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"A critical analysis of the accounting for sale and lease back transactions under the new IFRS 16"

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Dedication

I dedicate this work to the memory of Juan. I would especially like to thank my parents, all members of my big family and my friends for their support. Sincerely, I like to thank my thesis advisor Prof. Dr. Lars Norden, for being a great support and guidance during my study.

Table of Contents

Index of abbreviation	III
List of Illustration.....	IV
List of tables.....	V
Resumo	VI
Abstract.....	VII
1 Introduction	1
1.1 Objectives	1
1.2 Relevance of the study.....	1
1.3 Limitation of the study.....	2
2 Theoretical foundations of IAS 17, IFRS 15 & 16 regarding the sale and lease back transaction	2
2.1 History and of new standard of IAS/IFRS leasing accounting.....	3
2.1.1 IAS 17	3
2.2 The new standard IFRS 16	4
2.3 Classification of a sale and lease back transaction	4
2.4 IFRS 15.....	4
3 Methodical Procedures	5
3.1 Data Collection.....	5
4 Analysis of sale and lease back transaction under IAS 17 and IFRS 16 in theory & practise	6
4.1 IAS 17.....	10
4.1.1 Objective, Scope and determining whether an arrangement contains a lease.....	10
4.1.2 Classification of leases.....	10
4.1.3 Accounting by lessee	12
4.1.4 Accounting by lessors	14
4.1.5 Sale and lease back transactions	15
4.2 IFRS 16.....	16
4.2.1 Scope.....	17
4.2.2 Identifying a lease	17
4.2.3 Lessee.....	20
4.2.4 Accounting for Lessors:	21

4.2.5	Sale and lease back transactions	21
4.2.6	Fundamental changes and impact	21
4.3	IFRS 15	24
4.3.1	Control model in detail	26
4.3.2	Consequences for lease backs	27
5	Sale and lease back transaction in a practical example	27
5.1.1	Took a sale place and does the contract contain a lease?	28
5.1.2	Accounting for the buyer lessor “L AG”	29
5.1.3	Accounting for the seller “ABC GmbH”	31
6	Discussion of results	33
7	Conclusion	38
I	Appendix	40
II	References	51

Index of abbreviation

&.....	and
./.....	minus
\$.....	Dollar
€.....	Euro
%.....	Percent
§.....	Paragraph
*.....	times (math)
AG.....	Aktiengesellschaft
bn.....	billion (US metric system)
EBITDA.....	earnings before interest, tax, depreciation and amortization
et al.....	et alia; et alii
e.i.....	exempli gratia
EU.....	European Union
EY.....	Ernst & Young
Fig.....	Figure
FV.....	Fair Value
GAAP.....	Generally accepted accounting principals
GmbH.....	Gesellschaft mit beschränkter Haftung
GPD.....	gross domestic product
IAS.....	International Accounting Standards
IASB.....	International Accounting Standards Board
IFRS.....	International Financial Reporting Standards
KPI.....	key permanence indicator
KPMG.....	Klynveld, Peat, Marwick und Goerdeler
M&A.....	Mergers & Acquisitions
P&L.....	Profit & Loss Statement
PWC.....	PricewaterhouseCoopers
ROA.....	return on assets equity
ROE.....	return on
SEC.....	US Securities and Exchange Commission
SFAS.....	statement of Financial Accounting Standards
SLB.....	sale and lease back

List of Illustration

Figure 1: Sale and lease back transactions in Europe	9
Figure 2: Sale and lease back transactions by sector from 2012-2014	9
Figure 3: Sale and lease back transaction under IAS 17	16
Figure 4: Contract assessment tool for leasing identification in regards of IFRS 16.....	19
Figure 5: Schematic diagram of the effects of IFRS 16 on the balance sheet and P&L	22
Figure 6: Comparison of companies with large amounts of operating leases.....	23
Figure 7: 5-step model for determining the amount and timing of revenue	25
Figure 8: First booking for receivable for buyer-lessor	29
Figure 9: Second booking for receivable for buyer-lessor.....	30
Figure 10: Additional funding interest portion for the buyer-lessor	30
Figure 11: Financial income for the buyer-lessor in year 1	31
Figure 12: Booking record for the seller-lessee in year 1	32
Figure 13: Sale and lease back transaction guideline under IFRS 16 for seller-lessee and buyer-lessor	33
Figure 14: Accounting policy options for leases under IFRS 16	35

List of tables

Table 1: Volume and growth of leasing by region (2015-2016).....	7
Table 2: Impacts of the effects of IFRS 16 on the balance sheet and P&L	22
Table 3: Effects of IFRS 16 on KPI's	22
Table 4: Payment series from the perspective of the buyer-lessor.....	30

Resumo

Objetivo/ Resumo dos objetivos – O objetivo do trabalho de Antonius Sieverding “Uma análise crítica da contabilização de transações de venda e arrendamento sob a nova IFRS 16” é acessar o tratamento da operação de venda e arrendamento mercantil de acordo com a introdução da nova norma de arrendamento mercantil IFRS 16 e determinar suas consequências para os negócios. Devido a essas mudanças de longo alcance, a contabilização das transações de venda e arrendamento de acordo com a IFRS 16 é analisada criticamente e avaliada em relação à finalidade e aos princípios selecionados da contabilidade do IFRS. Além disso, é feita uma comparação com as disposições da IAS 17. Outrossim, esta pesquisa visa identificar espaço potencial para evitar as consequências da IFRS 16 e vincula essas descobertas à prática.

Design / metodologia / abordagem – A pesquisa foi dividida em diferentes partes. Em primeiro lugar, a fundamentação teórica é determinada com o uso de materiais do IASB em relação ao novo padrão de locação para investigar possíveis diferenças ocorridas na IFRS 16. Baseado em um exemplo prático, o procedimento contábil para uma transação de venda e arrendamento segundo a IFRS 16, para ambos envolvendo partes, é mostrado. Os resultados são discutidos e vinculados, especialmente no que diz respeito ao propósito e várias possibilidades oferecidas pela IFRS 16.

Resultados/ Conclusão – A introdução da IFRS 16 traz grandes mudanças para os negócios. Uma transação de venda e arrendamento sob a IFRS 16 leva em contraste com a IAS 17 (assumindo a locação operacional) para uma contabilidade em balanço.

Limitações – Não é necessário apresentar uma análise completa e revisão do novo padrão.

Aplicabilidade do trabalho – Este trabalho pode servir as empresas, assim como o auditor e contadores, como uma diretriz para o tratamento de transações de venda e arrendamento sob a IFRS 16 e mostra as consequências.

Originalidade – Para o conhecimento do autor, este é o primeiro estudo que combina uma comparação entre a IAS 17 e a IFRS 16 com o tratamento de transação de venda e arrendamento e determina sua finalidade e as consequências para as empresas que usam um exemplo prático.

Palavras-chave: IFRS 16; IAS 17; Sale and lease back transaction

Categoria do artigo: Tese de mestrado, tese de MBA, trabalho de pesquisa

Abstract

Purpose/Summary of objectives – The purpose of the work from Antonius Sieverding “A critical analysis of the accounting for sale and lease back transactions under the new IFRS 16” is to assess the treatment of sale and lease back transaction in regards of the introduction of the new leasing standard IFRS 16 and determine its consequences for businesses. Due to these far-reaching changes, the accounting for sale and lease back transactions in accordance with IFRS 16 is critically analyzed and evaluated in regards of the purpose and selected principles of IFRS accounting. In addition, a comparison is made with the provisions of IAS 17. Further, this research aims to identify potential room for avoiding the consequences of IFRS 16 and links these findings to the practice.

Design/methodology/approach – The research was divided into different parts. First of all, the theoretical foundation is determined with using IASB materials regarding the new lease standard to investigate possible differences occurring to IFRS 16. Based on a practical example, the accounting procedure for a sale and lease back transaction under IFRS 16, for both involving parties, is shown. The findings are discussed and linked, especially in regards of the purpose and various possibilities IFRS 16 offers.

Findings/Conclusion – The introduction of IFRS 16 bears far reaching changes for business. A sale and lease back transaction under IFRS 16 leads in contrast to IAS 17 (assuming operating lease) to an on-balance sheet accounting.

Research limitations/implications – It is not necessary to present a full analysis and review of the new standard.

Practical implications – IFRS 16 will have a significant influence on future balance sheets, analyses and company valuations. This work can serve companies as well as auditor and accountants as a guideline for the treatment of sale and lease back transactions under IFRS 16 and demonstrates the accruing consequences.

Originality – To the knowledge of the author, this is the first study that combines a comparison of IAS 17 and IFRS 16 with the treatment of sale and lease back transaction and determines its purpose as well as consequences for businesses using a practical example.

Keywords: IFRS 16; IAS 17; Sale and lease back transaction

Category: Master thesis, MBA thesis, research paper

1 Introduction

1.1 Objectives

This thesis is a critical analysis of the accounting for sale and lease back transactions pursuant to IFRS 16 including a quantitative analysis. The recast of the provisions of the leasing accounting under IFRS 16 is accompanied by significant conceptual changes. The accounting for the lessee is based on the so-called right-of-use model. Thereafter, the lessee shall record all assets and liabilities resulting from a lease. In addition, in accordance with IFRS 16, IFRS 15 is also relevant for the assessment of the sales transaction. As under IAS 17 it is common practise to use sale and lease back transactions for balance sheet financing and management. It is important to investigate, if this kind of transaction is still suitable under IFRS 16. Furthermore, the general changes by applying the new standard have far reaching impact on companies which I examine. Depending on the outcome of the case study, I also conduct if, and how much the intend of the new standards, to limitation of off balance sheet accounting are met or if there is still room for balance sheet management.

1.2 Relevance of the study

With this thesis, I provide an overview of the various possibilities for the new IFRS 16 regarding a sale and lease back transaction.

As a result of the accounting scandals in the early 2000s, dealing with off-balance-sheet transactions was a central issue for standard-setters (Spencer & Webb, 2015). Even before, international organizations such as the G4 + 1 group has criticized leasing accounting as an "unsatisfactory" (Lipe 2001). The (old) US Leasing standard SFAS 13 has even been declared the worst accounting standard (Gordon, 2002). From 2002, the subject matter of the US Securities and Exchange Commission (SEC) was set by the Sarbanes-Oxley Act (Pub. L. 107 - 204, 116 Stat 745 § 401 lit.) and proposed revising the prevailing 2005 leasing standard (SOX, 2002). One year later, the IASB and FASB launched their reform efforts to harmonize leasing accounting (FASB & IASB, 2006). Following the publication of a discussion paper in 2009 (FASB & IASB, 2009), the IASB issued the first draft in 2010 and the second in 2013 before finally publishing the final IFRS 16 in January 2016, which will replace IAS 17 from January 1, 2019.

With the release of IFRS 16, a new conceptual approach to accounting for leases has been introduced, the right-of-use approach (Leibfried & Kleibold 2009). This requires the compulsory accounting of the rights of use and the corresponding obligations, so that

previous off-balance sheet transactions will be recognized in the balance sheet for the first time (Stockinger, 2015). Nevertheless, this thesis is not only relevant as the first adoption of the new standard is required next year, but regarding the values of off balance sheet accounting for leasing” worldwide (refer to section 4 and 6).

1.3 Limitation of the study

This thesis studies, how and with what outcome sale and lease back transaction are portrayed within IFRS 16 using a generic case study. Due to the complexity of company’s structures and environments, the outcome does not apply generally to all sale and lease back transactions. Particularly with the regard to the complexity of the new rules, it is not necessary to present a full analysis of the new standard, as this is not the scope of the work. Additionally, it is to mention that not all the changes regarding the transition from IAS 17 to IFRS 16 can be displayed in detail (such as consequences for reporting regarding notes etc.), but rather a theoretical foundation is presented to understand the sale and lease back transaction within IFRS 16. Thus, with this thesis I concentrate on a normal sale and lease back transaction and do not focus on special circumstances regarding leasing. Especially for local GAAPs and other accounting standards the results may differentiate. Furthermore, in this work, the analysis of potential effects on current processes and systems of companies through the implementation of IFRS 16 is waived. It is important to mention that with this work the focus does not lie on sale and lease back transaction itself, but rather on the accounting outcome and its consequences for companies.

2 Theoretical foundations of IAS 17, IFRS 15 & 16 regarding the sale and lease back transaction

Leasing is an alternative to a credit-financed purchase for a large number of companies (Waldman, 1997). For companies, the positive impact on the balance sheet is due to leases classified as operating leases, as there is no balance sheet entry on the part of the lessee. However, conversely, this off-balance sheet effect leads to issues related to conveying decision-relevant information (Imhoff, Lipe & Wright, 1997). Due to the non-accounting of operating leases, much of the actual liabilities of the companies are not readily apparent to the final report reader. The actual asset, financial and revenue display is distorted and the balance sheet analysis is made more difficult (Sari & Altintas 2016). This main criticism has

prompted the IASB to launch the development of a new standard (Agoglia, Douppnik & Tsakumis, 2011). The key objective is the presentation of all leases in the lessee's balance sheet in order to do justice to the information purpose of the IFRS financial statements and to ensure an improved presentation of the net assets, financial position and results of operations. However, the development process was extremely complex and the factual outcome divides the opinion of many experts (Hung & Subramanyam 2007).

2.1 History and of new standard of IAS/IFRS leasing accounting

Lease accounting is currently regulated in IAS 17. The standard appeared in September 1982 and entered into force on January 1, 1984 for the first time. The current version is valid since January 1, 2005, it contains minor changes to January 1, 2010.

IAS 17 is based on a risk reward approach, as the leased asset is accounted for by the contractual partner who receives the significant risks and rewards of using the leased asset and thus becomes the beneficial owner (Beattie, Goodacre & Thomson, 2006).

2.1.1 IAS 17

In accordance with IAS 17.4, a lease is an arrangement under which the lessor transfers to the lessee the right to use an asset for an agreed period of time in return for payment or a series of payments. The transfer of rights of use is thus identified for the purpose of identifying a lease as such crucial. IAS 17 generally governs all leases, with the exception of the lease agreements referred to in IAS 17.2 (Buschhüter & Striegel 2011).

For the classification of leases, IAS 17 examines which contracting party bears the significant risks and opportunities from the leasing agreement. Leases are classified as finance leases and operating leases in accordance with IAS 17.8. If all significant risks and rewards are transferred to the lessee, this is a finance lease. As the lessor becomes the beneficial owner, it is required to present the leased property on his balance sheet. If this is not the case and the economic ownership remains with the lessor, there is an operating lease in the sense of a negative delimitation. According to the all-or-nothing approach, the lessee's lease is not disclosed (Chaudhry, 2017).

For classification as a finance lease, IAS 17.10 and IAS 17.11 specify five, respectively three criteria. The application of a criterion in accordance with IAS 17.10 is sufficient to classify a finance lease. However, the indicators are not clearly formulated and leave room for

interpretation and discretion. It is essential to consider the overall picture of the contract in order to properly assess the distribution of opportunities and risks.

2.2 The new standard IFRS 16

In the first quarter of 2016, after almost ten years of consultation, the joint project of the IASB and FASB to develop a uniform leasing standard ended with the publication of IFRS 16 "Leases" by the IASB on January 13, 2016. Shortly afterwards, on February 25, 2016, the FASB published its new leasing standard (International Accounting Standards Board, & IFRS Foundation 2016). Full convergence has not been achieved, nevertheless with the published rules lease accounting will change. The date of first-time application is the January 1, 2019 (Ebner & Stolz, 2016).

2.3 Classification of a sale and lease back transaction

Sale and lease back transactions are a special form of leasing and represent internal funding through asset diversification and the associated release of capital: The owner, as the future lessee, sells fixed assets that are required for operations, such as real estate or manufacturing gear to a leasing company, the lessor, and leases back the sold property or asset as part of a generally long-term leasing contract (Cary 1948). The motives for a sale and lease back transaction, in addition to reducing dependence on debt, may be strategic change, planned expansion or liquidity requirements for debt reduction, etc. (see section 4).

2.4 IFRS 15

In order to understand the consequences of IFRS 16 on sale and lease back transactions, further consideration of the also newly introduced IFRS 15 has to be made. The new accounting standard IFRS 15 applies to financial years beginning on or after January 1, 2018 and follows IAS 18. A sale must comply with the relevant requirements of IFRS 15 Revenue from Contracts with Customers. The aim of IFRS 15 is to improve accounting by developing a single revenue recognition concept applicable to all transactions and industries. IFRS 15 requires new quantitative and qualitative disclosures that enable users of financial statements to understand the nature, amount, timing and uncertainty of revenue and the resulting cash flows from contracts with customers. The core principle of IFRS 15 is that an entity should recognise revenue in its financial statements in the amount in which it expects to receive consideration for the transfer of goods or the rendering of services. The companies should

recognize revenue according to the following five-step model which will be discussed under section 4.3.

3 Methodical Procedures

I mainly conduct secondary research, primarily on IFRS 15, IFRS 16 and IAS 17 as sale and lease back transactions. I use both, a theoretical and a practical example to show what consequences for balance sheet accounting, P&L and KPI's are to be considered by companies while applying IFRS 16. Due to these far-reaching changes, with this master's thesis I intend to critically analyse and recognize the accounting for sale and lease back transactions pursuant to IFRS 16 in regards of the purpose and selected principles of IFRS accounting. For the purpose of the thesis it is intended to give an overview of the major changes to the newly published leasing standard and, on this basis, to examine the extent to which the objectives and expectations for the leasing accounting could be achieved, especially regarding sale and lease back transactions.

3.1 Data Collection

In order to achieve this objective, I give insights into the current standard IAS 17 and upcoming IFRS 16, which is of fundamental importance for the valuation and analysis. This is exercised by using the current IFRS Standard and additions from the IASB. For retrieving information, I rely on the IASB's webpage and its commentaries on the current issue. Furthermore, I show a stylized example to illustrate and discuss the effects of the new rules, which will represent a real transaction. Moreover, I collect numbers about the volume of leasing in the economy, the number of companies that make use of leasing and its overall impact. For academic purposes, I use the "journal quality lists" Sixty-Second Edition, April 3, 2018 compiled and edited by Professor Anne-Wil Harzing, as a guidance for top academic journals to use for secondary literature. I find general accounting books in the University and State Library Münster and the Central Library of the Goethe University Frankfurt. In order to understand the impact of the introduction of the new standard I review several studies conducted by the academic & political institutions, the IASB itself, the big 4 auditing companies, banks and real estate companies. The focus will firstly rely on, the impact for individual companies and secondly the overall economic impact on different industries and sectors. Apart from that I am also in contact with accounting companies and its employees and auditors to confirm the findings. I do not perform a guided interview, but rather in face to

face meetings a discussion about the current topic takes place. Further, I conduct databases from journal publishers such as “Wiley”, “Owlit” and “Beck online” to find potential articles related to the topic. The data collection is concluded with a general Google search. For general understanding I also follow the unorthodox way of retrieving information from a video series of a big 4 company on the key issues in implementing the new leases standard IFRS 16 on an online video platform.

4 Analysis of sale and lease back transaction under IAS 17 and IFRS 16 in theory & practise

As already mentioned, the aim of this work is to determine whether a sale and lease back transaction is suitable under the new accounting laws, and to which extend changes may accrue with the adoption of IFRS 16. Therefore, in the following chapter I compare the leasing accounting under the currently valid IAS 17 with the future IFRS accounting rules in accordance with IFRS 16. In the following section, I present the accounting for leases in accordance with IAS 17, which is still largely applied in 2018. Furthermore, I analyse the new rules of the IFRS 16, which is applicable for companies after January 1, 2019 and replace the IAS 17. As for the special case of sale and lease back transactions, how to determine sales plays a big role, IFRS 15 also partially has to be presented.

To begin with, the basics of IAS 17 are explained in order to understand the objective of this standard, to be able to define leases in accordance with this standard, and also to delineate its scope. However, the focus lies on the classification of leases as either finance leases or operating leases, as the nature of this classification contributes significantly to dissatisfaction with IAS 17 from regulators. Initially, the basic distinction between finance lease and operate lease is generally discussed. Following this, the assignment criteria from IAS 17.10 and IAS 17.11 are examined in more detail in order to identify the respective weaknesses of these criteria. After explaining the valuation of both finance leases and operating leases from the lessee's and lessor's point of view, an explanation of the sale and lease back transaction follows. Finally, the findings are summarized and linked with those of IFRS 16. A critical appraisal highlights the weaknesses of IAS 17, which have made the call to reform leasing accounting ever louder in recent years, which finally lead to the new IFRS 16. In order to understand the new standard, it is from highest importance to discuss the nature and structure

of the IFRS 16. Finally, I conduct several studies in order to understand the impact and significance for the economy and companies itself.

Leasing can be seen as an intermediate form between buying and renting and is therefore increasingly taken into consideration (Miller & Upton 1976). The use of lease contracts by companies has increased in recent years (Sofijanovska & Stoimilova 2016). The leasing market is considered as a growing market (Gleesen, 2018). The latest study of the leasing market I found results from The White Clarke Group Global Leasing Report which excludes real estate leasing. The company states that “the top 50 countries in 2016 reported growth in new business volume of 9.40%, rising from US\$1.005,30bn in 2015 to US\$ 1.099,77bn in 2016. Three regions, North America, Europe and Asia, account for more than 95% of world volume.”

Table 1: Volume and growth of leasing by region (2015-2016)

Rank by volume	Region	Annual volume (US\$bn)	Growth 2015–2016 (%)	Percentage of world market volume 2015	Percentage of world market volume 2016	Change in market share 2015–2016
1	North America	416,8	2,2	40,6	37,9	-2,7
2	Europe	346,3	7,3	32,1	31,5	-0,6
3	Asia	289,9	30,0	22,2	26,4	4,2
4	AUS/NZL	28,4	-8,9	3,1	2,6	-0,5
5	South America	12,9	-6,8	1,4	1,2	-0,2
6	Africa	5,4	-19,5	0,7	0,5	-0,2
Total		1.099,70				

Source: (Own figure based on White Clarke Group Global Leasing Report, 2018)

To put this figure into comparison, the GDP for Germany accounts for US\$ 3.466,76bn, which means the leasing market worldwide roughly accounts for one third of the German economy (Trading Economics, 2018).

Considering this issue, the question arises why are more and more companies finding leasing attractive. To name some of the reason companies participate in either lease transaction and, or sale and lease back transactions I summaries arguments of the study “Analysis of Factors and the Impacts of Sale and Leaseback Transaction” by Nur Lesya Firsya Johaimi Ling from 2012.

For seller lessees (“Corporation Companies”) she finds the following reasons:

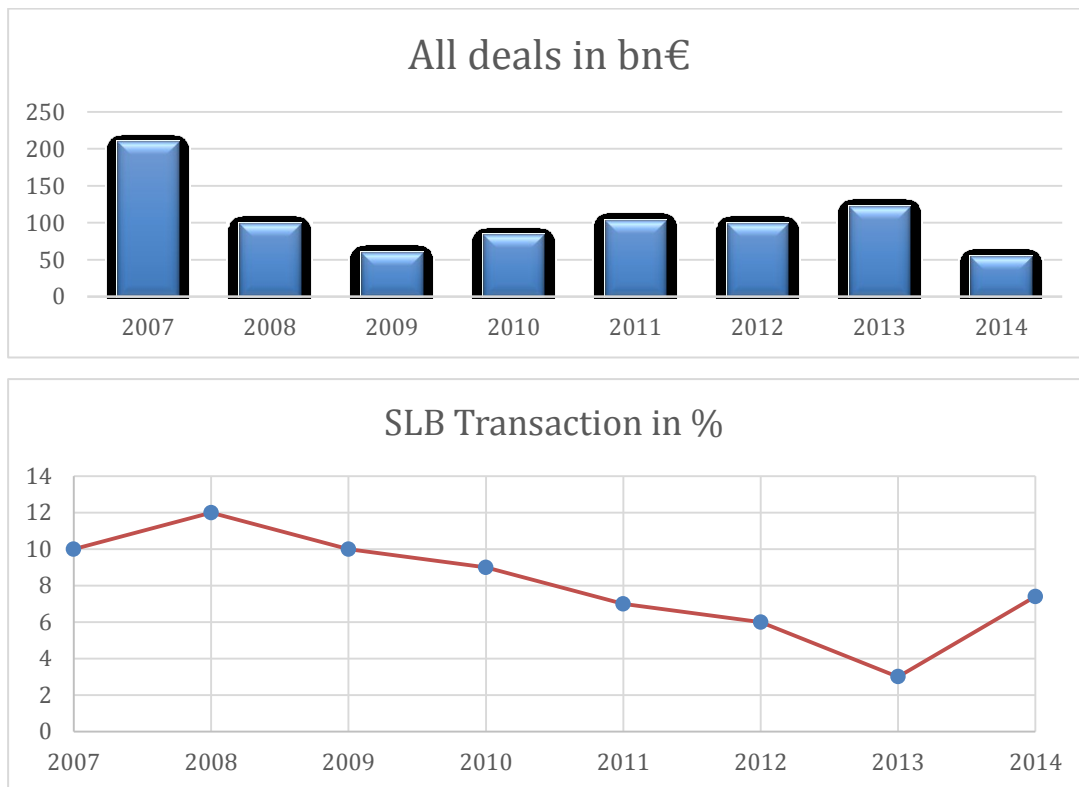
- Balance sheet management
- Flexibility
- Financing
- Elimination of risk
- Outsourcing
- Budgeting

For buyer lessors (“Investor Companies”):

- low risk investment
- Long term guaranteed rental income
- Financial (tax, insurance and operating cost) advantages
- Better asset care
- Full power of disposal of the asset
- Higher Return Rate

I discuss a number of these motives later in this thesis under section 5. Thus, an indication is that finance and balance sheets motives are predominant for leasing. Additionally, I provide a number of important sale and lease back transactions in the past. Colliers, a Canadian real estate agency names and provides an overview of what kinds of sale and lease back transaction are made within the past in its sale and lease back report from 2015.

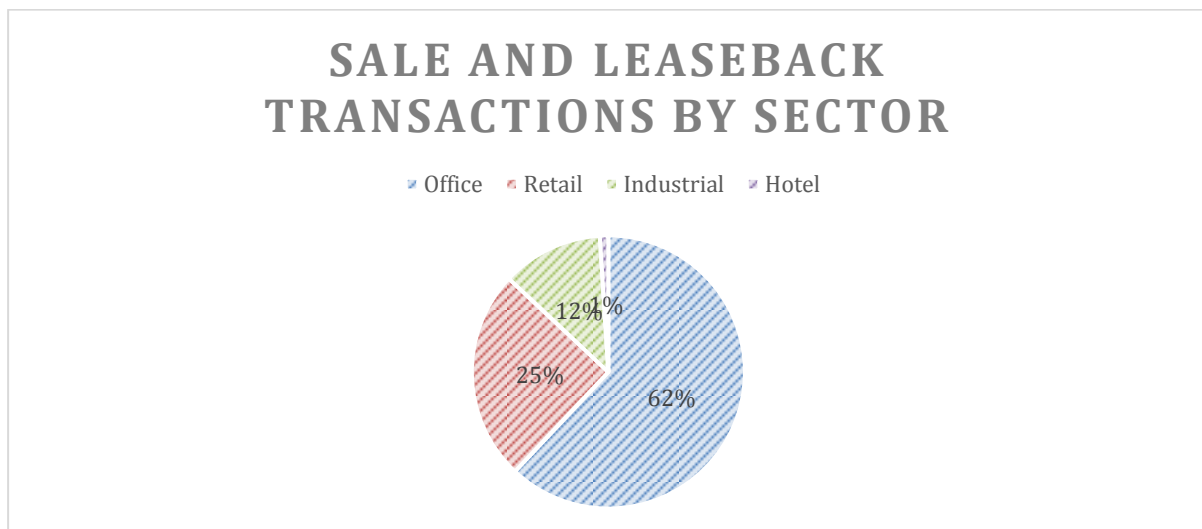
Figure 1: Sale and lease back transactions in Europe



Source: (Own figure based on Colliers, 2015)

The real estate company also provides an overview which kind of sale and lease back transactions are made. 63% of all deals were related to offices, followed by retail, industrial and hotels.

Figure 2: Sale and lease back transactions by sector from 2012-2014



Source: (Own figure based on Colliers, 2015)

As there was a rise in the amount of sale and lease back transactions in 2014, the company states that this kind of transaction is not only contra-cyclical. There is a peak of transactions

during the financial crisis in the late 2000s, but the recent rise in 2014 shows that also other factors play a role for the investment climate within SLB transactions (Colliers, 2015).

4.1 IAS 17

For almost 30 years, leasing itself has been recognised by companies applying IFRS in accordance with IAS 17 "Leases" (Petersen, Bansbach, Dornbach, & Accounting, K. L. S., 2017). Within this standard policies and disclosures for the lessor and the lessee are determined. Accounting for leases has been subject to considerable criticism to date as the leasing accounting formerly follows an all-or-nothing approach, after leasing relationships are almost arbitrarily divided into a dichotomy of finance and operating leases (Joubert, Garvie, & Parle 2017). Only the category of a finance lease is recognized on the balance sheet, while operating leases are not included in the balance sheet, therefore so called off-balance sheet (Stockinger, 2015).

4.1.1 Objective, Scope and determining whether an arrangement contains a lease

The objective of IAS 17 (revised 2003) is to require lessees and lessors to apply appropriate accounting policies and disclosure requirements in regards of finance and operating leases. Under IFRS, the rules concerning leases fall under the provisions of IAS 17, with the exception of IAS 17.2, which deals with license agreements, films, video recordings, plays, manuscripts, patents and similar agreements. Furthermore, IAS 17 does not apply to leasing agreements relating to investment property or agriculture. If real estate is held as a financial investment, it must be accounted for as assets of the lessee in accordance with IAS 40. In the case of biological assets, IAS 41 regulates the recognition of these assets on the balance sheet (Fülbier, & Pferdehirt, 2005).

4.1.2 Classification of leases

The classification of leases under IAS 17 is based under IAS 17.4 and furthermore in IAS 17.10.

“A lease is classified as a finance lease if it transfers substantially all the risks and rewards incident to ownership. All other leases are classified as operating leases. Classification is made at the inception of the lease (IAS 17.4)”

“Whether a lease is a finance lease or an operating lease depends on the substance of the transaction rather than the form (IAS 17.10)”

If the risks and rewards incidental to ownership are substantially transferred to the lessee, the leased asset is allocated to the lessee so that a lease is classified as a finance lease. Criteria and indicators specified in IAS 17.10 and 17.11 that lead individually or in combination to classification as finance leases must be taken into account. The classification is made at the beginning of the lease (Beattie, Edwards & Goodacre 1998).

In this, it is sufficient if at least one of the following criteria is fulfilled (Petersen, Bansbach, Dornbach, & Accounting, K. L. S.2017):

- Transfer of Ownership Test

At the end of the lease term, the legal ownership of the leased asset is transferred to the lessee.

- Bargain Purchase Option Test

The lessee has the option to purchase the leased asset at a price that is significantly lower than the expected fair value of the asset at the time the option is exercised.

- Runtime test (Economic Life Test)

The lease term including the renewal option covers most of the economic useful life of the leased asset. "The predominant part" is not explicitly defined; as a rule, the term of the contract corresponds to at least 75% of the economic useful life.

- Cash value test (recovery of investment test)

The present value of the minimum lease payments at the beginning of the lease essentially corresponds at least to the fair value of the leased asset. The present value of the minimum lease payments is the sum of the discounted minimum lease payments. In accordance with IAS 17.4, the minimum lease payments are payments made by the lessee during the term of the lease plus the residual value guaranteed to the lessor or the agreed purchase price if a favourable purchase option exists. The discount factor corresponds to the lessor's internal interest rate or a comparable financing interest rate of the lessee.

- special leasing (Petersen, Bansbach, Dornbach, & Accounting, K. L. S., 2017).

The leased asset is individually adapted to the needs of the lessee, i.e. it can be used without significant changes (Baetge at. al. 2013). In addition, IAS 17.11 contains indicators that complement or substantiate the abovementioned tests and are not to be understood as independent attribution criteria, as was already the case with the term "indicator" and from the wording "could lead to a lease being classified as a finance" (PKF International Ltd, 2017). The facts referred to as indicators would in any case be covered by another of the tests referred to in IAS 17.10 or by the general standard in IAS 17.8 and are not by themselves a

suitable classification criterion for leases (Ankarath, Mehta, Ghosh, & Alkafaji 2010). The indicators referred to in IAS 17.11 could be a finance lease if:

1. the lessee bears the lessor's losses if the lessee withdraws from the leasing contract,
2. the lessee shall bear the profits, but also the losses arising from changes in the market value of the leased asset (e.g. in the form of a discount on the leasing instalments corresponding to the proceeds of the lease) or
3. the lessee has a renewal option on terms substantially below comparable market conditions. (Zülch & Hendlér; Wiley-VCH. 2018).

In some cases, auditors are required to allocate the leased property to the lessee, solely on the basis of the indicator IAS 17.11 (b), if the lessee grants a tenant loan to cover the open residual value or a first piece of loss, although inclusion of the tenant loan in the recovery of investment test the leased property may not be allocated to the lessee in accordance with the criteria in IAS 17.10. This approach is incorrect regarding the fact that IAS 17.11 (b) is only an indicator of a finance lease, but not a separate overriding principle in the sense of an overriding principle, which necessarily results in a finance lease, although the overall picture of the circumstances is not for a transfer of beneficial ownership to the lessee (Adler & Gelhausen, 2011). In this respect, it can make no difference whether the lessor's risks are covered by tenant loans to be considered in the present value test or alternatively by higher lease payments (Shamrock, 2012). Because land has an indefinite useful life, IAS 17.14 specifies that the lessor only receives substantially all of the risks and rewards if ownership of the land at the end of its life is likely to pass to it. In the case of leases on land, therefore, only the first two, namely the transfer of ownership test and the bargain purchase test, are applicable to the above examples and indicators, because only in these leases is there a probable transition of opportunities and risks in the aforementioned sense (Bragg, 2016).

4.1.3 Accounting by lessee

To begin with, the accounting for leases under IAS 17 depends on the outcome of the test whether the lease itself is treated as a finance lease or an operating lease.

Finance Lease:

The leased asset is valued at the fair value at the inception of the lease or, if lower, at the present value of the minimum lease payments. If, on the other hand, the present value of the minimum lease payments exceeds the fair value, no unscheduled depreciation is required but

the lease liability is adjusted to the fair value by discounting with a higher interest rate (Baetge et al. 2013).

If its determination is practicable, the minimum lease payments underlying the lease shall be used to calculate the present value of the lease. Otherwise, the lessee's marginal borrowing interest rate shall be used. The costs initially incurred by the lessee, which are directly related to the leasing activity, are added to the asset to be recognized (IAS 17.24).

In the following periods, the capitalized asset is depreciated over its term and the liability is remunerated and repaid (Ballwieser, 2013). Normally, the amortization process will not be in line with the amortization procedure, so that the underlying balance sheet items will not evolve in the same way, with the liability tending to be higher than the asset value (Bauman, & Francis, 2011).

IAS 17.25 provides a division of the minimum lease payments into financing costs and repayment portion of the remaining liability. The financing costs are to be distributed in such a way that the term results in a constant interest rate on the remaining debt over time. Contingent rental payments are recognized as an expense in the period in which they are made (Petersen, Bansbach, Dornbach, & Accounting, K. L. S.2017). The repayment reduces the lease liability with no effect on net income. The amount of the depreciation of leased assets result from the scheduled distribution of the total depreciation volume over each reporting period of the expected useful life (Pellens et al., 2017). Whether a leased asset is impaired can be measured by the procedures prescribed in IAS 36. For depreciable assets where transfer of ownership is reasonably certain at the end of the contract, IAS 17.27 depreciation is to be applied in accordance with the same principles applied to comparable assets held by the lessee (Zülch & Hendler; Wiley-VCH. 2018).

Operating Lease:

On the other hand, if the lease is classified as an operating lease, the lease payments are recognized only in the income statement of the lessee, and thus not on the balance sheet. In principle, the expense is distributed on a straight-line basis over the term of the lease (Imhoff, Lipe & Wright, 1997). A derogation is made from this distribution of leasing expenses if the economic course of use of the leased object for the lessee follows a different systematic basis (IAS 17.33). This applies even if the payments are not made on this basis. The off-balance sheet character is crucial for the lessee as often this is used as an accounting tool and for balance sheet management (Petersen, Bansbach, Dornbach, & Accounting, K. L. S.2017).

4.1.4 Accounting by lessors

As already mentioned the treatment for lease accounting for lessors also differs whether the lease is classified as a finance or operating lease:

Finance Lease:

In the case of a finance lease, the leased asset is not capitalized in the lessor's balance sheet. The accounting treatment of the lessor is in principle a mirror image of that of the lessee, but not necessarily the amounts. The lessor's balance sheet must include a claim equal to the net investment value (IAS 17.36), which is the present value of all guaranteed and non-guaranteed payments that the lessor has included in the contract costing. The asset is accounted for as a sale to target, i.e. the asset is derecognised at the same time as the receivable is booked. The outstanding lease payments are divided into capital repayments and financial income (Zülch & Hendlér; Wiley-VCH. 2018). They serve to amortise and remunerate the lessor's financial investment (IAS 17.37). If the lessor is also a manufacturer or a dealer, an (instalment) purchase with an immediate effect on earnings may alternatively be available (Catty, 2010).

The direct costs incurred by the lessor upon conclusion of the contract may possibly be added to the lease contract. These costs are included in the initial valuation of the receivable from the finance lease and reduce the amount of income recognized over the term of the lease. The internal interest rate underlying the lease is set so that the initial direct costs are automatically included in the lease receivables (Pellens et. al., 2017).

According to IAS 17.39, the financing proceeds are to be distributed according to plan over their term, so that they equate to a constant interest rate on the outstanding net investment. The lease payments are offset against the gross investment in order to reduce the nominal amount by the unrealized financial income (IAS 17.40). The estimated non-guaranteed residual value contained in the gross claim must be reviewed regularly (Kümpel & Becker, 2006). The income distribution is to be adjusted if the estimated non-guaranteed residual value is reduced. The reduction of already deferred contributions must be recognized immediately (IAS 17.41), i.e. the estimated loss is to be divided into an expense from the reduction of the present value of the residual value and a reduction in the unearned interest income (Petersen, Bansbach, Dornbach, & Accounting, K. L. S.2017).

Operating Lease:

As for Operating Leases the lessor, who is also the legal and beneficial owner, must present the asset in its balance sheet in accordance with the properties of the leased asset in accordance with IAS 17.49. The leased asset remains as an asset under non-current assets and is measured in accordance with customary rules, using the cost of acquisition and manufacture. Depreciation is based on the principles of IAS 16 and IAS 38. In particular, depreciable leased assets must be depreciated using the same depreciation principles as for similar non-leased assets (Mirza, Orrell, & Holt 2010). IAS 36 assesses whether the recoverable amount of a leased asset still exists or not, however the depreciation is accounted for in profit or loss (IAS 17.53 and 54). As a reflection of the leasing payments of the lessee, the distribution of leasing income over the term of the contract does not determine the payment flow (Imhoff, Lipe & Wright, 1997). The leasing income is recognized in profit or loss on a straight-line basis. If the cash flow does not correspond to the straight-line nature of the use of the leased asset, a different scheduled distribution should be chosen that is more in line with the timing of the reduction in the benefit derived from the leased asset (IAS 17.50). Direct costs of an operating lease are added to the acquisition or production costs and recognized as an expense in the same way as the lease income (IAS 17.52). Other costs incurred by the lessor during the term of the contract are recognized immediately as an expense (Cairns, 2012).

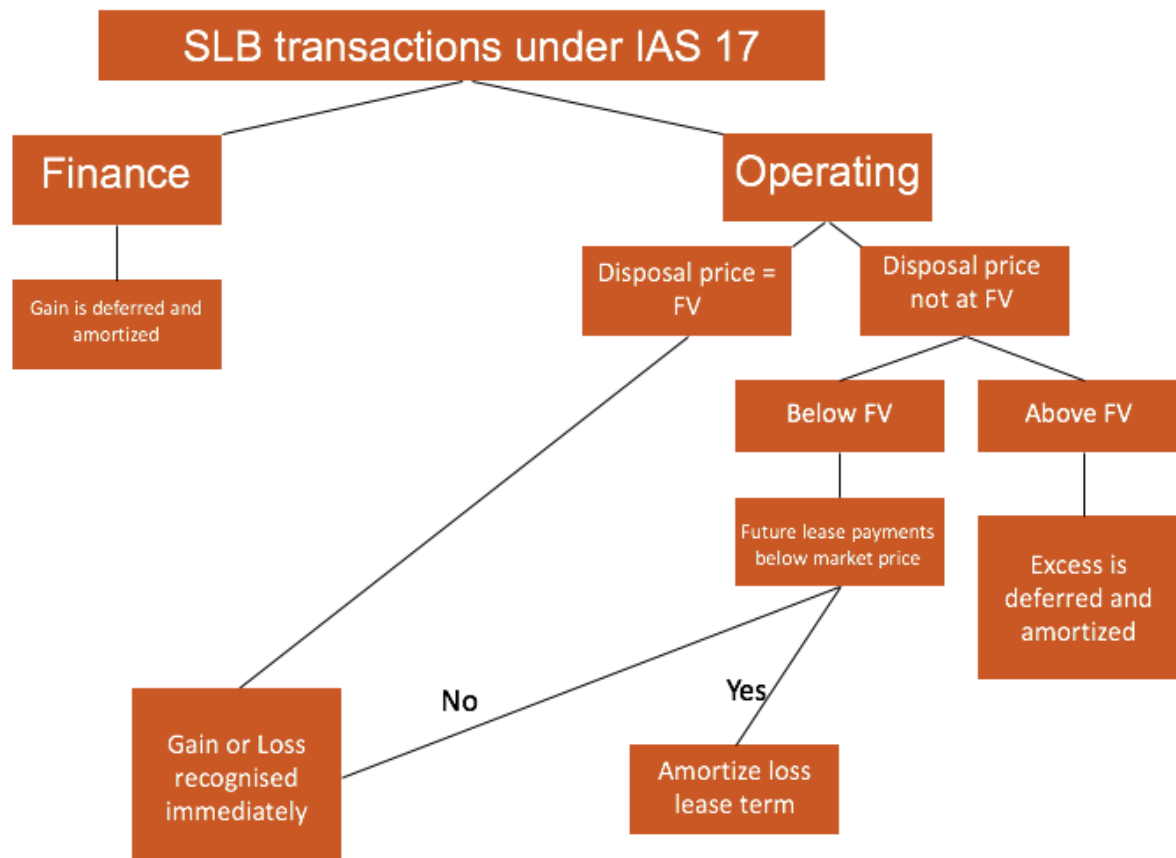
4.1.5 Sale and lease back transactions

IAS 17 gives specific guidance of how to account for a sale and lease back transaction (Zülch & Hendler; Wiley-VCH. 2018).

Sale and lease back transactions comprise the sale and simultaneous lease back of leased assets. If the lease back qualifies as a finance lease, income from the sale must be deferred in accordance with IAS 17.59 and recognized in income over the term of the contract (Pellens et. al., 2017). In other words, any excess sales proceeds over the carrying amount of the asset are treated as deferred income and then released to profit or loss over the lease term. If the lease back is classified as an operating lease, IAS 17.61 requires that a gain or loss is deferred and recognized in income over the term of the lease if the selling price is higher than the fair value or lower than the carrying amount of the leased asset. Otherwise, the gain or loss must

be recognized immediately in profit or loss (Pellens et. al., 2017). The dependence on the sales price and the following corresponding treatment is illustrated for:

Figure 3: Sale and lease back transaction under IAS 17



Source: (Own figure)

4.2 IFRS 16

After discussing very different variants of leasing accounting for more than a decade, the IASB published the new leasing standard IFRS 16 on January 13, 2016. At the latest for fiscal years beginning on or after January 1, 2019, the standard is to be applied. Early adoption is permitted unless the rules in IFRS 15 "Revenue from Contracts with Customers" are already fully applied. With the new standard, the accounting of leasing and leasing relationships with the lessee is put on a completely new conceptual basis (Müller & Saile, 2018). The reform of the leasing standard was integrated into the convergence project between IASB and FASB (EY, 2017a). Accordingly, the first drafts for the development of the new standard provided for identical regulations for IFRS and US GAAP (IASB, 2010b). In the end, both boards then went their separate ways in some areas as full consensus could not have been reached.

4.2.1 Scope

The standard itself gives a precise description of to what extent the scope of the new IFRS is applied.

IFRS 16 is to be applied to all leases, i.e. to the transfer of use of any assets (buildings, motor vehicles, machinery, etc.) as well as to rental and lease agreements. Subleases and sale and lease back transactions also fall within the scope of IFRS 16. Nevertheless, the standards also imply which kind of leases are excluded from the scope of IFRS 16 (Warren, 2016).

4.2.2 Identifying a lease

Already at the conclusion of a contract a company must assess whether a lease exists and whether IFRS 16, the new standard for lease accounting, is applicable at all. While the definition of the leasing relationship is not so problematic under IAS 17, it is of great importance under IFRS 16 (Warth & Klein Grant Thornton, 2017).

Upon conclusion of a contractual agreement (at recognition), an assessment is required as to whether a contractual agreement constitutes a lease or contains a lease (PWC, 2016b). A lease exists if the fulfilment of the contract requires the use of an identified asset and the contractual agreement establishes control over the type and purpose of use of the identifiable asset (right to control the use) in exchange for a consideration for a certain period of time.

“A contract is, or contains, a lease if it conveys the right to control the use of an identified asset for a period of time in exchange for consideration (IFRS 16.9)”

Furthermore IFRS 16 clearly states that:

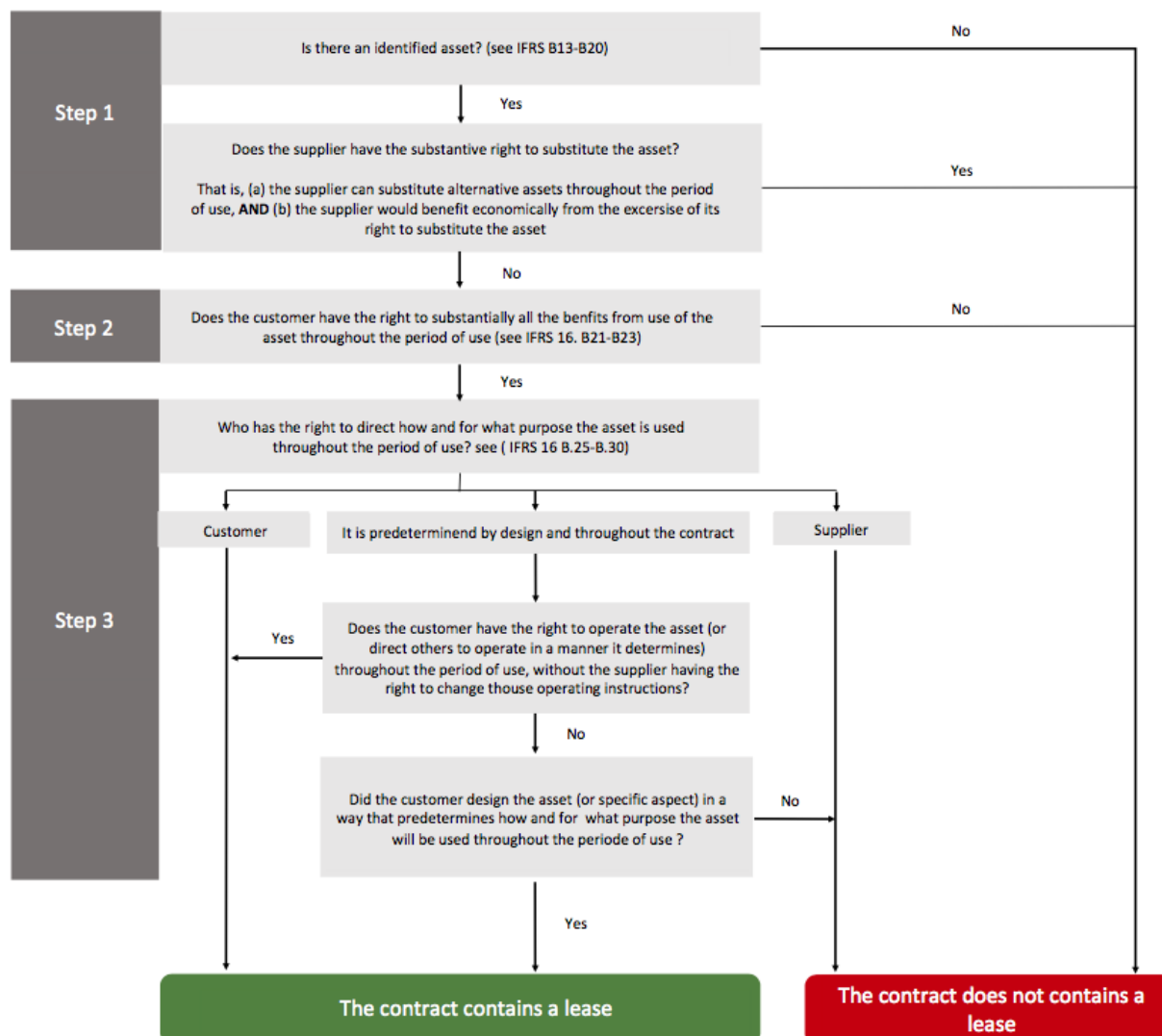
“Control is conveyed where the customer has both the right to direct the identified asset’s use and to obtain substantially all the economic benefits from that use. (IFRS 16.B9)”

The specified period does not necessarily need be expressed as a period (from [...] to), it can also be based on other units of measurement (performance, number of uses, etc.). Agreements for the mere provision of services do not meet the definition of transfer of use. The identification of a lease requires the transfer of an asset explicitly or implicitly specified in the agreement (IFRS 16.B13) at the latest at the time of commencement of use (IFRS 16.BC111). With this the standard setter wants to insure an appropriate measurement. A (physically) deferrable portion also meets the requirements for the proof of a lease (IFRS 16.B20). As a second step the economic benefits from the use of the relevant asset have to be examined. An

economic benefit from an asset can arise either directly from the asset's own use or its sublease or indirectly from the output generated by the asset in the form of goods or services (IFRS 16.B21 - IFRS 16.B23). Included in the assessment are not only main products, but also by-products and ancillary services that arise in connection with use (IFRS 16.B21), i.e. are not attributable to legal ownership (IFRS 16.IE2). However, advantages that can only be attributed to ownership and not to use are to be excluded (IFRS 16.BC118). If the legal owner builds or produces the asset and receives investment grants, tax relief or other subsidies for this purpose, these are not relevant for assessing whether the asset is being used unless they arise from the operation or realisation of the asset (IFRS 16.B21 - IFRS 16.B23). Thirdly the question of who can decide over the relevant asset arises. Determining the distribution of the economic benefits associated with the use of an asset is only a necessary but not sufficient condition for identifying a lease under the control concept (Wiley, 2017). It is also necessary to determine which contracting party can make the relevant decisions regarding the use and application of the specified asset during the contractual period of use (IFRS 16.B25). Merely industrial property rights are irrelevant for the assessment of the distribution of decision-making powers (IFRS 16.B30). Decisions that relate only to the ongoing operation or maintenance of a specified asset are not relevant for the assessment of control (IFRS 16.B27).

As the three steps of identifying a lease are highly complicated the following flowchart can be used as a guideline for accessing whether a contract contains a lease or not. Furthermore, at this stage the assessment seems mainly theoretical. Therefore, the IASB issued examples for the use in practise. The illustrative examples contain a total of ten different case studies for identifying leases (IFRS 16.IE2). The key determinants of whether a continuing obligation is a lease or not are summarized below. The explanations of the examples are abridged (refer to Appendix 3). In addition, this will be relevant for the discussion of the results, as a decision is made as to whether or not a lease is included in the lessee's balance sheet, depending on the terms of the contract.

Figure 4: Contract assessment tool for leasing identification in regards of IFRS 16



Source: (Own figure based on MNP LLP, 2017)

Beyond whether a contract contains a lease or not, it is crucial to separate service components and lease components within a contract. This applies, for example, to the rental contract of a property with cleaning service or the leasing contract of a vehicle with insurance. As a general rule, lessees have the option of reporting all contracts as leases and not splitting them up into service components. However, this would lead to a higher right of use asset in the balance sheet, since non-leasing components are also recorded (PWC, 2016b).

4.2.3 Lessee

One of the biggest changes reveal the lessees accounting for leasing under IFRS 16 (Kirsch, 2016). The lessee recognizes a "right-of-use asset" (hereinafter RoU asset) and a lease liability at the time of commencement of the lease, which constitutes the entry point for the accounting, meaning that that the lessee has to recognise the leased asset on their balance sheets. The RoU asset is an asset that embodies the lessee's right to use the leased asset during the term of the lease. The IASB (2016b) grants the lessee two significant options with regard to the approach (and hence the valuation). It is possible to waive the application of the new rules if they are **short-term leases** or if the asset underlying **the lease is of low value**, which will be further discussed in section 5.

Upon first recognition, the lessee must value the RoU asset at cost. The acquisition costs include the following components (EY, 2016):

- Access value of the lease liability
- Lease payments made before or at the beginning of the lease less incentive payments in favour of the lessee
- Any initial direct costs of the lessee

If costs of dismantling or reclamation arise, these costs must be accounted for as part of the RoU asset. The lease liability is the present value of the lease payments that are made during the term of the lease but not before or at the start of the lease term (Deloitte, 2016a). The concept of minimum lease payments, which is still included in IAS 17, has not been included in the new standard (EY n.d. b). In terms of content, the two terms differ in that the minimum lease payments under IAS 17 do not include variable payments, but exclude all conditional payments. In contrast, under IFRS 16, variable payments that depend on an index or price are included in lease payments (KMPG, 2017). The lease payments are discounted at the interest rate implicit in the lease underlying the lease. This is the interest rate that equates the present value of the lease payments and the non-guaranteed residual value with the total of the fair value of the leased asset and any initial direct costs of the lessor (MNP LLP, 2017). If the lessee is unable to determine this interest rate, the incremental borrowing rate must be used. It represents the interest rate for borrowing with a similar maturity and collateral in order to be able to finance the asset in a comparable economic situation (EY, 2017b).

4.2.4 Accounting for Lessors:

IFRS 16.63 gives, as IAS 17, direct examples.

With the introduction of the new IFRS 16 for leases there is virtually no change in the lessor's accounting treatment. When the lease is concluded, the lessor must classify the lease as a finance or operating lease according to certain criteria (KPMG, 2017). The catalogue of criteria for the assessment of a finance lease was adopted almost unchanged as of IAS 17. However, it should be noted that the changed definition of a lease also applies to the lessor. This may lead to an assessment that differs from IAS 17. Furthermore, the new rules about revenue recognition, IFRS 15 do apply for the sales part and have to align within this new standard (Deloitte, 2017). This topic will be discussed further in section 4.3.

4.2.5 Sale and lease back transactions

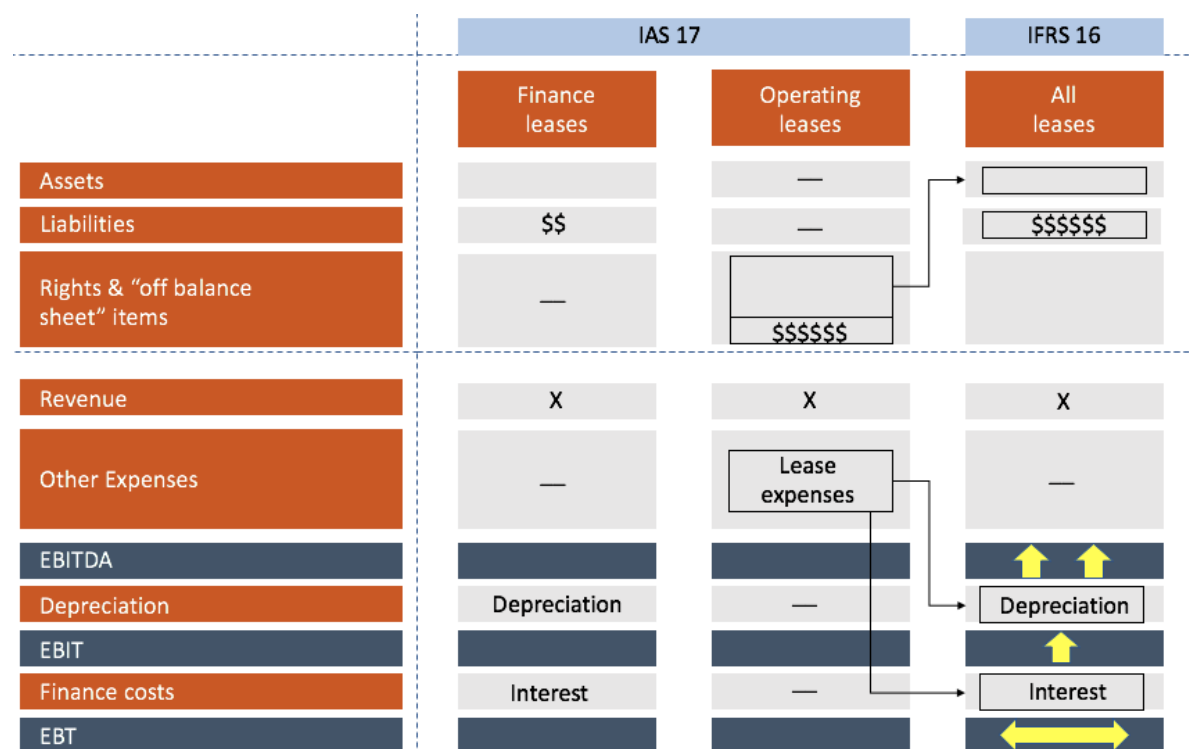
As well as IAS 17, the new standard IFRS 16 also gives precise guidance of how to account for sale and lease back transactions. In accordance with IFRS 16.99, the accounting treatment of sale and lease back transactions depends on whether a sale with derecognition of the asset by the seller/lessee occurs taking into account the criteria of IFRS 15 (revenue from contract with customers) (IFRS 16.B46). A generally applicable control test is used under IFRS 15.31, which applies to every asset, including assets under construction. The requirements for mapping sale and lease back transactions are to be applied sequentially, so there is no contradiction between the requirements. Depending on whether there is a sale or not, the rules apply in accordance with IFRS 16.98 - IFRS 16.103.

4.2.6 Fundamental changes and impact

The basic idea of the new accounting concept is that, from the lessee's point of view, a lease, from an economic point of view, is the debt-financed acquisition of a right to use an asset (Burgess & Daneshkhu, 2016). Consequently, each lease leads to the application of a right-of-use asset and a lease liability. For a distinction in finance lease and operating lease, as under IAS 17, there is no room left in the model (Bardens, Kroner & Meurer 2016).

The consequences of the introduction IFRS 16 of IFRS for balance sheet and P&L are summarised in the below mentioned flowchart:

Figure 5: Schematic diagram of the effects of IFRS 16 on the balance sheet and P&L



Source: (Own figure based on EY, 2017c)

This results in the following for balance sheets, P&L and cash flow statements:

Table 2: Impacts of the effects of IFRS 16 on the balance sheet and P&L

<i>Financial position</i>	Assets	Liabilities
	Increase	Increase
<i>Income statement</i>	<i>Depreciation & Interest expense</i>	<i>Lease expense</i>
	Increase	Decrease
<i>Cash flows statement</i>	<i>Cash from operating activities</i>	<i>Cash from finance activities</i>
	Increase	Decrease

Source: (Based on Tănase, Calotă, & Oncioiu, 2018)

Furthermore, consequently KPI's are affected:

Table 3: Effects of IFRS 16 on KPI's

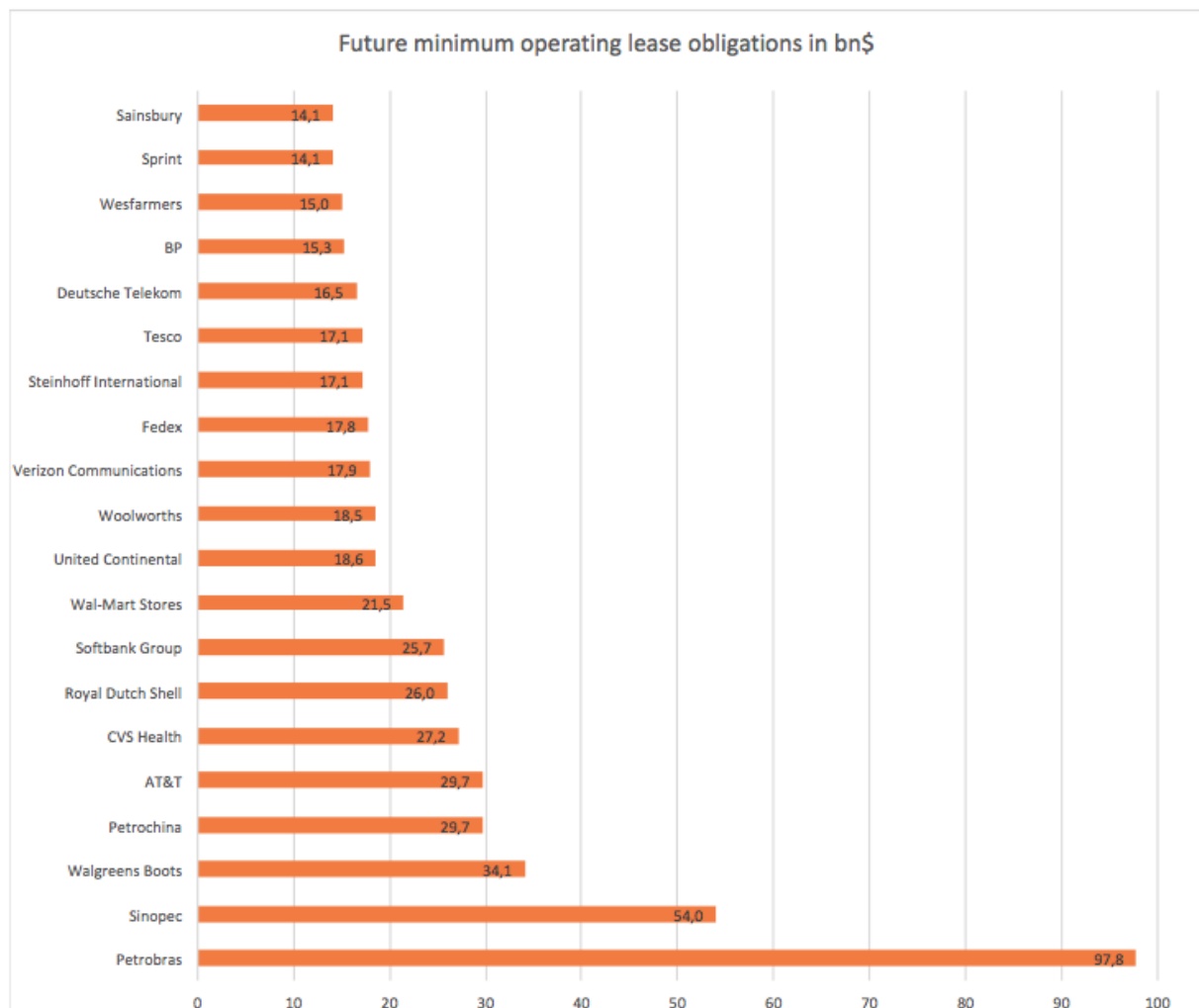
Key financial indicator	Impact (Increase/Decrease)
EBIT (Earnings Before Interest & Tax)	Increase
EBITDA (Earnings Before Interest, Tax, Depreciation and Amortization)	Increase
EBITDAR (Earnings Before Interest, Tax, Depreciation, Amortization, and Rent Costs)	No impact
EPS (Earnings per share)	Increase/ Decrease

Source: (Based on Tănase, Calotă, & Oncioiu, 2018)

Thus, the consequences are understood theoretically, in order to understand the impact in a practical view, I investigate data from Bloomberg. Bryant and Felsted (2017) identify in their article “Say Hello to \$3 Trillion in Forgotten Debt” from March 2017 around \$3 trillion in

operating lease obligations. They also show which companies are the largest users of operating leases, in the table below:

Figure 6: Comparison of companies with large amounts of operating leases



Source: (Own figure based on Bloomberg, 2017)

There are already some very recent studies in the literature dealing with the new leasing standard and the associated effects on traditional indicators. Even before the publication of the first discussion paper, Mulford and Gram (2007) dealt with the effects of capitalizing operating leases on various key figures. The results of their study showed that capitalization, among other things, affects total assets and operating cash flow. The study has also shown that activation of return on assets (ROA) and return on equity (ROE) are decreasing. In a study on IFRS 16 (Effects Analysis), published by the IASB in January (2016a), inter alia, the impact of the new standard on the financial statements of IFRS and US GAAP users was analyzed. According to this analysis, the IASB came to the conclusion that, in particular depending on the industry, material effects could result from the transition to IFRS 16. For

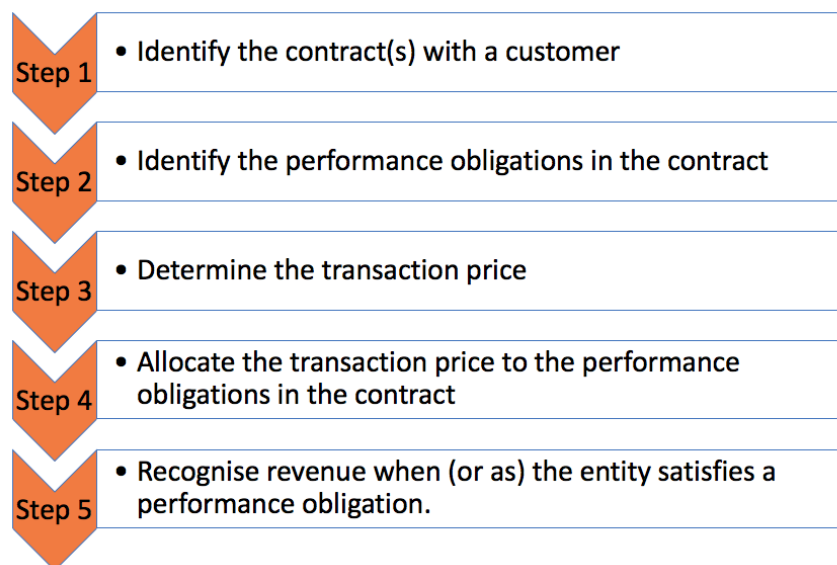
example, EBITDA will increase as a result of depreciation and interest expenses being charged instead of operating rental or leasing expenses. In the balance sheet, the recognition of all leases results in an increase in assets and liabilities, with a simultaneous increase in the degree of debt or the ratio between debt and equity (Burgess & Agnew, 2016). While simulating the adoption of IFRS 16 to the 2015 financial statements of companies, Europe Economics concludes that “the total simulated lease liability of these companies is around 576 billion €, representing 15 per cent of total debt of lessees if we exclude banks, insurance and financial services companies”. Even though there must be made a distinguishment between the different impact on different sectors, these figures show the significance of the new leasing treatment. The simulation study by Fülbier, Silva, & Pferdehirt (2008) supports the findings of Mulford and Gram. Fülbier Silva and Pferdehirt provided evidence that there was a clear influence on the balance sheet and P&L structure. However, the study also showed that profitability ratios are only partially affected and sector differences exist. "Kajüter & Meinhöver (2016) conclude that capitalization under IFRS 16 has an impact on the equity ratio and return on investment (ROI). They examined this on the basis of a practice case simulating IFRS 16 to the company Airbus. In early 2017, J. Morales-Díaz and C. Zamora-Ramírez (2018) confirmed the findings of the aforementioned studies. Based on data from 646 companies, they examined the impact of the introduction of IFRS 16 on the balance sheet and profitability. It turned out that IFRS 16 will have a significant impact on the balance sheet and the assessment of the solvency of companies, but no impact on profitability. They also found that the impact varies by industry. Nevertheless, J. Morales-Díaz and C. Zamora-Ramírez conclude that the “most affected sectors are those in which the ratio operating lease expense divided by total liabilities (lease intensity) is higher, basically the retail, transportation, hotels, and software and services sectors.” For a concluding overview refer to Appendix 5.

4.3 IFRS 15

Since 2002, the IASB and FASB have been working on the development of a joint standard for revenue recognition. After many years of work, numerous discussions and more than 1,000 comments on the draft standard, the IASB published the final standard IFRS 15 Revenue from contracts with customers in May 2014 and adopted it into EU law in September 2016. The standard is effective for annual periods beginning on or after January 1, 2018. The new regulation replaces the provisions of IAS 18 Revenue and IAS 11

Construction Contracts and the interpretations IFRIC 13, IFRIC 15, IFRIC 18 and SIC-31 (IFRS 15; EY. (n.d. a)). In accordance with IFRS 15.5, the provisions of IFRS 15 generally cover all contracts entered into with customers for the supply of goods or the rendering of services in the course of ordinary business activities. Leases under IAS 17, insurance contracts under IFRS 4, financial instruments, contractual rights or obligations under IAS 39/IFRS 9, IFRS 10, IFRS 11, IAS 27 and IAS 28 are excluded from the scope of application. Consequently, and put forward this means that IFRS 15 only is relevant for leasing under IFRS 16. IFRS 15 is based on the uniform and principle-oriented recognition of revenue for all customer contracts and is applicable in all industries (Petersen, Bansbach, Dornbach, & Accounting, K. L. S., 2017). The new regulation focuses on a 5-step model for determining the amount and timing of revenues. An asset-liability-approach with the transfer of control as an essential criterion for recording revenue is used (Yeaton, 2015). Revenue is measured in accordance with the consideration the company receives or will receive from the customer (IFRS 15.47). The individual steps of the model are summarized below:

Figure 7: 5-step model for determining the amount and timing of revenue



Source: (Own figure based on KPMG, 2016)

For the purpose of this thesis it is necessary to understand the fifth step whether a performance obligation is fulfilled. The entity performs this assessment using the requirements of IFRS 15.31 - 38 relating to when a performance obligation is satisfied (e.g. transfer of legal title, a present right to payment, transferred physical possession and significant risks and rewards of ownership) (Henneberger & Benner 2016).

4.3.1 Control model in detail

The control model contained in IFRS 15 is used to determine when the power of disposal is transferred to the acquirer and the non-financial asset must be derecognized accordingly. The entity estimates the expected consideration to determine the gain or loss resulting from the transaction. In doing so, the provisions of IFRS 15 for the determination of the transaction price must be applied. Subsequent changes in the estimated consideration must also be recognized in accordance with the requirements of IFRS 15. The valuation of profits and losses under the new rules may therefore deviate from the valuation of profits and losses in accordance with the provisions of IAS 18. This will be the case in particular for variable remuneration transactions. In accordance with IFRS 15.31, the date of revenue recognition is linked to the fulfilment of the service obligation arising from the transfer of a good or a promised service (Beyhs & Labrenz, 2016). An asset is deemed to be transferred when the customer has control over the asset. IFRS 15 basically distinguishes between performance at a certain point in time and performance over a certain period of time.

A period-related benefit obligation exists if one of the following 3 criteria is fulfilled:

- The customer continuously benefits from the provision of services and consumes them at the same time.
- An enterprise creates or processes an asset that is controlled by the customer.
- Creation of an asset without alternative use for the company and at the same time legal claim to payment for the services rendered.

If none of the above criteria are met, this is, conversely, a time-related benefit obligation (IFRS 15.38). The following indicators must be taken into account when assessing the transfer of control:

- claim to payment
- Transfer of legal ownership to the customer
- Physical possession of the asset by the client
- Transfer of risks and opportunities to the customer

(Pellens et. al., 2017)

4.3.2 Consequences for lease backs

As shown in section 4.2.6 the changes appearing from the omission of the differentiation regarding finance and operating under IFRS 16, consequences for sale and lease back transactions are various.

Initially obvious changes do not occur with this kind of transaction itself, however the motivation behind and its financial consequences are tremendous (Holzmann & Munter 2016). Sale and lease back transactions are another important field in the interplay of IFRS 16 and IFRS 15. The question of whether an actual sale has taken place within a sale and lease back transaction must be considered be assessed in accordance with IFRS 15 in the future (IFRS 16.99). However, a retrospective assessment of previously recognized sale and lease back transactions is not required (IFRS 16.C26). In accordance with IFRS 15, a sale has taken place when the buyer / lessor has acquired control over the asset. The buyer has control if he can control the asset or derive the substantial (remaining) benefit from the asset (Xu, Davidson, & Cheong, 2017). If repurchase rights or obligations (call / forward) have been agreed for the seller, no sales have taken place according to IFRS 15. The structure of the conditions is not relevant. If, on the other hand, the buyer has a right to sell (put), this may lead to the sale, unless the buyer has any significant economic incentives to exercise it. This will be demonstrated in the following section 5 in a practical example.

5 Sale and lease back transaction in a practical example

For the purpose of the practical example and the application of the pre-identified norms and rules a fictitious example is used, where a company performs a sale and lease back transaction in regards of IFRS 16:

An industrial goods manufacturer the “ABC GmbH” (seller-lessee) uses a freight railway in factory traffic, which was acquired at the beginning of 2011. At the beginning of 2016, the manufacturer will sell the freight railway to a leasing company “L AG” (buyer-lessor) and lease it back over the remaining useful life of 15 years. As the company’s accountants and strategic managers did not focus on what outcome applying IFRS might have, the impact of IFRS for contract design was not a priority.

Further the following data is given for the transaction:

- Total useful life: 20 years
- Book value: 7.000.000 €
- Fair value: 7.400.000 €
- Estimated residual value after 20 years: 1.000.000 €
- Selling price: 7.600.000 €
- Annual leasing rate: 650.000 €
- Term of leasing contract: 15 years
- Purchase option/renewal option: No.

The case study is inspired by the IFRS.IE2 examples and case studies (BDO, 2018; Kirsch, 2018; MNP LLP, 2017; Lühn, 2016; PWC Video Series, 2017) and represents a fictional, but feasible and realistic approach to SLB transaction in practise as it was discussed practically with auditors and accountants.

5.1.1 Took a sale place and does the contract contain a lease?

In a first step, it must be clarified in accordance with IFRS 16.98 whether the sale transaction qualifies as a sale within the meaning of IFRS 15. Crucial for this is the question of if a control transfer to the buyer-lessor has taken place. This is particularly the case if the buyer is able to control the asset (IFRS 15.31) or has the right to essentially determine the use of the asset (IFRS 15.33). The mere fact that the right of use is transferred back to the seller-lessee for a certain period of time in a sale and lease back transaction does not prevent the transfer of control, since it does not transfer control of the asset, but only the right of use over the term of the lease (IFRS 16.BC262 (a)). On the other hand, the transfer of control must be denied on a regular basis if the seller-lessee is granted a commercially lucrative repurchase option (IFRS 16.BC262 (b)).

If the transfer of control under IFRS 15 does not take place, the transaction is to be accounted for by the seller lessee as a pure financial transaction. The asset that is the subject of the transaction remains on the seller's lessee's balance sheet. The latter has to recognize a financial liability in accordance with IFRS 9 on the liability side of its balance sheet, while the buyer-lessor has to capitalize a financial asset (IFRS 16.103).

In the present case, however, it is a sale within the meaning of IFRS 15, as no repurchase option has been agreed and the transfer of control has taken place.

Therefore, the seller-lessee must activate a right of use of the leased asset for the remaining portion of its use (IFRS 16.100). The buyer-lessor must first assess the acquisition of the asset using the relevant standards and then apply the lessor accounting rules of IFRS 16 (in particular IFRS 16.100b). As a second step, it is crucial to decide whether the contract between the “ABC GmbH” and the buyer lessor contains a lease. For this purpose, I use the contract assessment tool presented in chapter 4.2.2. First step is to identify an asset, which is the present case as the contract contains a certain freight railway. The “ABC GmbH” has no right for replacing the car, only for repairs or maintenance this would be possible, which leads to step two. Further the customer has exclusive rights of use and essentially all economic advantages from the use. The customer has modification/adjustment rights and determines both the purpose of use and how and when the wagons are used which settles the assessment that the given contract contains a lease.

5.1.2 Accounting for the buyer lessor “L AG”

In a first step, the purchase of the leased property is to be accounted for. Since the purchase price for the freight railway is 7.600.000 € and therefore higher than its fair value at the time of sale (7.400.000 €), the difference of 200.000 € must be accounted for as an additional financing component of the buyer-lessor to the seller-lessee (refer to IFRS 16.101 (b)). The acquisition costs for the freight rail thus amount to only 7.400,000 €. The “L AG” also reports a financial receivable to the seller-lessee of 200.000 €. The booking record is thus:

Figure 8: First booking for receivable for buyer-lessor

leasing assets	7.400.000	
accounts receivables	200.000	
cash		7.600.000

Source: (Own figure)

In a second step, the buyer-lessor must classify the transaction whether as an operating lease or finance lease in accordance with IFRS 16.61. Since the leasing period at 20 years includes the entire economic remaining useful life, it is considered as a finance leases (IFRS 16.63).

Consequently, under IFRS 16.67, the buyer lessor must recognize a lease receivable in the amount of the net investment of the lease, meaning at the fair value of the asset plus

additionally the lessor's direct costs incurred at the start of the term. Since no direct costs are detected in the example at the start of the term, the leasing receivable of 7.400.000 € must be booked against the book value of the freight railway at the following booking record:

Figure 9: Second booking for receivable for buyer-lessor

leasing receivable	7.400.000
leasing asset	7.400.000

Source: (Own figure)

Subsequently, the buyer-lessor recognizes financial income that reflects a constant periodic interest rate on the net investment in value at the internal interest rate of the lease (IFRS 16.75).

To determine the internal interest rate of the lease, the payment series must be drawn up from the point of view of the buyer-lessor (see the table below).

Table 4: Payment series from the perspective of the buyer-lessor

Period	0	1. - 14.	15
purchase price	-7.600.000		
lease rate		650.000	650.000
estimated residual value			1.000.000
payment series for buyer-lessor	-7.600.000	650.000	1.650.000

Source: (Own figure)

With these cash flows, the buyer-lessor can achieve an internal interest rate of 4,317 % (nominal & p.a.). Based on the additional funding of 200.000 € over the 15-year period an annual debt service of the interest portion of this represents annual financial income (8.634 € in the first year) for the buyer-lessor.

Figure 10: Additional funding interest portion for the buyer-lessor

$$200.000 \times \frac{1,04317^{15} \times 0,04317}{1,04317^{15} - 1} = 18.389,22\text{€}$$

Source: (Own figure)

631.610,78 € of the annual instalments of 650.000 € are therefore still due to the lease. To determine the amount of the remaining lease receivable after one year, the remaining 14 leasing instalments of 631.610,78 € each and the non-guaranteed residual value of 1.000.000 € are discounted with the internal interest. The leasing receivable must therefore be stated at an amount of 7.044.818,78 € (Appendix 1).

The buyer-lessor has to recognize in his Statement of Comprehensive Income of the first year a financial income equal to the difference between the leasing instalment and the reduction of the lease receivable:

Figure 11: Financial income for the buyer-lessor in year 1

leasing rate	631.610,78
reduction of the leasing receivable (7.400.000 ./ 7.044.818,78)	355.181,22
financial income	276.429,56

Source: (Own figure)

In the following years, the financial income is reduced parallel to the leasing receivable. At the end of the 15-year term, there is still a leasing claim of 1.000.000 €, meaning the estimated non-guaranteed residual value of the leased asset. Upon return of the leased property from the lessee to the lessor, the lease receivable reduces. Instead, the leased asset is to be capitalized with its residual value in the lessor's balance sheet.

5.1.3 Accounting for the seller “ABC GmbH”

For the seller-lessee, IFRS 16.100 issues a proportional carrying amount valuation for the asset previously capitalized in its balance sheet. The leasing liability of the seller-lessee is to be valued at the beginning of the term at the present value of the unpaid lease instalments. The discounting must take place at the interest rate inherent in the leasing agreement. Applying the above-mentioned internal interest rate of 4.317 % (Appendix 4), the present value of the leasing instalments amounts to 7.043.026,18 € (refer to Appendix 2). Of those, 200.000 € are attributable to the additional financing granted and 6.843.026,18 € to the lease. Based on the fair value of the property of 7.400.000 €, the beneficial interest of the seller-lessee amounts to 92,47% (6.843.026,18 € ./ 7.400.000 € * 100%). The seller-lessee must continue the book value of the leased asset as the right-of-use asset for this share. Therefore,

this should be activated with $7.000.000 \text{ €} * 92,47\% = 6.473.132,87 \text{ €}$. The capital gain to be realized only for the portion of the use that does not remain with the seller-lessee. In the example, the capital gain accordingly amounts to only 7,53% of 400.000 € = 30.107 € (including 13 € rounding difference due to decimal places for the percentages as it would be 7,5266725 %).

Figure 12: Booking record for the seller-lessee in year 1

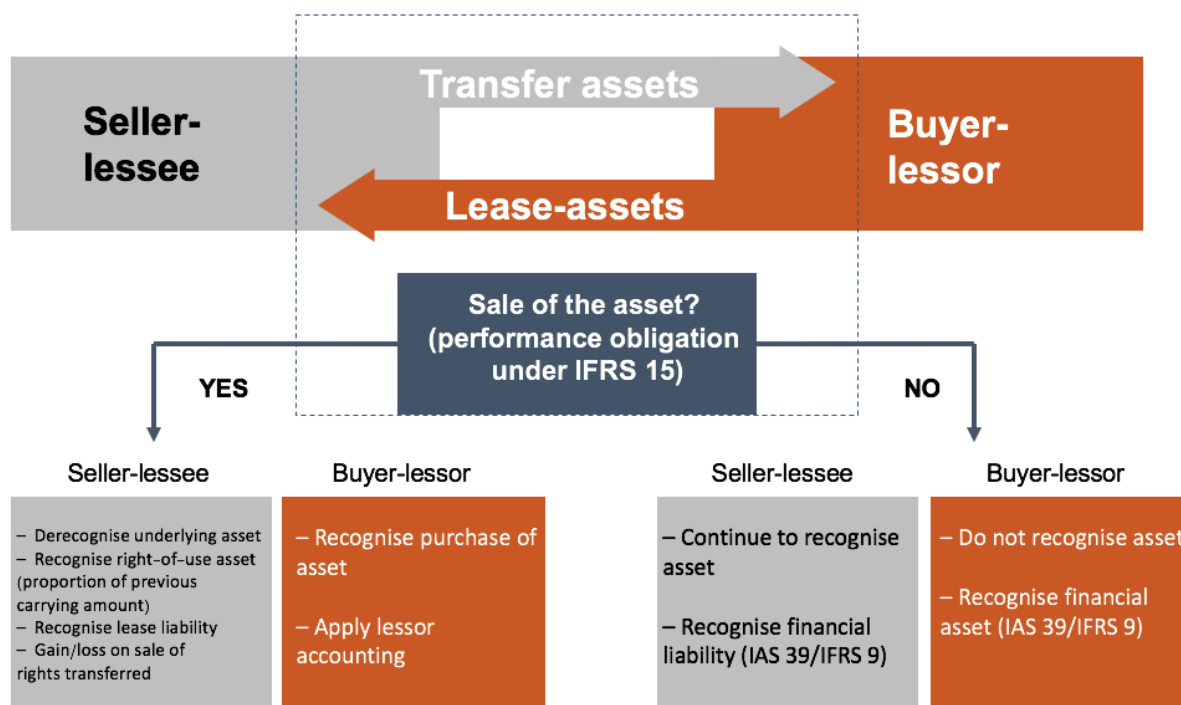
Cash	7.600.000	
RoU	6.473.133	
PPE		7.000.000
Lease Liability		7.043.026
gain on disposal		30.107
	14.073.133	14.073.133

Source: (Own figure)

In the following periods, the lease instalment to be paid by the seller-lessee must be divided into an interest and a redemption (IFRS 16.36-38).

Consequently, in the first year there should be recognized 304.047,44 € ($7.043.026,18 \text{ €} * 4.317\%$) as interest expense and 345.952,56 € ($650.000 \text{ €} \text{ ./. } 304.047,44 \text{ €}$) as redemption. The lease liability is therefore reduced to 6.697.073,62 €. The subsequent valuation of the right of use of the leased asset (right-of-use asset) is generally carried out at amortized cost in accordance with IFRS 16.29. Of the acquisition costs, the cumulative scheduled and non-scheduled depreciations are to be deducted. Scheduled depreciation is to be carried out over the normal useful life of the leased asset if, at the end of the lease period, ownership of the leased asset is transferred to the lessee or if the lessee is expected to exercise a purchase option. If neither is the case, the right of use is to be amortized until the end of the leasing period or, if earlier, until the end of its normal useful life (IFRS 16.32). As the leasing term and normal useful life are identical in the example case, each with 20 years, the annual depreciation amounts to 431.542,19 € ($6.473.133 \text{ €} \text{ RoU Asset} / 15 \text{ years useful life}$). The findings for both participating parties are compromised in the following flowchart which can be also used as guide.

Figure 13: Sale and lease back transaction guideline under IFRS 16 for seller-lessee and buyer-lessor



Source: (Own figure based on Deloitte, 2017)

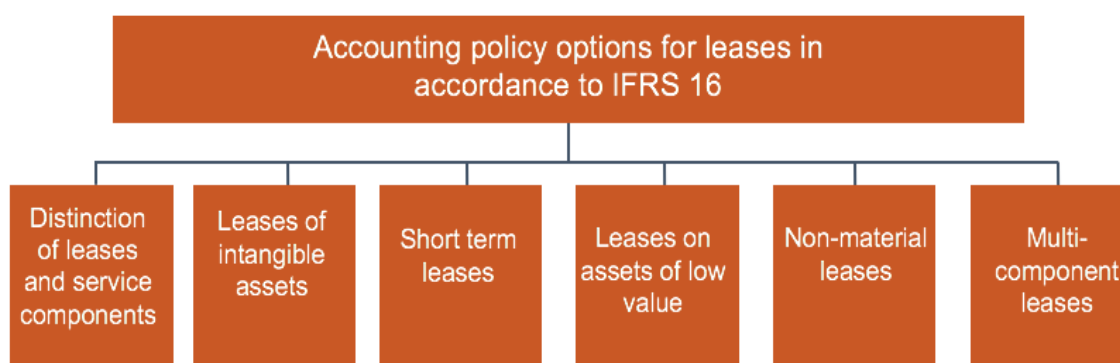
6 Discussion of results

In the first place, the previous chapters demonstrate that with the introduction of IFRS 16 the way, how to account for leases changes drastically, in particular for sale and lease back transactions. For this thesis, the discussion of results focuses on three different topics. To begin the results of section 5 are discussed respectively if a sale and lease back transaction is still the “holy grail” for keeping leases off balance sheet. Secondly, the motives for balance sheet management, also called off balance sheet financing, are linked to the outcome of section 5 as pros and cons are considered. For this purpose, the lessees point of view is considered to be dealing most with the far-reaching impact as shown in section 4 and 5, however with the introduction of IFRS 15 the way lessors account for sale and lease back transactions does change as well. Thirdly and to conclude, the loopholes and possibilities to avoid outcomes of IFRS 16 are displayed.

With the introduction of IFRS 16, the seller-lessee must activate and depreciate the remaining right to use the leased goods in the case of sale and lease back transactions as part of the right-of-use concept. In return, a lease liability is recognized (Meier, 2017). A capital gain arises only for the usage share, which passes to the buyer-lessor. The previously often desired off-balance presentation and the associated improvement in balance sheet ratios are no longer possible for the seller-lessee. In the case study the previous amount of the asset displays 7.000.000 €. After performing the sale and lease back transaction, the RoU assets replaces the previous asset with an amount of 6.473.133 €. Thus, the difference amounts to a reduction of assets of roughly 8%. This compared to an IAS 17 approach (assuming the lease would have been constructed as an operating lease) would mean a 92 % higher asset amount in the balance sheet. Nevertheless, considering a cash flow point of view in the short term, the transaction might be feasible, but the corresponding liability counterbalances this in the long run (15 years). Assuming the sales price in the shown transaction would not meet or surmount the fair value of 7.400.000 €, for example 6.400.000 €, the difference shall be accounted for as a prepayment of lease payments using the shown method. Thus, out of the seller-lessee perspective, it has to be clearly stated, that in comparison to IAS 17 a sale and lease back transaction, also due to the proportional capital gain on RoU asset, at least for balance sheet management, does not make no sense anymore. For the buyer-lessor, on the other hand, the previous, two-part accounting concept of IAS 17 is largely retained. It must continue to classify operating leases and finance leases and, depending on this, capitalize either the leased asset or a lease receivable on its balance sheet. The case study has also shown that IFRS 16 not only largely eliminates the "off-balance sheet" accounting applied to lessees under IAS 17, which is permissible only in a few cases (which I discuss later in this chapter), but rather IFRS 16 also contains comprehensive new regulations for the presentation of sale and lease back transactions. In the future, these regulations are differentiated according to the nature of the transfer of the leased asset (Lühn, 2016). Depending on whether or not the transfer meets the criteria for a sale transaction, the result is either realized in terms of the portion of the rights of use ultimately transferred to the buyer, or as a (hedged) financing transaction (Bardens, Kroner & Meurer, 2016). By contrast, the impact of IFRS 16 on lessors is comparatively low (BDL, 2017), due to the continued distinction between finance leases and operating leases and the largely unchanged adoption of the IAS 17 criteria for these types of leases (Tesche & Küting 2016).

The off-balance sheet design of leases is part of the standard balance sheet management policy under IAS 17 (Schneider, 2017). However, in the future, all leases will in principle be accounted for by the lessee under IFRS 16. Balance sheet management policy options therefore seem to be losing importance (HSH Nordbank, 2017). However, as a result of the introduction of IFRS 16, a deterioration in the equity ratio and the debt-equity ratio of lessees is expected, which ultimately leads to incentives for utilizing balance sheet options (Labrenz & Thorand, 2017). Potential scope in balance sheet policy is shrinking, nonetheless it is still existing. A closer look at the new lease accounting shows that IFRS 16 will continue to provide leasing accounting policy options that will mitigate the consequences of the paradigm shift from the users' perspective.

Figure 14: Accounting policy options for leases under IFRS 16



Source: (Own figure based on Interviews and Gruber & Hartmann-Wendels, 2017)

The design of leasing contracts to achieve the desired balance sheet results has been a wide field for factual designs within balance sheet management. Accounting policy is the deliberate and purposeful influence on the form and content of the annual financial statements within the limits imposed by law (Labrenz & Thorand, 2017). In IFRS financial statements, accounting policy has no tax implications and no direct consequences on the distributable profit. Further, balance sheet policy is exclusively geared to the information function of the annual financial statements (Gietzmann, & Trombetta, 2003) and is operated in order to induce the addressees to act in accordance with corporate goals (Hartmann-Wendels & Starck, 2017). Accounting policy is possible because there is room for manoeuvre left by the framework (Holland, 2008). Scopes of freedom may impact the carrying amount, the valuation and the presentation in the balance sheet, the income statement and the cash flow statement as well as the reporting in the notes (Meyer, 2015). Insofar as balance sheet measures have an effect on the level of assets, debts or profit or loss for the period, this is referred to as material balance sheet policy

(Bauman, 2003). The use of discretionary scope in the financial statements is a formal accounting policy (Lachnit & Müller, 2017).

In accordance with IFRS 16, this opens up new room for balance sheet policy (Schneider, 2017). The definition of leases is particularly interesting in accounting and balance sheet management terms because services are often provided using an asset (Bardens, Kroner & Meurer, 2016). The criteria "identifiable asset" and "right of disposal over the use of the asset" then open design options if the customer does not depend on the use of an asset, but on the output, that is achieved through the use of the asset (refer to Appendix 3). If it is not the use of an identified asset that focuses on the interests of the customer but the output from the use of an asset, it is possible to conclude contracts so that they are not considered as leases (Henneberger & Benner 2016). The right of use and the payment obligations would then not have to be accounted for. For this purpose, refer to Appendix 3 where different scenarios are summarised as of IFRS 16 illustrative examples (also refer to section 4).

Another option for keeping leases off-balance is to conclude short-term leases (EY, 2016). Leases with a non-cancellable basic lease term of no more than one year display a factual right to choose whether they are included in the balance sheet or not. It should, however, be borne in mind that the lessor's exposure to higher lease rates deteriorates. A different option of choice IFRS 16 provides are so called low ticket leases. A low-value lease represents leased assets which original price is less than \$ 5,000. The standard itself gives no amount which represents the \$ 5.000, but this size criterion was communicated by the IASB (Beyhs & Labrenz, 2016). Although the IASB's objective is primarily to reduce the cost of accounting for low-value assets, the right of choice may have a particular impact on the balance sheet. In practice, this can be relevant for tablets, laptops, smartphones, furnishings, servers etc. as some companies use a large number of low-value assets (HSH Nordbank, 2017). Both forms are treated similar to an operating lease in accordance with IAS 17, meaning they do not appear in the balance sheet (Giner & Pardo 2018). In addition to the described measures of off balance sheet characters, meaning the recognition, there is also scope of freedom for the valuation of leases, for example, insignificant leases, valuation of residual value guarantees, applicable discount rate (Gruber & Hartmann-Wendels, 2017).

Further, leases that are already accounted on the balance sheet containing options, through the agreement of renewal or call options where it can be assumed that they will not be exercised with sufficient certainty or that they will not be exercised, keep the valuation on the balance sheet as low as possible. It should also be remembered that the risk position of the lessor deteriorates (Bardens, Kroner & Meurer, 2016). Another possibility for achieving the lowest

possible valuation of leases is agreeing wholly or in part to usage-based leasing rates (PWC, 2016a). On the one hand, variable leasing installments that are usage- or performance-related are not included in the accounting. As a result of a high proportion of use- or success-dependent leasing payments, the valuation of the right of use and the lease obligations in the balance sheet can be kept low, as the RoU asset decreases. On the other hand, the agreement of variable lease payments leads to a transfer of opportunities and risks from the lessee to the lessor (Churyk, Reinstein, & Lander, 2015). To end this topic, there might be also room for balance sheet policy within group structures (Labrenz & Thorand, 2017).

Despite the very extensive and detailed regulations (Didier, 2017), however, not inconsiderable doubt remains with regard to the extent of analysts, rating agencies, credit ratings and valuation of companies (Schneider, 2017). Deutsche Telekom AG (2018) states for example, that

“in terms of the information provided to the company's various stakeholders, nothing is changing. There is no question of "hidden liabilities" because the rental and lease obligations previously not recognized in the statement of financial position are already disclosed in the notes to the financial statements in the Annual Report”.

Masaki Kusano confirms this statement in his study “Effect of Capitalizing Operating Leases on Credit Ratings: Evidence from Japan” (2017) as “constructively capitalized operating leases are associated with credit ratings.” Furthermore, and more importantly he

“finds that the associations between credit ratings and operating leases versus finance leases are not substantially different. However, when operating lease disclosures are less reliable, this study finds that operating leases are not associated with credit ratings and that the risk relevance of operating leases is substantially different from that of finance leases.”

Nonetheless, there are still comparatively few studies on the effects of IFRS 16 on company valuation procedures. Deloitte published two studies deal with the impact of IFRS 16 on free cash flow, cost of capital, and enterprise value metrics. For example, Deloitte (2016b) stated that the introduction of the new standard will have an impact on business valuation under the discounted cash flow and enterprise value *./.* EBITDA multiples. Thus, the discounted cash flow process in the first step is changed by changing various components, e.g. the weighted average cost of capital would lead to a higher enterprise value than previously under IAS 17. Nonetheless, the higher earnings in the second step should then be compensated for by taking into account the higher net debt. In the second study (Deloitte, 2017) the big 4 company confirms the statements on change of key figures insofar that it influences various key figures such as EBITDA, free cash flow and earnings per share. In comparison to that, the “Ex ante Impact Assessment of IFRS 16” from 2017 Europe Economics finds (while interviewing

credit rating agency analyst), even though of impact to balance sheet figures and KPI's and considering, that "IFRS 16 as being conceptually similar to the existing analytical adjustments" for credit analyst, "at least for a minority of lessees, ratios that feed into loan covenant calculations and the understanding of credit analysts of a company's creditworthiness" are materially affected.

7 Conclusion

The thesis shows that a sale and lease back transaction under IFRS 16 leads in contrast to IAS 17 (assuming operating lease) to an on-balance sheet accounting for lessees. Additionally, IFRS 16 also contains comprehensive new regulations for the presentation of sale and lease back transactions. Depending on whether or not the transaction meets the criteria for a sale, the result is either realized in terms of the portion of the rights of use ultimately transferred to the buyer or as a (hedged) financing transaction. Therefore, I conclude that in the future the advantages of a sale and lease back transaction will to be found particularly in financing function and risk management perspectives, but do not make sense for "off balance sheet financing" anymore. Overall, the new regulations mean that sale and lease back transactions are more difficult to portray. The seller's goal of reducing the balance sheet totals through a sale and thus improving balance sheet ratios, such as the equity ratio, may also fail due the introduction of IFRS 15. Either, no sale may be shown or a sale takes places, the lessee has to recognise a lease liability and RuO asset. For the seller, this means no or only a smaller reduction in its balance sheet. However, as the results show that under IFRS 16 sale and lease back transaction no longer leave much room for manoeuvre in balance sheet policy, other possible scope for manoeuvre was pointed out. Contractual design plays an immense role if, how and to what extent a lease must be recognised. With the introduction of IFRS 16 the different definitions and applications of key performance indicators, both in theory and in practice, will increase complexity and might make comparability between companies more difficult. The true economic benefits of leasing will not be affected, but companies will have to spend a great deal of time and money preparing the requirements, analysing the impacts and explaining them in an intelligible way to their stakeholders. Ultimately, however, the true purpose of IFRS 16 must be given priority (IAS Plus, 2017). The goal of introducing a common accounting procedure for operating and finance leases is to provide transparency and information to the investor and the public about the payment obligations and the debt situation of companies. IFRS 16 manages this better than IAS 17, thus keeps scope for

balance sheet management. It is therefore exciting to see how the impact of the first-time adoption of IFRS 16 will actually materialize within companies figures and how this will actually affect investors behaviour.

I Appendix

Appendix 1)

Year:	Amount	Amount discounted	internal Leasing Rate	Sum
1	650.000,00	631.610,78	0,04317	631.610,78
2	650.000,00	631.610,78	0,04317	580.415,98
3	650.000,00	631.610,78	0,04317	556.396,35
4	650.000,00	631.610,78	0,04317	533.370,73
5	650.000,00	631.610,78	0,04317	511.298,00
6	650.000,00	631.610,78	0,04317	490.138,71
7	650.000,00	631.610,78	0,04317	469.855,07
8	650.000,00	631.610,78	0,04317	450.410,83
9	650.000,00	631.610,78	0,04317	431.771,27
10	650.000,00	631.610,78	0,04317	413.903,07
11	650.000,00	631.610,78	0,04317	396.774,32
12	650.000,00	631.610,78	0,04317	380.354,42
13	650.000,00	631.610,78	0,04317	364.614,03
14	650.000,00	631.610,78	0,04317	349.525,04
15	1.650.000,00	875.301,37	0,04317	484.380,18
				7.044.818,78

Appendix 3: Illustrative Examples of IFRS 16.IE

Example:	Identified asset?	Substantive exchange right	Does the customer decide how and for what purpose?	Presence of a lease
1A: Contract between the customer and a carrier (supplier) who provides the customer with ten rail wagons of a certain type for ten years.	Yes, contract for certain rail cars.	No, replacement only for repairs or maintenance.	Yes, the customer has exclusive rights of use and essentially all economic advantages from the use. The customer has modification/adjustment rights and determines both the purpose of use and how and when the wagons are used. The supplier rights have only protective character.	Yes, leasing of rail vehicles (not locomotives).
1B: The contract between the customer and the supplier requires the supplier to transport a certain quantity of goods according to a fixed schedule for five years with a certain type of rail vehicles.	No. Supplier has a large pool of similar assets and none are clearly specified in the contract.	Yes, alternatives are easily available at minimal cost. The supplier benefits from the efficient use of his pool with the available vehicles.	No. The supplier selects which rail vehicles are used for each delivery and essentially receives the majority of the economic benefits from the use of rail vehicles.	No. The customer only purchases freight capacity as a service.
2: Coffee company (customer) signs a contract with an airport operator (provider) for the use of terminal space to sell prepared coffee for a period of three years.	No. The supplier has many areas at his disposal to define locations for the sales facilities.	Yes, alternatives are easily available at minimal cost. The supplier benefits economically from the efficient use of its sales area.	No. The provider decides which areas are allocated to the customer and essentially receives all economic advantages from the use of the (concession) areas.	No. The customer rents space whose location can be changed at the supplier's discretion.

<p>3A: The customer enters into a 15-year contract with a supplier who grants the right to use three specified, physically separated dark fibers in a larger cable connecting Hong Kong and Tokyo.</p>	<p>Yes. Fibers are specifically identified in the contract and differ physically from other fibers within the cable.</p>	<p>No. Can only be replaced for repair or maintenance.</p>	<p>Yes. The customer has the exclusive right to use the fibres during the contract term, so that he essentially has the entire economic benefit from their use. The customer has the right to make changes in how and for what purpose the fibres are used - and he decides when and whether the fibres are connected and the type and extent of data transmission.</p>	<p>Yes. This is a leasing of fixed fibres (dark fibre lease).</p>
<p>3B: The customer enters into a 15-year contract with a supplier for the right to use a specified amount of capacity within a cable connecting Tokyo and Hong Kong.</p>	<p>No. The customer only acquires a certain capacity, which corresponds to the use of the three defined fibres. The purchased capacity does not correspond to the total capacity of the cable.</p>	<p>Yes. Alternatives are easily available. The economic advantages lie with the suppliers through efficient use of the fibres.</p>	<p>No. The supplier makes all relevant decisions and has all essential rights to the economic advantages of using the cables.</p>	<p>No. The customer purchases a service in the form of a transmission capacity.</p>

<p>4: The customer signs a contract with a landowner (supplier) to use shop A for a period of five years. Unit A is part of a larger shopping centre with many separate sales units.</p>	<p>Yes. A specific store was identified in the contract.</p>	<p>No. Although the supplier has the practical option of offering other premises, it would be necessary to pay relocation costs. The right of substitution is not substantive, as there is no economic advantage.</p>	<p>Yes. The customer has the exclusive right of use and has the right to receive all economic benefits from the use of the shop during the contract period (regardless of the conditions for variable payments based on the retail sale to the supplier). The customer makes all relevant decisions regarding sales and prices. The supplier's entries (cleaning, security, advertising) do not give him the right to decide how and for what purpose the sales area is used.</p>	<p>Yes. It is a lease over a fixed shop.</p>
<p>5: The customer signs a contract with the supplier for the use of a truck for one week to transport freight from New York to San Francisco.</p>	<p>Yes. A specific truck was specified and identified in the contract.</p>	<p>No.</p>	<p>Yes. The customer has the exclusive right of use and has the right to reap all economic benefits from the use of the truck during the term of the contract. Although the contract stipulates how and for what purpose the truck is to be used. The customer uses the truck and therefore has the right to determine the use of the truck.</p>	<p>Yes. This is a short-term lease for a truck.</p>
<p>6A: The customer signs a contract with a shipowner (supplier) for the transport of goods from Rotterdam to Sydney on a specified ship. The ship's capacity is almost fully</p>	<p>Yes. A specific ship has been identified in the contract.</p>	<p>No.</p>	<p>No. The customer essentially takes over the entire capacity of the ship and thus essentially has the entire economic benefit from the use of the ship during the term of the contract. However, the use of the vessel (Rotterdam Sydney) is contractually pre-determined and cannot be changed by</p>	<p>No. The customer purchases a transport service.</p>

utilized.			the customer.	
6B: The customer concludes a contract with a supplier for the use of a specific vessel over a five-year contract period.	Yes. A specific ship has been identified in the contract.	No.	Yes. The customer essentially takes over all capacities of the ship and thus has essentially the entire economic benefit from the use of the ship during the term of the contract. The customer makes the essential decisions as to whether, where and when the ship will be used (subject to the contractual restrictions intended to protect the investments and personnel of the supplier). Even if the supplier operates the ship, it is in accordance with the customer's decisions as to how and for what purpose the ship is used.	Yes.

<p>7: The customer concludes a contract with an aircraft owner (supplier) for a period of two years for the use of an expressly named aircraft. The contract contains the internal and external specifications for the aircraft.</p>	<p>Yes. A specific aircraft was identified in the contract.</p>	<p>No. Although the supplier has the right to exchange the equipment for another aircraft, it can be assumed that the cost of equipment at the level specified in the contract will exceed the economic benefit.</p>	<p>Yes. The customer has the exclusive right of use and also the right to reap all economic benefits from the use of the aircraft during the term of the contract. Contractual and legal restrictions define the scope of the customer's right of use. Within this defined scope, the customer makes the relevant decisions about how and for what purpose the aircraft is used. Although the supplier operates the aircraft, it is in accordance with the customer's decisions as to whether, when and where the aircraft will be used.</p>	<p>Yes.</p>
<p>8: The customer signs a contract with a manufacturer (supplier) to purchase a certain type, quality and quantity of shirts for a period of three years. The supplier has only one factory in which he can fulfill the order. The factory's capacity is substantially higher than the order quantity.</p>	<p>Yes. The factory was implicitly indicated because the supplier can only fulfil the contract by using his own factory.</p>	<p>No. There is no alternative factory.</p>	<p>No. The customer does not have the right to receive all economic benefits from the use of the factory during the term of the contract, as his performance does not essentially cover the entire production and the supplier can provide replacement capacities for other customers. The supplier manages the use of the factory (the customer has the same rights as other customers).</p>	<p>No. The customer only buys shirts (goods).</p>

<p>9A: A utility (customer) signs a contract with an energy supplier (supplier) to purchase all the electricity produced by a new solar farm for 20 years. The solar park will be built according to the customer's specifications. The energy supplier retains tax advantages through credits.</p>	<p>Yes. A specific solar park was identified in the contract.</p>	<p>No.</p>	<p>Yes. The customer has the exclusive right of use and has the right to receive all economic advantages of using the solar park during the contract period (supplier advantages in the form of tax credits are economic advantages through ownership and not through use). Since the activity of the solar park is predetermined and it was built according to the customer's specification, the customer has the right to determine the use of the park.</p>	<p>Yes. This is a lease for a solar park for the term of the contract.</p>
<p>9B: The customer enters into a contract with the supplier to purchase the entire output of an expressly defined power plant for three years.</p>	<p>Yes. A specific power plant was identified in the contract.</p>	<p>No.</p>	<p>The customer has the exclusive right of use and has the right to receive all economic benefits from the use of the power plant during the term of the contract. However, it is predetermined how and for what purpose the system is used and the customer has not designed the system and the supplier is the operator of the system. Therefore, the customer is not entitled to determine the use of the system.</p>	<p>No. The customer merely concludes an electricity supply contract.</p>

<p>9C: The customer enters into a contract with the supplier to purchase the entire output of an expressly defined power plant for ten years. The customer determines when and in what quantity energy is generated.</p>	<p>Yes. A specific power plant was identified in the contract.</p>	<p>No.</p>	<p>Yes. The customer has the exclusive right of use and has the right to receive all economic benefits from the use of the power plant during the term of the contract. The customer makes the relevant decisions about how and for what purpose the system is used. Although the supplier operates the plant, he must take into account the customer's decisions on the time and amount of energy generated.</p>	<p>Yes. This is a lease for a power plant over the term of the contract.</p>
<p>10A: The customer concludes a two-year contract with a supplier for the operation of a network in specified (minimum) quality. The supplier uses servers on the customer's premises for this purpose.</p>	<p>Not considered.</p>	<p>Not considered.</p>	<p>No. The customer does not control the use of the servers. The supplier is the only contractual partner who can make relevant decisions about the servers during their useful life. It decides how data is transferred with the services, whether the servers are to be reconfigured and whether the servers are to be used for another purpose.</p>	<p>No. The customer signs a network service contract.</p>
<p>10B: The customer signs a contract with an IT company (supplier) for the use of an identified server for three years.</p>	<p>Yes. A specific server is identified in the contract.</p>	<p>No. The server can only be replaced in case of malfunctions.</p>	<p>Yes. The customer has the exclusive right of use and has the right to receive all economic benefits from the use of the server during the term of the contract. The customer makes the relevant decisions about which processes and data the server is used for.</p>	<p>Yes. This is a leasing relationship over a server for the term of the contract.</p>

Appendix 4)

Kenndaten

Anfangswert:	7.600.000,00	Euro
Anzahlung:	0,00	Euro
Nominaler Jahreszinssatz:	4,317	% p.a.
Effektiver Jahreszinssatz:	4,317	% p.a.
Leasingrate	650.000,00	Euro
Ratenintervall:	jährlich	
Zahlungsart:	nachschüssig	
Laufzeit:	15	Jahre
Restwert:	1.000.000,00	Euro
Gesamtaufwand:	9.750.000,00	Euro
Rechnerische Zinsen gesamt:	3.150.000,00	Euro

Zahlungsplan (Jahressummen)

Jahr	Zahlungen	Zahlungen gesamt	Wertverlust linear	Restwert linear	Wertverlust geom.-degr.	Restwert geom.-degr.
Anzahlung	0,00	0,00	0,00	7.600.000,00	0,00	7.600.000,00
1	650.000,00	650.000,00	440.000,00	7.160.000,00	961.152,60	6.638.847,40
2	650.000,00	1.300.000,00	440.000,00	6.720.000,00	839.598,08	5.799.249,32
3	650.000,00	1.950.000,00	440.000,00	6.280.000,00	733.416,26	5.065.833,06
4	650.000,00	2.600.000,00	440.000,00	5.840.000,00	640.662,98	4.425.170,08
5	650.000,00	3.250.000,00	440.000,00	5.400.000,00	559.639,96	3.865.530,12
6	650.000,00	3.900.000,00	440.000,00	4.960.000,00	488.863,73	3.376.666,39
7	650.000,00	4.550.000,00	440.000,00	4.520.000,00	427.038,38	2.949.628,01
8	650.000,00	5.200.000,00	440.000,00	4.080.000,00	373.031,93	2.576.596,09
9	650.000,00	5.850.000,00	440.000,00	3.640.000,00	325.855,53	2.250.740,56
10	650.000,00	6.500.000,00	440.000,00	3.200.000,00	284.645,41	1.966.095,14
11	650.000,00	7.150.000,00	440.000,00	2.760.000,00	248.647,03	1.717.448,11
12	650.000,00	7.800.000,00	440.000,00	2.320.000,00	217.201,28	1.500.246,83
13	650.000,00	8.450.000,00	440.000,00	1.880.000,00	189.732,39	1.310.514,45
14	650.000,00	9.100.000,00	440.000,00	1.440.000,00	165.737,42	1.144.777,03
15	650.000,00	9.750.000,00	440.000,00	1.000.000,00	144.777,03	1.000.000,00
Gesamt- summen	9.750.000,00	9.750.000,00	6.600.000,00	1.000.000,00	6.600.000,00	1.000.000,00

Appendix 5)

	IAS 17	IFRS 16
Types of leases	IAS 17 distinguishes between finance leases and operating leases.	IFRS 16 abolishes the distinction between finance leases and operating leases.
Recognition of a lease asset	Finance lease: recognized as assets; any initial direct costs of the lessee are added to the value of the asset. Operating lease: recognized as expenses	Right to control the use of an identified asset
Recognition of a lease liability	Finance lease: measured at the fair value of the leased property, if lower the PV of the minimum lease payments. Operating lease: recognized as expenses.	Measured at the present value of the lease payments payable over the lease term, discounted at the rate implicit in the lease or at borrowing rate
Balance Sheet	Finance lease: lease asset and liability Operating lease: not asset or liability recognized	Right-of-use asset and lease liability for all the leases
Income Statement	Finance lease: as same as IFRS 16 Operating lease: lease payments recognized as expenses over the lease term on a straight-line basis.	Depreciation on the right-of-use asset and interest on the lease liability using the effective interest rate method

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