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BUSINESS MODEL AND LEASE ACCOUNTING ACCORDING TO IFRS 16

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Abstract
The article presents the importance of appropriate lease recognition in financial statements according to IFRS 16, enabling an accurate evaluation of a company's business model. Additionally, an analysis of the financial statements of selected public companies included in the WIG20 index was conducted in order to assess the potential impact of the new standard on their financial statements. It was concluded that the new model introduced by IFRS 16 will not have a material impact on the majority of these companies, due to their limited use of the operating lease.

Keywords: business model, lease, IAS 17, IFRS 16.

1. INTRODUCTION
According to current financial reporting standards, assets under operating leases are not presented in the statement of financial position. But the off-balance sheet effects of operating leases are simply too material to ignore for meaningful analyses and comparisons of financial statement data. The objective of this article is to present the importance of appropriate lease recognition, its measurement, presentation and disclosure, enabling an accurate evaluation of a company's business model.

The article consists of two parts. The first part contains the theoretical considerations concerning the importance of leases in conducting business activities, using the example of the airline industry, and various definitions and types of lease. It also includes the relationship between the business model and lease accounting according to IFRS 16. The second part presents the results of an analysis of the financial statements of selected companies included in the WIG20 index, the aim of which is to assess the potential impact of the new standard on the financial statements of large listed companies.

2. THE LITERATURE STUDY
2.1. THEORETICAL BACKGROUND

According to Gavazza [2010] in a typical lease contract, the owner of the asset (the lessor) grants to another party (the lessee) the exclusive right to use the asset for an agreed period of time in return for periodic payments. Hence, the lessee takes the risks and returns from the use of the asset, and the lessor takes the risks and returns from ownership of the asset. As in any financial contract, the risk of default by the lessee is a primary element in the risk of ownership, with the liquidation value of the asset reverting to the lessor should the lessee default. As Oum, Zhang and Zhang [2000] noted, the benefits of leases were traditionally viewed as financial. In particular, the separation of ownership enables entities to record expenses more effectively for tax purposes.

An ideal subject for a general investigation of leasing issues is the commercial aircraft market, for the reasons given by Gavazza [2010]:

1. Aircraft, one of the most significant categories of leased equipment, represented 11 percent of the total of new leases in 2004, second only to computer equipment. Since the duration of lease contracts for aircraft is substantially longer than for computers, it is likely that aircraft comprise the single largest equipment category in terms of total volume.
2. More than half of all commercial aircraft are currently leased.
3. There is an active secondary market for aircraft. As airlines all around the world use the same few types of aircraft, planes can be redeployed to an operator anywhere in the world within a day.

The principal attractions of operating leases of aircraft are related more to operational issues than financial [Oum, Zhang and Zhang 2000]:

1. Airlines seeking a quick fleet expansion need not wait out production backlogs.
2. Short-term leases provide airlines flexibility in managing fleet size and composition efficiently, facilitating expansion or contraction in response to changes in demand.
3. Through the flexibility of operating leases, airlines are able to shift part of their business risk to leasing companies.

Although short-term leases reduce the risks of excess capacity for airlines, they do not eliminate the uncertainties of the financial costs. During a recession, when the costs of short-term leasing are low, airlines have little incentive to expand their fleets. On the other hand, during a boom period, when airlines seek to expand capacity the most, the costs of leasing are the highest. Thus leases enable airlines and leasing companies to share the risks of uncertain demand. Functioning in an industry confronted with cyclical demand, airlines find this risk-sharing aspect of leases to be highly desirable; however, they must address the trade-off between flexibility in capacity and higher costs.

Bazargan and Hartman [2012] studied aircraft replacement strategies, the critical decisions impacting all aspects of an airline's planning and operations. Focused on when and how many aircraft and which types to purchase, lease or dispose of within an airline's planning horizon, these decisions must support an airline's short- and long-term strategies as they directly impact its financial, operational and competitive performance. The study adopted a binary-integer linear programming model to identify the number of aircraft to buy, lease or sell with the aim of minimizing total discounted costs. The solutions favour: buying and leasing brand new aircraft, entering short-term leases, selling aircraft aged 12 years and older, discouraging fleet diversity, leasing aircraft over buying them.

The suggested strategy favours new aircraft leased for short-term periods and discourages fleet diversity. Various sensitivity analyses implied that leasing aircraft is preferred to buying

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them. The analyses also suggest that airlines will benefit from operating more efficient fleets, even if they cost more to acquire. Buying became more desirable over leasing when lease prices increased by 30 percent and purchase prices were reduced by 40 percent, both of which are unlikely events.

The existence in many firms of material non-cancellable operating lease commitments which had not been presented in the statements of financial position encouraged Imhoff, Lipe and Wright [1991] to develop a method for capitalizing these commitments. Constructive capitalization requires estimating the amount of assets and liabilities that would be reported on the statement of financial position if operating leases had been treated as capital leases from their inception. The difference between estimated assets and liabilities influences retained earnings. To calculate the impact on different levels of the statement of profit or loss (the operating income and the gross profit) the method of Imhoff, Lipe and Wright [1997] should be followed.

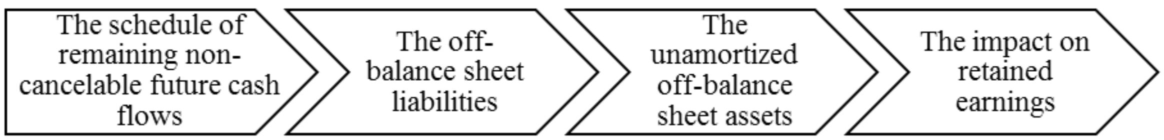

Figure 1. Stages of constructive capitalization suggested by Imhoff, Lipe and Wright [1991].
Source: own study.

To estimate the liability, the schedule of remaining non-cancellable future cash flows required to be disclosed for operating leases should be used. These cash flows are discounted using an estimate of the firm's incremental secured borrowing rate and an estimate of the remaining life of the leased assets. The result is the estimate of the off-balance sheet liabilities represented by the present value of the remaining non-cancellable obligations under operating leases. Assumptions concerning estimation of off-balance sheet liabilities are presented by Imhoff, Lipe, and Wright [1991]:

- all cash flows occur at year-end versus throughout the year
- the remaining life of the leased assets is suggested by footnote disclosures, which reveal the useful lives of property, plant and equipment used under operating leases.

In order to estimate the related unamortized off-balance sheet assets Imhoff, Lipe and Wright [1991] calculated percentages that express the unamortized unrecorded operating lease asset as a percentage of the remaining unrecorded operating lease liability at various stages of the assets' weighted average remaining useful life. The underlying assumptions for these calculations were:

- straight-line depreciation is used for all assets
- the unrecorded lease asset and unrecorded lease liability both equal 100 percent of the present value of the future lease payments at the inception of each lease

- the unrecorded lease asset and unrecorded lease liability are both zero after the last lease payment is made for each lease.

As noted by Imhoff, Lipe and Wright [1997], a series of balance sheet adjustments can account for the impact of constructive capitalization on retained earnings, as income statement details are not required for this computation as long as comparative balance sheet adjustments are made. However, measuring the impact of constructive capitalization on operating income is more complex than measuring the bottom-line effects.

According to current financial reporting standards, assets under operating leases are not presented in the statement of financial position. Imhoff, Lipe and Wright [1991] calculated that the average decrease in return-on-assets (ROA) for high lessees[1] is 34 percent compared to 10 percent for low lessees[2]. The average increase in debt to equity (D/E) for high lessees is 191 percent compared to only 47 percent for low lessees. This confirms that the off-balance sheet effects of operating leases in these and numerous other cases are simply too material to ignore for meaningful analyses and comparisons of financial statement data.

2.2. DEFINITIONS AND TYPES OF LEASES

There are many different definitions of leases. Table 1 presents selected definitions included in legal acts applicable within Polish jurisdiction.

Table 1. Definitions of lease

Name of legal act	Definition
Civil code, § 709	The agreement in which the lessor undertakes to purchase the thing specified by its user (in terms of the activity of the company) from a particular seller on predetermined conditions. After putting the subject to use, the lessee can benefit for a certain period of time, while being obliged to settle the liability with respect to the lessor in the amount equal at least to the price or remuneration for the sale of goods by the lessor.
International Accounting Standard 17 “Leases”, par. 4	An agreement whereby the lessor conveys to the lessee in return for a payment or series of payments the right to use an asset for an agreed period of time.
International Financial	A contract, or part of a contract, that conveys the right to use an

[1] The average ratio of operating lease cash flows for years 1-5 to total reported assets was relatively high.

[2] The average ratio of operating lease cash flows for years 1-5 to total reported assets was relatively low.

Reporting Standard 16 "Leases", appendix A	asset (the underlying asset) for a period of time in exchange for consideration.
National Accounting Standard No. 5 "Leases", par. II.1	The lease agreement, named in the Civil Code, as well as any other agreement contracted for a definite period, under which the lessor transfers the subject, such as real estate, equipment, machinery, vehicles, intangible assets, to the lessee for payable use and benefit from it.

Source: own study.

There are no significant differences between definitions of leases in IAS 17 and IFRS 16. A lease is a contract, in which a lessor conveys to a lessee the right to use an asset for a period of time for a payment or series of payments. IFRS 16 adds that part of a contract also might constitute a lease. The Civil Code regulates only finance leases; operating leases are not mentioned. However, according to the Polish National Accounting Standard, leasing includes all agreements of lease or rent for a definite period of time, but lasting at least 12 months. According to the Polish National Accounting Standard, only PPE and intangibles can be leased.

According to IFRS 16, it is important to assess if a contract is, or contains, a lease. The lease contract should convey the right to control the use of an identified asset for a period of time in exchange for consideration [IFRS 16 2016, par. 9, B9]. Additionally a lessee is not obliged to capitalize a lease agreement in the statement of financial position in the case of a short-term lease (a lease that, at the commencement date, has a lease term of 12 months or less[3]) and a lease for which the underlying asset is of low value [IFRS 16 2016, par. 5, appendix A].

IAS 17 distinguishes between the operating lease and the finance lease, based on the extent to which the risks and rewards associated with the leased asset are transferred by the lessor to the lessee. The standard sets out different accounting approaches depending on whether the business model uses the lease agreement as:

– a source of financing the acquisition of fixed assets at relatively favourable terms due to collateral on leased assets (finance lease) or
– a provision of short-term access to the leased asset corresponding to the entity's current needs, without having to involve resources (operating lease).

Particularly in the case of a business model based on the finance lease, the leased asset is recognized as an asset by the lessee, which significantly affects the assessment of its financial position in the financial statements [Świderska et al. 2014, c.f. EFRAG 2013, par. 2.39, p. 35].

IFRS 16 removes the distinction between finance leases and operating leases. A lessee is required to recognise assets and liabilities for all leases, with limited exceptions [IFRS 16 2016, par. IN7].

[3] A lease that contains a purchase option is not a short-term lease.

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2.3. FUTURE LEASE ACCOUNTING AND THE BUSINESS MODEL

IFRS 16 introduces a single lessee accounting model, requiring lessees to recognise assets and liabilities for all leases with terms of more than 12 months, unless the underlying assets are of low value [IFRS 16 2016, par. IN10].

According to IFRS 16 [2016, par. 9], an entity first must assess whether the contract is a lease or contains a lease. A contract is a lease or contains one if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration[4]. Secondly, an entity must determine the lease term as the non-cancellable period of a lease, together with the periods covered by options to [IFRS 16 2016, par. 18]:

– extend the lease if the lessee is reasonably certain to exercise that option, and
– terminate the lease if the lessee is reasonably certain not to exercise that option.

In assessing whether a lessee is reasonably certain to exercise an option to extend a lease or not to exercise an option to terminate a lease, an entity considers all relevant facts and circumstances that create an economic incentive for the lessee to exercise the above options [IFRS 16 2016, par. 19].

The impact of the business model on lease accounting under IFRS 16 is presented in Table 2.

Table 2. The impact of the business model on lease accounting under IFRS 16

Lessee	Lease
Recognition of lease assets and liabilities	A right-of-use asset representing the right to use the underlying leased asset and a lease liability representing the obligation to make lease payments are recognised in the statement of financial position (balance sheet) at the beginning of the lease term.
Measurement at recognition	A right-of-use asset and a lease liability are initially measured on a present value basis. The initial value of these items includes non-cancellable lease payments (including inflation-linked payments), and payments to be made in optional periods if the lessee is reasonably certain to exercise an option to extend the lease or not to exercise an option to terminate the lease. The lease payments included in the measurement of the lease liability comprise the following payments for the right to use the underlying asset during the lease term that are not paid in the beginning:

[4] If the terms and conditions of the contract are changed, an entity reassesses whether a contract is, or contains, a lease [IFRS 16, 2016, par. 11].

	– fixed payments, less any lease incentives receivable – variable lease payments that depend on an index or a rate – amounts expected to be payable by the lessee under residual value guarantees – the exercise price of a purchase option if the lessee is reasonably certain to exercise that option – payments of penalties for terminating the lease, if the lease term reflects the lessee exercising an option to terminate the lease.
Measurement after recognition	A right-of-use asset is measured similarly to other non-financial assets (such as property, plant and equipment), applying a cost model (unless it applies either of the measurement models), a lease liability – similarly to other financial liabilities. As a consequence, a lessee depreciates the right-of-use asset and calculates interests on the lease liability. The lease liability is measured primarily by: – increasing the carrying amount to reflect interest on the lease liability – reducing the carrying amount to reflect the lease payments made.
Presentation	A lessee presents in the statement of financial position or discloses in the notes: – right-of-use assets separately from other assets[5] – lease liabilities separately from other liabilities[6].
Disclosure	Lessees have to apply judgement in deciding upon the information to disclose to meet the objective of providing a basis for users of financial statements to assess the effect that leases have on the financial position, financial performance and cash flows of the lessee.

Source: [IFRS 16 2016, par. IN10, 22, IN12, 27, IN11, 29, 36, 47, IN13].

[5] If a lessee does not present right-of-use assets separately in the statement of financial position, the lessee includes right-of-use assets within the same line item as that within which the corresponding underlying assets would be presented if they were owned and discloses which line items in the statement of financial position include those right-of-use assets

[6] If the lessee does not present lease liabilities separately in the statement of financial position, the lessee discloses which line items in the statement of financial position include those liabilities.

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IFRS 16 does not refer directly to the business model, only implicitly. It is worth mentioning that, in terms of the business model, there are two important issues: assessing whether the contract is a lease or contains one and determining the lease term.

IFRS 16 referred to the business model directly in its draft 2010/9/ED. Two cases concerned lessors. Firstly, according to IFRS ED [2010b, par. 61] a lessor presents lease income and lease expense in the profit or loss statement either in separate line items or net in a single line item so that the lessor provides information that reflects the lessor's business model. For example, if a lessor's business model uses leases:

– as an alternative means of realising value from the goods it would otherwise sell, the lessor presents lease income and lease expense in separate line items[7]
– for the purpose of providing finance, the lessor presents lease income and lease expense net in a single line item.

Secondly, according to IFRS ED [2010a, par. BC27], in most cases an entity's business model indicates when a derecognition or a performance obligation approach are appropriate for lease recognition. In particular:

– the derecognition approach is likely to be appropriate when the entity's business model is primarily the provision of finance, because the profit of that business is derived from interest income and the principal risk associated with the business is credit risk
– the performance obligation approach is likely to be appropriate when the entity's business model is primarily to generate a return from active management of the underlying assets.

The second reference to the business model was not explicitly included in the standard, but in the supporting conclusion. It provided a definition of the accounting method based on the business model [c.f. ANC, 2013].

3. THE EMPIRICAL STUDY: METHOD AND RESULTS

The study covered 14 consolidated financial statements for 2015 of listed companies included in the WIG20 index, excluding banks and insurers [c.f. Kang, Gray 2014].

The study found that ten groups made use of operating leases. One disclosed in the notes to its financial statements that, by an administrative decision, it controlled land under a municipal ground lease constituting an operating lease; however, it did not disclose the value of the minimum payments under this lease. As a result, the financial statements of just the remaining nine companies were chosen for further analysis.

As disclosed in information supporting the financial statements, the percentage representing the sum of minimum operating lease payments to total assets for the subject companies ranged

[7] Many manufacturers and dealers regard the lease of an asset as equivalent to selling the asset. Those lessors present revenue and cost of sales so that income and expenses from sold and leased items are presented consistently.

between 0% and 83%, with only two companies exceeding 10% (respectively 17% and 83%). Figure 2 presents the above percentages for the subject groups.

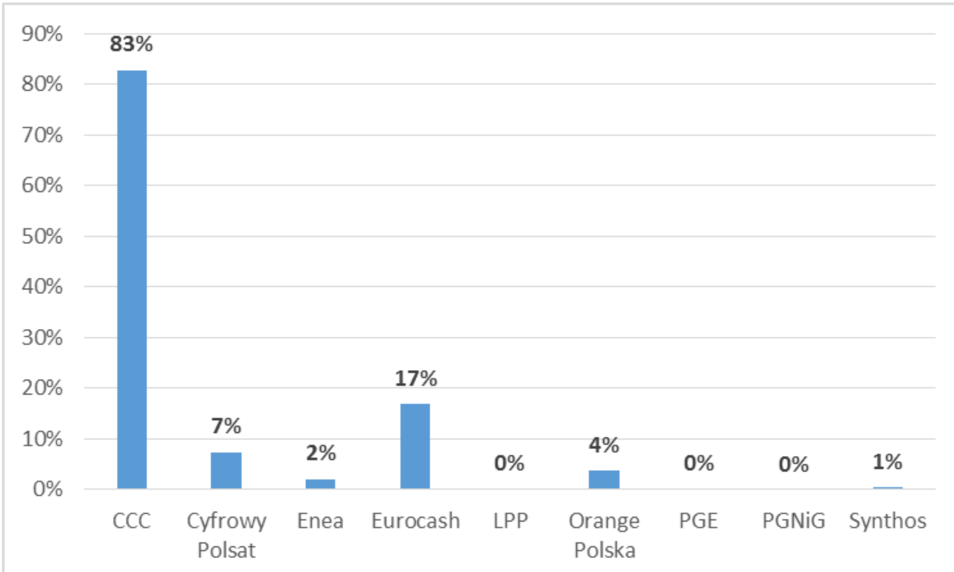

Figure 2. The percentage of the sum of minimum operating lease payments to total assets.
Source: own study.

Table 3 shows the results of the study of the financial statements of the nine groups in terms of the possible impact of the application of the new IFRS, which has been issued but is not yet effective [c.f. IAS 8 2003, par. 30].

Table 3. The assessment of the impact of IFRS 16 on financial statements

Name of capital group	Assessment of impact	Comments
CCC	Considerable	As part of the activities in the segment of distribution activities there are leased premises in which the sale of goods is conducted. These leases are treated as operating leases. According to IFRS 16, the group will have to recognise the assets and liabilities of this type of agreements in the statement of financial position. Future minimum payments under operating leases are disclosed in the notes. Currently, payments under operating leases are recorded on the straight-line basis. It is expected that the assets of the leases will be depreciated on the straight-line basis, and liabilities – using the effective interest rate, which will

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		increase expenses in the beginning of the contract or its modification and will diminish over time.
Cyfrowy Polsat	under analysis	As of the reporting date, the group had not completed its analysis of the impact of IFRS 16.
Enea	lack of information	Not applicable.
Eurocash	under analysis	As of the date of the preparation of the financial statements, the impact on future financial statements of the group was not known.
LPP	lack of information	Not applicable.
Orange Polska	under analysis	It is expected that the change in the standard will affect the following items presented in the financial statements: fixed assets, finance liabilities, net income, cash flows from operating and financing activities. The exact impact of the changes was then being considered by the management board.
PGE	lack of information	Not applicable.
PGNIG	lack of information	Not applicable.
Synthos	under analysis	The group had not yet completed its analysis of the impact of the standard on its consolidated financial statements.

Source: own study

The results of the study presented in Table 3 confirmed the significant impact of IFRS 16 on the financial statements of CCC. In the case of Euro cash, the impact of the new standard was unknown. This situation was similar at Orange Poland where the impact remained under consideration by the management board, although the group confirmed that the change of the standard would affect the following items presented in the financial statements: fixed assets, finance liabilities, net income, cash flows from operating and financing activities.

4. CONCLUSIONS

Proper recognition of leases is an important element in the preparation of financial statements. It is a difficult and complex issue and material in terms of the evaluation of business models. IFRS 16 introduces a new approach to lessee accounting. A lessee must recognise assets and liabilities for all leases with a term of more than 12 months, unless the underlying asset is of low value. It was concluded that the following lease recognition principles would have particular impact on the assessment of the business model in financial statements:

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- assessment if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration
- determination of the lease term, in which it is important to assess whether a lessee is reasonably certain to exercise an option to extend a lease or not to exercise an option to terminate a lease
- application of judgement in deciding the information to disclose in order to meet the objective of providing a basis for users of financial statements to assess the effect that leases have on the financial position, financial performance and cash flows of the lessee.

While the results of the study of the annual reports of listed companies in the WIG20 index, excluding banks and insurers, show that 10 of 14 companies use operating leases, only in the case of two companies did the percentage of the sum of minimum operating lease payments to total assets exceed 10%. The first of these companies determined that the impact of IFRS 16 on its statement of financial position and statement of profit or loss and other comprehensive income will be considerable. The second entity had not completed its analysis. Finally, it was concluded that the new leasing model introduced by IFRS 16 will have a significant impact on only very few companies.

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