The Impact of the Revolutionary Leases Standard (IFRS 16) on Valuations

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Based on a thought process carried out with my mentor Prof. Amir Barnea,
and an article written with Prof. Yoram Eden

Can an accounting amendment affect a company's valuation?

Theoretically, an amendment to IFRS that is not followed by a change in a company's operating parameters should not affect a company's value, which is derived from its future cash flows.

Nevertheless, IFRS 16, which is the result of the IASB's reconsideration of the economic nature of lease payments from the perspective of the lessee, may lead to problems in connection with appraisals carried out in the past, including in the context of the methodologies employed to assess impairment of assets. The problem with treating asset impairments in accordance with IAS 36 becomes clearer in view of the following:

In practice, many companies use the lessee's incremental borrowing rate when measuring a right-of-use asset and the corresponding liability; however, this rate is significantly lower than the interest rate implicit in the lease, and therefore also significantly lower than the WACC.

The Standard's concept (as long as this concept is applied), whereby a cash-generating unit tested for impairment should not include liabilities that are financial in nature such as the lease liability recognised against the new right-of-use asset.

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This is how the story begins…

Becoming mandatory at the beginning of 2019, IFRS 16 introduced the requirement to recognize operating leases in the statement of financial position (balance sheet), in order to rectify the distorting practice whereby operating leases were used as an off-balance sheet financing instrument.

The cancellation of the distinction between a finance lease and an operating lease from the perspective of the lessee, had a material effect on financial statements of companies that make extensive use of operating leases.

This may also have far-reaching consequences on financial covenants involving financial debt and EBITDA, and even on the manner of assessing a company's solvency as a precondition for dividend distribution.

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Effect of the Standard's application on financial statements

Statement of financial position (balance sheet)	Right-of-use asset Financial debt	↑ ↑	Recognizing an asset in accordance with the discounted value of the contractual lease payments against recognition of a financial debt
Statement of profit or loss	Rental expenses	Canceled	
	Interest expense	↑	Calculated according to the outstanding financial liability
	Depreciation expenses	↑	Calculated according to the lease term
	Operating income	↑	Operating income excluding finance expenses
	EBITDA	↑	EBITDA excluding interest and depreciation ** Since depreciation is mostly calculated on a straight-line basis and interest expenses decrease over the lease term, pretax profit at the first part of the lease term is lower than pretax profit at the second part of the lease term.
Statement of cash flows	Principal payments are classified as cash flows from financing activities. Interest payments are classified as cash flows from operating activities or as cash flows from financing activities, in accordance with the company's accounting policy. Previously, rental expenses were classified as cash flows from operating activities.		

Note:

The new model for accounting for leases under US GAAP has only affected the statement of financial position (balance sheet).

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Why does the accounting for lease payments affect appraisals?

The answer will be presented in two phases:

PHASE I

Using an example to illustrate how, in view of the fact that generally accepted appraisal methodologies are based on the distinction between enterprise value and market capitalization (enterprise value net of financial debt), the classification of lease payments as an operating expense or as a finance expense affects the value of a company's shares.

PHASE II

Reaching conclusions based on a relatively simple and logical analysis.

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PHASE I

Basic illustrative example - Data & assumptions

The interest rate implicit in the lease transactions is 8%.

The fair value of each of the stores as of December 31, 2018 is CU 4 million.

Companies B and C shall pay annual lease payments of CU 320 thousand.

Each of the companies expects that their profit in 2019, before lease payments, depreciation expenses and finance expenses, will be CU 1 million.

Each of the companies requires operating working capital of CU 1 million.

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PHASE I

Basic illustrative example

Companies A, B and C are active in the field of retail sales and operate stores.

- Company A acquired the store asset, and financed part of the purchase through a bank loan.
- Company B entered into a 10-year lease agreement for the store.
- Company C entered into a 20-year lease agreement in respect of the store.

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PHASE I

Example - Condensed relevant financial data (*)

	Comments	Company A	Companies B & C before applying IFRS 16	Company B after applying IFRS 16	Company C after applying IFRS 16
		CU			
Financial information as of December 31, 2018		(1)	(2)	(3)	(4)
Working capital		1,000,000	1,000,000	1,000,000	1,000,000
Right-of-use asset		-	-	2,147,226	3,141,807
Real estate		4,000,000	-	-	-
		5,000,000	1,000,000	3,147,226	4,141,807
Loan		3,000,000	-	-	-
Lease liability		-	-	2,147,226	3,141,807
Equity		2,000,000	1,000,000	1,000,000	1,000,000
		5,000,000	1,000,000	3,147,226	4,141,807
Financial information for the 2019 expected P&L		-	-	-	-
Operating income before rent, depreciation and finance expenses		1,000,000	1,000,000	1,000,000	1,000,000
Lease payments		-	320,000	-	-
Depreciation expenses		120,000	-	-	-
ROU depreciation		-	-	214,723	157,090
Interest expenses		180,000	-	171,778	251,345
Profit before income taxes		700,000	680,000	613,499	591,565
Leverage ratio		40%	100%	32%	24%
EBITDA		1,000,000	680,000	1,000,000	1,000,000

* Under the previous standard, the lease transactions of Companies B and C were classified as operating leases.

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PHASE I

(*) Notes and assumptions

The lease liability was calculated as follows:

For Company B - PV (8%, 10, 320,000) = 2,147,226

For Company C - PV (8%, 20, 320,000) = 3,141,807

Company A's depreciation expense was calculated according to a depreciation rate of 3% (120,000 = 3% * 4,000,000)

The interest rate for Company A's loan is 6% (180,000 = 6% * 3,000,000).

Tax expense was not considered, since it is irrelevant to calculating EBITDA, and to using EBITDA multiples in appraisals.

The accounting leverage ratio was calculated as the ratio between shareholders' equity and total assets.

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PHASE I

Example - Effect on financial debt

A A mathematical calculation of the accounting leverage ratio (compare Column 1 and Column 2) will show that Company A is leveraged, whereas Companies B and C are not leveraged at all. This is despite the fact that Company A's shareholders' equity is twice that of Company B and Company C.

B The application of IFRS 16 shows that Companies B and C are more leveraged than Company A (compare Column 1 and Columns 3 and 4).

C Presumably, Company B's leverage level is lower than that of Company C (compare Column 3 and Column 4). However, this gap stems from the fact that Company B's lease term is shorter than that of Company C. Assuming Company B will need to continue renting the store after the lease term ends, this gap has no real justification.

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PHASE I

Analysis structure

The conclusions are based on the analysis of the data in the basic illustrative example, as follows:

Slides 12-17

refer to an appraisal based on EBITDA multiples.

Slides 18-28

refer to an appraisal based on DCF.

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PHASE I

Example - Appraisal based on the EBITDA multiple

Let us assume that the value of each of the companies as of December 31, 2018 should be calculated using the EBITDA multiple method, assuming the industry multiple is 9.00.

Set forth below are the appraisal's results:

	Company A	Companies B & C before applying IFRS 16	Company B after applying IFRS 16	Company C after applying IFRS 16	Companies B & C adjusted
	CU				
	(1)	(2)	(3)	(4)	(5)
EBITDA	1,000,000	680,000	1,000,000	1,000,000	1,000,000
EBITDA multiple	9.00	9.00	9.00	9.00	9.00
Enterprise value	9,000,000	6,120,000	9,000,000	9,000,000	9,000,000
Net of financial debt	3,000,000	-	2,147,226	3,141,807	4,000,000
Market capitalization	6,000,000	6,120,000	6,852,774	5,858,193	5,000,000

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PHASE I

Example - Appraisal based on EBITDA multiple - Conclusions

A A mathematical calculation of the EBITDA multiple after the application of IFRS 16 might result in biased appraisal results. Thus, for example, Company B is worth CU 1 million more than Company C, but this is only due to the difference in the lease term.

B Assuming the companies are required to lease the property indefinitely, the conclusion is that the adjusted value of the financial liability is CU 4 million (= 320,000 / 8%), and therefore the adjusted value of Companies B and C is CU 5 million. The CU 1 million difference between the value of Company A and the adjusted value of Companies B and C (compare Column 1 and Column 5) reflects the difference between the companies' shareholders' equity as of December 31, 2018.

C What is the significance of the difference between the CU 6.12 million appraisal of Companies B and C according to the calculation prior to the application of IFRS 16 (where lease payments were deducted from EBITDA), and the CU 5 million appraisal after application of IFRS 16 (compare Column 2 and Column 5)? This is discussed in Slide 15 below.

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PHASE I

What is the significance of the EBIDTA multiple?

A

Multiplying the EBITDA by a certain multiple is equivalent to dividing the EBITDA at a (pre-tax) discount rate of one divided by the EBITDA multiple.

B

Therefore, using an EBITDA multiple of 9 is equivalent to discounting at a discount rate of 11.1% (= 1 / 9).

C

The lease payments were calculated as 8% of the property's fair value. This discount rate is equivalent to an EBITDA multiple of 12.5 (= 1 / 8%).

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PHASE I

Note on example - Estimated value based on an EBIDTA multiple of 12.5

	Company A	Companies B & C before applying IFRS 16	Company B after applying IFRS 16	Company C after applying IFRS 16	Companies B & C adjusted
	CU				
	(1)	(2)	(3)	(4)	(5)
EBITDA	1,000,000	680,000	1,000,000	1,000,000	1,000,000
EBITDA multiple	12.50	12.50	12.50	12.50	12.50
Enterprise value	12,500,000	8,500,000	12,500,000	12,500,000	12,500,000
Net of financial debt	3,000,000	-	2,147,226	3,141,807	4,000,000
Market capitalization	9,500,000	8,500,000	10,352,774	9,358,193	8,500,000

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PHASE I

Note on example - Appraisal using an EBIDTA multiple of 12.5: Conclusions

A

The classification of lease payments as an operating expense or as a finance expense does not affect the result of the appraisal (compare Column 2 and Column 5). Nevertheless, these results apply only to the specific and uncommon circumstance, where the company's weighted average cost of capital is identical to the interest rate implicit in the lease.

B

The CU 1 million difference between the value of Company A and the adjusted value of Companies B and C reflects the difference between the Companies' shareholders' equity as of December 31, 2018 (compare Column 1 and Column 5).

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PHASE I

How should the lease payments be classified? The significance under the EBIDTA multiple method

If the lease payments are classified as an operating expense, they will be discounted at a discount rate of 11.1%. If the lease payments are classified as a finance expense, they will be discounted at the interest rate implicit in the lease (8%) and will, in effect, be assigned a higher value.

The higher the discount rate applied to an expense, the higher the company's value. Therefore, classifying lease payments as an operating expense, as previously done, will necessarily result in a higher market capitalization.

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PHASE I

Appraisal based on the discounted free cash flow (DCF) approach

According to the DCF approach, the company's unleveraged free cash flows are discounted.

The result of such discounting reflects the company's enterprise value.

The enterprise value represents the value related to both the company's shareholders and its debtors.

In order to find the value of the company's equity, the company's financial debt should be deducted from its enterprise value. Where the company has surplus assets (that generate separate cash flows and are therefore excluded from the company's enterprise value), those assets should be added to the value of the company's equity.

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PHASE I

How should the lease payments be classified? The significance under the DCF method

The classification of lease payments as an operating or as a finance expense will affect the treatment under the DCF method:

If lease payments are classified as an operating expense, they are taken into account when calculating the company's discounted cash flows, and as a result its enterprise value will decrease.

If lease payments are classified as a finance expense, they are not taken into account when calculating the company's discounted cash flows, and as a result its enterprise value will not decrease. However the present value of the lease payments (the lease liability) will be added to the company's financial debt, which is deducted from the company's enterprise value.

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PHASE I

How should the lease payments be classified? The significance under the DCF method

Normally, these two alternatives will not result in similar appraisals of the company's value. The reason is that the cash flows are discounted at the company's weighted average cost of capital, while the amount of the lease liability is discounted based on the interest rate implicit in the lease.

In most cases, the company's weighted average cost of capital will be higher than the interest rate implicit in the lease.

The higher the discount rate applied to an expense, the higher the company's market capitalization.

Therefore, classifying lease payments as an operating expense will necessarily result in a higher market capitalization.

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Example (cont.) - Further assumptions and data for DCF purposes

Company A's Weighted Average Cost of Capital (WACC) is 10.80%, which was calculated as follows:

	Cost after tax	Cost pre-tax	Relative weight	Weighted cost
Equity	15.00%	15.00%	60%	9.00%
Debt	6.00%	4.50%	40%	1.80%
				10.80%

- For simplicity, let us assume that Companies B and C's WACC is 10.80%, despite their different leverage levels.
- Let us also assume that the projected cash flows for 2019 will be the normal cash flows of each of the companies.

PHASE I

Example (cont.) - Further assumptions and data for DCF purposes (cont.)

The treatment applied to CAPEX in the appraisal of Company A is as follows:

Company A operates its retail store as an owned depreciable asset.

The generally accepted assumption in appraisals is that the calculation of the normal residual cash flow should include CAPEX at the amount of the projected depreciation expenses.

When a property is leased - even if the lease term is long - the lease payments also reflect a compensation for impairment of the property, and the lessee is not required to take into account any CAPEX.

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PHASE I

Example (cont.) - Further assumptions and data for DCF purposes (cont.)

The tax rate applicable to each of the companies is 25%.

For the purpose of applying the DCF method, the tax expense involving cash flows should be taken into account, while deferred taxes should be completely ignored.

Company A operates its retail store as an owned depreciable asset and the depreciation expenses are deductible for tax purposes.

Let us assume that Companies B and C will continue to be taxed under the old operating-lease model. Meaning, they will adjust for tax purposes the finance expenses and the amortization of the right-of-use asset, and they will deduct the full amount of lease payments, totaling CU 320 thousand per year, from their taxable income.

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PHASE I

Example (cont.) - Appraisal based on DCF

	Company A		Companies B & C - Adjusted	
	Calculation 1	Calculation 2	Calculation 3	Calculation 4
Operating income before rent, depreciation and finance expenses	1,000,000	1,000,000	1,000,000	1,000,000
Lease payments	-	-	(320,000)	-
Depreciation expenses	(120,000)	(120,000)	-	-
Operating income	880,000	880,000	680,000	1,000,000
Tax (25%)	(220,000)	(220,000)	(170,000)	(170,000)
NOPAT	660,000	660,000	510,000	830,000
Adding back depreciation expenses	120,000	120,000	-	-
CAPEX	-	(120,000)	-	-
	780,000	660,000	510,000	830,000
Discount rate	10.8%	10.8%	10.8%	10.8%
Enterprise value	7,222,222	6,111,111	4,722,222	7,685,185
Net of financial debt	(3,000,000)	(3,000,000)	-	(4,000,000)
Market capitalization	4,222,222	3,111,111	4,722,222	3,685,185

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PHASE I

Example - Appraisal based on DCF: The four calculations

Company A:

Calculation 1 ignores the issue of CAPEX;

Calculation 2 is carried out under the assumption that the company will be required to invest CAPEX at an amount equal to the depreciation expenses;

Companies B and C (after adjustment of the lease term, as explained in slide 13):

Calculation 3 classifies lease payments as an operating expense;

Calculation 4 classifies lease payments as a finance expense.

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PHASE I

Example - Appraisal based on DCF: Conclusions

The inclusion of CAPEX at an amount equal to the depreciation expenses within the residual normal cash flow, caused a 26% decrease in market capitalization of Company A (compare calculation 1 and calculation 2).

The CU 1,037,037 difference between the result of calculation 3 (classification of lease payments as an operating expense), and the result of calculation 4 (classification of lease payments as a finance expense) stems from the different discount rate applied to the lease payments in each of the calculations, as explained in the next slide.

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PHASE I

Example - Appraisal based on DCF: Conclusions (cont.): Analysis of the difference stemming from classifying lease payments as a finance or operating expense

Value when lease payments are classified as an operating expense (calculation 3)	4,722,222	
Value when lease payments are classified as a finance expense (calculation 4)	3,685,185	
Gap	1,037,037	
Gap explanation:	-	
Using a discount rate of 10.8% (calculation 3)	(2,962,963)	= 320,000 / 10.8%
Using a discount rate of 8.0% (calculation 4)	(4,000,000)	= 320,000 / 8.0%
Gap	1,037,037	

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PHASE I

Appraisal based on DCF: Conclusions

- Normally, classifying lease payments as an operating expense will result in a higher market capitalization than that obtained when classifying lease payments as a finance expense.
- The higher the difference between the company's WACC (used to discount the operating cash flows) and the interest rate implicit in the lease, the greater the difference in market capitalization.
- The gaps increase even more due to the fact that many companies use their incremental borrowing rate for the purpose of measuring the right-of-use asset and the corresponding financial liability; this rate is usually significantly lower than the interest rate implicit in the lease.

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PHASE II

Logical analysis – Should IFRS 16 impact appraisals? Background

Once the potential impact of the classification of lease payments on appraisals in Phase I is clear, a logical analysis should be carried out in order to reach insights about the Standard's effect on appraisals.
For that purpose, the following assumptions are made:

A The stock prices on the capital market reflect the value of stocks correctly, regardless of the effect of classification of lease payments for accounting purposes.

B As a result of the application of IFRS 16, the cost of capital does not change, that is to say - there is no change in the market-observed CAPM beta. The empirical findings of the application of IFRS 16 support this assumption.

C Prior to the application of IFRS 16, most appraisers adopted the previous accounting classification as a guideline for classifying lease payments for appraisals.

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PHASE II

Logical analysis – Should IFRS 16 impact appraisals? Background

Given the basic assumptions described in the previous slide, and after realizing the potential impact of leases, the conclusion is that the nature of the lease should be analyzed as follows:

1. In the case of an in-substance finance lease - this means that the appraisals carried out in the past were too high. However, applying the financial debt correctly in the formula leads to a certain offsetting effect, since it reduces the WACC.

2. In the case of an in-substance operating lease - this means that the appraisals carried out in the past were correct, and the same methodology should be employed in the future (ignoring application difficulties). That is to say, the value does not change and the WACC is not updated.

These conclusions are also relevant to appraisals carried out in the USA, regardless of the fact that the new American accounting model applied to leases, which came into force at the same time as IFRS 16, has affected only the statement of financial position (balance sheet), but not the other parts of the financial statements.

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TO CONCLUDE ONE TIP:

Proposed distinction between operating expenses and finance expenses

The classification of lease payments requires the appraiser to assess, on a case-by-case basis for each company, what is the economic nature of the lease arrangement; in particular, the appraiser will be required to take into account the following parameters of the lease arrangement:

- The lease term;
- Termination clauses;
- Leasehold improvements; and
- The existence of a secondary market.

The longer the lease term, without a termination option for the lessee, and where there is no active secondary market that will allow the transfer of the lease right to a third party, the more appropriate it is to classify the lease payments as a **finance expense.**

The shorter the lease term, and/or the existence of a termination option for the lessee, and where there is an active secondary market that will allow the transfer of the lease right to a third party, the more appropriate it is to assume that the lease payments shall be classified as an **operating expense.**

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