Economic Alternatives, 2019, Issue 1, pp. 44-62

IFRS 16 Leases and Its Impact on Company's Financial Reporting, Financial Ratios and Performance Metrics

Eleonora Stancheva-Todorova*
Nadya Velinova-Sokolova**

Summary

The new *Leases* Standard, IFRS 16, was released by the International Accounting Standards Board in January 2016 and superseded IAS 17 *Leases* for reporting periods beginning on or after 1 January 2019. The new rules introduce asymmetrical models of the lessee and lessor accounting. Finance lease/operating lease distinction is no longer relevant for lessees but has been retained for lessors. The impact of IFRS 16 depends on a company's relative number of existing operating lease arrangements and varies across industries. In this paper we have discussed the IFRS 16 effects on lessee's financial statements, financial ratios and key performance indicators. These effects have been illustrated in the case of a food retailer as retailers will be most heavily impacted by the changes in the lease requirements. The implementation of the new accounting rules will lead to an increase in leased assets (the right-of-use assets) and financial liabilities on the balance sheet of the lessees with material former off-balance sheet leases and their EBITDA will increase substantially. To be more precise, we have split the analysis of the effects on company's profit or loss into "individual lease" and "portfolio of lease" cases. In both cases there will be a reduction in entity's equity compared to the former rules of IAS 17. The expected effects on profit before tax will be insignificant for many companies because of the "portfolio" effect. Operating profit will increase due to the reclassification of former lease expenses into depreciation and amortisation expenses and finance costs. Entities with material off-balance sheet lease commitments will encounter significant changes in their key financial metrics such as leverage ratio, return on invested capital and valuation multiples. Their leverage will increase significantly and interest coverage will decrease. The effect on company's debt covenants from IFRS 16 implementation has also been discussed.

Keywords: IFRS 16 application, effects, company's financial statements, financial ratios, performance metrics

Jel: M41, M48

1. Introduction

There are many archaeological artefacts undoubtedly proving that leasing was

* Associate Professor in Accounting, Sofia University "St. Kliment Ohridski", Faculty of Economics and Business Administration, Bulgaria.

** Associate Professor in Accounting and Audit, Sofia University "St. Kliment Ohridski", Faculty of Economics and Business Administration, Bulgaria.

well known and wildly applied by ancient civilisations almost 2000 years BC though as a term it was used for the first time in 1877 when the telephone company "BEL" decided not to sell but to lease its telephone sets. As a specific financing tool for assets acquisition, it has developed over the centuries to its current variety of types and enhanced its usage for building and shaping business relationships. Companies can use big-ticket items without incurring large cash outflows at the start of the lease term. Another benefit relates to the flexibility it provides to lessees enabling them to mitigate assets' obsolescence and residual value risks. In some cases leasing is the only possible solution for entities to access and use assets not available for market purchases (PWC, 2016b).

Existing lease accounting rules on the other hand have been widely debated and criticised, especially after the World Financial Turmoil from 2007-2008, because of the off-balance sheet treatment of some leasing arrangements. Under the current requirements operating lease transactions, sometimes having quite similar economic substance compared to financial leases, are not recorded into reporting entity's accounts and thus misleading shareholders and investors for its financial position, performance and cash flows.

In 2005, the US Securities and Exchange Commission announced that off-balance sheet leases of the US public companies were approximately $1.25 trillion (IASB, 2016). The lack of transparency of information about lease obligations was one of the driving factors behind the joint project initiated in 2008 by the International Accounting Standards Board (IASB) and the US Financial Accounting Standards Board (FASB). The two standard setting bodies tried to respond to the stakeholders' concerns about the substantial effects of the current regulations on reported assets and financial leverage but unfortunately the boards diverged on the lessee's accounting model at some point. In ASC 842 ("the leasing standard"), issued by FASB in February 2016, the dual model has been retained. Despite the joint efforts and long lasting cooperative work, the new *Leases* Standard, IFRS 16, released by IASB in January 2016, requires application of a single model (PWC, 2016b). The new Standard supersedes IAS 17 *Leases* for reporting periods beginning on or after 1 January 2019 but can be applied before that date in certain cases.

A specific feature of IFRS 16 is the introduction of asymmetrical models of the lessee and lessor accounting. A notable aspect of the new rules relates to the finance lease/operating lease distinction, which is no longer relevant for lessees but has been retained for lessors. The introduced changes for the latter are not significant and probably will require minor adjustment efforts for transition (Deloitte, 2016a). However, due to the changing patterns in customers' needs and behaviours, their business model and lease products could be a subject to change.

In this context it is quite logical to raise the question about the degree of companies' awareness, especially of the lessees, of how the new accounting rules will impact their financial statements, financial ratios and performance metrics. The question brings other important issues to the fore concerning the implementation costs of IFRS 16, timely and effective communication with stakeholders, new IT systems for responding to the complexity of the new rules, new control procedures, possible tax consequences and so forth. Business environment will also change with the new Standard application due to the changing negotiation patterns between lessees and lessors and lease incentives. (EY, 2016a)

2. Aim of the paper and used methodology

In the light of the new upcoming regulations for lease transactions and hotly debated implications for company's accounting and reporting, this paper is aiming to discuss and illustrate the IFRS 16 impacts on lessee's financial statements, financial ratios and key performance indicators. Some conclusions related to entity's covenants will be drawn from the perspective of changed requirements and their effect on information, generated and submitted by the lessees to financial institutions for monitoring purposes.

The methodology used in this paper includes investigation and analysis of new lease requirements and their future impact on business. Some empirical research from other profound global studies is used for supporting authors' conclusions and statements.

3. Summary of changes in lease accounting due to IFRS 16 implementation

IFRS 16 establishes principles for the recognition, measurement, presentation and disclosure of leases, with the objective of ensuring that lessees and lessors provide relevant information that faithfully represents those transactions. The scope of IFRS 16 is generally similar to IAS 17 (see fig. 1) and includes all contracts that convey the right to use an asset for a period of time in exchange for consideration, except for licences of intellectual property granted by a lessor, rights held by a lessee under licensing agreements (such as motion picture films, video recordings, plays, manuscripts, patents and copyrights), leases of biological assets, service concession agreements and leases to explore for or use minerals, oil, natural gas and similar non-regenerative resources. There is an optional scope exemption for lessees of intangible assets other than the licences mentioned above (Deloitte, 2016b).

The key changes according to the IFRS 16 are summarised as follows:

- The new leasing standard removes the distinction between finance and operating leases for lessees;
- Enhanced guidance is introduced on identifying whether a contract contains a lease;
- A completely new lease accounting model for lessees that requires lessees to recognise all leases on balance sheet, except for short term leases and leases of low value assets is introduced;
- Lessor accounting will not change significantly.

Figure 1 *Comparing IAS 17 with IFRS 16*

Source: Deloitte *Insights: IFRS 16 - Leasing*

IFRS 16 sets out a comprehensive model for the identification of lease arrangements and their treatment in the financial statements of both lessees and lessor. IFRS 16 applies a control model for the identification of leases, distinguishing between lessees and service contracts on the basis of whether there is an identified assets controlled by the customer. While, for the majority of contracts, the classification under the new Standard as either a lease or a service contract may not be different to the classification under the IAS 17 'risk and rewards' model, divergence may emerge, for example, when the pricing of the contract was a significant consideration under IAS 17. Importantly, both lessors and lessees are entitled to 'grandfather' assessment regarding whether a contract existing at the date of initial application of IFRS 16 contains a lease so that entities are not required to incur the costs of detailed reassessments (IASB, 2016).

For lessors, the changes introduced by IFRS 16 are not significant and, except in respect of subleases, a lessor is not required to make any adjustments on transition to leases in which it is a lessor. Additional requirements have been introduced for sublease and lease modifications, and lessor disclosure requirements have been expanded.

For lessees, the picture is fundamentally different and IFRS 16 can be expected to have a significant impact, particularly for entities that have previously kept a large proportion of their financing 'off-balance sheet' in the form of operating leases. This operating lease – style accounting treatment is no longer available, except for short-term leases (lease term 12 months or less) and leases of low-value assets.

All other leases within the scope of the IFRS 16 are required to be brought on-balance sheet by lessees – recognising a 'right-of-use' asset and the related lease liability at commencement of the lease, with subsequent accounting generally similar to finance lease model under IAS 17 (Deloitte, 2016a).

IFRS 16 includes detailed guidance to help companies assess whether a contract contains a lease or a service, or both. Under current practice, there is not a lot of emphasis on the distinction between a service and an operating lease, as this often does not change the accounting treatment. The analysis starts by determining if a contract meets the definition of a lease. This means that the customer has the right to control the use of an identifiable asset for a period of time in exchange for consideration. Under the new leases standard, lessee accounting for the two elements of the contract will change because leases will have to be recognised on the balance sheet. Both lessors and lessees are required to determine if a right to use an underlying asset is a separate lease component in their contracts if both of the following criteria are met:

- The lessee can benefit from use of the asset either on its own or together with other resources that are readily available to the lessee. Readily available resources are goods or services that are sold or leased separately (by the lessor or other suppliers) or resources that the lessee has already obtained (from the lessor or from other transactions or events); and
- The underlying asset is neither dependent on, nor highly interrelated with, the other underlying assets in the contract.

At the simplest level, the accounting treatment of leases by lessees will change fundamentally. IFRS 16 eliminates the current dual accounting model for lessees, which distinguishes between on-balance sheet finance leases and off-balance sheet operating leases. Instead, there is a single, on-balance sheet accounting model that is similar to current finance lease accounting (IASB, 2016, pp.3-5). For lessees, the lease becomes an on-balance sheet liability that attracts interest, together with a new asset on the other side of the balance sheet. In other words, lessees will appear to become more asset-rich but also more heavily indebted. The impacts are not limited to the balance sheet. There are also changes in accounting over the life of the lease. In particular, companies will now recognise a front-loaded pattern of expense for most leases, even when they pay constant annual rentals.

Lessees should initially recognise a right-of-use asset and lease liability based on the discounted payments required under the lease, taking into account the lease term as determined under the new standard. Determining the lease term will require judgment which was often not needed before for an operating lease as this did not change the expense recognition. Initial direct costs and restoration costs are also included.

Lessor accounting does not change and lessors continue to reflect the underlying asset subject to the lease arrangement on the balance sheet for leases classified as operating. For financing arrangements or sales, the balance sheet reflects a lease receivable and the lessor's residual interest, if any. Lessors shall classify each lease as an operating lease or a finance lease. A lease is classified as a finance lease if it transfers substantially all the risks and rewards incidental to ownership of an underlying asset. Otherwise a lease is classified as an operating lease. Upon lease commencement, a lessor shall recognise assets held under a finance lease as a receivable at an amount equal to the net investment in the lease. A lessor recognises finance income over the lease term of a finance lease, based on a pattern reflecting a constant periodic rate of return on the net investment. At the commencement date, a manufacturer or dealer lessor recognises selling profit or loss in accordance with its policy for outright sales to which IFRS 15 applies. A lessor recognises operating lease payments as income on a straight-line basis or, if more representative of the pattern in which benefit from use of the underlying asset is diminished, another systematic basis (IASB, 2016).

All companies will need to assess the extent of the standard's impacts so that they can address the wider business implications – and can expect analysts to take a close interest. Areas of focus may include:

- the effect of the standard on financial results;
- the costs of implementation; and
- any proposed changes to business practices.

4. Impacts on company's financial reporting

4.1. Some general implications

There are variety of activities within the organisation that will require certain changes, redesign or renewal as a result of the new lease Standard adoption. Many departments across the company will be involved and their join efforts will be required for overcoming the negative effects from the application of IFRS 16. The transition process will be a challenge despite the postponed effective date of the Standard and the available transition relief under the modified approach[1]. Implications from a lessee's point of view are presented in figure 2. Among them is the need to consider the impact on company's financial statements and performance metrics as they negotiate contracts that are, or may contain, leases (EYa, 2016). These effects are of the authors' interest and will be the focus of their joint paper.

[1] Lessees are permitted to choose either a full or a modified retrospective transition approach for leases existing at the date of transition.

Another challenging questions of IFRS 16 implementation is its impact on industries. Almost every company uses leasing to access and use assets necessary for performing its business operations though the terms of the lease arrangements vary in regard of their type, structure, incentives and characteristics of the leased items. As a result, the implications from the adoption of the new Standard will vary by industries.

Figure 2. *IFRS 16 impacts on lessees*
Source: EY, *2016a, p.18.*

PWC has performed a profound global study for accessing the impact of the new requirements for lease capitalisation on some companies' financial indicators as reported debt, leverage, solvency and EBITDA[2]. The research encompasses 3,199 listed companies reporting under IFRS in 51 countries worldwide, excluding US, across different industries and aggregated into eight geographies. The study identifies the capitalisation effect of the existing off-balance sheet leases on bases of entities' commitments, disclosed in their published financial statements in 2014, quantifying the minimum impact on financial ratios and performance measures reported by the companies worldwide. The impact per industry is determined by applying median values rather than average values because of the outliers as the examined effect is relatively high on the average changes for financial ratios (PWC, 2016a, p. 4).

Some of the key findings of the effects on the median increase in debt and EBITDA from the IFRS 16 implementation for some of the most impacted industries are presented

[2] Earnings before Interest, Tax, Depreciation and Amortisation

in table 1 (PWC, 2016a). According to the expectations of PWC, the reported debt of the studied entities will face an increase with a median of 22% and their EBITDA, an increase with a median of 13%. The median leverage increase would be 0.11 (from 2.03 to 2.14).

Table 1. *Summary of the IFRS 16 implementation effects on the most impacted industries*

Industry	Median increase in debt	Median increase in EBITDA	Median change in leverage ratio*	Median decline in solvency
Retailer	98%	41%	1.3 (increase)	13.3%
Airlines	47%	33%	0.37 (increase)	5.7%
Professional services	42%	15%	0.43 (increase)	2.8%
Health care	36%	24%	0.81 (increase)	3.1%
Wholesale	28%	17%	0.27 (increase)	1.8%
Transport & infrastructure	24%	20%	0.31(increase)	6%
Entertainment	23%	15%	*0.48 (decrease)*	5.1%
Telecommunication	21%	8%	0.35 (increase)	0.8%

Source: Summarised *by authors based on PWC study (2016a, pp.5-9).*
***debt divided** *by EBITDA*

According to PWC comprehensive research, retailers will be most heavily impacted by the changes in the new lease requirements. The findings presented in the above table show that their reported debt balances are expected to increase by a median of 98%. Retailers median leverage ratio will increase from 1.17 to 2.47 and their solvency is expected to decrease from 40.8% to 27.5%. Also approximately 35% of the retailers will see an increase of reported debt balances of over 25%. The results are not surprising as these companies usually lease their stores as part of their core business. Certain complications may arise for retailers from the new leases standard adoption, including but not limited to (PWC, 2016b):

- Substantial judgment needed for reassessing the renewal options, implemented into lease arrangements and the inherent economic incentives;
- Implementation of special systems for estimation and remeasurement of variable lease payments, linked to an index or rate, on a reporting period basis;
- Separation of lease elements from service (non-lease) charges as administration fees, marketing, utilities services, etc., that could be integrated into lease arrangements.

4.2. Effects on the statement of financial position

Despite the different implications, we will focus on IFRS 16 impact on retailers' financial statements, which will depend on their lease agreements in place, applied Standard's exceptions and practical expedience (Deloitte, 2016a). The effects are summarised and presented in table 2.

Table 2: *Effects on company's statement of financial position*

Effects on assets	● *Increase in company's lease assets* due to lease capitalisation ● *Initial measurement of the right-of-use assets* – at cost ● *Depreciation* – in accordance with entity's depreciation policy ● *Subsequent measurement* – depends on the applied model and assets' classification as property, plant and equipment (PP&E) or investment property; Any re-measurement of lease liability requires corresponding adjustment in the right-of-use asset's value ● *Presentation* – either as part of PP&E or as its own line item
Effects on liabilities	● *Increase in company's financial liabilities*; the lease component in the lease payments should be separated from the service component ● *Initial measurement of lease liabilities* – at present value of the lease payments, not paid at that date ● *Subsequent measurement* – lease liability is increased with finance charges and decreased with the lease payments made by the entity; reassessment of the initial amount is required in some cases as specified in IFRS 16
Effects on equity	● *Reduction in equity* compared to IAS 17 in both cases of individual lease and lease portfolio

Source: Drawn *by authors based on: IFRS 16[3], Deloitte (2016a), IASB (2016) and KPMG (2017a; 2017b).*

The newly recognised the right-of-use assets are non-current non-financial assets. The cost at their initial recognition is calculated as a sum of: 1) initial lease liability and 2) payments made less 3) incentives received before commencement date of the lease, plus 4) initial direct costs incurred, plus 5) estimated costs for dismantling, removing and restoring. Some brief analyses of the cost's components is presented below[4] (KPMG, 2017b). The measurement of the initial lease liability will be discussed further in the article.

- *Payments made before the commencement date of the lease* include any payments made for the right to use the asset, regardless of the timing of those payments; payments for the construction or design of an underlying asset should be excluded;
- *Incentives received before commencement date of the lease* – IFRS 16 defines them as "Payments made by a lessor to a lessee associated with a lease, or the reimbursement or assumption by a lessor of costs of a lessee" (IFRS 16, appendix A), for example an initial cash payment to the lessee or a reimbursement of certain lessee costs associated with obtaining the lease (such as real estate commission). Certain lessor's payments to lessee are not included in the cost calculation such as provided funds for leasehold improvements;
- *Initial direct costs* – these are the incremental costs of obtaining a lease that would not have been incurred if the lease had not been obtained, such as finder's fees, commissions to agents for establishing the lease and up-front fees. The standard emphasises that direct costs must be "incremental";
- *Estimated costs for dismantling, removing and restoring* – if the leased asset should be returned to the lessor in a specified condition, the lessee would be required

[3] European Commission, Commission Regulation (EU) 2017/1986 of 31 October 2017 Official Journal of the European Union from 9 November 2017 [Online] Available: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R1986&from=EN [Accessed 10 December 2017]

[4] For more details: https://www.bdo.co.uk/en-gb/insights/business-edge/business-edge-2017/ifrs-16-lessee-accounting

to incur costs to restore it. For instance, a retailer may have to remove any customised leasehold improvements of the leased property to restore it into its initial condition at the end of the lease term. Requirements of IAS 37 *Provision, Contingent Liabilities and Contingent Assets* should be followed for the capitalisation of these costs.

The company depreciates the right-of-use assets for the period of the lease term or the useful life of the assets in case of purchase option or transfer of ownership option embedded into the lease agreement.

Subsequent to its initial recognition, the right-of-use asset will be measured by applying one of the following models, depending on its classification as an item of PP&E or an investment property. If the leased asset is classified as PP&E by the entity, the accounting should follow IAS 16 *Property, plant and equipment* and if:

- the cost model is applied – the right-of-use asset is measured at cost less accumulated depreciation and impairment losses under the requirements of IAS 36 *Impairment of Assets*. The carrying value is also adjusted for any remeasurement of the lease liability;
- the revaluation model is applied to any class of property, plant or equipment – the company may choose to apply the model to right-of-use assets of the same class.

If the leased asset is classified as an investment property, then the accounting treatment should follow IAS 40 *Investment property.* In case of application of the fair value model, it must also be applied to right-of-use assets if they meet the definition of investment property. (Deloitte, 2016a)

The lease liability is part of entity's current and non-current obligations depending on the timing of payments, which shall be discounted using the interest rate implicit in the lease, if it can be readily determined. If not, the lessee's incremental borrowing rate shall be used. According to IFRS 16, lease payments include several components: 1) fixed payments; 2) variable lease payments; 3) payments under a residual value guarantee; and 4) purchase and termination options (KPMG, 2017b). Each of these components is explained more precisely bellow:

- *Fixed payments* – the set payments as outlined in the lease contract. Any lease incentives receivable from the lessor shall be deducted;
- *Variable lease payments* – they are only included as part of the initial lease liability calculation if they "depend on an index or a rate" (IFRS 16.27 (b)) as inflation, LIBOR, the consumer price index or the changes in market rental rates. Future changes in the rates should not be reflected in lease obligation subsequent measurement;
- *Residual value guarantee* – as these payments cannot be avoided, any amounts that the lessee expects to pay will be included in the initial lease liability;
- *Purchase and termination options* – only included if either the lessee is reasonably certain that they will purchase the underlying asset or if the lease term reflects the lessee exercising an option to terminate the lease.

It is worth emphasising the existing difference of initial measurement rules for the lessee's accounting of lease liability under IFRS 16 compared to IAS 17. For example, where a lease contract has variable lease payments linked to an index or a rate or where payments are in-substance fixed payments (Deloitte, 2016a; IFRS 16.36 (c), 39-46; KPMG, 2017a).

Applying IFRS 16, the carrying amount of the right-of-use asset would typically reduce more quickly than the carrying amount of the lease liability, because the lease asset is usually depreciated on a straight-line basis. On the other hand, the lease liability is decreased by the amount of lease payments made and increased by the interest charges. There are two consequences of this different accounting treatment:

- the amounts of the lease asset and lease liability are the same at the start and end of the lease, but the amount of the right-of-use asset would typically be lower than that of the liability throughout the lease term;
- the reported equity will be reduced compared to IAS 17 for companies with material off-balance sheet leases.

In general, the actual effect on a company's equity will vary depending on its financial leverage, the terms of its lease arrangements and the ratio of lease liabilities to equity (Deloitte, 2016a; IASB, 2016, pp. 42-43).

The impacts of the new lease rules compared to the former requirements in IAS 17 on a retailer's statement of financial position will be demonstrated by applying the case study method. For providing more realistic, practically oriented and useful information, we will use one of the illustrative examples, presented as an appendix to IASB's publication on effects analyses of IFRS 16 implementation (IASB, 2016). The selected company's general information and main assumptions of the provided example are the following:

- The company used for illustration is a food retailer with many stores, both large and small;
- The retailer leases a large proportion of its retail space using the ex-off-balance sheet lease agreements;
- The arrangements are predominantly long term leases for between 15 and 30 years;
- The lease assets are depreciated on a straight-line basis;
- The applied discount rate to the former off-balance sheet leases is 5 per cent;
- Leases of low-value assets and short-term leases, requiring a shift from the Standard basic requirements, are immaterial and could be neglected;
- Retailer holds a "rolling" portfolio of leases and the average terms have been estimated on basis of disclosures in the company's financial statements. (IASB, 2016, p. 87)

The statement of financial position of the food retailer is presented in table 3.

Table 3. *Illustrative statement of financial position of a food retailer (IAS 17 vs IFRS 16)*

	IAS 17 CU	IFRS 16 CU
Property, plant and equipment	44,521	44,521
Lease assets	958	18,757
Other	26,703	26,703
Total non-current assets	72,182	8,981
Total current assets	38,086	38,086
Total assets	110,268	128,067
Borrowings	22,533	22,533
Lease liabilities	697	21,233
Other liabilities	57,714	57,264
Total liabilities	80,944	101,030
Equity	29,324	27,037
Total liabilities and equity	110,268	128,067

Source: IASB, *2016, p.81.*

By applying the new rules of IFRS 16 the lease assets will increase from CU 958 to CU 18,757. As a result of capitalisation of the former off-balance sheet leases and recognition of the right-of-use assets, retailer's asset base will be significantly expanded more than 19 times compared to its initial condition. Correspondingly, lease liabilities will face a substantial raise in their reported amounts by recognising off-balance sheet obligations, which will be approximately

30 times bigger compared to the former reported figure. Moreover, if some of the example's assumptions change, the numbers presented in the food retailer's statement of financial position will differ, reflecting the new circumstances.

Referring to our previous arguments about the effects on entity's equity, the selected company will have a slight decrease in equity form CU 29,324 to CU 27,037. The reason for this expected change has already been discussed and explained.

4.3. Effects on the statement of profit or loss

Compared to the statement of financial position, the overall impact on profit or loss from the new lease standard implementation is not expected to be significant for many companies. Entities with material former off-balance sheet lease will experience higher EBITDA and operating profit. Major effects on some performance metrics are presented in table 4.

Table 4. *Effects on company's statement of profit or loss*

Effects on operating expenses (excluding depreciation and amortisation	● *Reclassification of lease expenses* associated with lease payments – instead of single lease expense the entity will account for depreciation and amortisation expenses of the right-to-use assets and finance costs associated with the recognised lease liabilities ● *Operating expenses will decrease* as a result of capitalisation of former off-balance sheet leases ● Expenses associated with variable lease payments excluded from initial recognition of lease liabilities, as well as expenses associated with the exemptions as short-term and low-value asset leases will be classified as operating expenses
Effects on EBITDA	● *EBITDA will increase substantially* for companies with material former off-balance sheet leases
Effects on depreciation and amortisation	● *Depreciation and amortisation expenses will increase* as a result of recognition into company's accounts of the right-of-use assets
Effects on operating profit	● *Operating profit will increase* due to the reclassification of former lease expenses into depreciation and amortisation expenses and finance costs
Effects on finance costs	● *Finance costs will increase* as the company will present separately the implicit interest in lease payments for former off-balance sheet leases
Effects on profit before tax	● *Little change for many entities is expected* because of the "portfolio" effect

Source: Drawn *by authors based on: IFRS 16, IASB (2016), Deloitte (2016a) and KPMG (2017a).*

The analysis of the effects on company's profit or loss from application of IFRS 16 requirements should be split into "individual lease" and "portfolio of lease" cases.

- The "individual lease" case

The expense that would be recognized for an individual lease would be the same applying IFRS 16 and IAS 17 over the lease term. There will be a difference in the total expense recognised in any reporting period from the lease term. The pattern of expense recognition under the new rules depends on the length of the lease terms, the timing of the lease payments and the applied discount rates. In contrast, under the former lease requirements lease expenses were recognised on a straight-line basis in company's operating expenses category over the term of a lease agreement. There will be an asymmetrical recognition of the sum of the interest expense and the depreciation charges. They will be higher during the first half of the lease term compared to the former straight-line recognition. This effect is a result of the different recognition pattern for depreciation expenses and interest charges. The former are usually accounted for on a straight-line base while the latter are bound with the lease obligation and decline with its decrease over the lease term. This effect is illustrated on figure 3 and refers to the individual lease assuming that all lease payments are even throughout the lease term.

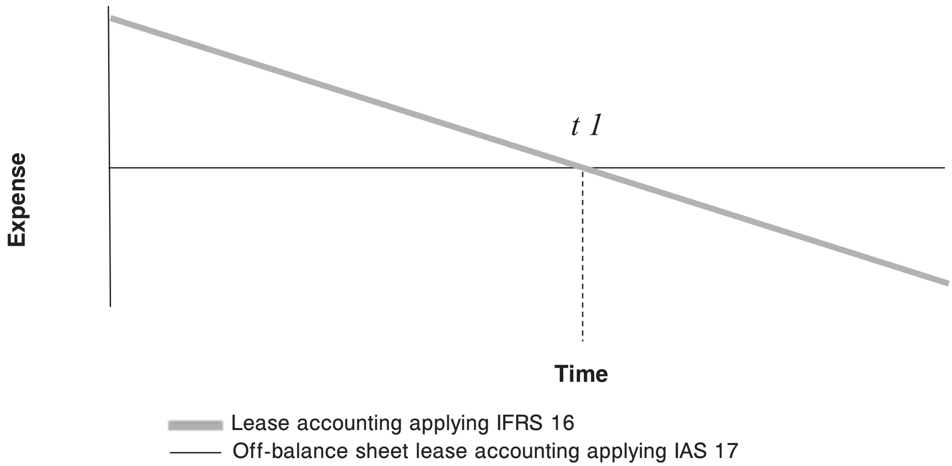

Figure 3. *Profile of expenses related to an individual lease*
Source: IASB, *2016, p.45.*

At point *t1* on the figure, the sum of depreciation and interest expenses is equal to expenses recorded on a straight-line bases for the former off-balance sheet leases. This point occurs after the mid-point of the lease term and is also characterised with the greatest difference between the carrying amounts of the lease asset and lease liability. As noted in the IASB publication, these conclusions are consistent only "for a range of lease terms from three to 40 years and using a range of discount rates from 2 to 20 per cent" IASB (2016, p. 45).

- *The "portfolio of leases" case*

In practice entities usually hold a portfolio of leases. There are several factors that determine its impact on company's statement of profit or loss – the terms of the leases, the conditions under leases' arrangements and the point of their respective lease terms, at which they are. Generally there are two possibilities – the portfolio's composite to be evenly[5] distributed or not evenly distributed. In the first case, the overall effect on the bottom line is neutral as there would be no difference between the sum of depreciation and interest expense recorded under IFRS 16 and the straight-line expense for off-balance sheet leases under regulations of IAS 17. In the opposite case, it is highly probable the application of the new rules to affect company's profit or loss. To confirm these assumptions, IASB and FASB conducted several tests. The so produced outcomes and conclusions indicated that the effect on profit or loss depends on the number of leases within a company's lease portfolio (IASB, 2016, pp. 45-46, pp. 98-101).

If we refer to our previous example of a food retailer, holding a "rolling" portfolio of leases, but now refocusing on IFRS 16 implementation and its effects on company's statement

[5] the same number of leases starting and ending in any one period, with the same terms and conditions.

of profit or loss, we will notice that entity's gross and operating profits differ but only by small amounts. Under IFRS 16 rules these performance indicators are higher compared to the requirements of IAS 17 as illustrated in table 5, because the interest charges on all leases are reported under finance cost category. The implicit interest on former off-balance sheet leases, part of the lease payments, should be presented within the cost of sale.

Table 5. *Illustrative statement of profit or loss of a food retailer (IAS 17 vs IFRS 16)*

	IAS 17 CU	IFRS 16 CU
Revenue and other income	164,181	164,181
Cost of sale	(141,937)	(140,764)
Gross profit	22,244	23,417
Operating costs	(16,222)	(16,222)
Operating profit	6,022	7,195
Net finance costs	(1,293)	(2,393)
Profit before tax	4,729	4,802
Income tax	(1,161)	(1,161)
Profit for the year	3,568	3,641

Source: IASB, *2016, p.81.*

Because the leases in the retailer' portfolio start and end in different years, the profit for the year in the two columns is also different as indicated by the comparative figures in the table – CU 3,568 and CU 3,641 respectively.

4.4. Effects on the cash flow statement

The new lease Standard will not affect the amount of cash transfers between the lessor and the lessee and consequently, there will be no effect on the total amount of the reported cash flows of the two parties of a lease transaction.

From a lessee perspective, the application of IFRS 16 requires reclassification of cash outflows associated with the lease arrangements for retaining the link between the statement of financial position, statement of profit or loss and cash flow statement (IASB, 2016). The so considered changes in presentation of the company's cash flows are summarized in table 6.

Table 6. *Effects on company's statement of cash flows*

Effects on cash flows from operating activities	● *Decrease in operating cash outflows* due to the reclassification of cash outflows associated with a lease
Effects on cash flows from financing activities	● *Increase in retailer's financing outflows,* corresponding to the decrease in operating cash outflows from payments of lease obligations ● *The principal as part of the lease payments* – presented within financing activities ● *The interest portion of lease liability* – presented separately from the principal payment in accordance with the entity's accounting policy and requirements in IAS 7 *Statement of Cash Flows*
Effects on total cash flow	● *No effect* on the total amount of cash flows reported

Source: Source: *Drawn by authors based on: IFRS 16, IASB (2016) and PWC (2016b).*

We will refer again to the food retailer's example to illustrate afore discussed effects on the entity's statement of cash flows. The total cash outflow has remained unchanged regardless of the applied accounting requirements. In contrast, amounts presented under the categories of operating and financing activities would be different under IAS 17 and IFRS 16 respectively.

Table 7. *Illustrative cash flow statement of a food retailer (IAS 17 vs IFRS 16)*

	IAS 17 CU	IFRS 16 CU
Operating activities	5,312	7,117
Investing activities	(3,283)	(3,283)
Financing activities	(2,236)	(4,041)
Total cash outflow	(207)	(207)

Source: IASB, *2016, p.81.*

4.5. Effects on the notes

A specific feature of IFRS 16 is its focus on the information considered as most useful to users of company's financial statement thus aiming to improve the effectiveness of lease disclosures. In contrast to IAS 17, the new lease rules require the reporting entity to provide users with information to assess company's leasing activities. The Standard sets out objectives rather providing a list of prescriptive qualitative disclosures and the entity shall apply judgement in determining the information that will achieve that goal. Disclosure requirements for lease assets, lease liabilities, expenses related to leases and cash flows are summarised and presented in table 8.

Table 8. *Disclosure requirements under IFRS 16*

Statement of financial position	Carrying amount of the lease assets, split by major class of assets
	The new lease assets, acquired during the reporting period
	Right-of-use assets meeting the definition of investment property (reference to disclosure requirements of IAS 40 *Investment Property*)
	Right-of-use assets measured at revalued amounts under IAS 16
	Maturity analysis of lease liabilities based on undiscounted gross cash flows, separately from the maturity analysis of other financial liabilities (reference to disclosure requirements of IFRS 7 *Financial Instruments: Disclosure*)
Statement of profit or loss	Depreciation of lease assets, split by major class of assets
	Interest on lease liabilities
	Expense relating to short-term leases
	Expense relating to leases of low-value assets
	Variable lease payments
	Sublease income
	Gains/losses on sale and leaseback transactions
Statement of cash flows	Total cash outflow for leases
Additional information	Qualitative and quantitative information about leasing activities to meet the disclosure objective in IFRS 16 – for example, the nature of the leasing activities, exposure to future cash outflows not reflected in measurement of lease liabilities, restrictions or covenants imposed by leases sale and leaseback transactions, etc.
	Information relating to variable lease payments
	Information relating to extension options or termination options
	Information relating to residual value guarantees
	Information relating to sale and leaseback transactions

Source: Drawn *by authors based on: IFRS 16, IASB (2016) and Deloitte (2016a).*

For the required maturity analysis of lease liabilities, IFRS 16 relies on IFRS 7 (Deloitte, 2016a). Unlike IAS 17, the company should apply judgement in determining which time bands to disclose. In most of the cases, following the new lease rules will lead to disclosure of more detailed information and more comprehensive maturity analysis in the entity's financial statements. For instance, as the arrangements of the food retailer from our example are predominantly long term leases for between 15 and 30 years, in accordance with IFRS 7 the entity would be expected to apply appropriate time bands to those lease terms. Under the former lease requirements, the reporting entity should apply prescribed time bands[6]. On the one hand, some opponents argue that applying IFRS 7 will result in sacrificing the quality of maturity analysis of lease liabilities. On the other hand, advocates of the new disclosure rules believe that in most of the cases, this approach will result in providing users of company's financial statements with more detailed information.

The new lease Standard requires disclosure of material company-specific information, not presented elsewhere in the entity's financial statements, for instance, variable lease payments and residual value guarantees. This information will vary between companies but is important for providing a complete pictures of their leasing activities.

5. Effects on entity's financial ratios, key performance indicators and covenants

The introduction of IFRS 16 should in principle have no impact on fundamental valuations, since the substance of the lease does not change the economics and cash flow generating capacity of the business. However, we expect that IFRS 16 will eventually impact the outcomes of valuations.

[6] Less than one year, between one and five years, and more than five years

5.1. Effects on entity's financial ratios and indicators

Others important key financial indicators are redefined such as: ROE (Return on equity), ROCE (Return on capital employed), current ratio, assets turnover, net income, ICR (interest cover ratio). The new requirements eliminate nearly all off-balance sheet accounting for lessees and redefine many commonly used financial metrics such as the gearing ratio and EBITDA. This will increase comparability, but may also affect covenants, credit ratings, borrowing costs and your stakeholders' perception of you.

The standard impacts different arrangements of an entity, such as tax arrangements, hedging arrangements, supply arrangements, financial arrangements and covenants. Consequently, the date of initial application is the first day of the annual reporting period in which a lessee first applies the requirements of the new leases standard (PWC, 2016a).

The table 9, reproduced from the January 2016 IASB Effects Analysis, sets out the expected effect of applying IFRS 16 to some frequently used metrics when analysing a company's financial statements that carry material off-balance-sheet leases. The table shows mixed effects on key financial metrics (i.e., some metrics will improve after applying IFRS 16, while others will not) (IASB, 2016).

Table 9. *IFRS 16 impact on company's financial metrics*

Financial metrics	What it Measures?	Common method of calculation	Expected effect of IRFS 16	Why?
Current ratio	Liquidity	Current assets / Current liabilities	⬇	Decrease because current lease liabilities will increase whereas current assets will not
Debt to equity ratios	Profitability	Debt/Equity	⬆	Increase because lease liabilities will increase total liabilities on an entity's balance sheet, thereby increasing the reported debt load
Asset turnover (e.g. sales to total assets)	Profitability	Sales / Total Assets	⬇	Decrease because leased assets will increase an entity's reported asset base with no change in sales
Leverage (gearing)	Long-term Solvency	Liabilities / Equity	⬆	Increase because financial liabilities increase (and equity is expected to decrease).
Interest Cover	Long-term Solvency	EBITDA / Interest Expense	Depends	EBITDA will increase applying IFRS 16 as will interest expense. The change in the ratio will depend on the characteristics of the lease portfolio.
EBIT	Profitability	Various methods — Profit that does not consider earnings from investments and the effects of interest and taxes	⬆	Rent expense will be replaced with depreciation and interest expenses. As rent is currently reported as an operating expense, whilst neither depreciation nor interest are taken into account when measuring EBITDA, reported levels of EBITDA could be materially increased. EBIT will increase because the operating lease expense will be eliminated and replaced by a smaller amortization expense. This will have a bearing on banking covenants (both absolute measures of EBITDA/EBIT, and also ratios such as gearing and interest cover), and also any other items such as bonuses, which may be linked to these measures of profitability. In the initial years of a lease, the new standard will result in an income statement expense which is higher than the straight-line rent expense typically recognized under the current standards, falling to a lower cost mid-way through the lease as the interest cost reduces. On implementation, existing leases will be treated in a similar fashion, resulting in increases in assets and liabilities of lessees of large estates.
EBITDAR	Profitability	Profit before interest, tax, depreciation, amortisation and rent	No change	No change because all lease-related expenses are excluded.
EPS	Profitability	Profit or loss / Number of shares in issue	Depends	Depends on the effect on profit or loss, which depends on the characteristics of the lease portfolio and the effects on tax.
ROCE	Profitability	EBIT/ Equity plus financial liabilities	Depends	EBIT will increase applying IFRS 16 as will financial liabilities. The change in the ratio will depend on the characteristics of the lease portfolio.
ROE	Profitability	Profit or loss / Equity	Depends	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.
Operating cash flow	Profitability	Various methods—Cash flow from operating activities does not include cash related to equity and borrowings	⬆	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.
Net cash flow	Profitability and liquidity	Difference between cash inflows and cash outflows	No change	No change because cash will not be affected.

Source: *Drawn by authors based on IASB (2016) analysis of IFRS 16 implementation*

The common ratios based on the food retailer's financial statements are presented in table 10.

Table 10. *Illustrative common ratios of a food retailer (IAS 17 vs IFRS 16)*

Ratio	IAS 17	IFRS 16
Financial leverage:		
Debt (borrowings plus lease liabilities) to EBITDA	2.4	3.5
Interest cover (EBITDA to net finance costs)	7.4	5.2
Performance:		
ROCE (Return On Capital Employed)	11.5 %	10.2 %

Source: IASB, *2016, p.96.*

Applying previous lease accounting requirements, credit analysts and others often calculated lease-adjusted leverage ratios by adjusting (a) debt (to capitalise off-balance sheet leases) and also (b) earnings (to add back rental expense for off-balance sheet leases. This resulted in a leverage ratio calculated on a basis similar to that provided by IFRS 16. Ratio of debt to EBITDA applying IFRS 16 (3.5 times) higher than when applying previous lease accounting requirements because debt (defined in this example as borrowings plus lease liabilities) increases by more than the increase in earnings.

For the food retailer, increase in the earnings measure (ie EBITDA) after applying IFRS 16 is not proportionate to the increase in interest. As a result, interest cover ratio decreased to 5.2. The decrease in interest cover (and increase in interest) is substantial for the retailer because expenses related to leases are large relative to profitability and the entity has long-term leases (IASB, 2016, p. 96).

Reported operating profit applying IAS 17 was often adjusted to add back estimated interest on off-balance sheet leases (similar to the outcome applying IFRS 16) for the ROCE. ROCE applying IFRS 16 (10.2 per cent) is lower than when applying previous lease accounting requirements (11.5 per cent) because the increase in operating profit is not proportionate to the increase in capital employed.

1.1. Effects on debt covenants

Most sophisticated users of financial statements (including credit rating agencies and lenders) already estimate the effect of off-balance sheet leases on financial leverage, particularly when a company has a significant amount of off-balance sheet leases. Banks set interest rates based in part on credit ratings when credit ratings are available. Because the credit rating agencies adjust for off-balance sheet leases, the interest rates charged on loans granted to rated borrowers are not expected to change as a result of the implementation of IFRS 16. For example, a retailer discloses the following in its financial statements: 'Debt covenants: The revolver requires that we maintain a leverage ratio, defined as Adjusted Debt [adjusted to capitalise off-balance sheet leases estimated as the annual rent expense multiplied by 8] to Earnings before Interest, Income Taxes, Depreciation, Amortisation and Rent ("EBITDAR"), of less than four times' (IASB, 2016, p. 61).

Conclusion

With the complexity of the new leases standard bringing all leases on balance sheet, using spreadsheets may not be cost-efficient and can lead to errors feeding into financial reporting. Lessees may need to implement contract management modules for lease data and lease engines to perform the lease calculations as required by the new leases standard. Entities need to think about implementing sustainable lease software solutions that are capable of dealing with the new lease accounting requirements. The current limited lease software solutions in the marketplace are based on the existing risks and rewards approach (finance versus operating leases). These will need to be modified to the requirements of the new leases standard.

The new standard may result in renegotiations of existing leases to minimise the impact of the new leases standard. The elimination of off-balance sheet accounting and increased administrative burden for leases might reduce the attractiveness of leasing. Next to the external transparency over leases, the increased internal transparency within an entity may actually drive more economic lease decisions, enable lease portfolio optimisation or provide for potential cost savings. Other changes in lessee needs and behaviours may include a desire to move to shorter lease terms or include more variable lease payments based on usage of an asset. However, entities considering such changes to their leases need to evaluate this carefully and consider all impacts, as these changes will often result in changes in economics, such as pricing and risks absorbed by an entity.

The standard may have a broad impact on the tax treatment of leasing transactions, as tax accounting for leasing is often based on accounting principles. Given that there is no uniform leasing concept for tax purposes, the effect of the proposed lease accounting model will vary significantly, depending on the tax jurisdiction.

Items that may be impacted include the applicable depreciation rules, specific rules limiting the tax deductibility of interest (for example, thin capitalisation rules for debt versus equity, percentage of EBITDA rules), and existing transfer pricing agreements, sales/indirect taxes and existing leasing tax structures (in territory and cross-border leases).

The introduction of IFRS 16 will lead to an increase in leased assets and financial liabilities on the balance sheet of the lessee, while EBITDA of the lessee increases as well. Accordingly, companies with material off-balance sheet lease commitments will encounter significant changes in their key financial metrics such as leverage ratio, return on invested capital and valuation multiples. Although equity values should not change, enterprise values of companies will increase. Furthermore, although accounting policies should not affect economic valuations, we foresee that IFRS 16 will impact the outcomes of valuations and introduce new attention areas in business valuation and mergers and acquisitions transactions.

Companies with material off-balance sheet lease commitments will encounter significant changes in their financial metrics such as leverage ratio and valuation multiples due to the implication of IFRS 16. The impact of IFRS 16 obviously depends on a company's relative number of existing operational lease agreements and hence varies across industries.

Although accounting policies should not affect economic valuations, we foresee that IFRS 16 will impact the outcomes of valuations and introduce new attention areas in business valuations.

In general terms, total assets and total liabilities will increase significantly; leverage will increase significantly; and interest coverage will decrease. Nevertheless, the results differ greatly according to the sector. The most affected sectors are those in which the ratio operating lease expense divided by total liabilities (lease intensity) is higher, basically the retail, transportation, hotels, and software and services sectors. In the case of the first three this is due to the "off-balance sheet" finance level they maintain, and in the case of software and services this is due to the small size on the balance sheet.

A number of aspects of the application of IFRS 16 will require the exercise of judgment – particularly in respect of the definition of a lease and the assessment of the lease term. Entities will also need to take time to consider whether to avail of practical expedients and recognition exemptions (including, in particular, reliefs available on transition).

In addition, there are important business considerations – including whether changes are needed to systems and processes (e.g. to track leases individually, or at a portfolio level, or to accumulate the information needed for disclosures); any potential tax impacts (if the treatment of a lease for tax purposes is based on its treatment in the financial statement); and the impact of changes in the amounts reported on key metrics, debt covenants and management compensation.

References

Deloitte, 2016a. Lease, a Guide to IFRS 16. Available: https://www2.deloitte.com/content/dam/Deloitte/sg/Documents/audit/sea-audit-IFRS-16-guide.pdf [Accessed 8 November 2017]

Deloitte, 2016b. New IFRS 16 Leases Standard. The impact on business valuation, Available: https://www2.deloitte.com/content/dam/Deloitte/nl/Documents/mergers-acquisitions/deloitte-nl-ma-ifrs16-impactonbusinessvaluation1.pdf [Accessed 25 April 2018]

European Commission, Commission Regulation (EU) 2017/1986 of 31 October 2017. *Official Journal of the European Union,* 9 November 2017 [Online]. Available: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R1986&from=EN [Accessed 10 December 2017]

EY, 2016a. Leases, a Summary of IFRS 16 and Its Effects. Available: https://www.ey.com/Publication/vwLUAssets/ey-leases-a-summary-of-ifrs-16/$FILE/ey-leases-a-summary-of-ifrs-16.pdf [Accessed 22 November 2017]

EY, 2016b. Paving a path to success: preparing for new lease accounting standards. Available: https://www.ey.com/Publication/vwLUAssets/ey-new-leasing-standards/$FILE/ey-new-leasing-standards.pdf [Accessed 1 August 2017]

IASB, 2016. IFRS 16 Leases, Effects Analysis. Available: https://www.ifrs.org/-/media/project/leases/ifrs/published-documents/ifrs16-effects-analysis.pdf [Accessed 9 January 2018]

KPMG, 2017a. Guide to Annual Financial Statements – IFRS 16 Leases Supplement, Available: https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2017/12/ifrs16-ifs-supplement-2017.pdf [Accessed 2 February 2018]

KPMG, 2017b. Lease Payments, What's Included in the Lease Liability? Available: https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2017/11/lease-payments.pdf [Accessed 5 January 2018]

Morales-Diaz, J., Constancio Zamora-Ramírez, Effects of IFRS 16 on Key Financial Ratios: A New Methodological Approach, Available at https://www.researchgate.net/publication/315677332 [Accessed 8 March 2018]

PWC, 2016a. A Study on the Impact of Lease Capitalisation. IFRS 16: The New Leases Standard. Available: https://www.pwc.com/gx/en/audit-services/publications/assets/a-study-on-the-impact-of-lease-capitalisation.pdf [Accessed 10 December 2017]

PWC, 2016b. IFRS 16: The Leases Standard is Changing, Are You Ready?. Available: https://www.pwc.com/gx/en/services/audit-assurance/assets/ifrs-16-new-leases.pdf [Accessed 15 December 2017]