

INTERNATIONAL JOURNAL OF ENGINEERING SCIENCES & MANAGEMENT REFLECTING THE BUSINESS MODEL IN FINANCIAL STATEMENTS

Mariusz Karwowski^{*1} and Gertruda Krystyna Świdarska²

^{*1&2}Management Accounting Department, Warsaw School of Economics, Warsaw, Poland

ABSTRACT

The purpose of the research underlying this article is to present the necessity of reflecting the business model in the financial statements.

For this purpose, a systematic review related to the issue was conducted. Also a comparative example and an empirical study were applied. The empirical study was based on the financial statements of airlines representing different business models.

Based on the review of relevant literature, it was concluded that reflecting the business model in financial statements would be a desirable improvement from their current form. The example and the empirical study demonstrate the impact of the business model on financial statements. They confirm that the current best way of reflecting business models in financial statements is the adoption of specific, legally compliant solutions (appropriate accounting policies).

The study is one of the few existing publications fully discussing the importance of business models in financial statements

Keywords: *Business model, Financial statements, Accounting policies, Cash flows.*

I. INTRODUCTION

A requisite condition for safe investing in corporate equity and debt securities is the provision of relevant information, thus enabling the assessment of the ability of a specific entity to generate future net cash inflows. Financial statements are the primary source of this information. However, investors and other stakeholders are increasingly seeking information about the entity's business model, since they believe that such information contributes to better understanding of the company's activity and to making more accurate forecasts concerning future performance.

The objective of the research underlying this article is to present the necessity of reflecting the business model in the financial statements. The article poses the thesis that appropriate accounting policies should reflect the financial consequences of activities within the adopted business model. In order to verify this thesis, the article employs a critical review of relevant publications, a comparative example, and an empirical study of annual reports of selected airlines that follow different business models. Chapter 2 presents the results of the review of relevant literature, the purpose of which was to determine whether financial statements provide the information demanded by investors and other stakeholders, including consideration of the business model. Chapter 3 focuses on value creation as an essential aspect of the business model in the context of financial reporting. Chapters 4 and 5 concern how current accounting policies can be used to reflect the business model in financial statements.

The contribution of the article to the existing literature lies in its identification of opportunities to reflect the business model in financial statements, given current financial reporting standards.

II. THE THEORETICAL FRAMEWORK

1. Description of the method used in the study

In order to identify publications on the topic of financial statements which also addressed the issue of the business model, a database search of Science Direct[1] was made (as of January 31, 2016). From this database, 677 items (articles, book chapters, etc.) were identified, published through December 31, 2015, all of which included the terms "business model" and "financial statements". By limiting the search to the "Business, Management and Accounting" section of the database, 389 items were identified. Figure 1 shows a graphical representation of the number of publications by year.

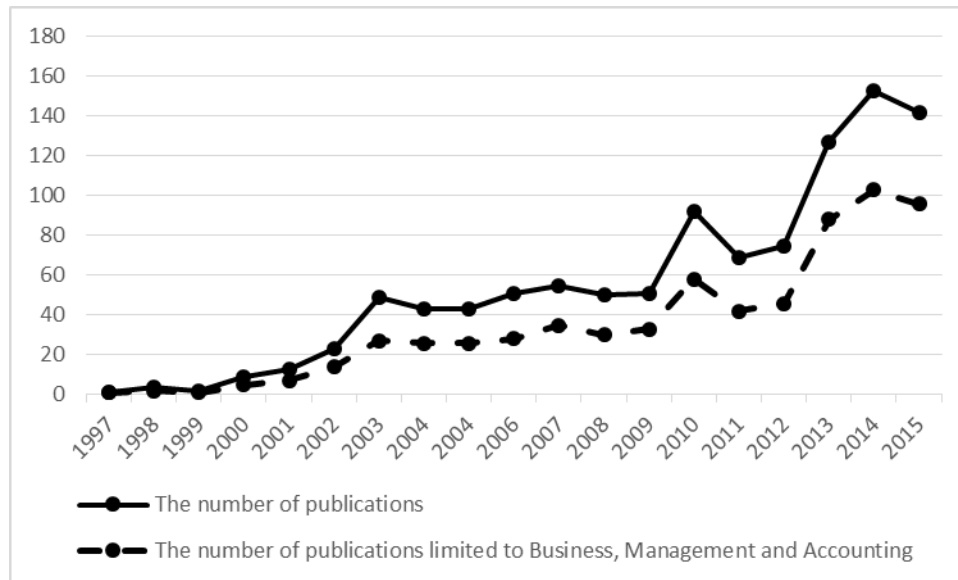


Fig. 1 The number of publications in the ScienceDirect database which included the terms “business model” and “financial statements” in the period 1997-2015

Source: Own preparation.

Figure 1 shows that increasing numbers of publications have appeared in recent years –with the exception of 2011-2012 – that refer to both the issue of financial statements and the business model. After analysing the materials retrieved from only the “Business, Management and Accounting” section of the ScienceDirect database, however, it was found that only 13 articles dealt to a relatively comprehensive extent with the usefulness of financial statements in regard to business models (Table I).

Table I. Articles dealing in a relatively comprehensive degree with the usefulness of financial statements in regard to business models Source: Own preparation

Authors	Year of publication
Carmona and Trombetta	2008
Gwilliam and Jackson	2008
Vasarhelyi and Alles	2008
Alali and Cao	2010
Zéghal and Maaloul	2011
Biondi and Rebérioux	2012
Doty	2012
Francis and Eason	2012
Beattie and Smith	2013
Gailly and Geerts	2014
Richardson et al.	2014
Adams	2015
Nielsen and Roslender	2015

To conclude, while more and more publications use the term business model in the context of financial statements (or vice versa), there are still only a few comprehensive studies on the importance of the business model in financial statements.

2. The content of current financial statements – a critical overview

As Hedlin noted (2001, p. 29) some time ago, most companies presented key resources in their financial statements and a rather informative and fair representation of their operations, while reflecting the historical value of items. In

recent years, however, the situation has deteriorated significantly, which the author described as “relevance lost”, as did Johnson and Kaplan (1987) in relation to management accounting.

While in the early 1990s investors and lenders expressed the need to improve the content of corporate reports (AICPA 1993), according to Tokar(2015, pp. 440-450),accounting standards are still too rigid and prescriptive to permit an entity to reflect how it uses its resources and how its performance should be measured, cf. (Whittington, 2008, p. 149). According to Alali and Cao (2001, p. 85) quality of financial reporting is based not only on the accounting standards but also the company’s own business model, structure, including the cultural, economic, legal and political systems in which it operates (Alali and Cao, 2001, p. 85).

Vasarhelyi and Alles (2008, p. 228) noted that, while businesses are moving into the “now” economy, accounting remains “traditional”, meaning that accounting ignores the changes occurring in business and focuses more on how markets reacted in the past to disclosures in financial statements. Tokar (2015, p. 450) noted that business transactions have become more sophisticated, an accurate reflection of which requires a closer link of accounting with the theory of finance and management, cf. (Carmona and Trombetta, 2008, p. 457; Doty, 2012, p. 130).

Stebbens and Braz (2013, p. 44) observed that investors are increasingly requesting fair and balanced forward-looking information about corporate strategy, the role of business models in the value creation process, and related risks. This requires an extension of the scope of corporate reporting, which should:

- support investors’ own assessments of business value and performance prospects
- enable investors to make judgments about key risks and opportunities.

In addition to forward-looking information, Vasarhelyi and Alles (2008, p. 231) noted that actionable data has become of greater importance than traditional archival data, because customized, dynamic, real time metrics place decision relevance over the comparability and reliability criteria that standard accounting reports dictate. To meet the needs of investors, the Jenkins Committee suggests that the traditional financial model be replaced by the business model. This model is based on financial information but also uses other information describing the wealth creation process within the enterprise (Zéghal and Maaloul, 2011, p. 269). The professional and popular press has joined the academic literature in arguing that the existing systems of accounting and reporting are inadequate to deal with business models that are driven by innovation and intangibles (Biondi and Rebérioux, 2012, p. 280).

Hussein and Seow (2002, p. 55) acknowledged that the current model of financial reporting fails to capture value in the New Economy. Companies such as Amazon and Microsoft derive most of their value from new types of intangible assets, such as technology, processes, and customer loyalty. One of the most important intangible assets a company has is its employees, especially during difficult economic times. But the existing model of financial reporting does not recognize many of these intangible assets. Factors such as strategic execution, innovation, customer loyalty, and employee satisfaction are the best predictors of the future success of a company. They also point to the fact that many companies are generating wealth by forming corporate alliances and joint ventures. As noted in Hedlin (2001, pp. 29 and 31), the majority of what would be regarded as investments from any other perspective are not regarded as such in accounting terms. For instance, with some exceptions, R&D, the development of corporate information infrastructure, activities to strengthen long-term customer loyalty, etc. are not presented in the balance sheet (statement of financial condition). As a result, insufficient information is provided for investors to assess the current standing and future prospects of a firm. While in recent years many companies have started to disclose various key indicators concerning internal process efficiency, market share, and customer retention, this is still not sufficient.

The concept of the business model has entered into the discourse, as has the concept of integrated reporting, adding to the established debate regarding accounting for intangible assets and, more generally, intellectual capital (Beattie and Smith, 2013, p. 243). The problem of the insufficient presentation of assets was noted by the International Integrated Reporting Council – IIRC. According to its document “The business model. Background paper for <IR>”, companies should expand the scope of information disclosed in their reports to cover all the resources used by organizations, cf. (Adams, 2015, p. 25). They suggested these resources be categorized as follows:

- financial – obtained through financing, such as debt, grants or equity, or generated through operations or investments;

- manufactured –physical objects available to an organization for use in the production of goods or the provision of services, including buildings, equipment, and infrastructure (such as roads, ports, bridges, and waste and water treatment plants);
- human –employees’ competencies, capabilities, experience, and their motivations to innovate;
- intellectual –for instance, intellectual property (patents, copyrights, licences), organizational resources (trade secrets, systems, procedures), brand and reputation that an organization has developed;
- natural – all renewable and non-renewable environmental stocks;
- social –for instance, shared norms, common values and behaviours, key relationships.

These represent potential direct (e.g., labour, raw materials or cash used in transactions) or indirect inputs (e.g., transportation infrastructure, regulatory parameters or education of the workforce) to the business model (IIRC, 2013a, § 35). Table II shows the reflection of the resources in the balance sheet (statement of financial position).

Table II. The reflection of the resources in the balance sheet (statement of financial position) Source: Own preparation.

Type of resources according to IIRC (2013a)	Are they reflected in the balance sheet?
Financial resources	YES
Manufactured resources	YES
Human resources	NO
Intellectual resources	YES, but only in certain cases
Natural resources	NO
Social resources	NO

Table II shows that the balance sheet (statement of financial position) primarily reflects financial and manufactured resources. Intellectual resources are included in the case of acquired assets, such as purchased goodwill or intangible assets under development, but only after fulfilling stringent criteria (IAS 38, § 57). The remaining types of resources are not recognized in the balance sheet, although increasing amounts of information about them are being disclosed in other sections of corporate reports.

3. Past proposals to amend financial statements with regard to the business model

According to Nielsen and Roslender (2015, pp. 264-266), business models were previously fairly consistent across specific industries. Recent changes in the competitive landscape, however, have given rise to a variety of new industry value creation and delivery models. The business model facilitates understanding how successful relationships with stakeholders, such as customers, contribute to generating value. Its ultimate aim is to capture the uniqueness of the enterprise and illustrate the interrelatedness of the processes of value creation, value delivery and value capture within the organisation. How much profit margin the firm captures from its total value chain depends upon its pricing strategy, relation to distributors, and retail network capacity (Haslam *et al.*, 2015, p. 63). Cash-to-cash cycles, growth and stability vary between industries, as well as within industries due to the use of different business model (Francis and Eason, 2012, p. 227), cf. (Gailly and Geerts, 2014, p. 188).

Hedlin (2001, pp. 33-34) pointed to the importance of a well described business model as a point of departure in identifying key value drivers, as well as for linking financial and non-financial measures. In his study, he noted the lack of corporate information in financial statements, such as the business model, the strategy and strategic goals, competitive advantages and market development. Although, in many cases, companies reported non-financial metrics, the information was perceived as not relevant as it was not presented in the appropriate context. Likewise, Nielsen and Roslender (2015, p. 266) noted that publication of voluntary information about strategy, value creation processes, knowledge resources, etc. may be problematic because such information is difficult to understand if not presented in a relevant context.

Hedlin (2001, p. 35) proposed a model report, shown in Figure 2, in which the business model is at the strategic level.

Strategic level	Markets, business model, strategy and strategic goals	Description metrics
Process level	Key business processes	Description
Performance and resource level	Key performance metrics Key resource metrics	Financial and non-financial

Fig. 2 A model report according to Hedlin (2001)

Source: Hedlin (2001, p. 35).

Stebbens and Braz (2013, p. 45) proposed that corporate reports should consist of three blocks (story, key numbers and details) and should focus much more broadly on an entity’s drivers for longer term value creation, rather than traditional financial performance measures. These drivers should include the entity’s strategy, business model, related risks and performance across a number of key performance indicators, including non-financial ones. The business model would be the first block, alongside challenges and prospects for the future.

Nielsen and Roslender (2015, p. 270) stated that the business model is something more than a perfunctory description of how the company seeks to create and deliver value to customers and shareholders. According to Tokar (2015, p. 441), the measurement basis should reflect both the characteristics of an item and how that item is used by the entity to generate cash flows. Similarly, according to Gebhardt *et al.* (2014, p. 114), a single measurement base for all assets and liabilities should not be used as it would not enable capital providers to appropriately assess a company’s future cash flows. While the IASB’s 2013 discussion paper of a conceptual framework does not explicitly introduce the business model concept, it states that the most appropriate information about future cash flows depends on the expected use of the assets and liabilities that are to be measured, cf. (IASB, 2013, p.9.23-9.34). In recent years, a number of initiatives have emerged that are also aimed at addressing the business model as a way of improving the relevance of financial statements, among them ICAEW, 2010; IIRC, 2013a, 2013b; EFRAG, 2013. In terms of presentation and disclosure, the document “Preliminary Views on Financial Statement Presentation” published by IASB in 2008 is noteworthy. It was developed in the exposure draft of International Financial Reporting Standard X “Presentation of Financial Statements”, in which it was assumed that users are primarily interested in the amount, timing, and uncertainty of an entity’s future cash flows (IASB, 2008c, § 2.1). Financial statements should present a coherent picture of the achievements of the company, which in practice means the existence of interdependence between financial statements. Highlighting, in line with a management approach, the same sections and categories in each element of the report was considered as very important, as shown in Table III.

Table III The structure of financial statements according to a 2008 IASB discussion paper Source: IASB (2008c, § S5).

Statement of financial position	Statement of profit or loss and comprehensive income	Statement of cash flow
BUSINESS ACTIVITY	BUSINESS ACTIVITY	BUSINESS ACTIVITY
– Operating assets and liabilities	– Operating income and expenses	– Operating cash flow
– Investing assets and liabilities	– Investment income and expenses	– Investing cash flow
FINANCING ACTIVITY	FINANCING ACTIVITY	FINANCING ACTIVITY
– Financing assets	– Financing asset income	– Financing asset cash flow
– Financing liabilities	– Financing liability expenses	– Financing liability cash flow

INCOME TAXES	INCOME TAXES on continuing operations (business and financing)	INCOME TAXES
DISCONTINUED OPERATIONS	DISCONTINUED OPERATIONS (net of tax)	DISCONTINUED OPERATIONS
	OTHER COMPREHENSIVE INCOME, net of tax	
EQUITY		EQUITY

Table III shows that the statement of financial position, statement of profit or loss and other comprehensive income, and the statement of cash flow were to be consistent at each level (IASB, 2008c, § S3, S6, 2.27). While the IFRS X project should be regarded as an important step in improving the presentation and disclosure of financial statements, unfortunately, the project was suspended.

III. THE BUSINESS MODEL AND THE OBJECTIVE OF FINANCIAL REPORTING

The objective of financial reporting is to provide financial information about the entity that is useful to capital providers in making decisions. Information is regarded as useful when it contributes to the assessment of the ability of the entity to generate future net cash inflows. Information which enables such assessment includes: economic resources (assets), claims on them (liability and equity), and the effects of transactions, other events and circumstances that change resources and claims on them (IFRS CF, § OB2-OB4). In the exposure draft issued by IASB concerning the objective of financial reporting, the information and the order of its use in estimating future net cash flows of the entity were identified. In order to produce this estimate, assets and liabilities must be recognized and measured, the difference between them being net assets. The financial result is a change in net assets (IASB, 2008b, § BC 1.37), cf. (IASB, 2015, § 1.3-1.4).

As Bezold noted (2009, p. 3), much attention has been given to the objective of financial reporting, but to a lesser degree to the subject which was included in IASB's exposure draft concerning the reporting entity. According to this document, the subject is a circumscribed area of business activity of interest to present and potential equity investors, lenders and other capital providers (IASB, 2008a, § 24, 27), cf. (IASB, 2015, § 3.11, 3.13). The essence of a business activity can be described as investing cash in non-cash resources, combined according to economic logic, in order to generate future net cash inflows, which is consistent with the definition of the cash conversion cycle, cf. (SFAC 1, § 39).

Every business activity which is the subject of financial reporting has to follow the logic according to which it carries out processes using a specific combination of resources. The logic, reflected in cause and effect relationships between resources and processes, is often referred to as a business model, which is confirmed by definitions in management literature. Casadesus-Masanell and Ricart (2010, p. 195) have identified the business model as the logic of the enterprise and how it operates and creates value for its stakeholders. Magretta (2002, p. 87) described it as the underlying economic logic that explains how value can be delivered to customers at an appropriate cost, effectively an explanation of the way the company conducts business. As Chesbrough and Rosenbloom (2002, p. 532) noted, the business model mediates between technology development and economic value creation, while, according to Zott and Amit (2010, p. 216), it is a system of interdependent activities that transcends the focal firm and spans its boundaries. Figure 3 shows a scheme of the business model according to IIRC.

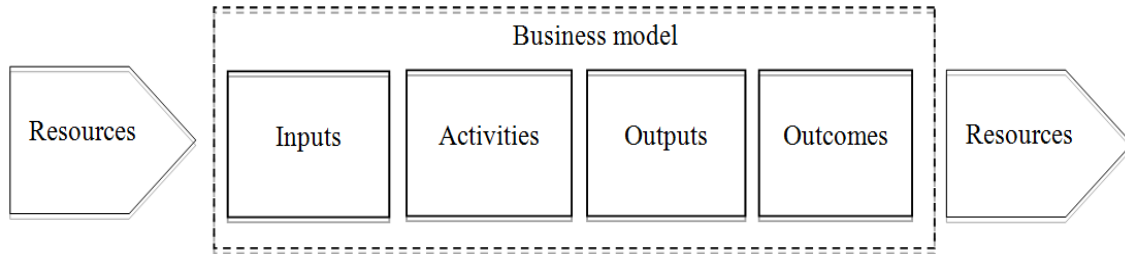


Fig. 3 A scheme of the business model according to IIRC

Source: Own preparation based on: IIRC(2013b, p. 13).

According to IIRC (2013b, § 2.23), the business model draws on various resources as inputs and, through its business activities, converts them to outputs (products, services, by-products and waste). The organization's activities and its outputs lead to outcomes in terms of effects on resources. In the cycle in which resources at the end of a period become resources available for use by the business model in the following period, value is being created (IIRC, 2013a, § 40). Creating and adding value as profits generated for investors are the main reason for establishing companies. According to EFRAG (2013, § 3.19), value creation could be viewed as current earnings that can be either reinvested or paid out in dividends, or future value that will be realised at a later date.

An example of a business model described in terms of value creation is a food processing entity. Such entity acquires basic food ingredients from agricultural producers. From those ingredients, the entity then prepares more valuable food products and markets those products to consumers. The entity captures the incremental added value of the manufactured final food product over the cost of purchasing and processing ingredients, marketing and distribution (EFRAG, 2013, § 3.22). Another example of a business model focused on value creation is that of a chemical entity. Such entity purchases raw materials which it processes in a chemical plant. Inputs are converted by a variety of methods in chemical reactions to create more valuable chemicals. The entity adds value by converting the lower cost chemical inputs into higher valued chemical products (EFRAG, 2013, § 3.23).

Inputs may be used in the production process, as in the above examples, but they can also be sold without change. Penman (2007, pp. 36 and 39) indicated that the essence of the business model may be:

- transforming inputs and adding value to them,
- adding or losing value due solely to fluctuations in market value of the rights and obligations, which means the absence of any transformation of assets; the company earns through appropriate choices of the times of purchase and sale.

It follows that a business model is focused on creating value, which is understood as realized and unrealized cash flows, and the objective of financial statements should be to provide information as to whether the activity within a specific business model, described as the investment of cash according to economic logic in combination with non-cash resources, is able to generate the expected net cash inflows. Unfortunately, financial reporting in its current form does not condition the rules of preparing financial statements on the business model in use. The question therefore arises to what extent financial statements can be used to provide information about the business model for the assessment of future net cash inflows.

IV. ACCOUNTING POLICY AS A TOOL FOR REFLECTING THE BUSINESS MODEL IN FINANCIAL STATEMENTS

The description of the business model should be the starting point for its appropriate reflection in the current form of financial statements. Investors and other stakeholders should learn how the business operates prior to assessing its financial position and performance, so understanding the entity's way of doing business is crucial for further analysis of financial data (EFRAG, 2013, § 4.13-4.15). The management commentary – a descriptive (narrative) report facilitating a broader understanding of the financial position, the financial performance, and cash flows of an entity – can be especially useful for this purpose, as it complements and supplements the financial statements (IASB, 2010, § IN3).

However, the reflection of the business model should not be limited only to its description as discussed in Chapter 2, cf. (Nielsen and Roslender, 2015, p. 272). Appropriate accounting policies should be used to reflect the financial consequences of activities within the adopted business model, providing the requisite information for the assessment of future net cash flows. According to IAS 8 (§ 5), accounting policies are the specific principles, bases, conventions, rules and practices applied by an entity in preparing and presenting its financial statements. Accounting policies include both the basic (obligatory) and those selected from the approved accounting principles. While the obligatory principles are quite rigid within a limited choice, selected accounting policies should be employed as well in order to present the impact of the adopted business model appropriately. They are selected by management through conscious choice and refer to the detailed solutions adopted by the company which must be in compliance with applicable laws. There may be a closed list of possibilities or complete freedom of choice among selected accounting policies.

The influence of distinct business models on solutions in the field of accounting policies of companies operating differently within the same industry will be demonstrated using the example of four companies selling machines, cf. EFRAG (2013, § 3.44-3.103). The first entity has a business model under which it manufactures machines before entering into a contract with any customer. The entity expects to be able to sell machines at a price which will be higher than the cost of manufacturing. It seems to be the most common model in the business. The second entity also manufactures machines before signing a contract but, in contrast to the first entity, the company leases manufactured machines directly to others upon completion. The third entity has a business model whereby it manufactures machines under pre-existing contracts, selling the machines upon completion at a pre-determined price. The company creates value based on its ability to produce machines at a lower cost than the pre-determined price. The three business models belong to the first group of models enumerated in chapter 3. The fourth entity purchases ready-made machines from manufacturers and sells them through a network of shops located in different regions of the country. This is a typical business model of adding or losing value resulting solely from fluctuations in the market of goods for sale, which was discussed in chapter 3.

The four business models all have very different risk and reward profiles. The first entity sells finished goods at a profit if it correctly predicts the demand. Its risk is that the sale may take more time than expected, due to the possibility of overestimation of demand for finished goods. Misjudging future demand for machines may not only mean a longer than anticipated period to sell the machine but the sale may also be made at a potentially distressed price. The second entity bears the risk related to the size of demand for the use of machines in the form of leasing. Price is a function of the relationship between supply and demand, which implies the recovery of production costs through lease payments. The risk to the third entity is that production costs exceed the pre-determined sales price. The entity captures value to the extent it can accurately estimate its manufacturing cost before entering into the sales contract and then effectively manage those costs. The activities of the fourth entity do not include manufacturing and are limited to trade.

Table IV shows the influence of the adopted business model on accounting policies for manufactured (purchased) machines.

Table IV The influence of adopted business model on accounting policies for manufactured (purchased) machines Source: Own preparation.

No.	The essence of the business model	Presentation of produced or purchased machines in the balance sheet (statement of financial position)	Balance sheet value of produced or purchased machines	The financial results of the adopted business model
1.	Manufacture of machines before signing purchase agreements with customers	Inventories (finished goods)	Cost or net realisable value	Revenues minus cost of sales of finished goods recognized once at a point in time

2.	Manufacture of machines intended for lease	Tangible fixed assets	Cost (possibly increased by borrowing costs), decreased by accumulated depreciation and impairment losses or fair value	Revenues minus expenses concerning tangible fixed assets recognized gradually over time
3.	Manufacture of machines on special order, the result of signed purchase agreements	Inventories (finished goods)	Cost determined on the basis of the method that best reflects the degree of production	Revenues minus cost of sales of finished goods recognized gradually over time
4.	Purchase of ready-made machines intended for sale	Inventories (merchandise)	Cost or net realisable value	Revenues minus cost of sales of merchandise recognized once at a point in time

Activities undertaken by these entities during production are very similar, except for the fourth entity in which no production occurs. These entities purchase the required materials, which are transferred to production. In the case of the first and third entities, the outputs are inventories (finished goods), while the second company produces tangible fixed assets. This follows the definition of the components of the balance sheet (statement of financial position). Inventories are regulated in IAS 2, according to which they are assets:

- held for sale in the ordinary course of business,
- in the process of production for such sale; or
- in the form of materials or supplies to be consumed in the production process or in the rendering of services (§ 6).

On the other hand, according to IAS 16, tangible fixed assets are assets:

- held for use in the production or supply of goods or services, for rental to others, or for administrative purposes; and
- expected to be used during more than one period (§ 6).

This means that, depending on the business model, the same goods are categorized differently and presented differently on the balance sheet (in theory, the manufactured machine may also be an investment). Treating the given component as inventory or tangible fixed assets (theoretically, investment) depends on how these assets are used in the business model. To calculate the cost of production of machines similar solutions are used, especially in regard to the first and the third entities, as shown in Table IV.

Business models begin to differ after manufacturing. The first, second and fourth entities must conduct marketing activities: the first and fourth to attract potential buyers of machines, and the second to attract potential lessees. The first and fourth entities recognize gain or loss upon sale [2]. The second entity recognizes rental revenues successively, while the machines will be depreciated and the entity will incur expenses of maintaining them in good condition. They can also be valued according to a revaluation model, which applies a fair value measurement. In the case of the third entity, profit or loss will be recognized during production, according to IFRS 15. This situation is especially possible when the created or enhanced asset has no alternative use to the entity, and the entity has an enforceable right to payment for performance completed to date. It means that, in order to determine how to recognize sales revenue, entities must focus on contracts with customers, which requires an understanding of how the company does business. As noted in Tokar (2015, p. 443), the introduction of such solution makes it possible to implement a more flexible approach, which would be applicable regardless of the business model employed.

Based on the foregoing example, it can be concluded that the accounting policies of the four entities selling the same goods but under different business models should not be the same, as each should provide specific information related to the generation of net cash inflows (or business model), cf. (EFRAG, 2013, § 4.25). The issue of forecasting was highlighted in joint IASB-FASB proposals at the conceptual framework measurement phase in 2009, cf. (Gwilliam and Jackson, 2008, p. 256). It was stated that the objective for selecting a measurement attribute for an item is to maximise the information about the reporting entity's prospects for net cash inflows. It means that a particularly important factor for measurement of an asset or a liability should depend on the future value flows it represents (IASB/FASB, 2009, § ME12). Value realization refers to the conversion of the economic value of an asset or liability into cash, other assets, services, or release from obligations (IASB/FASB, 2009, § ME29). Given this definition, the method of value realization for an asset or liability is a function of management's decision about the use, disposition or settling of that item. The business model determines how value will be realised, leading to the following chain of reasoning: accounting based on the value realisation method will provide the most relevant reported information because it determines future net cash inflows (Leisenring *et al.*, 2012, pp. 336-337).

Financial results should be reported in the manner in which the entity generates the actual cash flows and actually creates or destroys value, cf. (Świdarska *et al.*, 2014, p. 17). The way resources are used in the context of a business model, i.e. the role that they play in cash conversion cycles, has an impact on the timing and size of cash flows that will be generated and on the exposure to risk. Consideration of the business model in financial reporting is to reflect changes in the values that are important to the financial position and performance of the entity and recognition of the key elements of financial statements (assets, liabilities, revenues and expenses), cf. (EFRAG, 2013, § 4.17-4.18).

Financial reporting needs to account for the substance and not just the form of transactions (Tokar, 2015, p. 450). It means that assessing net cash inflows should be based on more than just the rights and obligations that are derived from the contract. Contractual terms could be an initial starting point for this assessment, but it is also necessary to consider the way the rights and obligations are used by the entity when conducting its activities. The way assets, liabilities and other resources are actually used in a business model is the most relevant and reliable way of assessing net cash inflows, thereby providing users with information that has better predictive value (EFRAG, 2013, § 4.26).

V. THE EMPIRICAL STUDY OF THE FINANCIAL STATEMENTS

An airline could structure its flight routes using certain "hub" airports or direct "point-to-point" flights to optimise its passenger traffic. By routing passengers through certain hub airports, it can combine passengers from multiple locations in order to offer more frequent flights to more destinations. The configuration of these routes and the choice of airports impact the cost structure of the entity (EFRAG, 2013, § 3.26). The business model of low-cost carriers relies specifically on low cost structures. Therefore, according to Flouris and Walker (2005, p. 6-7), these airlines mainly use secondary airports with low airport charges, typically a significant part of airlines' expenses. These airports are also less congested, helping low-cost carriers increase punctuality and reduce turnaround times which, in turn, lead to higher utilization of aircraft, cf. (Richardson *et al.*, 2014, p. 5). Additionally, "point-to-point" flights have the advantage of eliminating wasted time by interlining flights as there is no need to wait for passengers from delayed flights, thereby also increasing utilization of aircraft. The description of factors related to the adopted business model should be an integral part of the financial statements and the management commentary, cf. (Karwowski, 2015, p. 489).

According to its annual report for 2014, Ryanair Holdings plc pioneered the low-fares operating model in Europe in the early 1990s. Ryanair's low fares are designed to stimulate demand, particularly from fare-conscious leisure and business travellers who might otherwise use alternative forms of transportation or choose not to travel at all. In order to minimise expenses, Ryanair mainly provides frequent point-to-point service on short-haul routes to secondary, regional airports.

According to its annual report for 2014, Air France-KLM currently operates the largest network between Europe and the rest of the world. The network is centred on two intercontinental hubs, which are two of the four largest connecting platforms in Europe. In the traditional network carrier business, approximately 40% of passengers are on business while 60% are travelling for personal reasons. Furthermore, approximately 50% of revenue is realized

from loyalty scheme customers (members of the frequent flyer program or those whose companies have corporate contracts with the company).

Table V identifies the influence of the adopted business model on the accounting policies of two airlines, representing two different business models.

Table V *The influence of the adopted business model on the accounting policies of airlines* Source: Annual reports for 2014 of Ryanair Holdings plc and Air France-KLM SA.

No.	Name of company	Ryanair	Air France-KLM
1.	Type of business model	Low-cost carrier	Full-service carrier
2.	Property, plant and equipment	Historical cost less accumulated depreciation and provisions for impairments.	Acquisition or manufacturing cost, less accumulated depreciation and any accumulated impairment losses.
3.	Inventories	The lower of cost and net realisable value.	The lower of cost and net realizable value.
4.	Unused tickets	Systematic basis, such that twelve months of time-expired revenues are recognised as revenue in each fiscal year.	Recognized as revenue at issuance based on statistical analysis, which is regularly updated.
5.	Loyalty programs	No information.	“Miles” acquired by passengers are considered as part of the price and deferred until the commitments relating to these “miles” have been met.
6.	Revenue	Revenue from the sale of seats is recognised in the period in which the service is provided.	Sales related to air transportation operations are recognized when the transportation service is provided.
7.	Segment reporting	Single business unit.	The Group is organized around the following segments: Passenger, Cargo, Maintenance, Other.

The study of the financial statements identified the following accounting policies differentiating the two business models of the airlines:

- the recognition and measurement of unused tickets,
- the recognition and measurement of loyalty programs,
- identifying reportable segments.

The two companies recognise revenue in the period in which the service is provided, but there are differences concerning unused tickets. Ryanair recognises them as revenue on a systematic basis, such that twelve months of time-expired revenues are recognised as revenue in each fiscal year. Air France recognises them at issuance based on a statistical analysis, which is regularly updated. Ryanair does not have a loyalty program, which is typical of low-cost carriers. Air France-KLM, similar to other full-service carriers, has its own frequent flyer program, which entitles members to a variety of benefits such as free flights. Deferred revenue on ticket sales and frequent flyer programs of Air France-KLM constitute 13.7% of total liabilities and equity, while in the case of Ryanair, unearned revenue represents only 9.7%. Ryanair is managed as a single business unit that provides low fare airline-related services, across a European route network. This description is a very common feature of low-cost carriers, allowing them to minimise expenses. In contrast to Ryanair, the logic of Air France-KLM is based on differentiation.

The foregoing observations confirm that the business model impacts the accounting policies of the selected airlines which represent two different business models.

VI. CONCLUSIONS

The current form of financial statements is widely criticized (cf. Chapter 2.2) because it does not provide sufficient information for the assessment of future net cash flows. In the course of the review of relevant literature, the results of which are included in Chapter 2.1, the growing interest in reflecting the business model in the financial statements (and vice versa) was noted, although there is still a noticeable lack of studies entirely devoted to the importance of the business model in financial statements (cf. Chapter 2.3).

The objective of the research presented in this article was to present the necessity of reflecting the business model in financial statements. The use of the business model in financial statements is justified by review of relevant literature included in Chapter 3, which confirmed that the objective of financial statements has many common features with the business model, e.g. business activity, economic logic, creation of value, generation of net cash flows. However, current financial reporting standards make it impossible to appropriately reflect the business model in financial statements.

In Chapters 4 and 5 it was concluded that in order to reflect the business model in financial statements accounting policies can be applied appropriately. The presented examples (one theoretical and the other empirical) indicate various accounting solutions in companies following different business models. It was also noted that the description of the business model should be an integral part of financial statements and the management commentary in order to facilitate an understanding of the activity of the entity.

Notes

1. This database was selected due to the possibility of obtaining information about the quantities of materials by year, by publication, and by type of publication.
2. In general, inventories are valued at purchase price or production cost. However inventories held by broker-traders trading in goods are valued differently, because such inventories are principally acquired with the purpose of selling in the near future and generating a profit from fluctuations in price or broker-traders' margin (IAS 2, § 5)

REFERENCES

- [1] Adams, C.A. (2015), "The International Integrated Reporting Council: A call to action", *Critical Perspectives on Accounting*, 27, pp. 23–28.
- [2] AICPA (1993), "The Information Needs of Investors and Creditors. New York", American Institute of Certified Public Accountants, available at: <http://www.aicpa.org/> (accessed 25 February 2016).
- [3] Alali, F. and Cao, L. (2010), "International financial reporting standards – credible and reliable? An overview", *Advances in Accounting, incorporating Advances in International Accounting*, 26, pp. 79–86.
- [4] Beattie, V. and Smith, S.J. (2013), "Value creation and business models: Refocusing the intellectual capital debate", *The British Accounting Review*, 45, pp. 243–254.
- [5] Bezold, A. (2009), "The Subject Matter of Financial Reporting: The Conflict between Cash Conversion Cycles and Fair Value in the Measurement of Income", *Center for Excellence in Accounting & Security Analysis*, available at: <http://www8.gsb.columbia.edu/> (accessed 29 October 2015).
- [6] Biondi, Y. and Reberieux, A. (2012), "The governance of intangibles: Rethinking financial reporting and the board of directors", *Accounting Forum*, 36, pp. 279–293.
- [7] Carmona, S. and Trombetta, M. (2008), "On the global acceptance of IAS/IFRS accounting standards: The logic and implications of the principles-based system", *J. Account. Public Policy*, 27, pp. 455–461.
- [8] Casadesus-Masanell, R. and Ricart, J.E. (2010), "From Strategy to Business Models and to Tactics". *Long Range Planning*, 43, pp. 195–215.
- [9] Chesbrough, H. and Rosenbloom, R.S. (2002), "The role of the business model in capturing value from innovation: Evidence from Xerox Corporation's spin-off companies", *Industrial and Corporate Change*, Volume 11 Number 3, pp. 529–555.
- [10] Doty, J.R. (2012), "The Future of Financial and Business Reporting from a Standards-Setting and Regulatory Perspective", *Research in Accounting Regulation*, 24, pp. 126–131.

- [11]EFRAG (2013), “The role of the business model in financial statements. Research paper”, European Financial Reporting Advisory Group, Autorité des Normes Comptables and Financial Reporting Council, available at: <http://www.efrag.org/> (accessed 25 July 2015).
- [12]Flouris, T. and Walker, T.J. (2005), “The Financial Performance of Low-Cost and Full-Service Airlines in Times of Crisis”, *Canadian Journal of Administrative Sciences*, 22 (1), pp. 3–20.
- [13]Francis, R.N. and Eason, P. (2012), “Accruals and the naïve out-of-sample prediction of operating cash flow”, *Advances in Accounting, incorporating Advances in International Accounting*, 28, pp. 226–234.
- [14]Gailly, F. and Geerts G.L. (2014), “Business process modeling: An accounting information systems perspective”, *International Journal of Accounting Information Systems*, 15, pp. 185–192.
- [15]Gebhardt, G., Mora, A. and Wagenhofer, A. (2014), “Revisiting the Fundamental Concepts of IFRS” *ABACUS*, Vol. 50 No. 1, pp. 107–116.
- [16]Gwilliam, D. and Jackson, R.H.G. (2008), “Fair value in financial reporting: Problems and pitfalls in practice. A case study analysis of the use of fair valuation at Enron”, *Accounting Forum*, 32, pp. 240–259.
- [17]Haslam, C., Tsitsianis, N., Andersson, T. and Gleadle, P. (2015), “Accounting for Business Models: Increasing the Visibility of Stakeholders”, *Journal of Business Models*, Vol. 3 No. 1, pp. 62–80.
- [18]Hedlin, P., (2001), “Expanding the Scope of Financial Reports”, *Journal of Human Resource Costing & Accounting*, Vol. 6 Iss. 1, pp. 29–38.
- [19]Hussein, M.E. and Seow, G.S. (2002), “Investors: What’s Being Done about Misleading Financial Reports?”, *The Journal of Corporate Accounting & Finance*, pp. 55–65.
- [20]IAS 2 (2003), “International Accounting Standard 2 – Inventories”, IFRS Foundation.
- [21]IAS 8 (2003), “International Accounting Standard 8 – Accounting Policies, Changes in Accounting Estimates and Errors”, IFRS Foundation.
- [22]IAS 38 (2014), “International Accounting Standard 38 – Intangible assets”, IFRS Foundation.
- [23]IASB (2008a), “Discussion Paper Preliminary Views on an improved Conceptual Framework for Financial Reporting. The Reporting Entity”, IFRS Foundation, available at: <http://www.drsc.de/> (accessed 21 February 2016).
- [24]IASB (2008b), “Exposure Draft of an Improved Conceptual Framework for Financial Reporting: Chapter 1: The Objective of Financial Reporting”, IFRS Foundation, available at: <http://www.ifrs.org/> (accessed 21 February 2016).
- [25]IASB (2008c), “Preliminary Views on Financial Statement Presentation. Discussion Paper”, IFRS Foundation, available at: <http://www.ifrs.org/> (accessed 28 August 2015).
- [26]IASB (2010), “Management commentary. A framework for presentation”. IFRS Foundation.
- [27]IASB (2013), “A Review of the Conceptual Framework for Financial Reporting. Discussion Paper DP/2013/1”, IFRS Foundation, available at: <http://www.ifrs.org/> (accessed 21 February 2016).
- [28]IASB (2015), “Conceptual Framework for Financial Reporting. Exposure Draft ED/2015/3”, IFRS Foundation, available at: <http://www.ifrs.org/> (accessed 21 February 2016).
- [29]IASB/FASB (2009), “Conceptual Framework for Financial Reporting. Chapter 5: Measurement in Financial Statements”, IASB/FASB, available at: <http://www.ifrs.org/> (accessed 22 February 2016).
- [30]ICAEW (2010), “Business models in accounting: the theory of the firm and financial reporting. Information for better markets initiative”, The Institute of Chartered Accountants in England and Wales, available at: <https://www.icaew.com/> (accessed 22 February 2016).
- [31]IFRS 15 (2015), “International Financial Reporting Standards 15 – Revenue from Contracts with Customers”, IFRS Foundation.
- [32]IFRS CF (2010), “The Conceptual Framework for Financial Reporting”, IFRS Foundation.
- [33]IFRS X (2010), “Financial Statement Presentation. Exposure Draft”, IFRS Foundation.
- [34]IIRC (2013a), “Business model. Background paper for <IR>”, The International Integrated Reporting Council, available at: <http://integratedreporting.org/> (accessed 24 September 2016).
- [35]IIRC (2013b), “The International <IR> Framework”, The International Integrated Reporting Council, available at: <http://integratedreporting.org/> (accessed 11 October 2015).
- [36]Johnson, T.H. and Kaplan, R.S. (1987), “Relevance Lost. The Rise and Fall of Management Accounting”, Boston: Harvard Business School Press.
- [37]Karwowski, M. (2015), “The Effects of the Evolution of the Business Model in a Period of Economic Crisis – a Study of the Annual Reports of Selected Airlines”, *Economics and Law*, Vol. 16 No. 4/2015, pp. 479–490.

- [38]Leisenring, J., Linsmeier, T., Schipper, K. and Trott, E. (2012), “Business model (intent)-based accounting”, *Accounting and Business Research*, 42:3, pp. 329–344.
- [39]Magretta, J. (2002), “Why business models matter”, *Harvard Business Review*, May, pp. 86–92.
- [40]Nielsen, C. and Roslender, R. (2015), “Enhancing financial reporting: The contribution of business models”, *The British Accounting Review*, 47, pp. 262–274.
- [41]Penman, S. (2007), “Financial reporting quality: is fair value a plus or a minus?”, *Accounting and Business Research, Special Issue: International Accounting Policy Forum*, pp. 33–44.
- [42]Richardson, C. and Budd, L., Pitfield, D. (2014), “The impact of airline lease agreements on the financial performance of US hub airports”, *Journal of Air Transport Management*, 40, 1–15.
- [43]SFAC 1 (1978), “Objectives of Financial Reporting by Business Enterprises”, *Financial Accounting Standards Board*.
- [44]Stebbens, P. and Braz, M. (2013), “The future of corporate reporting”, *Charter*, June, pp. 44–45.
- [45]Świdarska, G.K., Borowski, S., Kariozen, M. (2014). “Business model as a determinant of financial statements”, *Journal of Management and Financial Sciences*, Vol. VII Issue 17, pp. 11–27.
- [46]Tokar, M. (2015), “What kind of accounting standards should the IASB write?”, *Accounting and Management Information Systems*, Vol. 14 No. 3, pp. 439–452.
- [47]Vasarhelyi, M.A. and Alles, M.G. (2008), “The “now” economy and the traditional accounting reporting model: Opportunities and challenges for AIS research”, *International Journal of Accounting Information Systems*, 9, pp. 227–239.
- [48]Whittington, G. (2008), “Fair Value and the IASB/FASB Conceptual Framework Project: An Alternative View”, *ABACUS*, Vol. 44 No. 2, pp. 139–168.
- [49]Zéghal, D. and Maaloul, A. (2011), “The accounting treatment of intangibles – A critical review of the literature”, *Accounting Forum*, 35, pp. 262–274.
- [50]Zott, C. and Amit, R. (2009), “Designing Your Future Business Model: An Activity System Perspective”, *Long Range Planning*, 43, available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1356511 (accessed 25 February 2016)