IVC Snippets 2019/02

In focus: Impact of IFRS 16 on the Goodwill Impairment Test in accordance with IAS 36

Agile. Individual. Personal.

Dear Reader,

In the current IVC Snippet, we analyse the implications of IFRS 16 for the goodwill impairment test in accordance with IAS 36.

Under the new IFRS 16 leasing standard, the lessee recognizes a right of use asset and a corresponding lease liability on the balance sheet. This increases the carrying amount, which is compared with the value in use. Without proper adjustment of the business plan and cost of capital, an impairment can (wrongly) occur.

In the following, we will show concrete solutions and indications for the proper implementation of the impairment test against the background of IFRS 16.

If you have further questions, we will be pleased to be at your disposal: agile, individual and personal, with custom made solutions.

With best regards from the "Ruhrgebiet"

Lars Franken and Jörn Schulte

IVC Snippets – Executive Summary

Background

- In January 2016, the IASB has published the new standard IFRS 16 ("Leases"). It comes into effect on January 1, 2019.
- In future, "almost" every type of leasing must be included in the balance sheet. Exceptions are so-called "short term leases" - leases with a term of less than twelve months - and "low value leases" - objects with a low purchase price such as tablets, computers and telephones.
- The leased right of use is recognized as an asset and a corresponding lease liability is recognized on the balance sheet.

Impairment Test

- The goodwill impairment test in accordance with IAS 36.10b compares the carrying amount with the recoverable amount of the cash-generating unit (CGU) (IAS 36.74). The carrying amount has to be determined on a basis consistent with the way the recoverable amount is determined (IAS 36.75).
- A right of use under IFRS 16 generally increases the carrying amount.
- To determine the recoverable amount, the value in use is generally determined first.

Challenge

- Companies that have so far carried out operating leases are faced with a significant increase in carrying amount.
- If the effects of IFRS 16 are not properly analyzed when determining the value in use, an impairment loss may be erroneously identified.

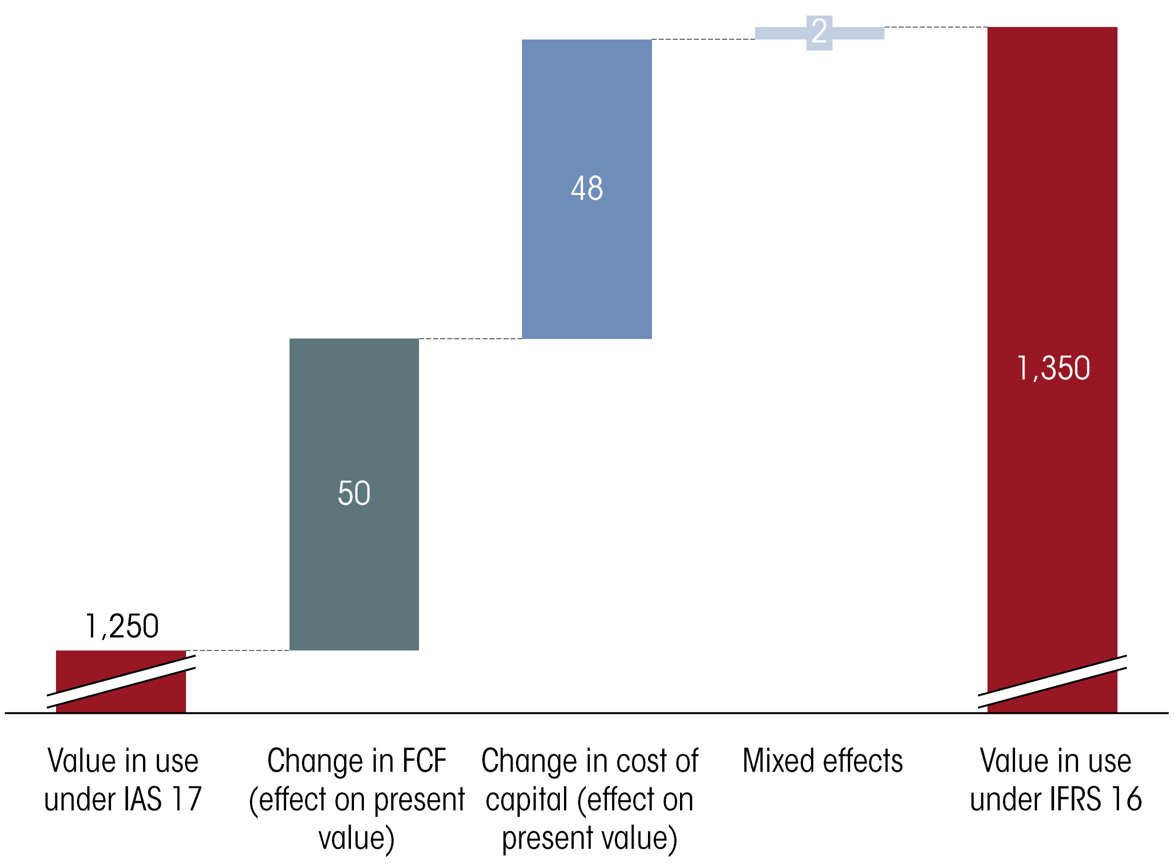
IVC Snippets

- IVC presents in a simplified example how the impairment test can be carried out properly in practice after the introduction of IFRS 16. The three main challenges are as follows:
  - Breakdown of lease payments into two components: depreciation and interest,
  - Reinvestment,
  - Appropriate determination of cost of capital.

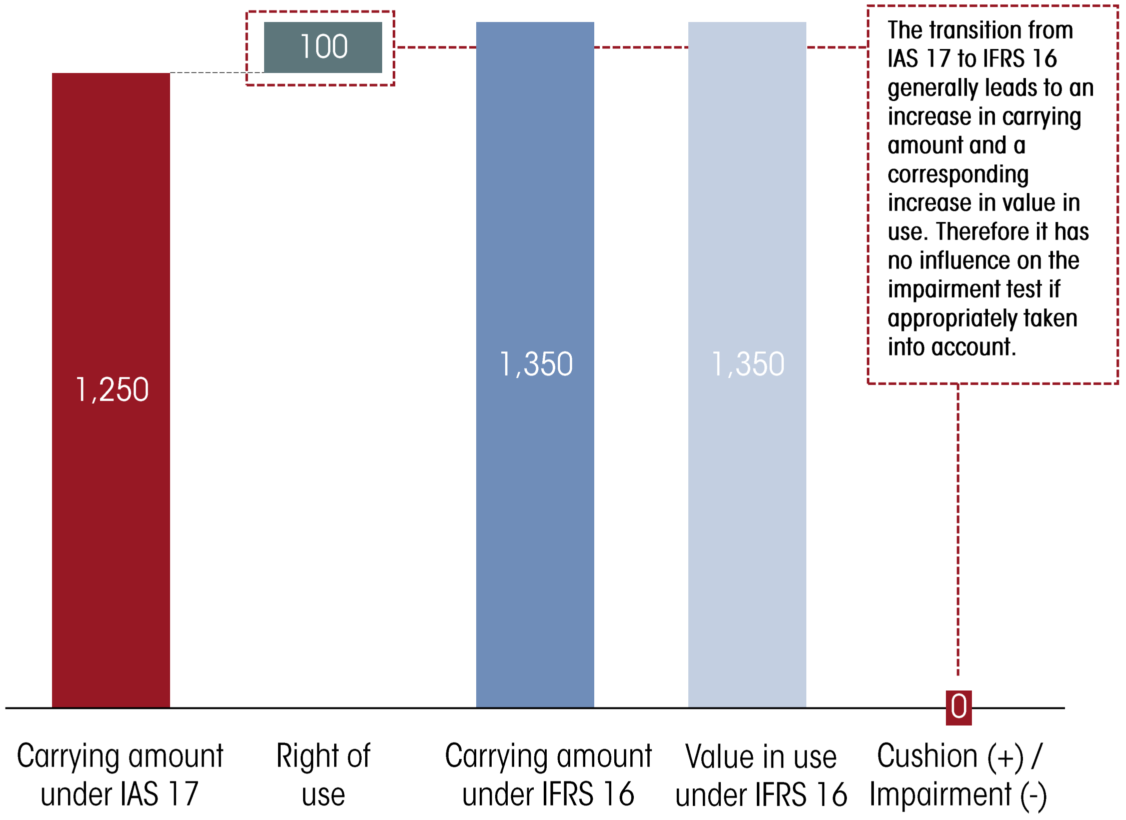
Effects of the transition from IAS 17 to IFRS 16 on the goodwill impairment test

IVC

Change in value in use



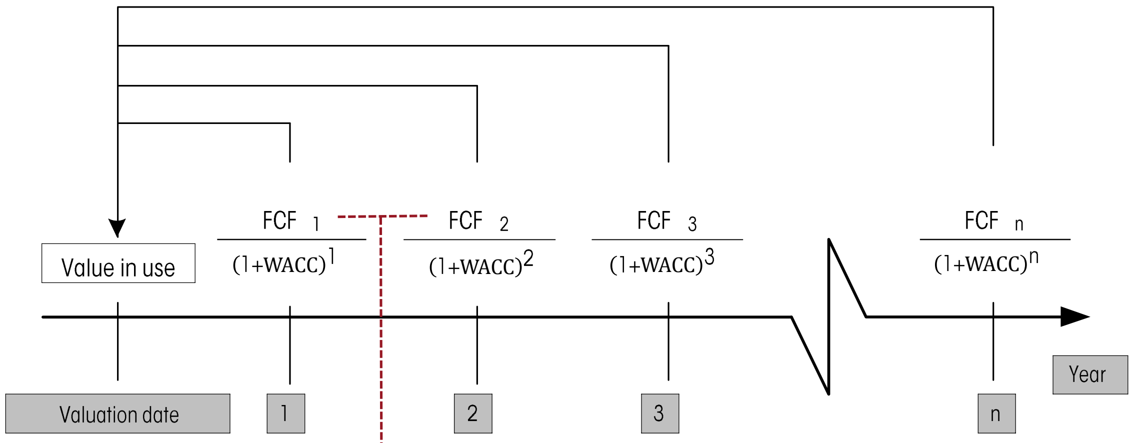
Impact on the goodwill impairment test



Determination of value in use

Enterprise value using WACC-method

Recoverable amount / Value in use > Carrying amount, otherwise Impairment!



Free cash flow (FCF) includes depreciation, delta net working capital and capital expenditure; reinvestment for the right of use should also be considered.

Simplifying: constant FCF = EBIT (no taxes, no Delta Net Working Capital)

Derivation of WACC

No consideration of taxes (t = 0)

$$WACC = k_e \times \frac{M_e}{M_e + M_d} + k_d \times (1 - t) \times \frac{M_d}{M_e + M_d}$$

$$k_e = r_f + \beta_e^L \times (r_m - r_f)$$

$$\beta_e^L = \beta_e^U + (\beta_e^U - \beta_d) \times \frac{M_d}{M_e}$$

$$WACC = r_e^U = r_f + \beta_e^U \times (r_m - r_f)$$

With t = 0 the following applies: WACC = Unlevered cost of equity

$$WACC = r_e^U$$

Impact of IFRS 16 on the income statement and balance sheet

Income statement

MU*	IAS 17	IFRS 16
Revenue	220	220
Other Operating Exp.	-90	-90
Leasing expenses	-10	
EBITDA	**120**	**130**
Depreciation & Amort.	-20	-20
Additional depreciation IFRS 16	./.	-6
EBIT	**100**	**104**
Interest (I)	./.	-4
EBT = EAT (Assumption: no taxes)	**100**	**100**

**monetary unit*

Leasing payments are now to be differentiated into depreciation and interest expense: Historical averages can usually be used for the differentiation for the purpose of simplification.

Practice Statement 1

Balance sheet

MU*	IAS 17	IFRS 16
Capital Employed	1,250	1,250
Right of use	./.	100
Total Assets (Carrying amount)	1,250	**1,350**
Equity	1,250	1,250
Liabilities	./.	100
Total liabilities and equity	1,250	**1,350**

**monetary unit*

Recognizing a right of use as an asset and a corresponding lease liability; this increases the carrying amount, which must be exceeded by the recoverable amount.

Impact of IFRS 16 on Free Cash Flow

Free cash flow

MU*	IAS 17	IFRS 16
EBIT = NOPLAT	100	104
Depreciation & Amort.	+20	+20
Additional depreciation IFRS 16	./.	+6
Delta Net Working Capital	./.	./.
Investments	-20	-20
Free cash flow	**100**	**110**
Investments	./.	-6
Free cash flow adj.	**100**	**104**

**monetary unit*

Impact of IFRS 16

/ Under IAS 17, the payments for the operating lease are fully recognized in EBITDA.

/ After switching to IFRS 16, only the right of use is depreciated (non-cash and thus – if taxes are neglected – in the first instance there is no impact on free cash flow).

/ In the business plan (at least in the Terminal Value), (re-)investments are regularly considered in connection with the right of use (simplifying in the amount of depreciation).

Practice Statement 2

Goodwill impairment test without adjustment of WACC

Calculation Example

MU*	IAS 17	IFRS 16
Free cash flow adj.	100	104
WACC	8.00%	8.00%
Enterprise Value	1,250	**1,300**
Carrying amount	1,250	1,350
Cushion (+) / Impairment (-)	0	-50

**monetary unit*

Impact and solution

Delta in the amount of 4: Interest component of the leasing payment (as a result of recognition of leasing liability)

No economic effect under IFRS 16, but still impairment?

There is no adjustment of cost of capital; the leasing liability under IFRS 16 has an impact on the leverage and thus on the determination of unlevered cost of equity / WACC.

Practice Statement 3

Adjustment of WACC

Impact on WACC

	IAS 17	IFRS 16	No.	Calculation logic	Impact of IFRS 16
Liabilities	0	100	[1]		↗
Equity	1,250	1,250	[2]		=
Total liabilities and equity	1,250	1,350	[3]	[1] + [2]	↗
Raw Betafaktor	0.75	0.75	[4]		
Debt-to-equity ratio	0.0%	8.0%	[5]	[1] / [2]	↗
Debt Beta	0.25	0.25	[6]	([12] - [9]) / [10]	
Unlevered Beta factor	0.75	0.71	[7]	[4] + ([6] x [5]) / 1 + [5]	↘
Relevered Beta factor	**0.75**	**0.75**	[8]	[7] + ([7] – [6]) x [5]	=
Base rate	2.0%	2.0%	[9]		
Relevered Beta factor	0.75	0.75	[8]		
Market risk premium	8.0%	8.0%	[10]		
Cost of levered equity	**8.0%**	**8.0%**	[11]	[9]+ [8] x [10]	=
Cost of debt	4.0%	4.0%	[12]		
Debt ratio	0.0%	7.4%	[13]	[1] / [3]	↗
Equity ratio	100.0%	92.6%	[14]	[2] / [3]	↘
WACC = Cost of levered equity	**8.0%**	**7.7%**	**[15]**	**[11] x [14] + [12] x [13]**	↘

Explanations

/ The debt-to-equity ratio is based on market values. Since there are no market values available for debt, the book values are used for the purpose of simplification.

/ As operating leases are reported as liabilities in the balance sheet under IFRS 16, debt and thus the debt-to-equity ratio increase (see No. 5).

/ The unlevered (operating) Beta factor decreases as the operating risk arising from the operating lease is eliminated (see No. 7).*

/ The relevered Beta factor remains unchanged as a lower unlevered Beta factor is relevered with a higher leverage.

/ Base rate and market risk premium remain unchanged.

/ The debt ratio increases due to higher liabilities under IFRS 16, and the equity ratio declines accordingly (see No. 13 and 14).

/ The changes in these items result in a lower WACC (which, exluding taxes, corresponds to the cost of unlevered equity) under IFRS 16 (see No. 15).

* The raw Beta factor - calculated from peer group data - remains unchanged under IFRS 16. The increase in liabilities and thus the debt-to-equity ratio result in a lower unlevered Beta factor.

Goodwill impairment test with adjustment of WACC

Introduction of IFRS 16 - with adjusted WACC

MU*	IFRS 16
FCF adj.	104
WACC = Unlevered cost of equity	7.7%
Enterprise Value	**1,350**
Carrying amount	**1,350**
Cushion (+) / Impairment (-)	**0**

** monetary unit*

/ Due to the reclassification of interest expenses from the previous operating lease from EBIT to interest expenses, the risk structure of EBIT has changed.

/ The risk of EBIT is reduced.

/ Correspondingly, the unlevered Beta factor decreases.

/ The unlevered cost of equity in the amount of 7.7% is adjusted for the leverage risk from the operating lease; in the WACC this effect is reflected in a higher weighting of liabilities.

/ After this adjustment, the enterprise value is increased by the value of the right of use / the corresponding liability.

/ This increase corresponds to the increase in carrying amount.

/ Accordingly, the cushion / impairment remains unchanged compared to IAS 17.

Case Study: Deutsche Telekom (I/II)

Impact of IFRS 16 on the unlevered Beta factor of Deutsche Telekom

- The raw Beta factor remains unchanged under the new IFRS 16 standard and stands at 0.93.
- The debt ratio rises from 48.5% to 53.9% - the debt-to-equity ratio increases under IFRS 16.
- The inclusion of operating leases on the liability side leads to increased debts and correspondingly to an increase in total assets of € 15.4 billion (see Annual Report) - the average debt changes from € 63.5 billion (without IFRS 16) to an average of € 78.9 billion (under IFRS 16).
- The higher debt ratio results in a lower unlevered Beta factor of 0.43 (previously: 0.48).

Impact of IFRS 16

Deutsche Telekom

	Raw Beta	ø Equity in € billion	ø Debt in € billion	Δ Debt IFRS 16 in € billion	ø Debt in € billion	ø Debt ratio	Debt-to-equity ratio	Unlevered Beta
IAS 17	0.93	67.8	63.5	./.	63.5	48.5%	94.2%	0.48
IFRS 16	0.93	67.8	63.5	15.4	78.9	53.9%	116.9%	0.43

Annual Report S. 161

- The increase in total assets/total liabilities and shareholders' equity as of January 1, 2019 as a consequence of the recognition of right-of-use assets in the amount of EUR 13.8 billion, the recognition of lease liabilities in the amount of EUR 15.4 billion, and a reduction in retained earnings, due in particular to the reversal of accrued lease payments (liabilities from straight-line leases) of EUR 0.5 billion (before deferred taxes). The increase in lease liabilities will lead to a corresponding increase in net debt.

Case Study: Deutsche Telekom (II/II)

IAS 17

Deutsche Telekom

	IAS 17
Debt ratio	48.5%
Equity ratio	51.5%
Base rate	0.20%
Market risk premium	7.00%
Unlevered Beta	0.48
Debt-to-equity ratio	94.2%
Relevered Beta	0.93
Risk premium	6.49%
Cost of equity	**6.69%**
Cost of debt	1.43%
WACC	3.91%

IFRS 16

Deutsche Telekom

	IFRS 16
Debt ratio	53.9%
Equity ratio	46.1%
Base rate	0.20%
Market risk premium	7.00%
Unlevered Beta	0.43
Debt-to-equity ratio	116.9%
Relevered Beta	0.93
Risk premium	6.49%
Cost of equity	**6.69%**
Cost of debt	1.43%
WACC	3.60%

Lower WACC after implementation of IFRS 16 due to higher proportion of "cheaper" debt capital.

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