DIRECT AND INDIRECT IMPACT OF NEW IASB AND FASB REGULATIONS, CONCERNING LEASE, TO LISTED COMPANIES AND LEASING MARKETS

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I hereby declare that the work submitted is mine and that where I have made use of another’s work, I have attributed the source(s) according to the Regulations set in the Student’s Handbook.

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Abstract

This dissertation was written as part of the MSc in Business Administration at the International Hellenic University.

On January 13, International Accounting Standards Board (IASB) launched IFRS 16 to replace IAS 17, and on February 25, the Financial Accounting Standards Board (FASB) introduced ASC 842 to replace ASC 840 (formerly FAS 13). New regulations oblige lessees to represent in their financial statements lease contract’s rights and obligations as an asset and liability, in the present value of the lease payments. Except leases shorter than 12 months and low valued leases, all other leases must be capitalized and moved from the notes to the balance sheet.

Apart from that similarity, both systems share many differences which do not alter their common scope. To improve the information derived from financial statements and obtain a real and clear picture of an economic entity. lack of information or its manipulation is a way to hide accounting malpractices or virtually (not illegal) improve a company's financial position. To investigate the impacts new regulations, I used AEGEAN AIRLINES S.A. as subject implementing IFRS 16 to its balance sheet.

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Keywords: Lease, information, financial position, capitalization

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INTRODUCTION

As year 2016 is nearing its end and still going through a decade of severe economic world crisis, it is important to realize that the tides have changed. 20 years ago, in an era of, almost, global prosperity and economic growth, no one could or wanted to see what was coming. But the only thing that we can state for sure is that you see the cliff just when you are near the gap. And then, to change direction, you must take strict measures and act fast. But before reaching the gap there are always indications that the road ends because it is not possible to see the road line in the horizon.

To a paper which deals with specific accounting issues the metaphor above could only be related to the value of information we get from financial papers. The “indications” that we proximate the “cliff” are the accounting scandals in which corporations manipulated the information derived from financial statements using either malpractices either taking advantages of legislation windows. Cases like Enron (2001), WorldCom (2002), HealthSouth (2003), AIG (2005), Lehmann Brothers and Say tam (2009) are some accounting scandals that triggered chain reactions which consequently led to new legislations.


The joint efforts of the two organizations gave birth, in 13th of January of 2016, to IFRS 16 lease legislation from I.F.R.S. and, in 25th of February of 2016, to A.S.U. (Accounting Standards Update) 2016 -2, Leases (topic 842) which both intent to improve financial reporting of leasing transactions. This way billions of off balance dollars will be reported in financial statements and improve the information we get. The new information will have impact to leasing market, bank loan contracts, capital requirements, taxation, and the list goes on.
This paper is written in the scope of:

1. Describing which will be the accounting actions of a lessee or lessor when a possible lease contract occurs under either IASB’s either FASB’s accounting system.
2. Describing the major differences between current IAS 17 and new IFRS 16 and between current US GAAP Topic 840 and new Topic 842.
3. Describing the major differences between IASB’s IFRS 16 and FASB’S Topic 842.
4. Apart of just the description the two new regulations, this paper will try to have an insight about the possible aftermath of their implementation in financial statements and therefore to the reactions of all stakeholders (lessees, lessors, and lenders) and their impact to major lease markets (Aviation, Retail, and Real Estate industries).
5. Finally, after having described the regulatory frame in the first chapters of the paper, AEGEAN AIRLINES S.A., a Greek enlisted company operating Aviation industry and highly financed through lease (operating lease mostly), will be used as test subject. Through the implementation of IFRS 16 we will reconstruct AEGEAN AIRLINES’ 2015 Balance Sheet focusing in Assets, liabilities, and Equity sections (the affected sections). After adjusting the Balance Sheet, we will measure in what extend changes in DEBT/EQUITY, DEBT/ASSETS, ROA and ROE ratios occurred. These ratios were chosen because they are the most important ratios to an investor when an economic entity is assessed. Depending the distortion of the ratios, we will have a projection about the impact of new regulations in the financial position of the company. A possible deterioration or improvement of the financial position would have different impact to investors’ and analysts’ attitude towards the company.
CHAPTER 1: IFRS 16

1.1 INTRODUCTION

IFRS 16 Leases regulations was issued from IASB in February of 2016 with effective date the 1st of January of 2019, to replace the older IAS 17 which was originally issued in September of 1982 with effective date the 1st of January of 1984. As you can understand IFRS 16 came to change accounting practices of 30 plus years. This alone is clue that the new legislation, and not just a reform, is issued with mission to make fundamental changes.

IFRS 16 constructs a model with which lease arrangements and treatments are identified from both lessees and lessors. IFRS 16 aims to secure that the information taken from financial statements is valid and represents fully the effects of lease transactions in financial position, financial performance, and cash flows of an organization.

In the next paragraphs, it will be illustrated the most important considerations, actions, decisions, or accounting entries that someone must do when entering a lease contract or when trying to identify if a contract is a possible lease contract. This will be done by “cutting” the regulation frame in small easier to understand pieces. The subject of each paragraph is expressed in the form of an obligation or a question that must be fulfilled or answered by the customer or the supplier under IFRS 16 scope. Having a clear picture of the framework will help someone to recognize the importance of differences and their effects between IFRS 16 and IAS 17, which are the subject of CHAPTER 2: IFRS 16 VS IAS 17.

1.2 WHAT IS A «LEASE» UNDER IFRS 16?

Lease is a covenant, or a part of a covenant, that concedes the use of an asset, for a period of time, in exchange of payment. The customer gets the full economic benefits from its use (and not from the ownership i.e. tax benefits because of owning an asset) and the same time has the capability to use it
directly. The other way, an arrangement that transfers the right to control the use of an asset for a specific period of time in exchange for remuneration, is a lease contract. “Period of time” is the total period which is needed for the contract to be fulfilled. Can also be translated to “amount of use”, i.e. number of production units¹.

1.3 IDENTIFY THE LEASED ASSET

Leased assets must be specified in the contract terms directly or indirectly².

Even if assets are correctly specified, the customer must have the full right of use. In contrast, if the supplier is granted a substantial right to substitute the asset throughout the period of use, the contract it’s not lease. When the supplier is able, under the contract terms, to substitute the asset after a specified event or a certain date or time, then the right of the supplier is not substantial and the contract is lease contract.

Next table illustrates all the questions someone can answer to be able to categorize a contract as lease contract:

<<<TABLE 1>>>  

1.4 SEPARATE COMPONENTS OF A CONTRACT

An asset is regarded as separate component of a contract if both parameters stand simultaneously:

1. Lessee can have benefits from the specific assets by using it on its own or in cooperation with another available asset which it is, already, obtained either from the same contract or from another contract.

¹ A contract in which the control of an asset is transferred without the parameter of “period” is a sale or purchase.

If in a contract agreement there is the parameter of “period of time” but the “right of use” is not in the hand of the customer and stays in control of the supplier then, this contract is a service contract.

An agreement contains a lease even if the customer has the right-of-use of an asset for only a fraction of the contract’s terms.

² Indirectly can be in the case when only one asset is capable of being used and meets the contract terms.
2. Lessee, in case of not leasing that asset, keeps its rights of use of another asset in the same contract intact.

Apart from lease items, a contract can provide the same time and not leasing items, such as maintenance services. The importance of separating the components is high because non-lease items are treated separately as service contracts. Categorizing the items like this, makes possible the calculation of the relative stand-alone price of each component. That price is determined by comparing similar assets’ charging prices which are supplied from the same supplier to other customers or from others suppliers.

If the separation of components does not affect the financial statements, then the lessee, for practical reasons, can treat the components (individual leases and non-leases) as a portfolio of assets or a single lease.

Lessors, on the other hand, cannot treat leasing assets and non-leasing assets as a portfolio. They must always be able to separate the assets because they have the information about the value of each asset and with this information they price the contract.

1.5 DETERMINE LEASE TERM

Is the non-cancellable period in which the lessee has the right-of-use of the underlying asset. That period starts as soon as lessor makes the underlying asset available for lessee. That moment, lessee accounts the right-of-use assets and the lease liability. That moment, also, lessor recognizes the assets as financial lease assets in his financial statements.

A contract is an arrangement of two or more sides which creates realizable rights and responsibilities, such is a lease term. For example, if an extension of the lease period cannot be done without the approval of lessor and lessee cannot use the item, there is no agreement after the fixed period because there is no enforceability.

In the commencement date, lessee must be able to assess if he is reasonable certain about an extension option, a purchase option and a no-termination option. Lessee, to reach in a valid and reasonable certain decision

\(^{1}\text{commencement date}\)
must take in mind all the relevant facts which may affect the operations and financial position when deciding to make one of the options above. Such facts may be:

- The amount of payments in the extension period
- Any kind of penalties resulting the termination of the contract
- Terms and conditions after exercising the right of extending the period of the contract.
- The economic effects because of terminating or extending the contract.
- Cost relevant to the termination of the contract (relocation cost, cost of finding new asset to replace the old one etc.)
- How valuable and important for the firm’s operations is the asset.

Facts that can provide reasonable certainty are:

- Contracts with short non-cancellable period are more certain to be extended because there is big likelihood the cost of finding a new underlying asset to be higher than just extending the contract.
- Contract options such as the possibility of purchasing the underlying asset if the contract is extended (or not) in low price give the certainty lessee will (or not) extend the contract.
- Lessee’s past practices regarding the use of similar assets. For example, if lessee had used similar assets in the past and extended the contract terms, then there is a strong possibility that lessee will repeat his practice and extend the contract.

Lessee is obliged to frequently reassess the possibility of extending or not a contract but because the constant reassessment is costly, IASB Board decided that it is necessary to proceed in reassessment only when next two facts occur simultaneously:

1. An incident or a change occurs which is within the control of the lessee (not market events).
2. That incident affects the reasonable certainty of the lessee to proceed (or not) to term extension, term termination or buy the underlying asset which before that point didn’t plan to exercise (or planned to exercise) that options.
Such circumstances may be:

- Modification or customization of a leased asset which was’tes supposed to happen on the commencement date.
- Business decision which affects directly the use and importance of the underlying asset.
- Improvement of the lease asset which occurred unexpectedly and seem to have economic benefits for the lessee.

It is important to say that any decision taken or not taken about an extension or termination, does not affect the non-cancellable period of the contract. These decisions affect the total lease term which is the sum of the non-cancellable term and extension period.

1.6 DETERMINE LEASE PAYMENTS

Lease payment are defined as the installments lessee pay to the lessor to have the right of use of the underlying asset during the lease term. Lease payments can the take the form of:

- Fixed payments
- Variable lease payments
- Purchase of the underlying asset in a pre-determined price.
- Penalty payments in the event which lessee did not meet a contract term.
- Residual value guarantees as set out.

Fixed payments are defined as the unavoidable payments, lessee does to the lessor to be granted the right-of-use of the underlying asset during the lease term\(^4\).

Variable payments are the slice of lessee’s payments to lessor for the right to use an underlying asset during the lease term that fluctuates because of turn of facts or circumstances happened after the commencement date, other than the passage of time. For example, variable payments occur when

\(^4\) Variable payments are not included to fixed payments.
payments are linked to a benchmark rate (i.e. LIBOR) which fluctuates, the performance of the underlying asset or to degree of usage of the underlying asset.

Purchase option must be added in the calculation of the lessee’s liability. A reasonable certain purchase in an exercise price must be taken in mind and calculated when the user of financial statement tries to measure lessee’s liability or lessor’s receivables. The option of purchasing an underlying asset is similar as if lessee extends the term covering the whole economic life of the asset.

Residual value guarantee is a reassurance made to a lessor by an unrelated to it party, that the underlying asset will be valued, at the end of the lease term, at least a specified amount. Lessee has the obligation to pay the residual guarantee to the lessor. It is an unavoidable payment which’s amount can vary according to the fluctuation of underlying asset’s residual value. It is like variable payments which follow the movement of an index. That amount must be calculated, by lessee, and be included to lease liability measurement.

1.7 ACCOUNTING OBLIGATIONS OF LESSEES

At commencement date, lessee must recognize a right-of-use asset and a lease liability.

Exceptions to the rule above, in which the lessee is not obligated to realize a right-of-use and a lease liability, are when there is a short-term lease or when the underlying asset is of low value. When an exception is applied, lease payments are recognized as expenses on a straight-line basis or other systematic basis which is more representative to the pattern of lessee’s benefit.

Short-term is a duration of 12 months or less. Short-term means that there is a reasonable certainty that the term won’t be extended. The short-term exception can be applied to a range of assets of the same class. For example, if an entity lease furniture and some of them are leased for less of 12 months and other for more than 12 months, then the entity can apply the exception to the whole of the leased assets, or not, because all the underlying assets are
considered to be of the same class. If any lease modification or change of lease term occurs, then lessee reassess the “short-term” exception rule.

About low value assets, IFRS do not specify the exact value. However, low value asset is considered as an asset which has initial value (when new) of $5,000,00 max. Low value assets are, for example, personal computers, tables, furniture etc. A leased old car cannot be qualified as low value asset because when it was new it was valued for more than $5000. The evaluation of assets, regarding their value, is done on lease-by-lease basis. That means that assets that are either highly interdependent either not highly interrelated with other readily available assets to the lessee, can be assessed separately. For example, if a hospital goes for a lease contract of a large amount of beds, then, because each bed is valued under $5,000,00 and can be used together with other already available resources, each bed can be qualified as low value asset and the low asset rule can be applied to the whole contract. However, if the hospital goes for a rental contract for servers including many individual modules which increase the server’s capacity, then, even though, each part is valued less than $5000,00, the contract is not qualified as a low value asset contract because servers and modules are so related that cannot be used separately.

The recognition of right-of-use asset is done in the commencement date and is the sum of:

- Incremental cost,
- Lease payment made at or before the commencement date, less any incentives received,
- The amount of the initial measurement of the lease liability and
- Restoration cost \(^5\).

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\(^5\) An estimation of the cost which will occur, for the lessee, to bring the operational status of the entity to the original (prior to the rental arrangement) status. Exception is when those costs are incurred for the production of inventories. Also, restoration cost may occur in the case lessee must return the underlying asset, when contract ends, in a certain condition.
The lease liability equals the present value of the lease payments that are not paid that date (commencement date). Lease payments will be discounted with either the interest rate implicit in the lease, either the lessee’s incremental borrowing rate.

The interest rate implicit is the rate of the interest that causes the present value of lease payments and the unguaranteed residual value to equal the sum of the fair value of the underlying asset and any initial direct cost of the lessor. Unguaranteed residual value is the portion of the residual value of the underlying asset, the realization of which is not assured or is guaranteed solely by the lessor or a party related to the lessor.

Incremental borrowing rate is the interest that lessee would have to pay to borrow over a similar term and with a similar security, the funds necessary to obtain an asset of a similar value to the underlying asset in a similar economic environment.

After commencement date, right-of-use asset is measured under a cost model, in which we deduct depreciation, any impairment losses and adjust to any re-measurement of the lease liability.

The asset will be depreciated for its whole useful life if, by the end of the contract term, its ownership will be transferred from lessor to lessee or if the lessee will proceed in the purchase of the asset. In all other cases, the depreciation will be calculated up an earlier time of the useful life of the asset or in the end of the contract term.

After the commencement date the lease liability would be measured:

- Increasing the carrying amount to reflect interest on the lease liability.
- Reducing the carrying amount to reflect the lease payments made.
- Re-measuring the carrying amount to reflect any reassessment or lease modifications, or to reflect revised in-substance fixed lease payments.

In case that scope of the lease or the consideration of the lease change in a way which was not part of the original term then, we are dealing with a modification. A lease modification can be a different lease if both following apply:
1. In the new state is added the right-of-use of at least one more underlying assets.

2. The consideration for the lease increased relatively to the amount of stand-alone price of the increased scope and any adjustments to the stand-alone price which reflects the circumstances of the contract.

If a lease modification does not result a new lease, the lessee should:
- Distribute the consideration in the modified contract,
- Re-determine the lease term,
- Remeasure the lease liability by discounting the revised lease payments using a revised discount rate\(^6\).

- If lease modifications decrease lease scope, lessee should remeasure the lease liability by reducing the carrying amount of the right-of-use asset to mirror the partial or full termination of the lease. Any gain or loss connected to the partial or full termination of the lease, is recognized as profit or loss. In all other cases, the lessee should just do adjustments to the right-of-use asset.

1.8 ACCOUNTING OBLIGATIONS OF LESSORS

Lessors, firstly, must classify leases to operating or finance. Assets are classified in the inception date and re-classified only in the case of a modification.

When under a lease contract, all the risks and rewards to ownership of an underlying asset are transferred to lessee, the lease is finance lease. In all other cases, in which the risks and rewards to ownership of the underlying asset are not transferred to lessee, is operating lease.

Ownership can be immediately transferred at the inception date or at the end of the lease term only if there is a purchase option which gives a reasonable certainty that lessee will buy the underlying asset. Also, a lease is classified as finance when the lease term covers the major part of the

\(^6\) A revised discount rate is:
- The interest rate of the lease for the remaining lease term,
- If the interest rate cannot be determined, then it is lessee’s incremental borrowing rate at the effective date of the modification.
economic life of the underlying asset or when the asset is so specialized that only the lessee can use it without major modifications.

Related risks which follow an ownership can be idle capacity, technological obsolescence, and the change of the profitability due to future changes of economic conditions.

Rewards are related to the profitable underlying asset’s usage and a possible appreciation of its value.

If lessor recognizes an asset as finance lease then, the asset must be mentioned in financial position statement and accounted as a receivable, valued equally to the lease net investment. Net investment is the sum of the lease payments which lessor receives and of any unguaranteed residual value accruing to the lessor, discounted at the interest rate implicit in the lease. The interest rate implicit is the interest rate which makes the sum of lease payments and the unguaranteed residual value equal to the sum of fair value of the underlying asset and the initial direct (incremental) cost of the lessor.

Lease payments which are included in the calculation of the net investments are:

- Fixed payments less any lease incentive payable.
- Variable payments depended on an index or a rate.
- Any residual value guarantees provided by the lessee.
- The exercise price when lessee is reasonable certain of purchasing that asset.
- Lease termination penalties.

Residual value must be reassessed periodically. If there is any decrease, the income allocation is revised and the reduction is recognized immediately. The change in the unguaranteed residual value affects the lease only when there are indications of imminent receivable impairment and subsequently, reversal of impairment.

At commencement date, a manufacturer or dealer lessor should, for each lease, recognize:
Revenue: the fair value of the underlying asset or the present value of the lease payments from lessee discounted by a market interest rate.

The cost of sale: cost of the underlying asset minus the present value of the guaranteed residual value.

Profit/Loss: the difference between revenue and cost of sale.

Lessor recognizes finance income to reflect the return of its net investment by allocating the payments received from the lessee between finance income to the lessor and repayment of the debtor balance.

In case of lease modification, lessor would account a finance lease as separate when both next rules stand:

1. Lease’s scope is increased, adding at least one right-of-use asset and
2. The consideration for the lease increased relatively to the amount the stand-alone price of the increased scope and any adjustments to the stand-alone price which reflects the circumstances of the contract.

If modification does not result separate lease, lessor should proceed as follows:

- If lease was classified as operating and modifications would have happened at the inception date, lessor should:
  - Recognize lease modifications as new lease from the date the modification took effect, and
  - Calculate underlying asset’s carrying amount as the lease net investment, immediately before modification’s effective date.

- In all other cases, the lessor should adopt the requirements of IFRS 9 (FINANCIAL INSTRUMENTS).

Operating lease payment should be accounted in a straight-line basis, unless another systematic basis is more representative and benefits from asset usage are not diminished.

Any cost arises from lease, including depreciation, is recognized as expense.

A manufacturer and a dealer lessor should not recognize profit or loss because an operating lease in not like a sale.
Modification to an operating lease would result lessor to account, starting from the effective date, the new state as a new lease and considering any payments related to the pre-modificated lease as payments for the new lease.

Operating lease assets are presented in financial position statements depending from the nature of the underlying asset.

CHAPTER 2. IFRS 16 vs IAS 17

2.1 COMPARISON

The most important differences between IFRS 16 and the current IAS 17 are presented in the next table:

<<<TABLE 2>>>

2.2 THINKING OVER THE IMPLEMENTATION OF IFRS 16

The implementation of the new leasing standard could have a significant impact on lessees, both accounting and business related. Lessors could face an increased business risk resulting from the adoption of the leasing standard and the same time, investors will have access to better information and thus can make better investment decisions.

Under IFRS 17, investors have enhanced ability to properly compare companies that are in a similar line of business but have a different asset acquisition model. Companies that have very few, but material leases, for example a lease of a large building, will experience greater volatility in their income statement because of the finance charges for the lease being disproportionately charged to the income statement in the earlier years of the lease and will therefore be resistant to this change. Also, IASB setting exemptions as far the treatment of smaller and short-term leases, proved to be pragmatic.
3.1 INTRODUCTION

Following IFRS 16, FASB introduced the FASB Accounting Standards Codification and by Topic 842 Leases, updated Topic 840 (2010). By leasing, financial entities gain access to assets without the obligations of ownership. Because leased assets create value for the lessee and the lessor, it is crucial for the user of a financial statement to obtain a complete picture of the undertaken risk and the range of the leases assets. Previous amendment fail because it couldn’t provide information about the utilized lease assets and the obligations that follow a lease.

The FASB Board, decided that, because lease economics vary between seemingly similar lessees, financial information must be improved and incorporated in the financial statements.

Like in CHAPTER 2, in the next paragraphs will be illustrated the most important considerations, actions, decisions, or accounting entries that someone must do or take when entering a lease contract or when trying to identify if a contract contains lease after implementing Topic 842. The subject of each paragraph is, also, expressed in the form of an obligation or a question that must be fulfilled or answered by the customer or the supplier under US GAAP scope. Having a clear picture of the framework will help someone to recognize the importance of differences and their effects between Topic 842 and current Topic 840, which are the subject of CHAPTER 3. TOPIC 842 vs TOPIC 840.

3.2 WHAT IS A “LEASE” UNDER TOPIC 842?

A lease contract transfers the right to control an asset (property, plant, or equipment) for a term, in exchange of consideration. The term is specified either as duration either as a specified amount of use (i.e. number of production units).

Next flowchart describes the questions that must be asked to conclude if a contract is lease:
3.3 INTENTIFY THE LEASED ASSET

In a lease contract, all the following must stand:

- Explicitly or implicitly, the underlying asset must be specified
- The asset must be physically distinct or lessee to be entitled to the right-of-use of all asset’s capacity
  - Supplier (lessor) has not substantive substitution right
  - Customer (lessee) receives all the economic benefits from the asset’s usage
  - Customer (lessee) can direct the asset as he wants

3.4 ARE THERE ANY EXCEPTIONS?

Topic 842 applies to all leases and subleases except:
- Intangible assets
• Explore for or use of non–regenerative resources.  
• Biological assets.  
• Inventory.  
• Assets under construction.  
• Leases with term less than 12 months

3.5 SEPARATE COMPONENTS OF A CONTRACT

Entering a lease agreement, lessee must:

i) Identify the lease components of the contract:

Under topic 842, the unit of accounting is on each “separate lease component” and not in each lease. Even if the contract contains more than one underlying assets, there is a strong probability that the number of “separate lease components” to be less than the number of leased assets or even to be only one “separate lease component”, as in the next table:

KPMG, Leases- Issues in depth (US GAAP), APRIL 2016, page 59

An underlying asset or a group of them, to be assumed as separate, must both following criteria stand:

1. There is an economic benefit for lessee from the use of that asset (or group of assets) as they are or in combination with other already obtained resources, such as goods or services that are sold separately from a supplier.

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7 But, the right of use of the equipment used to explore these resources is accounted under topic 842  
8 The definition of an asset as “inventory” is not necessary excluded from topic 842. If an asset which is classified as inventory is depreciable under other accounting guidance, then topic 842 is applicable
2. The asset (or group of assets) is independent and unrelated to other leased assets of the contract. Independent and unrelated means that each leased asset doesn’t affect significantly the other.

ii) Identify the non-lease components:

In a contract, may be included lease and non-lease components which must be separated. For example, in a machine rental contract, may be present the arrangement of its maintenance. The maintenance component is a non-lease components.

iii) Measure the consideration (also applies to the lessors):

1. LESSEE:

Consideration’s measuring starting point is the commencement date and equals:

\[
\text{Consideration}^9 = \text{Payments related to the use of asset} + \text{Other fixed or in-substance fixed payments} + \text{Other variable payments that depend on an index or rate}^{10} - \text{Incentives paid or payable to the lessee}
\]

2. LESSOR:

Initially, lessor measures the consideration as lessee does. But, after certain variable payments occur, things change:

\[\text{Variable payments which are specifically or partially related to the lease (or non-lease) components which are not depended on an index or rate, are not included. These payments are recognized in profit or loss when incurred.}\]

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In Part 1, lessor is obliged to consider if the variable payments depend on how non-lease components perform. For example, in a contract of leased building including maintenance service, lessee must make fixed payments and variable payments (independent from an index or rate) which are depended from the ability of the underlying asset to function in certain level of productivity. Lessee does not add the variable payments when measuring consideration because they are not depended form an index or rate. Lessor, also, does not include them because the productivity - performance of the underlying asset is not solely related to the maintenance service.

---

11 Topic 606 = ASC 606 — Revenue from Contracts with Customers
Variable payments which are specifically or partially related to the lease components which are independent from an index or rate, are not included. These payments are accounted as profit/loss when earned.
iv) Lessees and lessors separate and distribute consideration between lease and non-lease components:\textsuperscript{13}

1. LESSEE:

Allocates the consideration of separate lease and non-lease components under a relative stand-alone price\textsuperscript{14} basis. If that price is available (observable)\textsuperscript{15}, lessee, use it, if not, it is estimated.

2. LESSOR:

Following topic 606\textsuperscript{16}, consideration is allocated to each lease and non-lease components to illustrate the consideration amount to which lessor expects to be entitled. Consideration will be allocated proportionally to the stand-alone selling prices of lease and non-lease components. The stand-alone selling price would be either the observable price either will be estimated.

If lessor will receive any variable payments, these will be accounted entirely to the non-leasing components to which they are connected.

v) Subsequent changes by:

1. LESSEE:

Remeasurement and reallocation of the consideration happens when there is a lease liability recalculation or there is a contract modification that is not recognized as a separate contract.

2. LESSOR:

Remeasurement and reallocation of the consideration happens only when, occurs a contract modification that does not result a separate contract.

\textsuperscript{13} FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-10-15-31, page 19

Lease components follow topic 842 and non – lease components follow another applicable US GAAP.

\textsuperscript{14} The price the customer purchase the component separately

\textsuperscript{15} FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-10-15-34, page 19

Observable is the price the lessor or a similar supplier charges a lessee for a similar lease or non – lease component

3.6 COMMENCEMENT DATE

It’s the date when the underlying asset is available to lessee\textsuperscript{17}.

Commencement date may vary between the underlying assets meaning that if a contract includes many assets it is possible these assets to be available to lessee in different dates. Also, it is possible that the commencement date to depend from other conditions, such as minimum number of supplied units or value of equipment.

3.7 DETERMINE LEASE TERM

Lease term is the duration of a contract. Begins at the commencement date, including the non-cancellable period and, maybe, one or more optional periods.

The non-cancellable period is the period when enforceable rights and obligations have been created, because of a contract agreement. Beyond that period, the lessor and the lessee can terminate the contract consensually, without suffering penalty or the penalty payment would be insignificant.

The right of a lessee to terminate a contract is an option. If only the lessor can terminate the contract or affects lessee’s decision to end the contract, the lease term assumes that the lease will not be terminated.

The period in which both, lessee, and lessor, have the right to terminate the lease, is excluded from the lease term because after that period there are not realizable rights or obligations. The lessee has not the obligation to make payments or the right-of-use of the underlying asset. The lessor has not the right to obtain payments and is not committed to extend lessee’s right-of-use of the underlying asset.

3.8 DETERMINE LEASE PAYMENTS

Lease payments are classified as in the following chart:

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|}
\hline
\textbf{Category} & \textbf{Description} & \textbf{Example} \\
\hline
\textbf{Initial Payment} & Amount payable at the inception of the lease & \textbf{First Year} \\
\hline
\textbf{Operating Lease} & Rent payments made at regular intervals & \textbf{Second Year} \\
\hline
\textbf{Capital Lease} & Payment that is treated as an asset in the lessee’s financial statements & \textbf{Third Year} \\
\hline
\end{tabular}
\caption{Lease Payment Classification}
\end{table}

\textsuperscript{17} FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-10-55-19, page 43

The underlying asset can be available to lessee before the initiation of the lessee’s operations, before the begging of the lease payments or before the commencement date.
Not included payments:
- Variable payments not depended from an index or rate
- Lessee’s guarantees of any lessor’s debt
- Amounts distributed to non-lease components

i) Variable payments:

There are of two types:

1. Variable payments related to an index or a rate
2. Other variable payments all of which excluded from the lease payments

The amount of variable payments which use an index or a rate at the commencement date are unavoidable. Under topic 842, an entity cannot make prediction about any future movement of the index or rate. Thus, the amount included in the lease payments is the initial calculated payment multiplied with the lease term.

Reassessing the variable payments depended on an index or rate occurs only when something else changes, in example a change of the lease term. Lessee, then, reassess using the index or rate measured in the reassessment date.

Lessor remeasures the variable payments only in the case of lease modification and if the modification is not a separate contract.

ii) In-substance fixed payments:

Are payments which do not produce variability and are the minimum payments the lessee must do when alternative payments are selected under the lease. For example:

- Payments resulted from causes which do not have economic substance
- The lowest payment when the lessee has to choose about the set of payments it makes, although it must make at least one set of them.

iii) Lease Incentives:

Lessor, to make lessee sign a contract, may offer incentives such as:

- Payments to or on behalf of the lessee.
• Losses incurred by the lessor, because of assuming a lessee’s pre-existing lease with a third party.

iv) Purchase option

The purchase in a certain price (exercise price) of the underlying asset by the lessee in incorporated in the lease payments, if lessee is reasonable certain to exercise that purchase option. If lessee is not reasonable certain anymore, as far the exercise of the purchase option, the lease payments are reassessed.

Lessor does not reassess the lease payments even if the lessee is not reasonable certain anymore, as far as the exercise of the purchase option.\(^\text{18}\)

v) Termination penalties:

Termination penalties are reckoned in the lease payments unless the lessee is reasonable certain that a termination option is not expected, thus a penalty won’t incur.

vi) Residual value guarantees:

Is an assurance made to the lessor that the value of an underlying asset, at the end of the lease, will be returned to the lessor at a specified amount.\(^\text{19}\)

vii) Initial direct cost:

Is the incremental cost of a lease which wouldn’t have incurred if the lessee wouldn’t have proceeded in the lease arrangement. Such are:

\(^{18}\) FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-10-35-3, page 37

Lessor reassess only in case of modification and if the modification is considered as a separate lease.

\(^{19}\) FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-10-30-5 (f), page 35

If lessor has the right to force lessee to purchase the underlying asset, the price of the purchase is included in the lease payments by both the lessor and the lessee. This transaction is like residual value guarantee because the lessee obtains the underlying asset in a price similar to the guaranteed residual value.
viii) Discount rate:

lessee and lessor, for discount rate, use the rate implicit. If rate implicit, using the available information at the commencement date, is not determinable, lessee uses the incremental borrowing rate.

Implicit rate makes equal:\n
\[
\text{PV of lease payments + PV of lessor’s estimated future residual value} = \text{FV underlying asset – any related investment tax credit retained and expected to be realized from the lessor + Any deferred initial direct cost of the lessor.}
\]

The incremental borrowing rate is the secure (collateralized) rate the lessee would have to pay to borrow an amount equal the lease payment in similar economic environment.

ix) Economic life of an underlying asset:

Is the period in which the asset can be economically usable or its production capability is the expected.

Economic life is different from the useful life. Useful life is the period in which the underlying asset can produce future cash flows.

Thus, the economic life is period which is at least equal to the period of useful life.

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20 FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-20-30-2,3,4, page 103
3.9 ACCOUNTING OBLIGATIONS OF LESSEES

Under topic 842, lessee recognizes, in its balance sheet, all financial leases, and operating leases with a term greater of 12 months. The separation between financial and operating leases effects, as shown in the next chart, the way expenses and cash flows are presented:

KPMG, Leases- Issues in depth (US GAAP), APRIL 2016, page 143

Lessee accounting steps are illustrated in the chart below. Steps 1,2 and 3 have been discussed in previous chapters. In this chapter steps 4 to 9 will be discussed in more detail.
i) Lease classification (STEP 4)

As finance is classified, if at least one of the next tests stands at the commencement date. If not, then the lease is classified as operating:

- Is the ownership of the underlying asset transferred to lessee at the end of the contract? (Transfer ownership test)
- Is any purchase option for which lessee is reasonable certain to exercise? (Lessee purchase test)
- Is the lease term covering the most of the remaining economic life of the underlying asset? (lease term test)
- PV of the lease payments and lessee residual value guarantee not reflected in the lease payments equals or is substantially larger than the fair value of underlying asset? (PV test)
- The underlying asset is customized to have the point that has no alternative use for the lessor. (Alternative use test)

Elaborating:
1. Transfer ownership test:
   Is met only in leases that the lessor transfers the ownership of the underlying asset when it is required:
   - lessee to meet a specified performance obligation or
   - to pay a nominal amount related to the transfer of the underlying asset\(^{21}\)

2. Lease purchase option:
   Is met only if the lessee is reasonably certain (due to economic reasons) to exercise a purchase option.

3. Lease term test:
   Applies when the next thresholds are met\(^{22}\):
   - 75% or more of the remaining economic life of an underlying asset is accounted as a major part of its economic life
   - If at commencement date, remaining underlying asset’s economic life is 25% or less.

4. Present value test:
   The condition “substantially” equals to 90% or more.

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\(^{21}\) FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-10-25-5, page 39
If the ownership transfer is depended only by lessee’s tolerance to pay the nominal fee, the transaction is considered a purchase and accounted like that.

\(^{22}\) FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-10-25-5, page 39
When we deal with lease components containing more than one leases asset, we evaluate the predominant asset
5. Alternative use test:

If underlying asset has alternative uses for the lessor, the lessor must consider:

- The contractual restrictions which must be overcome to have alternative use.
- The practical limitations related to the arise of any significant cost to alternate the use of the asset.

ii. Initial recognition and measurement (STEP 5)

At the commencement date, lessee accounts the lease liability and the right-of-use asset:

\[
\text{Lease liability} = PV \text{ of any future lease payments discounted at any rate implicit or incremental borrowing rate}^{23}.
\]

\[
\text{Right-of-use asset equals}^{24}:
\]

\[
\text{The initial measurement of the lease liability} +
\]

\[
\text{Any initial direct cost} +
\]

\[
\text{Any prepaid lease payments} -
\]

\[
\text{Any lease incentives received}.
\]

iii. Subsequent accounting (STEP 6)

1. For Finance Leases:

After the commencement date, lessee measures the right-of-use asset on a cost basis, taking in mind the amortization and any impaired losses\(^{25}\):

\[
\text{Right – of – use asset} =
\]

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\(^{23}\) FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-20-30-1, page 103

\(^{24}\) FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-20-30-6, page 103

\(^{25}\) FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-20-35-1, page 104
Beginning balance – Any accumulated amortization – Any impairment losses.

Amortization follows a straight-line basis, unless there is another pattern from which the lessee can have future economic benefit. The impaired losses follow, also a straight-line basis.

Amortization process starts at the commencement date and ends either in the term’s end either in the end of its useful life (the earlier date will be picked).

In income statement, lessee, for every period of the lease term, recognizes:

• Amortization
• Interest on the lease liability
• Any variable payments
• Any impairment

2. For Operating Leases:

Lease liability is measured after the commencement date and equals to the Present Value of any unpaid lease payments discounted at the discount rate.

The right-of-use asset, after the commencement date, equals:

• Right-of-use asset (if asset has not been impaired) =
  Lease liability +
  Unamortized initial direct cost +/ -
  Prepaid (accrued)lease payments –
  Unamortized balance of lease incentives received, or

• Right-of-use asset (in any case) =
  Beginning balance –
  Accumulated amortization

---


In the income statement, the lessee, recognizes the following amounts:

- Lease cost =
  Total lease payments for the lease term +
  Total Initial direct cost incurred –
  Periodic lease cost previously recognized

The leased cost is measured to allot the remaining cost through the lease term on a straight-line basis, unless the lessee uses another basis which can produce bigger benefit from the right of use of the underlying asset and unless the asset has been impaired.

- Variable lease payments only in the period in which the relative obligation has occurred or in the period in which the event of variable payments is probable.

- Variable payments recognized because a target was probable and in the end of the period did not achieved, are reversed.

- Any impairment of the right-of-use asset.

iv. Impairment testing (STEP 7)

Topic 360 (Property, Plant, and Equipment) set the guidelines about the impairment of long lived assets. Following topic 360, lessee recognizes, if any, the amount of impairment loss. In the income statement the impairment loss of the right-of-use asset is depicted the same way as any impairment loss of any long-lived asset29.

After the measurement of any impairment, the right-of-use asset is measured less the impairment and any amortization related to the impairment. No matter the lease classification, any amortization follows a straight-line basis (unless the lessee follows another pattern) with starting point the impairment date and final point, the earlier between the end of assets useful life and the end of lease term30.

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29 FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-20-35-9, page 105
30 FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-20-35-10, page 105
If an underlying asset suffered impairment, then, the single cost of the operating lease, from the date the impairment initiated until the end of the lease term, is measured as:

Single lease cost = Accretion of the lease liability + Amortization of the ROU asset.

v. Lease reassessments (STEP 8A)

In case of reassessment or modification (without accounting a separate contract), it is possible to proceed in remeasurement of the lease liability and the ROU asset as in the chart:

<table>
<thead>
<tr>
<th>When do I reassess?</th>
<th>N/A</th>
<th>Only when there is a triggering event (as defined)</th>
<th>Whenever relevant facts and circumstances change</th>
</tr>
</thead>
<tbody>
<tr>
<td>In remeasuring, what do I update?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lease payments?</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Consideration in the contract?</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Allocation of consideration in the contract?</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Discount rate?</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Lease classification?</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

KPMG, Leases- Issues in depth (US GAAP), APRIL 2016, page 144

There is obligation of reassessment only when:
• If the event which necessitates, or not, a purchase in written in the contract
  • The lessee wasn’t reasonably certain to make the purchase and now is.
  • The lessee was reasonably certain to make the purchase but now chooses not to make it.
  • A “triggering event” occurs. A “triggering event” is a significant occurrence or change in circumstances which are in control of lessee and directly affects its certainty about exercising an option.

Circumstances in which an accounting action is required:
1. Change in lease term
2. Change in the lease option exercise assessment
3. Change in the amount probable of being owned under residual value guarantee
4. Resolution of a contingency

The accounting steps in each situation are:

<table>
<thead>
<tr>
<th>Accounting steps</th>
<th>Circumstances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remeasure and reallocate the 'consideration in the contract' to the remaining lease and non-lease components of the contract</td>
<td>√</td>
</tr>
<tr>
<td>Remeasure the lease liability to reflect the revised lease payments, using a 'discount rate for the lease' determined at the remeasurement date</td>
<td>√</td>
</tr>
<tr>
<td>Remeasure the lease liability to reflect the revised lease payments, using the original discount rate for the lease.</td>
<td>√</td>
</tr>
<tr>
<td>Adjust the amount of the right-of-use asset by the amount of the remeasurement of the lease liability. However, once the right-of-use asset is reduced to zero, then the remaining amount of the lease liability remeasurement is recognized in the income statement</td>
<td>√</td>
</tr>
<tr>
<td>Reassess lease classification at the remeasurement date based on the circumstances at that date (e.g. fair value and remaining economic life of the underlying asset at the remeasurement date).</td>
<td>√</td>
</tr>
<tr>
<td>If there is a change in lease classification, adjust the remaining lease cost recognition pattern and presentation in the income statement and statement of cash flows prospectively.</td>
<td>√</td>
</tr>
</tbody>
</table>

KPMG, Leases- Issues in depth (US GAAP), APRIL 2016, page 195
vi. Lease Modifications (STEP 8B)

A lease contract goes under modification when there is a change in the lease term and conditions that result a change in the scope and consideration of the lease.

The considered effective date that a lease contract goes under modification, is the date when lessee and lessor approve the modification.

The lease modification requirements are presented in the next chart\textsuperscript{31}:

\begin{center}
\includegraphics[width=\textwidth]{chart.png}
\end{center}

\textit{Note 1:}

Lease term is an attribute of the lessee’s right to use the underlying asset (i.e. an extension does not grant the lessee an additional right of use).

KPMG, Leases- Issues in depth (US GAAP), APRIL 2016, page 209

A modification is recognized as a separate lease contract when:

- An extra ROU is granted that wasn’t comprised in the initial lease contract and

\textsuperscript{31} FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-10-25-8 -14, pages 31-32
• The lease payments are increased proportionally to the stand-alone price of the extra ROU, adjusted to the conditions of the contract.

A modification that is not a separate contract results:

I. Remeasurement and distribution of the consideration between contract’s remaining lease and non-lease components at modification’s effective date.

II. Remeasurement of lease liability in order to reflect the new lease payments by a discount rate for the lease determined at modification’s effective date.

III. Either:

   a) In case the modification deteriorates lessee’s ROU, the carrying amount of ROU is reduced on a proportionate basis to the full (or partial) termination of the existing lease liability and the reduction in the ROU asset is recognized as a gain (or loss) at the effective date of the modification.

   b) Or, change the amount of the ROU asset to the amount of lease liability’s recalculation

IV. Account for initial direct cost, lease incentives and other payments connected to the modification as if it was a new contract.

V. Redefine the class of the lease in the effective date of the modification based on the information at that date.

VI. If lease changes class, correct the remaining lease cost recognition pattern and how it is presented in the income statement and in the statement of cash flows.

If, after the modification, a finance lease is classified as operating, the lessee accounts the difference between:

• The carrying amount of the ROU asset immediately after the remeasurement because of the modification and

• The carrying amount of the ROU asset that would result from applying the initial measurement guidance of an operating lease ROU asset to the modified lease.

vii. Financial Statements (STEP 9)
Summary of financial statements requirements:

### Finance leases

**Balance sheet**
- ROU assets
  - separate line item; or
  - within another line item, separate from where operating lease ROU assets are presented

**Lease liabilities**
- separate line item; or
- within another line item, separate from where operating lease liabilities are presented

### Operating leases

**Balance sheet**
- ROU assets
  - separate line item; or
  - within another line item, separate from where finance lease ROU assets are presented

**Lease liabilities**
- separate line item; or
- within another line item, separate from where finance lease liabilities are presented

KPMG, Leases- Issues in depth (US GAAP), APRIL 2016, page 217

### 3.10 ACCOUNTING OBLIGATIONS OF LESSORS

Lessor accounting under topic 842 following US GAAP accounting, classify leases as:

- Sales-type or
- Direct financing or
- Operating leases

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Necessary definitions:

- Net investment in the lease = Lease receivable + unguaranteed residual asset
- Lease receivable = PV of lease payments + PV of guaranteed portion of estimated residual value
- Unguaranteed residual asset = PV of unguaranteed portion of the estimated residual value

i. Lease classification

The procedure that lessor follows, at commencement date, is separated in 2 parts:

- In the first part, lessor classifies the lease in sales-type lease or goes to part 2,
- In the second part, lessor classifies the lease as operating lease or direct financing lease
Part A tests

Transfer of ownership test
Does the lease transfer ownership of the underlying asset to the lessee by the end of the lease term?

Lessee purchase option test
- No
- Yes
  Does the lease grant the lessee an option to purchase the underlying asset that the lessee is reasonably certain to exercise?

Lease term test
- No
- Yes
  Is the lease term for a major part of the remaining economic life of the underlying asset?

Present value test (A)
- No
- Yes
  Does the present value of the sum of (1) the lease payments and (2) any lessee residual value guarantee, equal or exceed substantially all of the underlying asset’s fair value?

Alternative use test
- No
- Yes
  Is the underlying asset of such a specialized nature that it is expected to have no alternative use to the lessor at the end of the lease term?

Note 1:
If the commencement date is at or near the end of the underlying asset’s economic life, this test does not apply.

Go to Part B tests

Part B tests

Present value test (B)
- No
- Yes
  Does the present value of the sum of (1) the lease payments and (2) any residual value guarantee from the lessee or a third party unrelated to the lessor equal or exceed substantially all of the underlying asset’s fair value?

Collectibility test
- No
- Yes
  Is it probable that the lessor will collect the lease payments plus any amount necessary to satisfy a residual value guarantee?

KPMG, Leases- Issues in depth (US GAAP), APRIL 2016, page 225

Lessor classifies lease as a sales-type lease

Lessor classifies lease as an operating lease

Lessor classifies lease as a direct financing lease

KPMG, Leases- Issues in depth (US GAAP), APRIL 2016, page 226
1. Sales-type and Direct Financing Leases:
   a. Initial recognition and measurement:

   lessor recognizes a net investment in the balance sheet and derecognizes the underlying asset.

   • Sales-type lease net investment\(^{33}\) =
     
     lease receivable
     + any unguaranteed residual value estimated in the future value as the end of the lease term.

   • Direct financing lease net investment\(^{34}\) =
     
     lease receivable
     + any unguaranteed residual value estimated in the future value as the end of the lease term
     - sale profit on the lease, which is deferred and recognized over the lease term

   • Sales profit =
     
     the lower of the fair value of the underlying asset or the sum of the lease receivable and any prepaid lease payments
     - the carrying amount of the underlying asset, net of any unguaranteed residual asset
     - initial direct cost

   • Lease receivable\(^{35}\) = PV of future lease payments + PV of residual value guaranteed

b. Subsequent accounting:

   After commencement date, lessor, measures:

   • The net investment\(^{36}\):

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\(^{33}\) FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-30-30-1, pages 129-130

\(^{34}\) FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-25-8, page 128 & 842-30—2, page 130

\(^{35}\) FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-30-30-1, pages 129-130 & 842-30-30-2, page 130
Inflating the carrying amount reflecting the interest income resulting from the amortization of the lease receivable and growth of the unguaranteed residual asset using in both the effective interest method.

- Recognize any deferred selling profit (only for direct financing leases)
- Reduce the carrying amount reflecting the lease payments received
  - The interest on the net investment
  - Any variable payments as income profit or loss in the period which the changes in conditions occurred on which the payments are based.
  - The impairment of the net investment in accordance with the guidance for financial instruments. The lessor determines the loss allowance considering the collateral relating to the net investment in the lease. The cash flows that lessor expects to receive from the underlying asset during the lease term, are represented by the collateral. Lessor excludes cash flows which are expected after the end of the lease term (i.e. case of re-leasing the asset).

At the end of the lease term, lessor:

- Reclassifies the lease net investment to the appropriate asset category
- Measures the carrying amount of the net investment in the lease.
- Accounts the asset under another US GAAP.

In case of termination, lessor:

- Tests the net investment for impairment
- Reclassifies the underlying asset measuring the carrying amount of the lease receivable (less the amounts still expected) and the residual value asset
- Accounts the underlying asset under another US GAAP.

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36 FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-30-35-2, page 130
The net investment is remeasured again only in the case of modification which is not accounted as separate lease

37 FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-30-35-3, page 130

38 FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-30-35-5, page 131

In the case of a replacement with a new lease, lessor:\[40\):

- Accounts for the termination of the original lease as described above
- Accounts the new lease as it would in any new lease.

2) Operating Leases:

At commencement date, lessor:\[41\]:

- Recognizes the underlying asset and depreciate it over its estimated useful life
- Measures the underlying asset accordingly to other US GAAP and tests for impairment accordingly to the guidelines of impairment or disposal of long lived assets.
- Do not recognize any income interest because the lease payments under the contract are accounted as receivables only when they are due and payable by lessee.
- Lease income is recognized on a straight-line basis, unless another basis is more representative.
- Variable lease payments are recognized as profit or loss in the period which the changes in conditions occurred, on which the payments are based.
- Initial direct costs are initially differed and accounted as expense over the lease term.

ii. Lease Modifications:

Lease modification is a change in terms and condition that result a change in the scope or the consideration. Effective date of a modification is the date lessee and lessor approve it.

A modification is accounted as a separate lease when:

- An additional ROU asset\[42\] is granted to the lessee and

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\[40\] FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-30-40-2, page 132


\[42\] Right-of-use asset
• Lease payments increase commensurate with the stand-alone price of the extra ROU asset.

1. Operating lease modifications:

If an operating lease is modified and not accounted as a separate lease, lessor accounts the modification as a new lease and terminates the initial lease contract.

2. Direct financing lease modifications:

Lessor’s accounting in case of a modification that does not recognized as a separate contract:

KPMG, Leases- Issues in depth (US GAAP), APRIL 2016, page 255

3. Sales-type modifications:

Lessor’s accounting in case of a modification that is not recognized as a separate contract:
iii. Financial Statement presentation

1. Balance sheet:
   a) Sales-type and direct financing leases:
      Sales-type and financing leases are presented separately from other assets. Net investment is subject of the same accounting as other assets in a classified balance sheet\(^{43}\).
   b) Operating leases:
      The underlying asset and the related depreciation expenses are presented using another US GAAP, such as topic 360\(^{44}\).

2. Income statement:
   a) All leases:
      Lease income is not presented separately. Line items are disclosed in the income statement in which lease income is included\(^{45}\).
   b) Sales-type and direct financing leases\(^{46}\):
      Selling profit or loss is recognized at commencement date and presented in a way that best reflects the lessor’s business model:

---

\(^{43}\) FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-30-45-1 -2, page 132

\(^{44}\) FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-30-45-6, page 133

\(^{45}\) FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-30-45-3, page 132

\(^{46}\) FASB, Accounting Standards Update, No. 2016-2, February 2016, Topic 842,842-30-45-4, page 133
• If lessor uses leases as alternative to selling, profit or loss at lease commencement date are presented on a gross basis as separate line items. Revenue and cost is calculated as follows:

KPMG, Leases- Issues in depth (US GAAP), APRIL 2016, page 264

• If contracts are used from the lessor as a financing tool, the lessor presents profit or loss at the commencement date on a net basis in a single line item.

3. Statement of cash flows:

Cash receipts from leases are classified as cash flows from operating activities.
4.1 COMPARISON

The most important differences between Topic 842 and the current Topic 840 are reported in the next table:

<table>
<thead>
<tr>
<th>Topic 842</th>
<th>Topic 840</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DEFINITION OF A LEASE</strong></td>
<td></td>
</tr>
<tr>
<td>1 Topic 842 uses the concept of &quot;controlling a specified asset&quot;. Comparing with Topic 840: (b) and (c) do not demand from the customer to have the right to direct the use of the asset. (a) also, is not consistent with topic 842 because, the right to operate an asset is relevant only if the customer has power over the decisions about “how” and “for what” the asset will operate and used. Also, under topic 842, the customer is litigable to obtain all the economic benefit from the use of the underlying asset rather than a minor amount of it.</td>
<td>Current US GAAP uses the concept of “controlling an identified asset”, meaning: a) Lessee can operate the asset as he determines as he obtains or controls all or a minor amount of the asset’s output. b) has physical access to the asset while controlling it and obtaining its output. c) It is remote that someone, other than the asset purchaser, will take more than a minor amount of the output and the price that the purchaser will pay for the output is neither contractually fixed per unit of the output nor equal to the current market price per unit of the output as of the time of delivery of the output.</td>
</tr>
<tr>
<td><strong>SEPARATE COMPONENTS OF A CONTRACT</strong></td>
<td></td>
</tr>
<tr>
<td>2 Land element (a lease of land and a building or land and integral equipment) is considered a separate lease unless the effect of accounting separately the land is insignificant. By insignificant it is meant, for example that the separate accounting of land would have no effect on lease classification (the classification as finance or operating lease is not affected) or the recognized amount for</td>
<td>it is required to account separate land and building when the fair value of the land is 25% or more of the total value of the total property which is leased.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>the land lease would be insignificant</strong></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Executory cost that do not transfer goods or services to the customer is allocated to both lease and non-lease components and not excluded from the lease payments.</td>
</tr>
<tr>
<td></td>
<td><strong>COMMENCEMENT DATE</strong></td>
</tr>
<tr>
<td>4</td>
<td>Initial measurement and classification may occur either the commencement either the inception date</td>
</tr>
<tr>
<td></td>
<td><strong>RESIDUAL VALUE GUARANTEES</strong></td>
</tr>
<tr>
<td>5</td>
<td>Minimum lease payment includes the full amount of the guaranteed residual value</td>
</tr>
<tr>
<td></td>
<td><strong>5. INITIAL DIRECT COST</strong></td>
</tr>
<tr>
<td>6</td>
<td>Initial direct cost contains the costs which wouldn’t have incurred if the lease agreement wouldn’t have been made</td>
</tr>
<tr>
<td></td>
<td><strong>DISCOUNT RATE</strong></td>
</tr>
<tr>
<td>7</td>
<td>Lessee discounts the future lease payments using the rate implicit only if the rate is lower than the incremental borrowing rate</td>
</tr>
<tr>
<td>8</td>
<td>Incremental borrowing rate will be used would be on collateralized basis – secure.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>9</td>
<td>Incremental borrowing rate is referred in a possible funding of an amount equal to the value of the lease payments.</td>
</tr>
</tbody>
</table>

**ECONOMIC LIFE**

| 10 | Incremental borrowing rate is referred in a possible funding of an amount equal to the value of the leased asset. | Is the period during which the asset is economically usable. |

**ACCOUNTING BY LESSEE**

| 11 | Classification is done at the commencement date | Classification is done at the inception date |
| 12 | Lease payments | Minimum lease payments |
| 13 | Impairment | Charges in operating leases, under current US GAAP, are recognized under Topic 420 (Exit or Disposal Cost Obligations). Under Topic 420, any charge is recognized:  
• When the lessee terminates formally the lease contract, or  
• The lessee cease use of the underlying asset resulting a cost with no economic benefit, measured at fair value  
• The charges are allocated in a lease basis. That means that if an asset is part of a group of assets, it will receive an impairment charge because the group of assets, as unity, is impaired even if the asset which was referred in the beginning is not impaired. |

**ACCOUNTING BY LESSOR**
<table>
<thead>
<tr>
<th>Key change</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changes in lease classification between sales-type and direct financing</td>
<td>Sales-type leases and direct financing leases are no longer differentiated by whether there is manufacturer/dealer profit or loss. Instead, they will be differentiated by whether the lessor transfers substantially all of the risks and benefits of ownership of the underlying asset to only the lessee or to the lessee and an unrelated third party.</td>
</tr>
<tr>
<td></td>
<td>- The changes will result in many current direct financing leases being classified as sales-type leases under Topic 842.</td>
</tr>
<tr>
<td></td>
<td>- A smaller number of current sales-type leases will be classified as direct financing leases under Topic 842.</td>
</tr>
<tr>
<td>Recognition of selling profit</td>
<td>If selling profit arises from a direct financing lease, it will be deferred and recognized over the lease term.</td>
</tr>
<tr>
<td>Narrowed definition of initial direct costs</td>
<td>Initial direct costs include only those incremental costs of a lease that would not have been incurred if the lease had not been executed. Some costs (e.g. legal fees and allocated internal costs) that an entity capitalizes as initial direct costs under current US GAAP will be expensed when incurred under Topic 842. For some lessors, this may result in recognizing more expenses before the lease commences and higher margins on lease income earned over the lease term.</td>
</tr>
</tbody>
</table>
### Key change

**Changes in lease classification between sales-type and direct financing**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
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<td></td>
</tr>
</tbody>
</table>

**Recognition of selling profit**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>If selling profit arises from a direct financing lease, it will be deferred and recognized over the lease term.</td>
<td></td>
</tr>
</tbody>
</table>

**Narrowed definition of initial direct costs**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Impact</th>
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<tr>
<td>Initial direct costs include only those incremental costs of a lease that would not have been incurred if the lease had not been executed. Some costs (e.g. legal fees and allocated internal costs) that an entity capitalizes as initial direct costs under current US GAAP will be expensed when incurred under Topic 842. For some lessors, this may result in recognizing more expenses before the lease commences and higher margins on lease income earned over the lease term.</td>
<td></td>
</tr>
</tbody>
</table>

**Leveraged leases**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leveraged lease classification and accounting is eliminated by Topic 842 for all leases that commence on or after the effective date of Topic 842.</td>
<td></td>
</tr>
<tr>
<td>Lessors will continue to account for leveraged leases that commence prior to the effective date in accordance with current US GAAP, unless the lease is modified on or after the effective date.</td>
<td></td>
</tr>
</tbody>
</table>

KPMG, Leases- Issues in depth (US GAAP), APRIL 2016, pages 222,223 & 224
4.2 THINKING OVER THE IMPLEMENTATION OF TOPIC 842

The implementation will have the same aftermaths as IFRS 16, discussed in CHAPTER 2, because both systems have the same scope and goals.

CHAPTER 5: IFRS 16 Vs US GAAP, TOPIC 842

In 2008, both the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) implemented a joint project to improve the current guidance on accounting for leases. In January 2016, the IASB issued IFRS 16, *Leases*, and in February 2016, the FASB issued ASC Topic 842, *Leases*. Different standards with many similarities. The biggest similarity is that all leases must be recorded on the balance sheet, that means trillions in previously off-balance sheet arrangements will be presented to balance sheet.

Some similarities and differences between U.S. GAAP and IFRS as it relates to lessee accounting are:

1. **Classification of Leases**
   
   Under ASC Topic 842, lessees must classify leases as operating lease or finance lease following a lease classification test. The “new” lease classification test was constructed using the criteria under current IFRS guidance. The goals were to remove the “bright lines” that exist under current U.S. GAAP guidance requiring more judgment of facts and circumstances to determine when the control of an asset has substantially transferred to the lessee. Regardless of the classification, operating and finance leases are required to initially be reported on the balance sheet by recognizing a right-of-use (ROU) asset and a lease liability, calculated on the present value of lease payments to be made over the lease term. IFRS 16 eliminates the need for a classification test requiring all leases to be reported on the balance sheet in the same manner.

2. **Initial Recognition and Measurement**
   
   All leases under both U.S. GAAP and IFRS follow the same process to calculate the initial recognition and measurement. Economic entities will recognize a right-of-use asset with a corresponding credit to a liability.

3. **Initial Direct Costs**
   
   Under both U.S. GAAP and IFRS, the definition of initial direct costs is the same: incremental costs that an entity would not have incurred if it had not obtained the lease. ASC Topic 842 and IFRS 16 require lessees to include initial direct costs in the measurement of the right-of-use asset and amortize the costs over the lease term\(^{47}\).

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\(^{47}\) An example of an initial direct cost would be the commissions paid to real estate agents. They would not have to be paid if the company had not obtained the lease.
4. Non-lease Components

The accounting for non-lease components is the same under both systems. A lease contract may contain lease components, non-lease components (such as maintenance services), and activities that do not transfer a good or service to the lessee (such as taxes on a property). ASC 842 and IFRS 16 only apply to the lease components. U.S. GAAP and IFRS obliges entities to separate lease components from non-lease components in a lease contract. Lessees allocate the consideration in the lease contract between the lease components and non-lease components on a relative standalone basis, maximizing the use of observable information. Activities that do not transfer a good or service to the lessee (such as payments to cover the lessor’s property taxes) are not considered components of the contract and therefore are not separated out.

5. Subsequent Recognition and Measurement

Under U.S. GAAP, the subsequent recognition depends on the lease classification.
- Finance Leases:
  Under ASC Topic 842 and IFRS 16, the subsequent measurement for finance leases (under ASC Topic 842) and all leases under IFRS 16 is substantially the same. After initial recognition, the lease liability is measured at amortized cost and accreted using the effective interest method (interest expense) and the right-of-use asset (amortization expense) is amortized (typically on a straight-line basis).
- Operating Leases (U.S. GAAP only):
  For an operating lease, an entity will accrete the lease liability similarly to the method described for a financing lease, but the guidance does present two different ways for calculating the amortization to recognize on the ROU asset.
  One other key difference is in the journal entries. In a finance lease (or any lease under IFRS 16), the lessee would record two separate entries: interest expense and depreciation/amortization expense. Under US GAAP is one expense entry, which is equal to what straight-line rent expense would have been, were this accounted for as an operating lease under the old guidance.

CHAPTER 6: EFFECTS IN FINANCIAL STATEMENTS, METRICS AND LEASING MARKETS

The combined efforts of IASB and FASB to converge the two accounting standards, IFRS and US GAAP, will result enlisted companies to move off-balances assets to balance sheet. Because there was not past information, IASB estimated the effects of applying the two standards considering:
- Information by geological region and industry sector
- Information based on 2014 annual reports
- All companies reporting currencies other than USD are converged in USD using the exchange rate at the date of the latest annual report.
• The present value of the lease payments for off balance sheet leases is estimated using a 5% discount rate and the average lease terms estimated using the maturity obligations for off balance sheet leases available in financial data aggregators.

• The annual lease expense is estimated equal to the payments due within one year from the reporting date as presented in the financial data aggregators.

• EBITDA is based on available financial date.

• IASB observed 14,000 listed companies’ disclosure information. That observation concluded that there were $2.86 trillion of off-balance assets with $2.18 Trillion present value.

![Percentage of IFRS / US GAAP companies who disclose off balance sheet leases](image)

IFRS, Effects analysis, IFRS 16 Leases, January 2016, page 14

Implementing the new accounting systems will affect the numbers reported in financial statements and metrics as follows:

1. Balance sheet:
   I. Lease assets ↑:
      New regulation requires companies to present all the off-balance sheet leases to the balance sheet.
   II. Financial Liabilities ↑:
      New regulation requires companies to recognize a lease liability
   III. Equity ↓:
      The carrying amount of the lease assets will typically reduce more quickly than the carrying amount of the lease liability resulting a reduction in the reported equity.

2. Income Statement:
I. EBITDA \( \uparrow \uparrow \):
Under new regulation EBITDA do not include expenses related to leases.

II. Operating profit and finance cost \( \uparrow \downarrow \):
A company is expected to recognize interest expenses and depreciation.

III. Profit before tax \( \leftrightarrow \):
Under new regulation operation profit and profit before tax will be increased because in their calculation, interest on lease liabilities and expenses are excluded.

3. Cash Flow statement:
   I. Cash from operating activities \( \uparrow \)
   II. Cash from financing activities \( \downarrow \)
   III. Total cash flow \( \leftrightarrow \)

   Operating Cash outflows are expected to be reduced resulting an increase in financing cash outflows because companies are obliged to presents the cash flows of former off balance sheet leases as operating activities.

4. Metrics:

   "\( \text{\textless\textless\textless TABLE 4\textgreater\textgreater\textgreater} \)
   IFRS, Effects analysis, IFRS 16 Leases, January 2016, page 53

   "\( \text{\textless\textless\textless TABLE 5\textgreater\textgreater\textgreater} \)
   IFRS, Effects analysis, IFRS 16 Leases, January 2016, page 54

As far the impact in Leasing decision, obligations to active lease contracts and to some major markets, some estimations can be:

1. Leasing decision:

   Implementing the new lease legislations may result some companies to proceed in buying instead of leasing an asset. That may occur in companies which held off balance sheet lease and now they are obliged to present them in balance sheet. That way the lease could be more expensive than just buying the underlying asset.

The implementation of new guideline does not discourage companies from leasing because there are considerable benefits related to leasing. For example:

- Financing if assets without collateral
- Financing without using bank credit lines
- Using assets without the obligations of ownership
- Supplementary services (maintenance services)
- Ability to use an asset for only a portion of its economic life
- Operational flexibility

2. Terms and conditions of active lease contracts:

   IASB and FASB do not expect that terms and condition will change because contracts are negotiated to suit companies needs and not in the basis of accounting.
Although lease contacts are agreements which are made for business reasons, there will be companies which will re-examine their leasing activity because of incurred length and payment changes resulting from the implementation of the standards.

3. Cost of borrowing:

Probably, not rated and small companies with high off balance sheet lease may suffer a higher borrowing cost.

Although the new regulations change the numbers in financial statements, companies are still the same. The change in accounting methods brings more transparency and better information quality. Sophisticated users who deal with financing decisions always take in mind the off-balance information. Rated companies obtain their rate after the evaluation of their on-balance and off-balance sheet information.

Interest rates are related to the available information. If information is available, in any kind, interest rates will be more accurate to the ability of a company to repay its obligations. On any other case, interest cases incorporate a higher risk because of the lack of information.

4. Debt covenants:

A research from Moody’s showed that even if an accounting change occurs, companies continue to use the same credit line agreements through good faith negotiations.

Also, that research supports that sometimes lease agreements contain “carve-outs” like “frozen GAAP” in which the contracts are not subject of change when unintended accounting change happens.

Debt covenant agreements take in mind if a company holds a significant amount of off-balance lease assets. IASB expects that terms and conditions of future debt covenants will be revised in a manner that separated economic changes from accounting changes.

5. Regulatory capital requirements:

Theoretically, under new regulations, banks should report higher assets and lower equity. That would affect the regulatory capital. The extent of that effect is depended in the actions of prudential regulators with which IASB and FASB maintains an ongoing dialogue.

6. Aviation Industry:

Airlines require to recognize almost all leases on the balance sheet resulting an account for new assets and liabilities. This will impact reported profit and performance measures, such as debt and gearing ratios, EBITDA (this will increase as rental expense is replaced by interest, depreciation, and amortization), and Return on Capital Employed (ROCE).

Also, airlines will be more greatly affected by currency volatility because when the lease liability is retranslated at each reporting date any movements will be recorded on profit and loss account. Thus, there will be an increased

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48 Loan- Covenant Clauses Protect Companies from Default When Accounting Changes, August 24, 2011
49 Article: How will aviation Industry be affected by IFRS? by Berwin Leighton Paisner LLP - Rebecca Quayle, January 5 2017, LEXOLOGY.COM
demand for lease rentals to be denominated in local currency which lessors will need to anticipate and eventually respond to.

7. Retail industry\textsuperscript{50}:

Lessees will be required to recognize most of their leases on their balance sheets. On the other hand, there will be little or virtually no impact for the lessors as their accounting for their lease contracts will be substantially the same. IFRS 16 may have far-reaching implications on their financial statements and even their operations as these entities usually enter many lease contracts and/or enter high-rent contracts.

Some potential business impacts may be:

- Debt covenants may need to be renegotiated
- Share-based payments – performance may need renegotiation
- Revised profit or loss expenses may affect the ability to pay dividends
- Lease negotiations may be affected by a turn of market toward shorter lease tenured so the lease liabilities to minimized.

8. Real Estate industry\textsuperscript{51}:

Tenants, under IFRS 16, must recognize a lease liability and a ROU asset. The exception of some variable payments in the sum of lease payments and the adding of renewal option in the lease term, may lead tenants to renegotiate their rental terms and payments.

Landlords must consider the impact of shorter lease terms. an increased amount of variable rent, financing cost, increased operating cost, will have to their business.

Tenants may change their perspective toward leases and choose to buy rather than lease or request separate pricing in non-lease components.

Some effects to Tenants will be:

- Increased total assets and liabilities
- Increased net debt and EBITDA
- Increased finance expense
- Decreased operating expense
- Shifts in cash flow statements
- Deterioration of debt related ratios

\textsuperscript{50} PWC, An industry focus on the impact of IFRS 16 - Retail and consumer, April 2016 and

The impact of IFRS 16, leases, on Lessees in the retail industry, Ma. Emilita L. Villanueva is a Senior Director of SGV & Co., October 03 2016 – BWORLDONLINE.COM

\textsuperscript{51} EY, How will IFRS 16 impact real estate entities, May 16


CHAPTER 7: AEGEAN AIRLINES S.A. CASE

Aegean Airlines SA is an airline company operating in Greece which uses operating leasing for obtaining most its aircraft fleet. In 2015 Annual Report, it is mentioned that from the sum of 58 aircrafts only 4 are under finance lease\(^{52}\). This means that, under IFRS 16, it will be greatly affected because holds a great amount of off-balance lease assets.

The method which will be used to “move” the off-balance sheet assets to the balance sheet is the constructive capitalization of unrecorded operating leases developed by Eugene A. Imhoff, Jr. Robert C. Lipe and David W. Wright (1991). This method is generally accepted for its more accurate results.

Under IFRS 16, minimum lease payments recorded in the notes must be converted to reflect the present value because they are recorded in their future value. Aegean Minimum lease payments are:

<table>
<thead>
<tr>
<th>YEARS</th>
<th>AMOUNT *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 years</td>
<td>112,091,48</td>
</tr>
<tr>
<td>Between 1 - 5 years</td>
<td>343,911,08</td>
</tr>
<tr>
<td>Over 5 years</td>
<td>49,740,02</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>505,742,58</strong></td>
</tr>
</tbody>
</table>

*Amounts in thousands

Annual Report 2015, 5.52 Commitments, (a) Operating leases, page 106

Under IFRS 16, it is assumed that lease payments are classed in periods in which the amounts of lease payments are equal. That means that between years 1 – 5, the amount of annual lease payments is 343,911,08 / 5 = 68,782,22. Because company usually contracts utmost 8 years, the class “Over 5 years” consists of 2 annual payments of 49,740,02/2 = 24,870,01. The break of lease payments is pictured in the next table:

---

\(^{52}\) Annual Report 2015, 5.24 Tangible assets, page 88
For the calculation of the present value of the lease payments a 10% interest rate will be used because implicit rate or alternative liability interest ratio of the company cannot be detected. A 10% rate is also used from Imhoff (1991). Company’s present value of minimum lease payments is presented in next table:

<table>
<thead>
<tr>
<th>YEARS</th>
<th>F.V. OF LEASE PAYMENTS*</th>
<th>10% VALUE FACTOR</th>
<th>P.V. OF LEASE PAYMENTS*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>112.091,48</td>
<td>0,909</td>
<td>101.891,16</td>
</tr>
<tr>
<td>2017</td>
<td>68.782,22</td>
<td>0,826</td>
<td>56.841,62</td>
</tr>
<tr>
<td>2018</td>
<td>68.782,22</td>
<td>0,751</td>
<td>51.676,08</td>
</tr>
<tr>
<td>2019</td>
<td>68.782,22</td>
<td>0,683</td>
<td>46.978,25</td>
</tr>
<tr>
<td>2020</td>
<td>68.782,22</td>
<td>0,621</td>
<td>42.706,88</td>
</tr>
<tr>
<td>2021</td>
<td>68.782,22</td>
<td>0,564</td>
<td>38.793,17</td>
</tr>
<tr>
<td>2022</td>
<td>24.870,01</td>
<td>0,513</td>
<td>12.763,29</td>
</tr>
<tr>
<td>2023</td>
<td>24.870,01</td>
<td>0,467</td>
<td>11.601,86</td>
</tr>
</tbody>
</table>

**ESTIMATED UNRECORDED DEBT**  363.252,31*

*Amounts in thousands

Under constructive capitalization of operating leases method developed by Imhoff et.al., some assumption has been made:

- Straight Line depreciation method is used.
- Off-balance sheet lease assets and off-balance lease liabilities are equal to the present value of the future lease payments beginning of the lease.
• Off-balance sheet lease asset and off-balance lease liabilities are equal to zero when lease payments are completed.

Imhoff calculates the relation between the off-balance sheet liabilities and assets in certain points of the useful life of the asset.

The ratio is expressed as:

\[ \frac{PVA}{PVL} = \left( \frac{RL}{TL} \right) \times \left( \frac{PV AF%r,TL}{PV AF%r,RL} \right) \]

- **PVA** = Present Value of Unrecorded Asset
- **PVL** = Present value of unrecorded Liability
- **RL** = Remaining lease life
- **TL** = Total lease life
- **PV AF %,r,n** = Present Value Annuity Factor for 1€ at ( % ) interest rate for ( n ) years.

Imhoff method states that higher accuracy is reached when 50% of lease life have been consumed. Following the mathematic from above:

\[ \frac{PVA}{PVL} = \left( \frac{4}{8} \right) \times \left( \frac{5.335}{3.17} \right) = 84.15\%^{53} \]

Because most the beginning payments of the lease consists of interest payments and the minority of capital payments, the book value of the leased assets would be less than the book value of the lease liabilities. Depreciation deduction will decrease the value of an asset in a higher ratio than reduction in the capitalization of the liabilities.

So, Net book value would be 84.15% of the Present value of the off-balance sheet liabilities: 363.252.31 x 84.15% = 305.670,51. The difference of 15.85 % (100% - 84.15%) represents the lease expenses. These numbers will be represented in the balance sheet:

---

53 RL = Remaining lease life = 4 (50% of lease life has been consumed)
TL = Total lease life = 8
PV AF %,10,8 = Present Value Annuity Factor for 1€ at (10 %) interest rate for (8) years. = 5,335
PV AF %,10,4 = Present Value Annuity Factor for 1€ at (10 %) interest rate for (4) years = 3,17
## IMPACT ON BALANCE SHEET

<table>
<thead>
<tr>
<th>ASSETS*</th>
<th>LIABILITY*</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNRECORDED LEASE ASSETS: 305.670,51</td>
<td>UNRECORDED LEASE LIABILITY: 363.252,31</td>
</tr>
<tr>
<td>TAX DEDUCTION (INCOME TAX 29%): 54 - 16.698,72</td>
<td>LIABILITIES NET EFFECT: 346.553,59⁵⁵</td>
</tr>
<tr>
<td>EQUITY: -40.883,07⁵⁶</td>
<td></td>
</tr>
</tbody>
</table>

*Amounts in thousands

**TOTAL**: 305.670,51  **TOTAL**: 305.670,51

The adjusted numbers in 2015 Balance Sheet would be:

### FINANCIAL STATEMENT SUMMARY

<table>
<thead>
<tr>
<th></th>
<th>REPORTED*</th>
<th>UNRECORDED*</th>
<th>AFTER CAPITALIZATION*</th>
<th>CHANGE %</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL ASSETS</td>
<td>668.834,00</td>
<td>305.670,51</td>
<td>974.504,51</td>
<td>45,70%</td>
</tr>
<tr>
<td>TOTAL LIABILITIES</td>
<td>446.860,00</td>
<td>346.553,59</td>
<td>793.413,59</td>
<td>77,55%</td>
</tr>
<tr>
<td>EQUITY</td>
<td>221.974,00</td>
<td>-40.883,07</td>
<td>181.090,93</td>
<td>-18,42%</td>
</tr>
</tbody>
</table>

*Amounts in thousands

To understand the magnitude of the changes which illustrated above, it is necessary to calculate the changes in important financial ratios which are used for the measurement and analysis of the performance of a company:

1. **TAX DEDUCTION (INCOME TAX 29%)**:
   
   \[(\text{UNRECORDED LEASE LIABILITY} - \text{UNRECORDED LEASE ASSETS}) \times \text{TAX RATE}\]
   
   \[= (363.252,31 - 305.670,51) \times 29\% = 16.698,72\]

2. **UNRECORDED LEASE LIABILITY - TAX DEDUCTION**:
   
   \[= 363.252,31 - 16.698,72 = 346.553,59\]

3. **ASSETS = LIABILITIES**:
   
   \[\Rightarrow \text{UNRECORDED LEASE ASSETS} - \text{LIABILITIES NET EFFECT} = 305.670,51 - 346.553,59 = -40.883,07\]
The capitalization of operating leases has resulted in an increase 117,64% in the DEBT (LIABILITIES) / EQUITY because debt increased and the same time equity decreased. If the DEBT/EQUITY ratio is higher than a certain level, the company needs financing by third party rather than only from the owners. This means that higher the ratio the higher the risk for the company. DEBT/ASSETS is another debt ratio known also as leverage ratio. Leverage ratio informs about the extent that liabilities finance assets. Higher ratio means that the company is exposed to higher risks.

Because this example of converting operating leases to finance is focused in the changes of the balance sheet, no estimations about the income statement have been done and thus the income statements is supposed to be intact. The assumption that the net profit has not been changed leads to a degrease of equity and thus the increase of ROE. ROA is decreased because company’s assets are increased.

**CONCLUSION**

Economic entities, because of limited resources and high equity cost, choose to lease instead of buying an asset. Under current IFRS regulations leases are classified as finance or as operating. Finance leases, because of the future lease payments, create an increase in the asset section of balance sheet and an increase in liabilities section. On the other hand, operating lease stay off-balance and the lease payments are reported in the income statement as expense. Off-balance sheet lease assets is a way for a company to be financed and not to represent that obligation to the balance sheet. Like this, companies manage to decrease or manipulate the risks related to increasing liabilities and assets. Unrecorded finance makes comparisons between companies extremely difficult and tricky. Sophisticated analysts and investors often reach to

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different conclusions when assessing two companies in which recorded leases are the same but have different unrecorded debt. This leads to different investing decisions for two seemingly same companies.

Under IAS 16, all lease transactions are reported as finance leases and are presented in the balance sheet. Accounting has been further developed to represent cash flows, financial performance and the financial position of the lessee and the lessor. Capitalization of former operating leases makes undercover financing to disappear. Less sophisticated investors and analysts will be apt to export more and more accurate information from financial statement. As in the case of AEGEAN AIRLINES S.A., capitalization of operating leases will increase assets and liabilities, decrease equity, and thus worsen the finance ratios.
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- Grant Thorton, Comparison between US GAAP and IFRS Standards, September 2016
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- Thomas A. Buchman, Peter Harris & Michelle Liu, Review of Business & Finance Studies, GAAP vs IFRS TREATMENT OF LEASES AND THE IMPACT ON FINANCIAL RATIOS, Vol 7, No 1, 2016, pp 93-104

Web Articles:


Presentations:

- Mian Ahmad Farhan, FCA, IFRS 16- Leases, CPD Activity Organized by: Institute of Charted Accountants of Pakistan
TABLE 1:


Yes

Does the customer have the right to obtain substantially all of the economic benefits from use of the asset throughout the period of use? Consider IFRS 16:B21 – B23.

Yes

Customer

Does the customer, the supplier or neither party have the right to direct how and for what purpose the asset is used throughout the period of use? Consider IFRS 16:B25 – B30.

Yes

Neither: how and for what purpose the asset will be used is predetermined

Supplier

Yes

Does the customer have the right to operate the asset throughout the period of use, without the supplier having the right to change those operating instructions? Consider IFRS 16:B24(b)(i).

No

Did the customer design the asset in a way that predetermines how and for what purpose the asset will be used throughout the period of use? Consider IFRS 16:B24(b)(ii).

Yes

The contract contains a lease

No

The contract does not contain a lease
**TABLE2:**

<table>
<thead>
<tr>
<th></th>
<th>IFRS 16</th>
<th>IAS 17</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>DEFINITION OF A LEASE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>An agreement in which the lessor transfers the right of use of an asset for a period of time to the lessor in exchange of consideration.</td>
<td>An agreement in which the lessor gives the lessee, in return for a payment or line of payments, the right to use an asset for an agreed period.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>A contract contains a lease when:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- The right of use and the control of the use of an underlying asset is transferred,</td>
<td>Determining if an arrangement contains a lease, depends on whether:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Lessee obtains all the economic benefits from the leased asset,</td>
<td>- Fulfillment of the arrangement is depended on the use of a specified asset or group of assets,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Lessee has the right to direct the use of the asset over the lease term.</td>
<td>- The arrangement conveys a right to use an asset.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>LEASE CLASSIFICATION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>- No distinction between finance and operating lease from the perspective of lessees.</td>
<td>Leases are classified at the inception date as finance or operating.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- The classification between operating and finance remains for lessees.</td>
<td>- Finance lease is a lease that transfers substantially all the risks and rewards to ownership of an asset.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- In all other cases, its operating lease.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>IFRS provides exception options in order a lease to be classified as operating:</td>
<td>No guidelines about exceptions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- If the lease is short term (less than 12 months) or</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- If the lease is a low value asset.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>ACCOUNTING BY LESSSEES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Lessee must use an interest rate implicit as a discount rate when calculating the present value of the lease payments. If an implicit rate is not easily determined, lessee uses the incremental borrowing rate</td>
<td>Lessee must use an interest rate implicit as a discount rate when calculating the present value of the <strong>minimum</strong> lease payments. If an implicit rate is not easily determined, lessee uses the incremental borrowing rate</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Lease payments are included in the determination of the asset and liability and are equal to the sum of all fixed payments, certain variable payments and reasonable termination/extension or purchase payments.</td>
<td>Minimum lease payments are the unavoidable payments to the lessor during the lease term, excluding any contingent rent, cost for services, taxes and any amounts guaranteed by the lessee.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Variable payments which are depended on an index or rate are included in the initial measurement using the index or the rate at the commencement date</td>
<td>No guidance about the variable payments which are depended on an index or rate.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Variable payments do not include contingent rental. Rentals are recognized as profit or loss</td>
<td>Contingent rentals are recognized as profit or loss</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Right of use assets follow the cost or revaluation model under IAS 16 – Property, Plant, or equipment. The chosen method applies simultaneously to all asset of the same class.</td>
<td>Underlying assets are amortized like any other property, plant, or equipment</td>
<td></td>
</tr>
</tbody>
</table>
TABLE 3:

<table>
<thead>
<tr>
<th>Type of payment during the lease term</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Fixed payments</td>
</tr>
<tr>
<td>- Variable lease payments that depend on an index or rate.</td>
</tr>
<tr>
<td>- Adjustments to fixed payments:</td>
</tr>
<tr>
<td>» in-substance fixed payments (added); and</td>
</tr>
<tr>
<td>» lease incentives paid or payable by the lessor to the lessee (subtracted).</td>
</tr>
<tr>
<td>- The exercise price of a lessee option to purchase the underlying asset that the lessee is reasonably certain to exercise.</td>
</tr>
<tr>
<td>- Penalties for terminating the lease if the lease term reflects the lessee exercising a termination option.</td>
</tr>
<tr>
<td>- For lessees only, amounts probable of being owed by the lessee under residual value guarantees.</td>
</tr>
<tr>
<td>- Payments by the lessee to the owners of a special-purpose entity for structuring the transaction.</td>
</tr>
</tbody>
</table>

KPMG, Leases- Issues in depth (US GAAP), APRIL 2016, page 111

TABLE 4:

<table>
<thead>
<tr>
<th>Metric</th>
<th>What it measures</th>
<th>Common method of calculation</th>
<th>Expected effect of IFRS 16</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leverage (goearing)</td>
<td>Long-term solvency</td>
<td>Liabilities / Equity</td>
<td>↑ Increase</td>
<td>Increase because financial liabilities increase (and equity is expected to decrease).</td>
</tr>
<tr>
<td>Current ratio</td>
<td>Liquidity</td>
<td>Current assets / Current liabilities</td>
<td>↓ Decrease</td>
<td>Decrease because current lease liabilities increase while current assets do not.</td>
</tr>
<tr>
<td>Asset turnover</td>
<td>Profitability</td>
<td>Sales / Total assets</td>
<td>↓ Decrease</td>
<td>Decrease because lease assets will be recognised as part of total assets.</td>
</tr>
<tr>
<td>Interest cover</td>
<td>Long-term solvency</td>
<td>EBITDA / Interest expense</td>
<td>Depends</td>
<td>EBITDA will increase applying IFRS 16 as will interest expense. The change in the ratio will depend on the characteristics of the lease portfolio.</td>
</tr>
<tr>
<td>EBIT / Operating profit</td>
<td>Profitability</td>
<td>Various methods--Profit that does not consider earnings from investments and the effects of interest and taxes</td>
<td>↑ Increase</td>
<td>Increase because the depreciation charge added is lower than the expense for off balance sheet leases excluded.</td>
</tr>
<tr>
<td>EBITDA</td>
<td>Profitability</td>
<td>Profit before interest, tax, depreciation and amortisation</td>
<td>↑ Increase</td>
<td>Increase because expenses for off balance sheet leases are excluded.</td>
</tr>
</tbody>
</table>

IFRS, Effects analysis, IFRS 16 Leases, January 2016, page 53
<table>
<thead>
<tr>
<th>Metric</th>
<th>What it measures</th>
<th>Common method of calculation</th>
<th>Expected effect of IFRS 16</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBITDA</td>
<td>Profitability</td>
<td>Profit before interest, tax, depreciation, amortisation and rent</td>
<td>No change</td>
<td>No change because all lease-related expenses are excluded.</td>
</tr>
<tr>
<td>Profit or loss</td>
<td>Profitability</td>
<td>As reported applying IFRS</td>
<td>Depends</td>
<td>Depends on the characteristics of the lease portfolio and the tax rate.</td>
</tr>
<tr>
<td>EPS</td>
<td>Profitability</td>
<td>Profit or loss / Number of shares in issue</td>
<td>Depends</td>
<td>Depends on the effect on profit or loss, which depends on the characteristics of the lease portfolio and the effects on tax.</td>
</tr>
<tr>
<td>ROCE</td>
<td>Profitability</td>
<td>EBIT / Equity plus financial liabilities</td>
<td>Depends</td>
<td>EBIT will increase applying IFRS 16 as will financial liabilities. The change in the ratio will depend on the characteristics of the lease portfolio.</td>
</tr>
<tr>
<td>ROE</td>
<td>Profitability</td>
<td>Profit or loss / Equity</td>
<td>Depends</td>
<td>Depends on the effect on profit or loss, which in turn depends on the lease portfolio— if there is no effect on profit or loss, then the ratio will be higher because reported equity will decrease.</td>
</tr>
<tr>
<td>Operating cash flow</td>
<td>Profitability</td>
<td>Various methods—Cash flow from operating activities does not include cash related to equity and borrowings</td>
<td>Increase</td>
<td>Increase because at least part of the lease payments (those payments relating to the principal) will be moved to the financing section of the cash flow statement.</td>
</tr>
<tr>
<td>Net cash flow</td>
<td>Profitability and liquidity</td>
<td>Difference between cash inflows and cash outflows</td>
<td>No change</td>
<td>No change because cash will not be affected.</td>
</tr>
</tbody>
</table>

IFRS, Effects analysis, IFRS 16 Leases, January 2016, page 54