

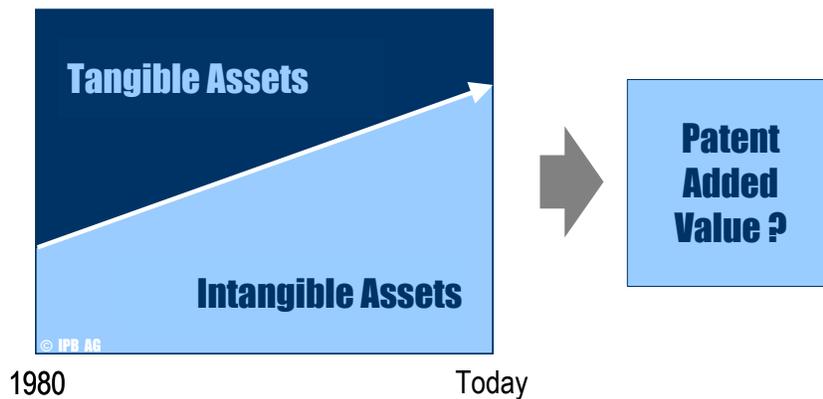
**International Conference On
“IP As An Economic Asset: key Issues In Exploitation
And Valuation”
Berlin, July 1st 2005**

**Methods For Patent Valuation
(Session 5A)**

Guido von Scheffer, IPB AG + Dr. Martin Zieger, KPMG

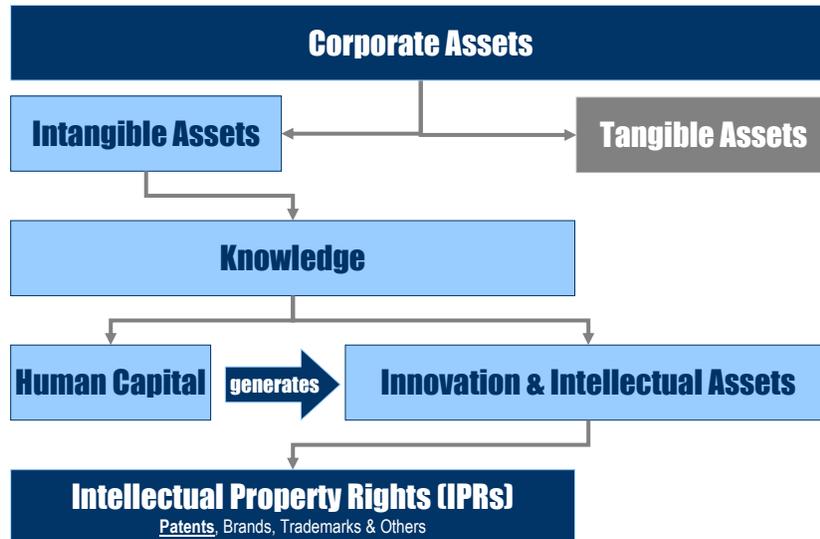


**Nowadays There Is A Shift To Intangible Assets
within Corporate Assets**



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Patents Are An Important Part Of Intangible Assets Patents are the most “TANGIBLE” Intangible Assets



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German Accountancy Rules Are Restrictive for Intangible Assets



In principle German law demands a true and fair view of the financial statement (§ 264 HGB)

- Hence **all assets** – including intangible assets as e.g. patents – have to be shown in the balance (§ 243 HGB)

But true and fair view is restrained by the prudence principle (§ 252 HGB)

- If intangible assets are generated internally -that means not acquired from a third party- the prudence principle requires the internal production costs on this item to be recognized as an expense (§ 248 HGB)
- Therefore the true and fair presentation of the German financial statements are restricted (example: technological start-up corporation)
- Even if a patent has been bought externally and meets for this reason the recognition criteria the asset have to be valued always by their historical costs and not their fair value
- Optional solutions in practice: Sale and lease back of patents (and other intellectual properties)

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In Practice There Is A Need For A 'True And Fair View' Valuation Of Patents



There are ambitious efforts for a further development of the valuation of intellectual properties and especially patents

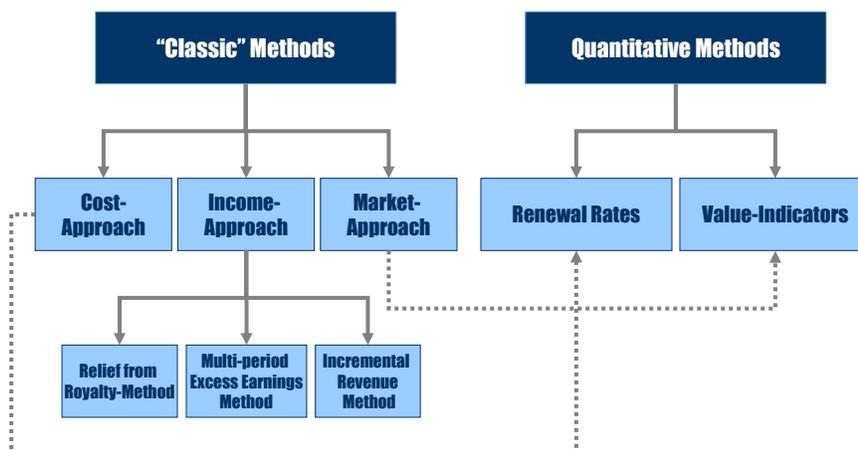
- Within the accounting for business combination and for contribution in kind the valuation of a patent is a controversial complexity
- International accounting standards (IFRS and US-GAAP) already have a possibility/must to disclose development costs in the balance sheet
- German Accounting Standard Committee (DRSC) recommend the disclosure of selective intangible assets as well
- Furthermore the users of the financial statement need a fair presentation for their economic decisions (see IP-based financing)

But the Problems of a proceeding valuation of intellectual properties and patents have to be considered:

- manipulative accounting policy
- risk of higher tax expenses
- lack of a standardized and accepted valuation methods

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Patent- Valuation Methods Overview



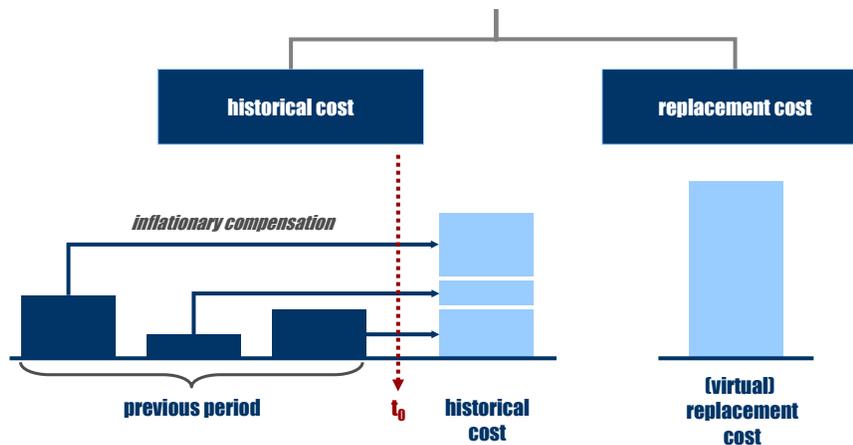
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Patent- Valuation Cost-Approach (1/2)



Historical cost measures the actual cost incurred in creating the patent.

Replacement cost quantifies the estimated cost of replacing the patent innovation or recreating an equivalent asset.



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Patent- Valuation Cost-Approach (2/2)



Advantages:

- Cost based measures are objective and consistency can be achieved
- Historic cost data is reliable
- If a recent acquisition cost of patent exists it is a reliable indicator of value

Disadvantages:

- No correlation between expenditure on an asset and its value
- Difficult to distinguish between 'normal' operating expenses and patent investment expenditure
- Subjective nature of estimate costs of replacement and some patents may not be replaceable

Conclusion :

- Cost-based approaches are only used in limited circumstances (e.g. when the replacement cost can be estimated with a reasonable degree of reliability and confidence)
- Cost is, however, a relevant benchmark where a patent has recently been acquired (see Market-Approach)

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Patent- Valuation Income-Approach (1/2)



The Income- Approach (Discounted Cash Flow = DCF) quantifies cashflow forecasts based on (prognosticated) future income streams of the patent's commercial use. In principle they can be separated into procedures, which quantify either the economic additional receipts or cost savings by the respective patent.

By discounting these future cashflows on t_0 today's value of these future incomes and thus the value of the patent can be calculated.

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Patent- Valuation Income-Approach (2/2)



Advantages:

- **Theoretically superior to other approaches as focused on future earnings or cash flow**
- **Consistency can be achieved facilitating comparison across a patent portfolio**
- **Widely accepted and concepts widely understood**

Disadvantages:

- **Requires subjective cash flow allocation**
- **Translation of theory into practice requires assumptions which are limiting**
- **Relevant information is not always readily accessible from internal reporting systems**

Conclusion :

- **Provided that information of an appropriate quality can be obtained this is a primary valuation methodology and the most widely used in practice**
- **The limiting nature of the assumptions needs to be understood and where possible scenario analysis should be performed**

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Patent- Valuation Market-Approach (1/2)



With the Market-Approach the value of the patent is determined on the basis a similar before accomplished transaction:

If a competitor sold a similar patent, it is to be assumed for the own patent might have a similar value.

In real estate evaluation similar procedures were established reliably.



Example:

The red, the white and yellow houses were reconditioned in the year 1995.

The yellow house and the white house were sold for 4 Millions Euro recently.

The red house should be evaluated ...

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Patent- Valuation Market-Approach (2/2)



Advantages:

- **Practical approach which makes use of prices actually paid for comparable assets**
- **Variety of market based approaches such as comparable companies, comparable transactions or a premium price-earnings-multiple approach allows comparison**

Disadvantages:

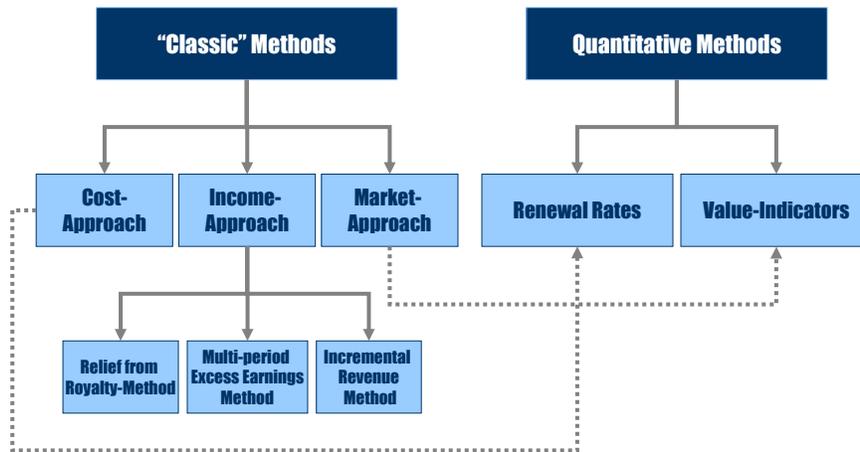
- **Given the uniqueness of patents third party arm's length transactions involving similar patents are infrequent**
- **Transactions involving the shares of companies owning patents are more frequent but allocating value between the business and the patent is difficult**

Conclusion:

- **If information on recent transactions involving patents exists this is an extremely important indicator of value**
- **However, in practice sufficient information is rarely disclosed and this methodology is used as a cross check on other more theoretical methodologies**

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Patent- Valuation Methods Overview



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Value-Indicators Are Established In Asset Valuation e.g. Of Real Estates



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Value-Indicators for Patents Example



1. Backward Citations
 2. Forward Citations
 3. Claims
 4. Patent-Family
 5. Litigations
- others ...

Backward Citations and technical details

Description For a Patent-Application it is necessary to cite all other patents and scientific publication.

- Determinates**
- a. Age
 - b. Type (Own- / Others)
 - c. Citing Person (Applicant / Patent-Office)
 - d. Region

Availability From Date of Grant

Please Note: One separate indicator does not reflect a significant correlation on patent-values.

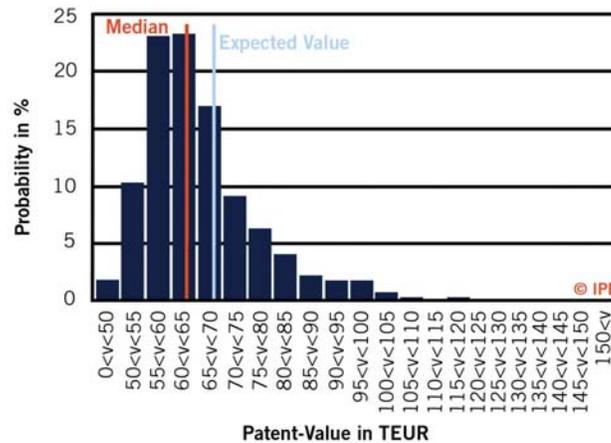
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Patent-Valuation Market-Approach with Value-Indicators



Patent-Value-Distribution



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Patent-Valuation Market-Approach with Value-Indicators



Advantages:

- **Objective fair market value due to realized market transactions**
- **Consistency and efficient due to objective and automated data-selection from public data-bases**
- **Patent-holder is not involved in the process**
- **Efficient for large portfolios including strategic patents**

Disadvantages:

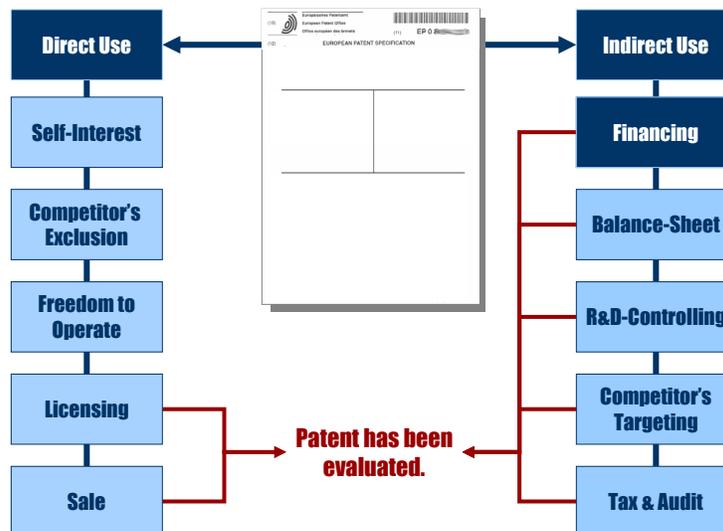
- **Only the market-price of the patent itself is valued, not the potential income that might be generated**
- **Potential of young patents and patent-applications is underestimated**
- **Statistically uncertainty for a single-patent-valuation**

Conclusion:

- **Significant correlation between construct of indicators and patent-values is empirical proven**
- **If an objective and consistent valuation without involving the patent-holder for a competitive price is needed this is an appropriate valuation system**

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Value from Patents Using Patents as Assets



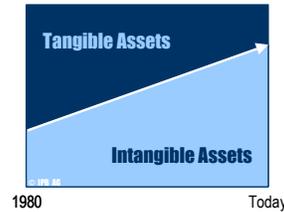
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IP-based Financing Using Patents As Collaterals Or For Internal Ratings



For most banks companies are trustworthy up to the value of their material assets (classical assets).

This applies especially for innovative small and medium-sized-enterprises (SME) which in most cases are short of material assets and equity. There are rare options in credit financing.



Basel II will even increase this situation. Due to the lack of private-equity financing-structures - especially in Continental-Europe, credit-financing is the core financing-source for this so called type of enterprises which might lead to serious financial shortage.

IP should have to find its systematic way into internal rating-systems and should be a fixed component in any financing process.

Of course IP-assets are much more than only patents. But patents due to their high fungibility, a legally fixed process of granting (such as in Europe, the US and Germany) and their legal enforceability are very appropriate to be used as collaterals in the financing process.

Crucial in these circumstances is a valuation-process for this asset-class which is accepted by banks or any other investor. It has to fulfil a maximum of objectivity, for a competitive price and can be repeated at any time.

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Patent- Valuation Methods for IP-based Financing Depending on the investors earn-risk-ratios



Granted Patent	Income-Approach	Market-Approach	Market-Approach
			© IPB AG
Patent Application	Income-Approach		---
	Equity		Loans

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Thank You for Your attention.

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