



**Center for Financial Reporting
and Consolidation**

Note No. 2

Accounting for the Impairment of Assets under IFRS

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I. Introduction

IAS 36: *Impairment of Assets (rev. 2004)* contains accounting rules for the recognition of impairment losses. As the overriding principle of the *International Financial Reporting Standards* is to provide a true and fair view of the financial position, performance and changes in financial position of enterprises, the objective of IAS 36 is to ensure that assets are not carried at an amount above the amount that can be recovered through use or sale of the asset. Therefore IAS 36 contains detailed rules on when to test assets for impairment and how these tests have to be conducted. There still remain some areas where the standard leaves room for discretion, thus IAS 36 is often linked to earnings management. The aim of this note is to describe the rules of IAS 36 and identify those areas where they leave room for earnings management.

II. Accounting Regulations

1. The Impairment Test

IAS 36 applies to property, plant and equipment, intangible assets, investment property which is accounted for using the cost model, goodwill and interests according to IAS 27, 28 and 31.² According to IAS 36.9 an entity has to assess at the end of each reporting

² See Hoffmann, in: Lüdenbach/Hoffmann (Ed.), Haufe IFRS-Kommentar, 8.edt., Freiburg 2010, § 11. 4. For negative delimitation see 36.2. For a detailed overview on the regulations concerning the accounting for

period whether there is an indication that the asset under consideration is impaired (qualitative impairment test). IAS 36.12 gives a list of examples for such indications:

External sources of information:

- *During the period, an asset's market value has declined significantly more than would be expected as a result of the passage of time or normal use;*
- *Significant changes with an adverse effect on the entity have taken place during the period, or will take place in the near future, in the technological, market, economic or legal environment in which the entity operates or in the market to which an asset is dedicated;*
- *Market interest rates or other market rates of return on investments have increased during the period, and those increases are likely to affect the discount rate used in calculating an asset's value in use and decrease the asset's recoverable amount materially;*
- *The carrying amount of the net assets of the entity is more than its market capitalization.*

Internal sources of information:

- *Evidence is available of obsolescence or physical damage of an asset;*
- *Significant changes with an adverse effect on the entity have taken place during the period, or are expected to take place in the near future, in the extent to which, or manner in which, an asset is used or is expected to be used. These changes include the asset becoming idle, plans to discontinue or restructure the operation to which an asset belongs, plans to dispose of an asset before the previously expected date, and reassessing the useful life of an asset as finite rather than indefinite;*
- *Evidence is available from internal reporting that indicates that the economic performance of an asset is or will be worse than expected.*

If there is an indication that the asset may be impaired the entity has to conduct a quantitative impairment test which means that the recoverable amount has to be estimated and compared to the carrying amount. For intangible assets with indefinite useful life, intangible assets which are not yet available for use and goodwill a

impairments see Zülch/Siggelkow (2010): Der Impairment-Test gemäß IAS 36: Problembereiche und Implikationen der Wirtschaftskrise, Zeitschrift für international Rechnungslegung, Vol. 5, No. 1 pp. 29-35.

quantitative impairment test has to be conducted annually and additionally if there is an indication because those assets are not depreciated (yet). The recoverable amount is defined as the higher value of fair value less costs to sell and value in use – which reflects the principle of rationality of the management. If the carrying amount exceeds the recoverable amount the asset is impaired and an impairment loss has to be realized in the amount of the difference between carrying amount and recoverable amount. Thus the impairment test according to IAS 36 is a one-level impairment test, contrasting the impairment test according to U.S.-GAAP, which requires the user to assess the need to realize an impairment loss at the first stage and the amount of this loss at the second stage. Fig. 1 depicts the course of the impairment test under IAS 36 for single assets.

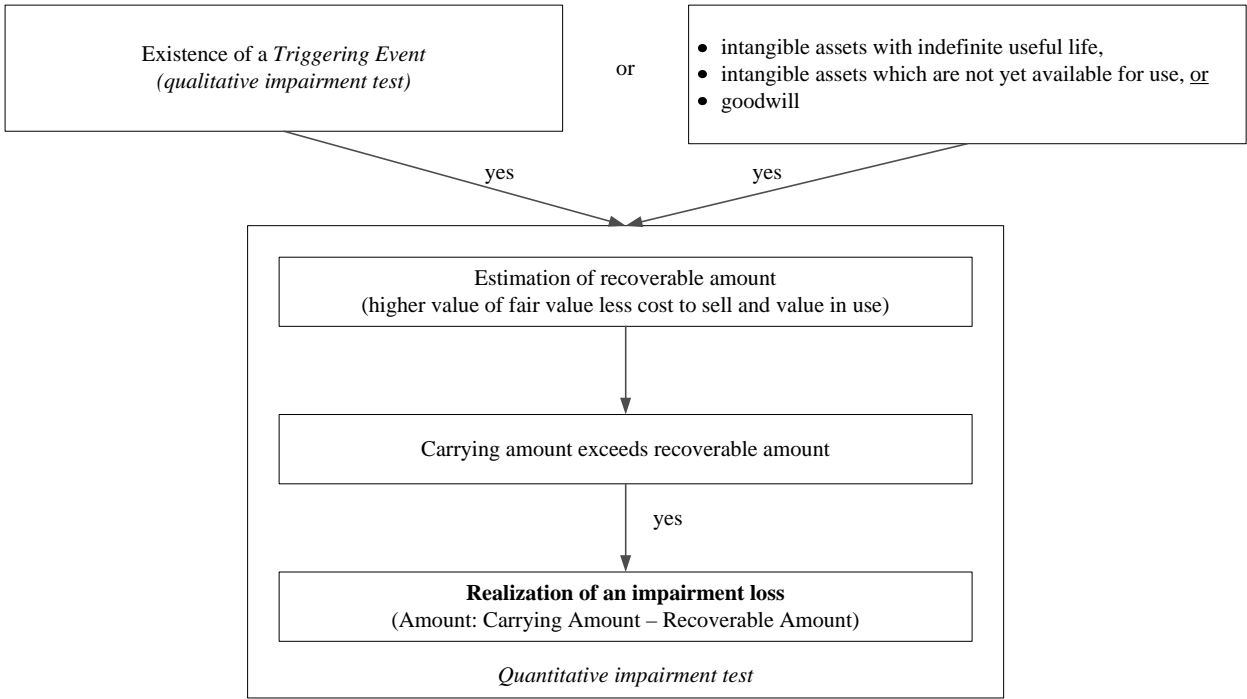


Figure 1: Impairment Test for single Assets

If the recoverable amount of the single asset cannot be determined the entity has to estimate the recoverable amount for the cash-generating unit to which the asset belongs. The cash generating unit is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets.

2. The Recoverable Amount

a) Fair Value less Costs to Sell

The fair value less costs to sell reflects the (estimated) market price of the asset. IAS 36.6 defines the fair value less costs to sell as the amount obtainable from the sale of an asset or cash-generating unit in an arm's length transaction between knowledgeable, willing parties, less the costs of disposal. According to IAS 36.25 - .27 the following hierarchy has to be applied for the determination of fair value less costs to sell:

1. The price in a binding sale agreement in an arm's length transaction less costs to sell;
2. The current market price less costs to sell if the asset is traded at an active market;
3. The price of the most recent transaction less costs to sell if there were no significant changes in economic circumstances since that transaction;
4. The best estimate of the amount that an entity could obtain from the disposal of the asset in an arm's length transaction between knowledgeable, willing parties, at the end of the period, less costs to sell. As long as the entity is not forced to sell the asset immediately the fair value less costs to sell does not reflect a forced sale.

With the *Improvements Project 2008* the International Accounting Standards Board introduced the possibility to calculate the fair value less costs to sell using discounted cash flow methods. This possibility has to be understood as specification of the best estimate according to 4., meaning that binding sale agreements as well as prices from active markets have to be used preferably. For single assets the fair value less costs to sell is mostly easily to determine. If the fair value less costs to sell cannot be determined the value in use can be used as recoverable amount according to IAS 36.20.

b) Value in Use

The value in use shall reflect the value that the entity can earn by further use of the asset. It is defined as the present value of the future cash flows expected to be derived from an asset or cash-generating unit and thus has to be calculated using discounted cash flow methods by definition. The calculation can be subdivided in three problems:

1. Estimating future cash flows
2. Calculating a discount rate
3. Calculating the terminal value

The *estimation of future cash flows* has to reflect reasonable and supportable assumptions and shall be based on the most recent financial budgets approved by management. The detailed cash flow projection should generally not exceed a time span of five years. Cash flow projections shall reflect

- Cash inflows from further use of the asset,
- Cash outflows that are necessary for the further use of the asset, and
- Cash inflows from the disposal of the asset.

Cash flow projections shall not reflect

- Cash flows that arise from future restructurings to which an entity is not yet committed,
- Cash flows that arise from improving or enhancing the asset's performance,
- Cash flows from financing activities, and
- Cash flows from income tax.

As *discount rate* the entity shall choose a pre-tax rate which is independent of the capital structure of the entity and reflects the time value of money as well as the risks of the asset which have not been incorporated in the cash flow estimates. As the discount rate has to reflect the current market assessments (contrasting the firm-specific cash flow estimates) the best way to determine the discount rate is to estimate it from similar assets. As those similar assets are in the majority of cases not available IAS 36.A17 gives three discount rates which can be used as a starting point for the estimation of the discount rate:

- The weighted average cost of capital (*WACC*) determined using techniques such as the capital asset pricing model (*CAPM*);
- The entity's incremental borrowing rate; or

- Other market borrowing rates.

These three starting points are based on market data and thus produce post-tax discount rates. To receive the required pre-tax rate IAS 36.BCZ85 shows two techniques to calculate the pre-tax rate from the post-tax rate:

- Iterative calculation: Based on the assumption that the value in use after taxes is equal to the value in use before taxes the pre-tax rate is the discount rate that discounts the pre-tax cash flows to the same amount as the post-tax cash flows discounted with the post-tax discount rate;
- Grossing up: The pre-tax rate is the post-tax discount rate divided by $(1 - \text{tax rate})$.

The *terminal value* has to be calculated using a steady or declining growth rate. An increasing growth rate may only in rare circumstances be used when it can be justified. The growth rate shall not exceed the long-term average growth rate for the products, industries, or countries in which the entity operates, or for the market in which the asset is used.

The calculation of the value in use can only be forgone if the fair value less costs to sell lies above the carrying amount or if there is no reason to believe that the value in use materially exceeds the fair value less costs to sell. In these cases the fair value less costs to sell may be used as the recoverable amount.

3. Cash Generating Units

If the value in use cannot be estimated for the single asset – it cannot be estimated to be close to the fair value less costs to sell and the asset does not generate cash inflows that are largely independent of those from other assets – the recoverable amount cannot be calculated. In such cases the quantitative impairment test has to be conducted at the level of the cash-generating unit of the asset. Goodwill and corporate assets can only be tested for impairment using their cash-generating units as both do not generate cash inflows on their own. As the definition of a cash-generating unit is that it generates cash inflows that are largely independent of cash inflows of other assets or groups of assets the value in use of a cash-generating unit can always be determined. If the fair value less

costs to sell of the cash-generating unit cannot be determined because there is no binding sale agreement, no active market and no starting point for 'value in use-estimation' of the cash generating unit can be used as the recoverable amount.

The identification of cash generating units is based on the management approach as they are supposed to represent the lowest level within the entity at which the goodwill is monitored for internal management purposes. The upper bound for the size of cash-generating units are segments according to IFRS 8. Cash-generating units shall be identified consistently from period to period. Goodwill has to be allocated to cash-generating units or groups of cash-generating units based on the assessment of future benefits from the synergies of the business combination the goodwill results from. If a quantitative impairment test is conducted for a cash-generating unit which contains goodwill and reveals an impairment the carrying amount of the goodwill has to be reduced first. The carrying amount of the other assets covered by the cash-generating unit has to be reduced only if the carrying amount still exceeds the recoverable amount after the goodwill has been completely written off. Figure 2 depicts the course of the impairment test under IAS 36 for cash generating units.

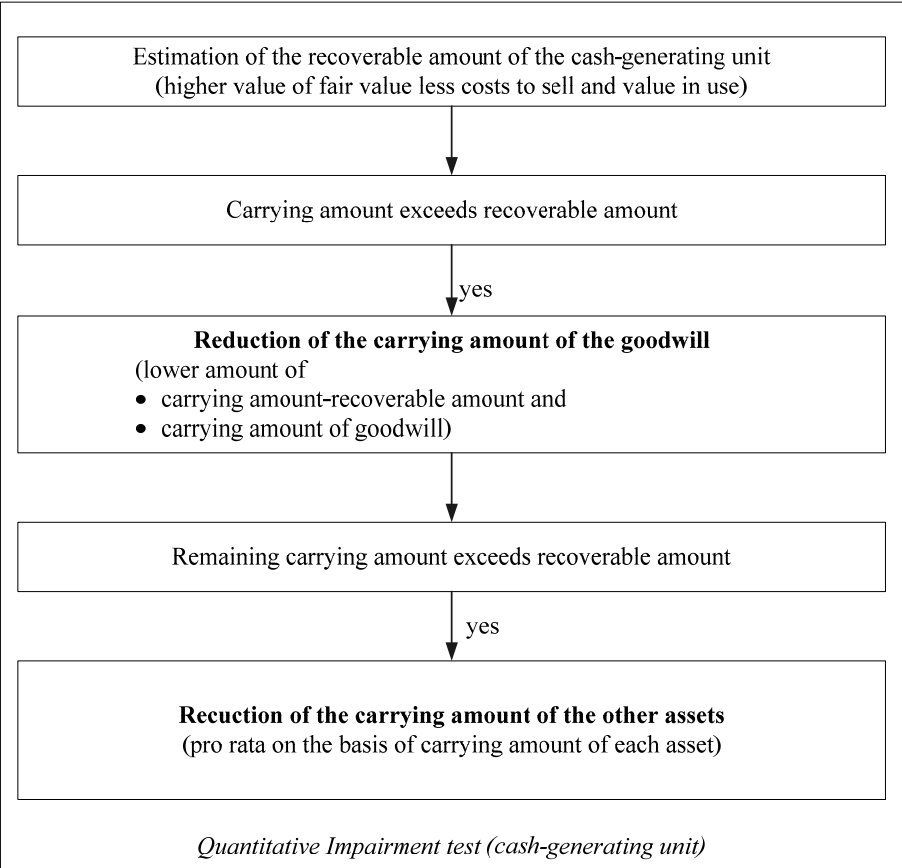


Figure 2: Impairment Test for cash-generating units

III. Earnings Management

1. Preliminary Remark

Opportunistic behavior of the management in form of manipulation of the published earnings is generally called earnings management.³ Earnings management is referred to whenever managers apply discretion during financial reporting. One still has to keep in mind that discretion can on the one hand be used to manipulate specific accounting parameters to improve external perception or internal consequences and on the other hand to communicate internal, private information to the addressees. Regarding the rules on impairment of assets there are several parameters giving room for discretion. When the fair value less costs to sell is determined based on market prices there is no room for discretion by definition. For the application of discounted cash flow methods there are no prescriptions resulting in a free choice of management of all parameters. For the value in use detailed regulations do exist but they still leave room for earnings management. Another starting point for earnings management which is often overseen is the identification of cash-generating units.

2. Estimation and Extrapolation of Future Cash Flows

Calculation of the value in use as described above starts with the projection of future cash flows. As the future is uncertain the estimation of future cash flows by definition gives room for earnings management. This room is reduced by the prescription that these estimates shall be based on the most recent financial budgets as the adherence of this rule can be tested during an audit.

Another point – which generally gives more room for discretion – is the choice of a growth rate for the extrapolation of cash flows to calculate the terminal value. It has to be kept in mind that future restructurings may not be considered in the estimation of cash flows.⁴ Thus a growth rate – independent of whether it is increasing, stable or

³ A good introduction on earnings management is provided by the survey articles of *Schipper (1989)*: Commentary on earnings management, *Accounting Horizons* 3 (4), pp. 91-102, *Healy/Wahlen (1999)*: A review of the earnings management literature and its implications for standard setting, *Accounting Horizons* 13 (4), pp. 365-383, *Dechow/Skinner (2000)*: Earnings management: reconciling the views of accounting academics, practitioners and regulators, *Accounting Horizons* 14 (2), pp. 133-168 and *Dechow/Ge/Schrand (2010)*: Understanding earnings quality: A review of the proxies, their determinants and their consequences, *Journal of Accounting and Economics* 50, pp. 344-401.

⁴ For a discussion of different growth rates that can be used to calculate the value in use see *Lienau/Zülch (2006)*: Die Ermittlung des value in use nach IFRS, *KoR* 5, pp. 319-329.

decreasing – must be justifiable. To communicate internal information to the stakeholders the management should choose a growth rate that reflects the expected development of future benefits from the use of the asset. But as the expected future benefit is a private information available to the management only there remains room to choose a growth rate which in the first place fulfills the objective of management itself.

3. Choosing the Discount Rate

Concerning the choice of an adequate discount rate there is an ongoing discussion in the literature.⁵ In most articles as well as in most interpretations the use of pre-tax *WACC* is recommended, where the pre-tax *WACC* can be calculated based on post-tax *WACC* using one of the two methods described before. Alternatively one can find authors that recommend the use of the entity's incremental borrowing rate or the cost of equity of the fictitiously unlevered entity. Thus the entity has a relatively wide range to choose a discount rate that either reflects the economic reality or delivers the results the management wants to achieve.

4. Identification of Cash-Generating Units

For the purpose of earnings management the company can further use the identification of cash-generating units.⁶ Generally the size of the cash-generating unit affects the probability of the necessity to realize impairment losses. The larger the cash-generating unit the lower is the risk of impairment because fluctuations in the values of the covered assets could cancel out each other. Additionally there exists the possibility to recompose the cash-generating units. As the definition shall be consistent from period to period the room for discretion is limited but still it does exist.

5. Evidence

The use of areas of discretion considering the accounting for impairments has been widely discussed. Existing studies do not focus on the question of HOW managers manage earnings but on WHAT GOALS they try to achieve. Common goals are for example income smoothing and big bath accounting. The rationale behind income smoothing is to meet the shareholder's expectations. The rationale behind big bath

⁵ See for example *Ruhnke* (2008): Kapitalkostensatzbestimmung für die Zwecke der Nutzungswertbestimmung gem. IAS 36, Betriebsberater 1, *Husmann Schmidt* (2008): The Discount Rate: A Note on IAS 36, Accounting in Europe, Vol. 5 (1), pp. 49–62.

⁶ For a detailed description of areas of discretion regarding the identification of cash-generating units see *Klingels* (2005): Die cash generating unit nach IAS 36 im IFRS-Jahresabschluss, Berlin.

accounting is to realize all losses in a period that is bad, anyways, to be able to show good results in subsequent years. Further common influencing factors are the existence of earnings based bonus payments and the occurrence of a management change in the reporting period. If earnings based bonus payments exist the management usually aims to a financial result above the upper and below the lower bound for the measurement of bonus payments. Management changes have an effect of cleaning the decks – the new manager tends to realize impairment losses because he is not held responsible for the underlying losses. Thus a change in management has the effect that impairment losses are realized early whereas income smoothing, big bath accounting and earnings based bonus payments could delay impairment losses as well as pre-draw them.

The majority of the existing studies focus on the U.S.-market⁷ but there are some studies for other countries,⁸ as well. Most of these studies find evidence for the existence of earnings management concerning the accounting for impairments. To our knowledge there exist no study for the German market on earnings management concerning impairments, yet. As the areas of discretion are similar in the U.S., Australian and German setting, it is most likely, that earnings management concerning the accounting for impairments exists in Germany, too. But as the national backgrounds diverge it is not straightforward to predict for which goals German managers use earnings management.

IV. Conclusion

The regulations on accounting for impairments are complex and thus widely discussed. Even though the *International Financial Reporting Standards* have to be applied mandatory since 2005 and IAS 36 was in the discussion from the very beginning no best practice has evolved, yet, leaving the managements a lot of room for earnings management. As the accounting for impairments is one of the main topics of the German enforcement authority *DPR* (deutsche Prüfstelle für Rechnungswesen) since 2006 the

⁷ See for example *Riedl* (2004): An Examination of Long-Lived Asset Impairments, *The Accounting Review*, Vol. 79, No. 3, pp. 823-852, *Beatty/Weber* (2006): Accounting Discretion in Fair Value Estimates: An Examination of SFAS 142 Goodwill Impairments, *Journal of Accounting Research*, Vol. 44, No. 2, pp. 257–288.

⁸ *Cotter/Stokes/Wyatt* (1998), 'An analysis of factors influencing asset writedowns', *Accounting and Finance*, Vol. 38, pp. 157–179 analyze the Australian market, *Garrod/Kosi/Valenticic* (2008), 'Asset Write-Offs in the Absence of Agency Problems', *Journal of Business Finance & Accounting*, Vol. 35, No. 3 and 4, pp. 307–330 focus on small privately held companies in Slovenia.

main parameters for the impairment test still have to be chosen reasonable – reducing the areas of discretion at least a little.

Further Reading:

Beyhs, Oliver (2002), *Impairment of Assets nach International Accounting Standards*, Frankfurt am Main

Reinke, Jens (2010), *Impairment-Test nach IAS 36 - Grundlagen, Durchführung, abschlusspolitisches Potenzial*, Berlin

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