

## **RESPONSABILITY CENTRES UNDER IAS2/IFRS**

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### **Abstract**

*In the last decades, the implementation worldwide of IFRS to a larger extend impacts more and more the financial accounting., Particularly, the requirements of accounting standard for inventory, IAS2, influence not only the external reporting but also the internal one.*

*In this paper, we discuss the impact of IAS2 on the cost accounting system of an entity. In this line of thought, we conclude that the cost accounting, along with its responsibility centres, assists financial accounting in IAS2 implementation.*

**Keywords:** *Responsibility centres, Cost Accounting, Inventories IAS2, Internal Reporting*

**JEL classification:** *F15, M11, M41*

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### **1. Introduction**

Harmonizing accounting systems is a big challenge of our days. Business leaders need to take the time to understand the rules and regulations and develop practices that meets standards without huge costs. In this line of thought, we discuss in the following how the financial accounting requirements are linked to the cost accounting system of a reporting entity under IAS2.

### **2. Cost approach under inventory standard IAS2**

IAS2 requires that those assets, considered inventory, should be stated at the lower of cost and net realisable value. Cost not only includes the purchase cost but also the conversion costs, which are the costs involved in bringing inventory to its present condition and location. In other words, there

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is a need for implied direct costs identification, such as, for example direct labour and direct material. (IFRS)

**Direct costs** can be directly attributed to a **cost object** and thus assimilated to a finished product (or service) and is generally associated with a **profit center** (Loitsch, 2005). The cost object can be a product, a service, a project or an order. These costs are visible through the expense report at the contract, order or profit center level, as the cost items within the company have been defined.

**Direct costing** was developed by Jonathan N.Harris and published in 1936 in New York. Also **called variable** or marginal **costing** nowadays, is the practice of charging all direct costs to operations, process or products, leaving all indirect costs to be written off against profits in the period in which they arise. According to Horngren et.al.(2012) this method is largely used in internal reporting worldwide- 30-50% of the worlds' companies- in order to create a model to answer a question about what actions management should take on the short run. We add to the figures of Horngren's study, the percentage of implicit using of variable costing in Germany, according to Kilger et.al.(2012).

**Table 1: International use of costing methods**

	SUA	Canada	Australia	Japan	Sweden	UK	Germany*
<b>Use of</b>							
<b>Direct Costing</b>	31%	48%	33%	31%	42%	52%	70%
<b>Absorption Costing</b>	64%	52%	} 67%	} 69%	} 58%	} 48%	} 30%
<b>Other method</b>	4	0					

Source: Horngren et.al. 2012, ro p. 354 and \*Kilger et.al., 2012;

Although direct costing is widely used, as shown in Table 1, it is not a costing methodology for constructing financial statements – in fact, **accounting standards specifically exclude direct costing** from financial statement reporting. Thus, it does not fill the role of a standard costing, process costing, or job costing system, which contribute to actual changes in the accounting records, thus necessitating year-end adjustments for the preparation of financial disclosure. Instead, it is most useful for short-term decisions, unhand **contribution margin** and least useful when a longer-term

time frame is involved, especially in situations where a company must generate sufficient margins to pay for a large amount of overhead. Contribution (selling price less variable costs) is an excellent tool for decision-making. Though useful, direct costing information is problematic in situations where incremental (marginal) costs may change significantly, or where indirect costs may be pertinent to the decision (Kilger,2012).

According to the studies presented in Table 1 many companies using the direct costing method for internal reporting purposes are also using one absorption cost method for external and tax reporting.

**Indirect costs** are connected to **absorbing costing**, which is a method of apportioning all the production costs to a unit. It is the practice of charging all costs both variable and fixed to operation, process or products or process (Horngren et al, 2012, p.302). Therefore, it is not useful for decision making process. Historically, this was a very common costing method in the manufacturing industry. **Overhead costs** cannot be attributed directly to a cost object, because they are indirect costs, which include indirect materials and indirect labour such for example rent, insurance, heat, light, supervision costs, facilities maintenance (Loitsch, 2005). Therefore, they are assigned to **cost centres**.

The difference between the two above mentioned costing methods is in the treatment of **fixed manufacturing overhead costs**. Under the direct costing method, fixed manufacturing overhead costs are expensed during the period in which they are incurred. Under absorption costing, fixed manufacturing overhead costs are expensed when the product is sold (Webster, 2004, p.119). Moreover, manufacturing overhead costs impact work in process (WIP) inventory, as part of total manufacturing costs incurred and furthermore as cost of goods manufactured.

IAS 2 insists on delimitation between fixed and variable costs (IFRS, Girbina, p.82) and allows the capitalisation of variable overheads and fixed overheads also, so long as the **fixed overheads are allocated on a systematic and consistent basis and in respect to usual output levels**. This requirement means, that there arise, not only a need for overheads classification between fixed and variable ones, but also between fixed and variable overheads. Furthermore, the allocation rules gain a big importance under IFRS. Where output is lower than expected, the resultant excessive overhead should be considered a period expense and should be not capitalised. In case output is abnormally high the fixed overhead allocated to each unit must be decreased so as not to overvalue the inventory. As a consequence, we may conclude, that

IAS2 impose the cost classification among fixed or variable and direct and indirect.

As the marginal costing refers to the ascertainment of marginal costs by differentiating between fixed costs and variable costs, the changes in volume or type of output impact the profit: overheads are not included in unit costs, instead charging them to the income statement in full. Thus, inventory is valued within this method, at variable cost of production. That is the reason for, the direct (marginal) costing doesn't comply with IAS2.

On the other hand, **absorption costing** complies with IAS2 on accounting for inventory, whereby the value of inventory must include an appropriate amount of fixed production overhead, therefore becoming a part of the cost of the product. Furthermore, it explicit recognises that selling price must cover all costs. Problems may issue because it assumes that **overheads are volume related**, and also profits can be manipulated by simply changing production levels. In the same line of thought, the figure bottom presents the impact of absorption costing and variable costing on profits, according to a comparative study of different cost techniques and their application in the pharmaceutical companies. It further emphasis that idea, that stock valuation method impacts the financial result.

**Table 2: Impact of marginal costing and absorption costing on profit**

Stock valuation method	Increase in stock	Decrease in stock
Marginal costing	Low profit	High profit
Absorption costing	High profit	Low profit

Source: Aleem,M, Khan, MH and Hamad,W., 2016, Audit Financiar

The deficiencies mentioned above are put aside by an extension of absorbing costing, the **ABC method**, developed by Kaplan, Cooper and Johnson in 1987. It assumes that many overheads are complexity and diversity related, not only volume related. In ABC case, overheads are grouped into activities, which are called cost pools. The item that causes the costs to incur is the cost driver and on its basis are overheads absorbed into products (Webster, 2004, p.132). Due to high levels of overheads and the diversity of product ranges, ABC is becoming a much more appropriate tool for businesses to use (Briciu,2006, p.421).

**IFRS does not permit** direct costing methods that expense all overheads. Therefore, inventories should not include administrative overheads unrelated to production, such as selling costs, abnormal waste and storage costs, where the storage is not part of the production process, as well as foreign exchange differences arising directly from the acquisition of inventories invoiced in a foreign currency and interest cost, when inventories are purchased with deferred settlement terms. These costs are referred to as **period costs**, as they are **not assigned to products**, and therefore cannot be included in the cost of items held in inventory. Consequently, these are reported on the income statement in the accounting period in which they incur. (Girbina, 2007, IAS2). Period costs are deducted from revenues without ever having been included as part of inventory, whereas in the financial accounting they are assigned to the accounting period. They are extremely important for financial disclosure because they are running directly in the P&L account, having an immediately impact on income statement, and thus on financial performance. Ebbeken, Possler and Ristea (2000, p.19) declares that period costs are respective period related expenses that have nothing in common with inventories. Relating to period costs is of paramount importance the value of expense in any given period and not the detailed structure of it (Hoitsch& Lingnau, 2004, p.14). Thus, processing of period costs on responsibility centres level is not necessary.

Furthermore, IAS 2 impose the following two costing methods for cost measurement: the standard one and the retail technique. In the following, we focus on standard costing, which is merely used in manufacturing sector.

Standard costing is a particular concept that involves setting up predetermined standards for each element of cost and each product, comparison of actual with standard to find variation and last but not least causes identification of variances by breaking down the differences between standard and actual cost, for taking remedial action (Esanu, 2002). Given these prerequisites, one may analyse the types of variance for every type of cost: material, labour, variable and fixed overhead. Variance analysis refers to the investigation of the reasons for deviations in the financial performance from the standards set by an entity in its budget in order to keep a control on its operational result (Briciu, 2006). Thus, standard costing is an excellent system control of costs and of measuring efficiency. When standard costs are used to create an inventory valuation, there will inevitably be some differences between standard and actual costs that will create variances that appear in the cost of goods sold (Bragg, 2005).

In order to align to the IAS2 requirements regarding the overhead allocation on a systematic and consistent basis and in respect to usual output levels, **the responsibility centres may intervene.**

### **3. Insight on responsibility centers of cost accounting**

Responsibility center is defined as a part, segment, or subunit of an organization whose manager is accountable for a specified set of activities. There are the following ways to track cost: Profit Center and Cost Center, aside Investment Center. The cost center is responsible for controlling and minimizing costs, while the profit center is responsible for maximizing revenue and profits (Horngren et.al., 2012).

A **profit center** is the place or function in the organization, where the manager is responsible for both revenue and expenditure, so for the resulting profit. It collects both revenue and expense for the purpose of calculating the result, associating cost objects (Ebbeken et al., Horngren et al). According to Webster (2004, p.88), the cost object is any activity, unit or operation for which management wishes to measure costs. A cost object answers the question **WHAT FOR** the costs arise (Friedl et al., 2010). Examples of cost objects are a product, a service, a project, a customer, a brand, a department or a program, namely a car, boat, train, tram or plane.

In the manufacturing sector, the assignation of least one **plan of the project structure (PSP)** to each project is quite frequent. PSP is a cost element that directly collects contract or product actual costs and for which the project activities are developed by type of activity into a network or a tree structure (Loitsch, 2005). It also estimates time, cost and risk, by comparing actual with budget (Friedler, 2014). According to DIN 69901, PSP establish a rank for each activity due to the relationships between them.

As a consequence, on one profit center level may be presented a simplified profit and loss result, in one of the forms proposed by IAS1: by nature, or by function, as given in the table bottom.

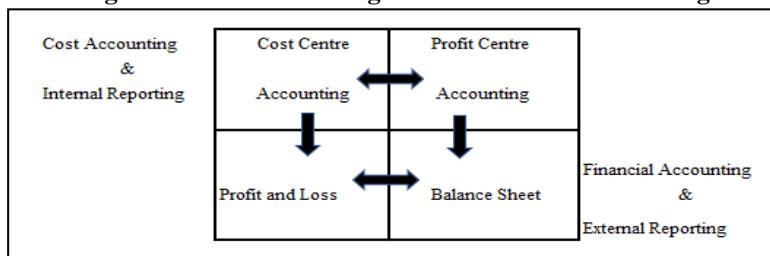
**Table 3: P&L by nature and by function on profit center level**

Revenue	Revenue
+ / - Changes in inventories of finished goods and work in progress	- Cost of goods sold (Variable costs)
- Work performed by the enterprise and capitalized	<b>Marginal contribution</b>
- Raw material and consumable used	- Fixed costs including:
- Staff costs	Distribution costs
- Other expenses	Administrative expenses
<b>Operational result on profit center level</b>	<b>Operational result on profit center level</b>

Source: inspired from SAP

All profit-and-loss results on profit center levels, for a given period, actually build the profit and loss of one entity, for that period. This relation between profit center accounting and balance sheet is represented in the figure bottom, along with the financial correlation between the profit-and-loss and balance sheet of a reporting entity. Costs flow naturally to the profit-and-loss, but the cost centers, collects not only incurred costs, but also hours, of direct or indirect labor or machine hours and some other units of measurement resources. Cost center accounting calculates direct material cost percentage rate, direct labor cost percentage rate and prime cost percentage rate for the given period. On this basis, called cost driver, (Webster, 2004) the indirect cost distribution will be done, taking into consideration the actual output levels, in one particular period. Furthermore, as cost centers are always assigned to a profit center, as traditional cost accounting explains, the settled costs on cost center level, will be automatically presented on profit center level. In other words, this is the relation between cost center accounting and profit center accounting in Figure 2. Right after cost center accounting is done, may begin the profit center processing. Taking in consideration the incurred costs per activity, department or project, according to the management interests, the distribution rates of overheads will be first calculated, according to effective input levels of the given period, and then allocated to cost objects accordingly. In the Figure 2 are shown these interdependencies among cost and financial accounting, based on the way they interact.

**Figure 1: Cost Accounting versus Financial Accounting**



Source: inspired from SAP

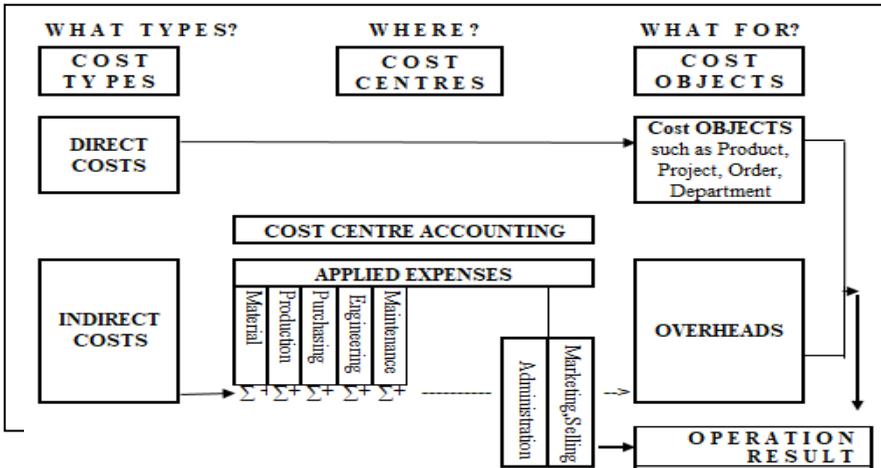
Cost accounting is different from costing, shortly presented in the previous section, in the sense that the former provides only the basis and information for ascertainment of costs, according to The Chartered Institute of Management Accountants in England (CIMA). Once the information is made available, costing can be carried out. Cost accounting principles evolved over the years to fulfil needs of management, who are the primary users of cost (and revenue) information. In other words, cost accounting is the link between management accounting and financial accounting.

Starting from the paradigm - Different costs for different purposes, presented by Horngren (2012, 14<sup>th</sup>, p.199), Cokins (2013), Briciu (2006 p.81) and many others, the collection of costs in a logical pattern is recommended within the predictable function of accounting information. Moreover, it is actually by IFRS imposed. In this way of thinking, one entity may fulfill the requirement of IAS2 regarding allocation of fixed overheads on a systematic and consistent basis, taking into consideration the usual output levels.

**Cost center** is a location or function of an organization where management is primarily responsible for controlling costs (Webster, 2004). It answers the question WHERE the costs incur (Friedel et. Al., 2010).

There are many classifications for the cost centres in speciality literature, but from responsibility point of view significant is the delimitation between auxiliary cost centres, where resources and costs are collected and afterwards distributed with defined rules to the final ones and main cost centres. Furthermore, certain cost centres, that show only their plan figures are blocked for posting actual costs, while cost centers that collect actual costs will be associated with the same burden center or directly to one profit center.

Figure 2: Traditional Cost Accounting



Source: adapted after Friedel, Hoffmann, Pedell (2010)

Regarding the expenditure reports they may declare costs vertically according to the cost type (Ebbeken et al., 2000) and horizontally on each given burden center. The vertical collection and settlement report tables may be developed on three levels: for each financial cost/expenditure account (first level) shall be assigned a cost type (second level) so that total costs on cost objects (third level) will be shown. Direct costs as well as applied expenses of cost center accounting and further on the allocated overheads distributed on cost drivers base become visible on cost objects, only after the internal distribution of indirect costs in cost center accounting and overheads costs in profit center accounting is done, at the end of the given period.

Cost centers usually form a hierarchical tree structure because **costs come in a hierarchy of levels**. (Webster, 2004, p.137). Cost hierarchy is a tool for organizing costs in collection centers, with great importance in the allocation process. While the hierarchical structure depends on the nature of the individual business, in many situations, an entity adopts a hybrid of two or more costing methodologies (Cokings, 2013). Several cost centers can form a **sector** linking cost centers to burden cost centers (Esanu, 2002). For example, in the production cost center, painting can be a sector. Sectors can be defined for selected manufacturing phases to facilitate full cost calculations with phase method or on sub-processes within process cost calculation method. As a

result of cost hierarchy, cost centers can be assigned to cost pools (Bragg, 2005) for certain processes respectively responsibilities. These pools, also called **burden centers (BC)**, collect expenditure and then, according to the agreed settlement methods, established at management level, allocates them according to the allocation keys for the different types of indirect costs in certain collection basins, such as material and production (Loitsch, 2005).

Burden centers are relatively modern cost elements that have emerged along with the development of process costing by Germans Horvath and Mayer in year 1989. They have appeared in German cost accounting, in order to reduce the deepest weakness of marginal contribution accounting (so called: Grenzplankostenrechnung – GPK): higher fixed costs (Kilger,2012). Each burden center may have its own cost allocation rate and criterion, set at the company level. For example, in the case of maintenance burden center, the cost driver for allocating indirect production costs may be worked hours.

Regarding cost center accounting, after distribution of prime cost centers to the final ones is done, on standard costs basis, follows the calculation of distribution rate for the period according to the output levels in the given period, on the cost driver basis. Then variances between predefined costs and actual costs are calculated and posted on the cost center level for the respective period. (Loitsch, 2005).

Finally, the most significant difference between cost centers and profit centers accounting is, that, one may analyze, in the first case, the variances between actual and standard costs, as where in the second case, the variances between actual and budgets costs (and revenues).

#### **4. Conclusions**

Inventory valuation addresses usually the biggest expenditure that flows into the result in any given period. Inventory standard IAS2 recommend standard costing for manufacturing sector. In practice, an entity adopts a hybrid of two or more costing methodologies, such as absorbing costing or ABC method, that is becoming a much more appropriate tool for businesses to use. Direct costing stock valuation method is not accepted by inventory standard IAS2, although it is used worldwide for internal reporting purpose.

IAS2 impose the cost classification among fixed or variable (explicit) and direct and indirect (implicit), as where fixed overheads should be allocated on a systematic and consistent basis and in respect to usual output levels, according to the same reporting standard. In order to align to this IAS2 requirement, the responsibility centres may intervene. This big challenge is

met in cost accounting, where cost centre accounting and profit centre accounting is processed.

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