS2 "Inventories" and IAS1 "Presentation of financial statements".

In the subchapter with the research on the use of marginal calculation respectively of the gross contribution margin in the productive sector of the machine building industry in Romania, we intend to test the first three working hypotheses by **deductive method**:

- use, in parallel with the full cost calculation, of another system for calculating partial marginal cost, in accordance with IAS2 "Inventories" recommendations and harmonized domestic regulations;
- collects overheads (administration and distribution costs) to a significant extent separately under indigenous legislation respectively harmonized with IFRS/IAS2 "Inventories", even when they do not report under IFRS;
- report gross profit margin (Income from turnover — Cost of sales), hereinafter referred to as contribution margin or coverage of indirect costs in external reporting by the company or to the parent company, as appropriate.

In the subchapter containing an applicative case study of a transnational company of the construction industry, Bombardier Transportation, reporting under IFRS, we propose to test the fourth working hypothesis by **inductive method**:

- the interconnection of management and financial accounting occurs at the level of gross contribution margin in terms of reporting in accordance with IAS1 "Presentation of Financial Statements" and IAS2 "Inventories", through responsibility centers;

In the subchapter on the applicability of the gross contribution margin in establishing transfer pricing within internal reporting at profit center level, we propose to verify the fourth working hypothesis:

- uses gross margin coverage in internal reporting to establish transfer pricing with one of the most common methods, namely the cost plus method (CPM) .

In the subchapter, questionnaire-based empirical research, we aim to test working assumptions including direct questioning of operational objectives:

1) Identification **of costing systems**, combinations of calculation methods used within sampled production entities.

2) Evaluation of the use **of responsibility centers in** internal and intragroup reporting activity in the practice of multinational companies in the production sector in Romania.

3) Identification of the relevance of gross contribution margin reporting at company or group of companies' level, as applicable;

4) Expressing an opinion on **the importance of management accounting** versus financial accounting, for substantiating internal and external reporting.
5) Assessment of the positioning of entities in the productive sector of the machine building industry in Romania, from the point of view of meeting the requirements of international accounting norms, regarding internal and external reporting.

Research methodology

From the multitude of meanings of defining the research methodology we have selected the following approach that defines the research methodology as "the study of methods used throughout the research, which confer relevance and validity to the knowledge development process"[62].

In order to carry out the scientific research approach, we resorted to choosing and using appropriate methods[63]. For the particular case of this doctoral thesis, we focused in the research on the ways of presenting the income and expenditure statement by affiliated entities in the production sector of the machine building industry in Romania, from the perspective of international accounting reporting referentials (IFRS), namely IAS1 "Presentation of financial statements" and IAS2 "Inventories", using the following methods and techniques: theoretical documentation through the study of bibliographic material represented by books and articles from national and international journals and databases, legislation specific to the field studied, in websites of various national, German and international bodies in the field of accounting, argumentation of the importance of the research topic through deductive and inductive approach and finally through empirical research.

The scientific approach of the theoretical documentation perspective involves a deductive approach, from general to particular, respectively from evoking the evolution of accounting in Germany and Romania, presenting the theoretical aspects relevant to the topic of the thesis and the national and international regulations concerned, compared to the German ones, regarding the presentation of financial statements in general and profit and loss account in particular. We chose Germany because the first lines of the German profit and loss account by function until the

[62] Niculescu M., Vasile N., Epistemiology, Interdisciplinary perspective, Ed Bibliotheca, Targoviste, 2011, pg.108
[63] I. Cenar, Methodology of scientific research in accounting. Lecture notes, Didactic Series, Alba Iulia, 2010, p. 26.

calculation of operating result are identical to those required by IAS1 "Presentation of Financial Statements". In this context, we started with exposing the ways of presenting accounting information, by developing a parallel Romania – Germany, from the perspective of presenting the financial statements. Starting from the premise that argumentation is the basis of any scientific research, the deductive exposure[64] supports the main legislative aspects regarding the interaction of financial accounting with management, from the perspective of the implementation of IAS 1 and IAS 2 in Germany and Romania.

The scientific approach of the empirical research perspective involves an inductive approach, starting from highlighting the particular elements resulting from theoretical documentation to the presentation of general conclusions.

Methodologically the work is oriented towards the positivist research current, initiated in the 1980s by the American academics, Watts and Zimmermann, as a result of pressure on all intellectual disciplines to become scientific, known as positive accounting theory[65].

According to this theory, the positive approach in accounting implies in Ionașcu's approach that any theoretical formulation cannot be valid-„true", unless it is empirically verified, a situation that also justifies its name of "positive", that is, accepted as a result of empirical testing, by confronting the hypothesis with the facts. In other words, "a theoretical model without an empirical basis has no use." In this context, we use the empirical research method to validate the widespread use of marginal contribution, in accordance with IAS1 classification "Presentation of financial statements" of the profit and loss account by function and in the machine building industry in Romania. In this regard, we resorted to analyzing the annual reports of the sampled companies, choosing the population under investigation from the map of the machine building industry, on which occasion we argue the presence, mostly of affiliated entities in this productive sector in Romania, choosing a sample, establishing research objectives and testing them on a group of sampled participants from the target industry, processing the results and ultimately presenting the results obtained and drawing conclusions that may or may not verify the assumptions. In empirical research we test the use of gross contribution margin reporting by multinational companies active in the machine building industry, present in Romania. The identification of gross contribution

[64] Cenar I., Guiding marks regarding the reasoning of scientific research in accounting, Annals of the University of Petroşani, Economics 2011, ISSN 1582-5949
[65] Ionașcu, Dynamics of contemporary accounting doctrines, Ed Biblioteca de contabil, Bucharest, 2007, p.77

margin in the annual reports of the 15 sampled companies, of which only 7 report under IFRS and 5 in the American system (GAAP) is a guarantee that gross contribution margin reporting is mandatory for each of the companies held. The complete list of the most important players in the productive sector of the machine building industry in Romania can be found in Annex no.5.

Research results

Based on the data collected and their analysis within the primary and secondary analysis, we can conclude the following about the users of the marginal calculation system and implicitly of the gross contribution margin in the entities in the productive sector of the machine building industry in Romania:

- The sampled companies use a complete calculation system in parallel with the partial marginal cost calculation on a large extend another (49%). This claim can only be considered valid for companies in our sample reporting under IFRS (18/37). However, taking into account the majority percentage of multinational companies in the machine building industry in Romania has German origin, according to the exposure of our research population, which, whether reporting under IFRS or not, prepare financial statements according to indigenous legislation (HGB) respectively calculate to a large extent the gross contribution margin. We cannot rule on the use of marginal calculations in determining gross profit margins under other reporting systems. In order to demonstrate that gross margin is the result of marginal accounting, another study is required certifying that gross profit margin reported under U.S. Reporting Standards (GAAP) is also the result of marginal accounting. Therefore, we can say that for our sample, the hypothesis cannot be verified in this research and will be tested further in empirical questionnaire-based research.
- The sampled companies calculate and report the gross profit margin found in the financial statements at parent level, at a rate of 76%, regardless of the agreed reporting accounting system. Therefore, gross margin for contributions or coverage of fixed indirect costs is largely used in their external reporting, regardless of whether they report under IFRS or not. Therefore, the hypothesis is confirmed.
- The sampled companies collect to a large extent separately overheads, i.e. the overall cost of administration and distribution, according to indigenous legislation and harmonized with IFRS. No matter under what system they report at mother level, by virtue of the harmonization in Romanian

legislation of the provisions of IAS2 "Inventories", we will find absolute unanimity (100%) regarding the highlighting of overhead expenses. The sampled companies report below IFRS to a large extent (49%), and under the US system, USA GAAP to a small extent (29%). Therefore, cumulatively, it reports below international standards in a proportion of 78%. Therefore, the hypothesis is confirmed.

In the research on the use of marginal calculation, respectively of the gross contribution margin, in the productive sector of the machine building industry in Romania, we followed the marginal calculations presented in the theoretical part, starting from the **linear evolution of costs**. In this regard, we started from the general formula for determining costs: total costs = fixed costs + variable costs x number of pieces produced. Therefore, variable costs are proportional to production and production sold, respectively, in the case of reporting expenses by destination, so we can say, based on historical data, that they are known. Fixed costs are not only known based on historical data, but significantly, they can be adjusted by management based on short, medium and long-term decisions. So, tracking fixed costs and breaking them down allows management to directly influence the operational result and ultimately the net result of the company.

In the linear regression analysis, we can see how management's decisions regarding indirect costs and overheads are reflected in the operational result. In any case, the strategies underlying the handling of overheads can be further elaborated in the annual reports of each company. If most of the gross profit and operating result evolutions are similar, i.e. the company's strategies are consistent over time, we mention below the situations in which general overheads indicate changes in the strategy and objectives of the following:

- Mercedes is massively reducing overheads to achieve a higher operating result.
- Delphi/Borgwarner maintains steady operating results, even with gross profit on a significant upward trend.
- Faurecia reports an upward trend in gross profit and a downward trend in operating results, through a considerable increase in overheads.

The multiple regression analysis shows statistically the same state of affairs: overheads have a significant influence on the operating result. Therefore, the thorough monitoring of overheads makes sense, given that their control represents a lever for adjusting the operational result in the responsibility of the companies' management.

In connection with the fourth working hypothesis – the interconnection of management and financial accounting at the level of gross contribution margin in terms of reporting under IAS1

"Presentation of financial statements" and IAS2 "Inventories", through responsibility centers, we can say that it is confirmed in our applied case study, namely in Bombardier Transportation. However, starting from the particular case presented, we cannot generalize the validation of our hypothesis to all companies present in Romania in the productive sector of the machinery industry. In conclusion, the hypothesis cannot be verified due to the lack of information from the internal reporting of the companies concerned.

An important aspect to note regarding the use of the cost-plus method is that the financial statements prepared according to Romanian accounting regulations present expenses according to their nature and not according to destination, which means that they do not allow a clear delimitation between the cost of goods sold, respectively the cost of services rendered and the other operational expenses of entities. Thus, if there is no proper internal reporting, the correct application of the cost-plus method becomes impossible.

Finally, we can conclude that the contribution margin over costs is vital for establishing transfer pricing with the cost-plus method, but we cannot say from this research to what extent this method is used in the machine building industry in Romania. If in the present research we calculated the market value respectively the comparison basis, we lack information from the internal reports of the companies concerned regarding the agreed method of establishing transfer pricing and, respectively, profit margins over costs actually taken into account in establishing transfer pricing. Therefore, the fifth hypothesis, the use of gross coverage margin in internal reporting for transfer pricing purposes with the cost-plus method (CPM) cannot be verified in this study. Hypothesis testing will continue in questionnaire-based empirical research.

In our questionnaire survey, the majority (52%) of our sample population says they report and calculate the marginal cost. The marginal cost is the cost determined by the one-unit change in the quantity produced and is specific to the German marginal accounting system, as detailed in the theoretical part. In absolute unanimity (100%), respondents use the analysis, plan to achieved out at the level of responsibility centers, as well as a management program (ERP). The vast majority (76%) also use the German software program SAP. This management and accounting software works according to the principles of cost allocation in German cost accounting and has become widely used by medium and large companies in Germany due to the marginally flexible planning it incorporates. The extensive use of SAP by the population of our sample represents a guarantee that, in parallel with the full cost calculations, mandatory by law, the companies concerned use marginal calculations for control purposes, in support of management decisions. Therefore, we can say with regard to our first operational objective - the identification of costing systems, combinations of calculation methods used in the sampled production entities that thanks to the use of a hybrid of partial and complete calculation systems, it is generally confirmed.

Regarding the fifth operational objective, the assessment of the positioning of entities in the productive sector of the machine building industry in Romania, from the point of view of meeting the requirements of international accounting norms, regarding internal and external reporting, we can say about the implementation of IAS2 "Inventories" and its most sensitive point respectively - the allocation of indirect fixed production costs on a systematic and consistent basis and according to the usual levels of production is achieved (71%). We further specify, as we have shown in the theoretical part, that the harmonization of IAS2 "Stocks" in the Romanian legislation is perfect.

In the table above, we note that the population of our sample largely (95%) reports gross profit margin above costs even when it does not necessarily report the profit and loss account by destination, under IFRS or to the parent. The cost of production sold is reported to the mother largely (57%) but not proportional to gross profit margin over costs. One explanation could be that some companies in our sample do not have a market in Romania, but more detailed investigations are needed to determine this aspect more precisely.

In any case, given the high percentage of gross contribution margin disclosure over costs, we can say in relation to the second operational objective that the identification of the relevance of gross **contribution margin** reporting at group level of companies is confirmed, due to its widespread use by the population of our sample.

Gross profit contribution margin over costs is largely used internationally (Horngren 2012) and in Germany mostly (70% -Kilger, 2012) as shown in the content of the thesis.

Regarding the third working hypothesis, the largely separate collection of overheads (administration and distribution costs) under the indigenous legislation respectively harmonized IFRS/IAS2 "Inventories" is unanimously confirmed even though the vast majority do not report under IFRS (76%) as can be seen below in the table of classification questions.

In connection with the second operational objective, the use of responsibility centers in internal and intragroup reporting activity in the practice of multinational companies in the production sector in Romania, it is confirmed based on the results obtained in our empirical research. In Germany, the analysis of the plan has lost relevance in recent years, due to increasingly rigorous planning, so that deviations have become smaller and the percentage of use of this analysis has decreased in Germany to 53% (Kilger, 2012).

Regarding the fourth working hypothesis, the interconnection of cost and financial accounting at the level of gross contribution margin, we can affirm on the basis of the results obtained from our sample replies that it is not confirmed. Our respondents consider that the gross margin over costs provided by the internal reporting of cost accounting has no direct equivalent in the external reporting of financial accounting (57%). Taking a look at the reports related to the financial statements in the Romanian accounting system, in this case to the explanatory note no. 4, analysis of operating result, it is correct that the gross contribution margin i.e. gross margin over costs does not present the same calculation methodology, as there are even differences in structure between the note and the profit and loss account by purpose recommended by IAS1, "Presentation of financial statements", as shown in the content of the thesis.

Therefore, our respondents consider that the gross contribution margin over costs belongs exclusively to the internal reporting of cost accounting and therefore it possibly aim to internal control activities, especially useful in planning and budgeting.

Regarding the fourth operational objective, expressing an opinion on the importance of cost accounting versus financial accounting, for substantiating internal and external reporting, our respondents consider financial accounting more important than management accounting (52%). The substantiation is based on the fact that external reporting of financial accounting is strictly regulated in close connection with the Fiscal Code and other international reporting systems, especially IFRS, while internal reporting and the organization of management accounting are, in fact, at the hands of the responsible persons in the management of the company.

As regards the fifth working hypothesis, the use of gross coverage margin in internal reporting to establish transfer pricing with the cost-plus method, we can say based on the collected and summarized answers that the hypothesis is largely confirmed (62%). We do not have precise information from internal reports on the exact percentage of margins considered, but margin range values that are in market values are outlined in the research on the applicability of gross margin over (contribution) costs in transfer pricing within profit center reporting.

The test of the general assumption made, namely that in the practice of the sector of production there is an **interdependence between financial accounting and management accounting and the** connection between them can be made at several levels, we can say that it is confirmed for the particular case presented in the applied case study in the context of harmonization of accounting reporting systems to international accounting standards, in this case in the referential IAS2 “Inventories" and IAS1 "Presentation of financial statements". Due to the lack of information on internal reporting of the sampled population, testing of the general assumption is possible. Therefore, we cannot generalize the validation of the hypothesis – the interconnection of internal and external reports in the machine building and manufacturing industry in Romania, respectively, at gross margin level (revenues from turnover - cost of sales). Regarding marginal calculations, we have concluded in our empirical research that they are used to a large extent, as is gross contribution margin reporting.

General conclusions

- In order to achieve the overarching purpose of IFRS, comparability of statutory external reporting and, in particular, financial statements, the provisions of IAS2 “Inventories" relating to inventories may supplement indigenous legislation on how cost accounting is organized. Currently, in Romania, it is completely left to the discretion of reporting entities, without any obligation regarding cost accounting, according to the Accounting Law[66] with subsequent updates. In Germany, too, the organization of cost accounting is at the free choice of companies, with the possibility of choosing the limits for implementing tax limits. Germany's advantage is that it has developed a cult of internal control in societies as well as organizations such as the International Control Association (ICV), the International Control Group (IGC), and the profession of authorized controller.
- The lack of regulation of cost accounting in Romania from the perspective of the IFRS harmonization process may allow great confusion regarding the same financial terms: under IFRS, the gross margin from P&L by destination is a contribution margin, respectively contribution to cover fixed costs, and in the calculations of the same gross margin presented in explanatory note no.4 Analysis of the operating result in the Romanian accounting system, this may just be just a

[66] Law No. 82 of December 24, 1991, Accounting Law with subsequent amendments, respectively Law 86/ 2008, published in MO no. 454 of June 18, 2008, accessible at https://legislatie.just.ro/Public/DetaliiDocument/1576 and OU no. 37 of April 13, 2011 published in MOnr. 285 of 22 April 2011 accessible at https://legislatie.just.ro/Public/DetaliiDocumentAfis/127905

coincidence. To fill this gap, with respect to gross contribution margin or fixed cost coverage as a line of P&L by destination, recommended by IAS1 "Presentation of Financial Statements" and IAS2 "Inventories", an additional appropriate alignment with IFRS requirements should be considered, both at management and financial accounting levels.

- Due to the advantages conferred by the calculation in parallel with the full cost recommended by IFRS, of the partial marginal cost respectively of the gross contribution margin, it is widely used internationally and to a large extent in the machine building industry in Romania, according to our empirical study.
- The use of plan to achieved (marginal) analysis at cost center level in the machine building industry in Romania, confirms the implementation to a large extent of responsibility centers in cost accounting in the productive sector of the machine building industry.
- Financial statements prepared in accordance with Romanian accounting regulations present expenses according to their nature and not according to destination, which means that they do not allow a clear delimitation between the cost of goods sold, respectively the cost of services rendered and the other operational expenses of entities. Thus, if there is no internal reporting to remove this deficiency, the application of the cost-plus method in transfer pricing becomes difficult.
- Accurate representation and comparability – recommended by both IFRS and Romanian regulations in force – are required for entities exposed to an international environment. As evidence even if there is no legislative basis, no harmonization or comparability at the level of gross contribution margin, it is calculated in transnational entities in the production sector in Romania by virtue of international regulations in force and not only, but even in cases where the group does not report IFRS, but needs the same calculation method for the same economic terms, both for internal analyzes and for reporting, especially at group level.

The main proposals made aim to:

- reducing the gap between the evolution of cost accounting and production systems;
- adopting a management accounting model based on responsibility centers in the productive sector, especially in the case of implementation of IAS2 "Inventories";
- analysis of major interventions on adaptability and flexibility of accounting information system in production sector;

- using the possibility of cost control and improvement of performance tracking in the productive sector by implementing a hybrid of costing methods;
- taking concrete measures to ensure operational control of costs in the manufacturing sector by implementing cost analysis at the level of cost centers and especially profit;
- taking concrete measures to ensure operational control of achieving the objectives regarding the result - planned profit for each product in the production sector by implementing cost analysis at cost center / profit / product / project level;
- study of the effects of using modern instruments for measuring and managing performance;
- substantiation of mixed models for calculating partial and total costs, allowing orientation towards forecasting, confrontation with reality and taking corrective measures in due time;
- how to freely adopt regulations on cost accounting - can also be implemented in Romania, for the sake of those who struggle to prepare double reporting sets. The adjustments could be much easier because they are currently doing all this work on their own.
- under IAS 1 "Presentation of Financial Statements", entities may choose between a presentation of expenses by **nature or by function**. From these, at entity level, the most appropriate option for presenting performance will be chosen. The harmonization in Romanian accounting should offer the possibility to present in Romania at management choice, according to nature or function, as in fact happens in Germany.
- If in the future the Romanian legislation will extend, possibly optionally, the scope of IFRS for statutory reporting purposes to other companies, it is very likely that many subsidiaries of external investors would opt for reporting in accordance with international accounting standards, IFRS, in order to benefit from simplified records, the information systems being generally compatible globally and the results of the profit and loss account may become similar in the reports concerned. A voluntary application of IFRS can save further costs.
- In the context of harmonization to international standards, we expect to find similar definitions of the same financial terms. In particular, **gross P&L margin by function under IAS1 "Presentation of Financial Statements" should be a marginal contribution, as recommended by IAS2** "Inventories", regardless of under which local reporting system we are reviewing it. Therefore, in order to ensure this identity, it is necessary to regulate this deficiency, in order to harmonize accounting calculation methodologies in internal reporting. In conclusion, in order to avoid these great confusions regarding the same financial terms in the Romanian reporting system compared to the

international system, we consider that it is necessary to resort **to the legislative regulation of cost** accounting in Romania as well, with the option of choosing the limits adopted by each entity but specifying them in accounting policies or, alternatively, the obligation to publish accounting policies. Reporting entities should be able to choose whether they wish to adopt a reporting system with implicit cost accounting. But if convergence to IFRS is carried out, it must ensure comparability and financial terms should be the same. It is unacceptable that the result of the gross profit line of the profit and loss account by destination in the Romanian accounting system is different from that of the international system, on the one hand, and on the other hand, to state that we have made the harmonization of inventories to IFRS.

- taking over in the financial accounting the reporting of expenses by destination, at the free choice of entities, depending on the reporting needs of each company.
- extending the modalities of mandatory annual inventory, with the retrograde method or with other methods of stock valuation designed primarily to facilitate planning but also statutory reporting efforts.
- a consensus on the name of the gross result of net turnover i.e. the target gross margin (Revenue from turnover — Cost of goods sold and services rendered). In the literature, especially on cost accounting, many different terms of this margin are found.

Own contributions

In the thesis we show that

- The interconnection of cost and financial accounting under IFRS and German system can happen first at the level of gross contribution (or coverage) margin and then at the level of operating result.
- The gross margin from P&L by function in the German system and IFRS is a contribution margin of marginal accounting, identity that is not confirmed and cannot be proven in the Romanian accounting system.
- The P&L gross margin by function under IFRS and German accounting system is the bridge between cost and financial accounting, as is operating result also. It remains inconclusive in the Romanian system, since there are differences in structure in the presentation of the P&L by destination and the analysis of the operating result.

- In order to ensure harmonization with IAS2 "Inventories", the methodology for calculating gross P&L margin by function should be regulated in Romania, according to IFRS recommendations.
- In terms of harmonization, the requirements of the inventory accounting standard, IAS2, 'Inventories' influence not only external but also internal reporting, so the use of responsibility centers becomes a necessity because cost accounting assists financial accounting in implementing IAS2 'Inventories' through responsibility centers.
- Harmonization of IAS2 "Inventories" involves checking P&L lines by function in both financial and cost accounting. Therefore, P&L by function will be generated both in financial accounting and in cost accounting at the level of responsibility centers, ensuring not only traceability but also identity.
- The sum of all P&Ls at the level of responsibility centers, respectively in cost accounting, shows P&L by function at company level, respectively in financial accounting. The interconnection is direct.
- The monthly or quarterly internal reports of transnational companies in the production sector in Romania, to the parent company, widely use the Gross Contribution Margin in order to identify deviations from budgets, respectively the expected result and short-term corrective measures, even in the absence of legal regulations.
- Intra-group reporting on gross contribution margin is a necessary condition for establishing transfer pricing with the cost-plus method (CPM), which is one of the most common methods of determining market value in transactions between related persons in the productive sector.
- Proposal for internal reporting on budgeting
- Model proposal on non-financial reporting.
- Proposal for internal reporting of the collection and settlement table. Cost center expense report. Operating result reporting at profit center level.
- Proposal on market value testing for transfer pricing in the productive sector with the cost-plus method.

SYNTHESIS OF THE MAIN PARTS OF THE DOCTORAL THESIS

In this thesis we treat the interconnections between financial accounting and cost accounting from the perspective of IAS1 "Presentation of financial statements" and IAS2

"Inventories" with emphasis on highlighting the widespread use in industry of gross margin contribution (or fixed costs coverage) in Germany and in Romania in the manufacturing sector.

In **Chapter 1 Accounting information in financial reporting,** we present historical dimensions of accounting in Germany and Romania with emphasis on the increasing digitization of reporting. We argue the differences in the number of expert accountants and tax consultants in Romania and Germany based on their area of responsibility. As far as reporting tools are concerned, we focused on accounting accounts and highlighted the fact that in Germany they are at the free choice of entities and the most used chart of accounts are a recommendation of the Federation of German Industries (IKR). Therefore, accounting accounts in Germany are not mandatory with the mention that they will be specified in accounting policies and are not regulated by law as in Romania. However, in the manufacturing sector we can identify the widespread use of the SKR04 chart of accounts, recommended by Industry Trade Institution in Germany (IHK), which underpins the development of the profit and loss account by destination. In order to analyze the role of accounting information, we have inevitably treated the importance of information provided by management accounting for both internal and implicitly external reports. So, we briefly presented Horvath's study, the father of controlling in Germany, on the activity of internal controlling, generically called controlling, starting from the definition to the area of responsibility. The most common area of responsibility in controlling **in Europe** is **budgeting.** In next place in Europe is internal **reporting.** The main source of information in internal reporting is management accounting.

Starting from Horvath's exposition on control instruments in the production sector, the most important belong exclusively to internal reporting, only the profitability indicators are taken over in external financial reporting, within the financial indicators presented in the explanatory notes. Among the main **internal reporting** in controlling **Gross margin of contribution** or coverage of fixed costs, is used in proportion of 70% by German companies (Kilger, 2012) in **budgeting** fixed costs and largely at international level. In large companies, however, the percentage of gross contribution margin use in operational planning increases in Germany to 94.8%.

Users of internal financial reporting are largely concerned with the qualitative aspects of accounting information.

At the end of the chapter, we make a proposal – flexible budgeting model, starting from the gross contribution margin, respectively a planned gross profit margin (25%).

In Chapter **2 Internal and external reporting in Germany and Romania** we present the similarities and especially the differences between external financial and non-financial reporting in Romania and Germany. The declaration of conformity accompanying the financial statements in Germany acts as an oath and is regarded with great responsibility and seriousness. The annual report does not appear in the Romanian accounting regulations for unlisted companies.

Regarding Financial Reporting under IAS2 "Inventories", we note that in Germany management accounting is quasi-regulated, with the mention that each entity is free to choose how detailed it tracks costs, while in Romania the theoretical legislation is perfectly harmonized with IAS2 "Inventories", but we can find that in Romania the implementation methodology is missing.

The highest principles of IFRS accounting[67] are the accrual principle and the continuity principle. In Germany, we find regulated in the German Commercial Code only the first 6 of the 10 principles set out in Order 1802/ 2014 approving the Accounting Regulations on individual annual financial statements and consolidated financial statements, namely the principle of intangibility, the principle of going concern, the principle of separate valuation of assets and liabilities, the principle of prudence, the principle of accrual accounting and the principle of permanence of methods. At the same time, we find that Romanian accounting is one of accruals, while German accounting recognizes the dominant principle, that of prudence.

So tax legislation regulates financial accounting in detail, but each company is free to choose how it plans its cost accounting, having precise obligations regarding financial accounting. In recent decades, the implementation of IFRS worldwide is increasingly affecting financial accounting. In particular, the requirements of the International Financial Reporting Standard for Inventories (IAS2 "Inventories") influence not only external but also internal reporting.

At the end of the chapter, we propose a model on non-financial reporting.

In Chapter 3 **Identification of gross contribution in internal reporting of cost accounting under IAS2 "Inventories"** we proceed from the argument that this gross margin is a result of marginal accounting, a perspective very nicely explained in the ACCA manuals. Using partial and full cost calculations in parallel gives entities the opportunity to reap the benefits of each. Because IAS2 "Inventories" notes that partial cost calculations are not accepted as a single cost calculation, we highlight the link between full cost and partial cost calculations, at the level

[67] ACCA Advanced Financial Management, Paper P4, Essential text, 2008, Kaplan Publishing UK, ISBN 978-1-84710-551-6

of the gross contribution margin that represents the contribution to cover fixed administration and selling costs, as required by IAS2 "Inventories" with respect to statutory reporting.

Of course, the identification of gross contribution or coverage margin in the internal reporting of management accounting happens at the level of responsibility centers. Therefore, we consider them to be the implementing tools of IAS2 "Inventories" requirements.

At cost center level, the gross contribution or coverage margin can be found in the cost collection and settlement table, on the Over-/Under absorption line. The difference between total indirect costs allocated (prognose) and total indirect costs allocated (actually realized), including double indirect costs applied in the period, is the deviation of the contribution margin.

At profit center level, gross margin is illustrated in a mini profit and loss account by function at the level of each profit center. The sum of all contribution or coverage margins determined across a company's profit centers will be the gross margin in the statement of financial performance by destination disclosed in external reporting and financial statements under IAS1 "Presentation of Financial Statements".

Contrary to the basic principle of marginal accounting, fixed costs are allocated to products, in accordance with IAS2 'Inventories', in an additional calculation level for medium and long-term objectives. In order to keep fixed costs from variable costs delimited, the calculation of fixed costs is separate from that for variable costs, fixed costs being allocated as a percentage share of normal costs, following a certain rule on the basis of apportionment. Note that **margin contribution or cost coverage is the essential concept in marginal accounting** and expresses the extent to which an entity depends on its fixed costs.

Therefore, the interconnection of internal reporting of management accounting with external ones, of the financial accounting can be achieved through responsibility centers, respectively calculations at cost and profit center level.

In Chapter 4 **Identification of gross contribution or coverage margin in external reporting of financial accounting under IAS1** "Presentation of financial statements", we highlight the gross margin line in the profit and loss account by function both under IFRS and in the German system and at the theoretical level in the Romanian system. In Germany, entities may choose to present the profit and loss account by function or by nature, according to individual reporting needs.

In Romania there is no option for P&L by destination, nor for IFRS, as it is in Germany. In order to report under IFRS, both in Romania and Germany the restatement of financial statements is used.

In Romania we identify the gross margin in the explanatory note no. 4, Analysis of operating result as gross net turnover result. In Germany, gross earnings are presented similarly to the P&L by function recommended by IAS1 "Presentation of Financial Statements", for the first 7 lines respectively up to gross profit, as Germany gives the right of option for P&Ls by nature or destination. When analyzing the P&L structure by function in the 3 reporting systems, we find that in Romania the line - other operating expenses - is missing. This line contains unallocated fixed indirect costs in the line cost of goods sold and services rendered, as recommended by IAS2 "Inventories" based on the allocation of fixed indirect costs to normal production capacity. This structural deficiency in the analysis of the operating result in Romania raises questions about the methodology for calculating the gross turnover result, given that theoretically IAS2 "Inventories" is perfectly harmonized in Romanian legislation by Order 1802 / 2014 approving the Accounting Regulations on individual annual financial statements and consolidated financial statements. Therefore, we cannot be sure that the contribution margin in Romania is the result of marginal accounting, as in Germany or according to IAS2 "Inventories" recommendations, and the implementation methodology is left to the discretion of company management, as cost accounting is not regulated in Romania. In Germany, management accounting is legislated, but with the right of choice for companies to choose to what extent they detail each factor of production, specifying these limits in explanatory notes and accounting policies.

In Chapter **5 The interaction of internal reporting of cost accounting with external financial reports** we argue that the interconnection in the German system is achieved on several levels: at the level of accounting account, at the level of cost places and at the level of cost bearers through the gross contribution margin or coverage of fixed costs and only subsequently at the level of the operating result, **while the interconnection of internal and external reports in the Romanian accounting system happens only at the level of operating result**.

The gross contribution margin under IAS1 "Presentation of Financial Statements" and IAS2 “Inventories" is a **bridge between internal reporting (cost collection and settlement table and profit center level, respectively) with external reporting (profit and loss account by destination), respectively between financial and cost accounting** and is extremely useful in internal reporting.

Of great importance for any entity is the interaction of financial accounting with cost ma accounting at the level of gross contribution margin and operating result, when constructing the profit and loss account by destination, because these indicators are extremely useful in controlling costs and achieved versus planned results.

Gross net turnover, as the gross contribution margin in the Romanian accounting system is officially called, is not necessarily a marginal contribution under IAS 2 "Inventories". However, this is the case in Germany, which has legislated the profit and loss account by function alongside the one by nature, leaving it to the discretion of entities to choose under which format they report. In this way, we can say that in the German accounting system we find the same line of CPP by functions, gross margin, exactly as under IFRS.

In our research we test the working hypotheses and the results obtained are statistically interpreted and synthesized in the subchapter research results.

The results obtained are statistically interpreted and synthesized. The main objective of the doctoral thesis – reporting the Gross Margin in the productive sector of the machine building industry in Romania is largely verified.

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