

WIPO/IP/BJ/96/10
ORIGINAL: English
DATE: November 1996



CHINESE PATENT OFFICE



WORLD INTELLECTUAL
PROPERTY ORGANIZATION

**WIPO NATIONAL SEMINAR ON THE VALUATION
OF INDUSTRIAL PROPERTY ASSETS**

organized by
the World Intellectual Property Organization (WIPO)

in cooperation with
the Chinese Patent Office (CPO)

Beijing, November 26 and 27, 1996

**THEME III: METHODOLOGIES FOR DETERMINING THE VALUE OF INDUSTRIAL
PROPERTY ASSETS - VIEWPOINT OF A PROFESSIONAL CONSULTANT ENGAGED
IN VALUATING INDUSTRIAL PROPERTY ASSETS**

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**The Valuation of
Intangible Assets**

Structure of Presentation

- Description of intangible assets
- Background to the valuation debate
- Importance of valuing intangible assets
- How intangible assets are valued

Description of Intangible Assets

- Intangible assets possess the following attributes:
 - non-physical in nature;
 - capable of producing future economic benefits;
 - protected legally or through a *de facto* right; and
 - for valuation purposes, the asset must also be readily identifiable and capable of being separated from the other assets employed in the business
- The most common intangible assets encountered are:
 - Brands - consumer goods brands, trademarks, corporate names
 - Publishing rights - magazines, books, mastheads, film and music rights
 - Intellectual property - patents, copyrights, technology, know-how
 - Licences - TV and radio, airline slots, franchises, distribution rights

Debate Over the Valuation of Intangible Assets

- Concerns are expressed over whether intangible assets can sensibly be valued
 - Factors highlighted include
 - the *subjectivity* of the valuation process;
 - the *separability* of intangible assets from the underlying business; and
 - the *consistency* of valuation methods applied
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Debate Over the Valuation of Intangible Assets

- In 1992 Arthur Andersen completed a major study which concluded
 - many intangible assets are identifiable, separable and capable of being valued
 - there was considerable consensus over valuation methodologies
 - valuation of intangible assets may be subjective, but no more than the valuation of unquoted companies, pension funds, or emerging markets

The Importance of Intangible Assets Valuation

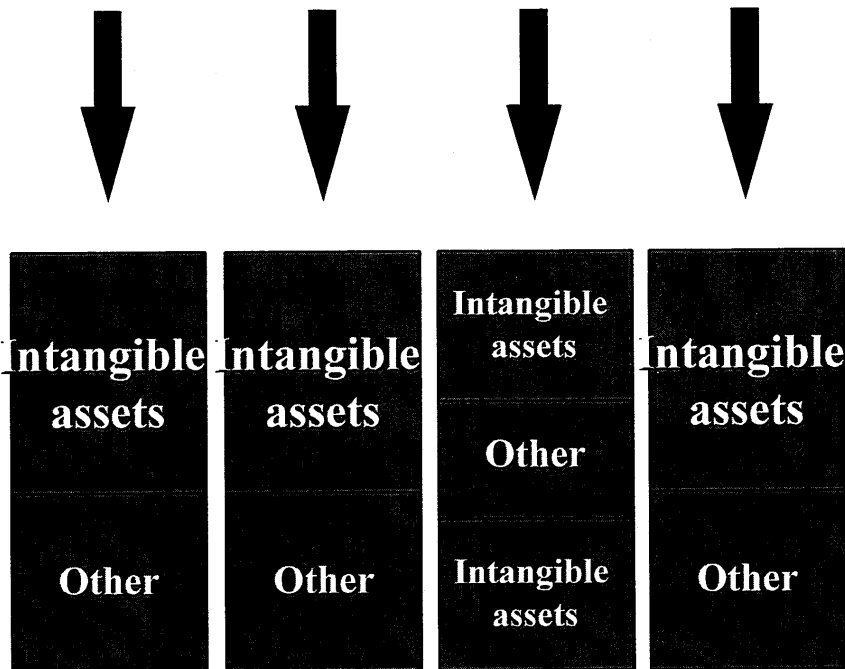
- The ability to value intangible assets is of increasing importance to the business and financial community
- Intangible asset valuations are frequently performed in the areas of
 - licensing arrangements
 - mergers and acquisitions
 - fund raising
 - taxation, including transfer pricing and purchase price allocation
 - financial reporting
 - litigation

Methodologies for Valuing Intangible Assets

- The valuer must choose from existing methodologies according to
 - conceptual superiority of the methodology
 - availability of information
- The main approaches are
 - cost
 - market value
 - economic approaches
 - net present value of cash flows deriving from the intangible assets
 - brand contribution
 - royalty method
 - asset approach

Measuring the Value of Intangible Assets - Assessing the Components

Value = quantity x [price - cost] @ capitalisation
factor



The key is determining the incremental value or cost contributed by the intangible assets. The proportion will differ depending on the intangible assets under consideration

Cost-Based Approach

- May be used to assess the replacement cost of the intangible assets or the costs of creating an equivalent asset (e.g. pharmaceutical compounds, brands, software)
- Requires accumulation of costs invested in the intangible assets (e.g. R&D, marketing support)
- Costs are adjusted for
 - inflation, using a suitable cost index
 - the required rate of return on the investment

Example of Cost-Based Approach

	Actual 1991	Actual 1992	Actual 1993	Actual 1994	Actual 1995	Total expenditure to 1995
	£'000	£'000	£'000	£'000	£'000	£'000
Total estimated gross expenditure	5,355	5,299	6,306	6,387	6,394	29,741
Tax rate	33%	33%	33%	33%	33%	
Less: tax benefit	(1,767)	(1,749)	(2,081)	(2,108)	(2,110)	(9,815)
Total relevant value	3,588	3,550	4,225	4,279	4,284	19,926
Inflation index (based on RPI)	20.6%	12.8%	7.5%	3.0%	-	
Relevant value adjusted for inflation	3,327	4,005	4,542	4,408	4,284	21,565
Rate of return p.a.	10%	10%	10%	10%	10%	
Risk return factor (compound)	1.46	1.33	1.21	1.10	1.00	
Risk adjusted relevant cost	6,335	5,330	5,496	4,848	4,284	26,294

Limitations of Cost-Based Approach

- No correlation between expenditure and subsequent value
(Biotech and pharmaceutical R&D, Sinclair C5, Betamax video system)
- Lack of relevant cost information on the intangible assets and indices to adjust historic to current costs
- Difficulty in separating expenditure that enhances value (R&D, marketing) and expenditure that maintains value (marketing!)

Market-Based Approach

- The intangible assets are valued by reference to recent market transactions for comparable assets
 - Provides credibility and objectivity
 - Terms of most intangible assets transactions are not disclosed. Values may have to be estimated from the sale of companies owning substantial intangible assets
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Economic-Based Approaches

- Two components
 - identification, separation and quantification of cash flows (earnings) attributable to the intangible assets
 - capitalisation of those cash flows (earnings) attributable to the intangible assets

<p><i>Cash flow/earnings generated by intangible assets</i></p> <div style="background-color: black; color: white; padding: 10px; width: 150px; margin: 0 auto;"> <ul style="list-style-type: none"> Net cash flow/earnings Brand/intangible assets contribution Royalty </div>	X	<p><i>Capitalisation factor</i></p> <div style="background-color: black; color: white; padding: 10px; width: 150px; margin: 0 auto;"> <ul style="list-style-type: none"> Earnings/cash flow multiple DCF discount rate </div>	=	<p><i>Value</i></p> <div style="background-color: black; color: white; padding: 10px; width: 150px; margin: 0 auto;"> <ul style="list-style-type: none"> Intangible assets value </div>
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- Various methodologies exist: despite apparent differences, all methodologies seek to quantify these parameters

Discounted Cash-Flow Approach Is Preferred

- Discounted cash flow (“DCF”) requires
 - projection of expected future cash flows
 - estimates of risk-adjusted rate of return (discount rate) to express future cash flows in present day terms
- Approach is generally preferred to the price-earnings multiple approach as it is conceptually superior, focusing on:
 - the future, as reflected in financial projections
 - the risks associated with the intangible assets and its related cash flows
 - the useful economic life of the intangible assets

Limited market data exist on intangible asset transactions

The Brand Contribution Methodology

- The brand contribution may be separated from the profit contribution generated by other elements of the business in a number of ways:
 - by identifying a normal or “utility” (i.e. unbranded product) cost charged by manufacturers and distributors of unbranded products
 - by deducting an appropriate return on capital employed in respect of the product, thus eliminating the value added by other assets (eg physical distribution systems, fixed assets)
 - by comparing the profitability, or rate of return, of the business with the brand to the profitability of a comparable unbranded business (the “premium profits” method)
 - by identifying the premium price commanded by the brand over and above the retail price obtained for a comparable unbranded or “generic” equivalent (the “retail premium” method)

Brand Contribution - Example of Utility Cost Method

As an example, brand contribution under the utility cost method is calculated as illustrated below:

	£	
Turnover generated by the product/service	x	
Less utility cost of manufacture (i)	(x)	
Contribution	x	(i) Cost of subcontracting the manufacture (and distribution) of the unbranded product to a third party, or the full cost of internal manufacture including an industry average profit mark up
Marketing costs (ii)	(x)	
Other overheads (iii)	(x)	
Brand contribution before tax	x	(ii) Sufficient marketing support to maintain the brand
Taxation	(x)	
Brand contribution after tax	x	(iii) Fair allocation of central overheads (before interest)

Royalty Method

- Value intangible assets by capitalising estimated annual post-tax royalty payable under a licensing arrangement
- Valuation parameters may be estimated using details of arm's length licensing arrangements for *comparable* intangible assets
- "Reasonable royalty" approach often used in the estimation of damages arising from patent infringement
- There are many different sources of royalty data

Example of Royalty Calculation Method

	19X0	19X1	19X2	19X3	19X4	19X5	Residual value
Turnover/qualifying revenue	100,000	15,000	32,250	52,088	74,901	92,301	
Royalty income @ 5%	5,000	5,750	6,613	7,604	8,745	9,620	
Taxation @ 33%	1,650	1,898	2,182	2,509	2,886	3,174	
Royalty income after taxation	3,350	3,853	4,430	5,095	5,859	6,445	64,450
Discount factor @ 10%	1	0.91	0.83	0.75	0.68	0.62	0.62
Net present value of royalty stream	3,350	3,502	3,661	3,828	4,002	4,002	40,018
Net Present Value	62,363						

Asset Approach

- Hybrid methodology
- Difference between the value of a business and the value of its net tangible assets is attributable to intangible assets and goodwill
- Difference is allocated to
 - Intellectual property (e.g. licences, patents, trade marks and copyright)
 - Intangible assets (quality of workforce, distribution networks)
 - Goodwill

Quantification of Future Cash Flows

- The future cash flows and risk profile attributable to the intangible assets will be determined by an assessment of a number of factors, including:
 - remaining economic life of the intangible assets e.g. patent life
 - market position
 - market and economic trends
 - maturity and life cycle of the intangible assets and the market
 - pricing
 - volume growth
 - marketing support
 - cost of development of competing technology
 - extent of protection (legal or otherwise) from competitors

Purpose of Valuation

Valuation basis	Description	Application
Existing use value	Value to the owner under the existing marketing, operational and financial strategies. This ignores unexecuted plans to develop the patent in new areas.	Licence agreements Merger/ acquisition Financial reporting Litigation
Market value	Amount that would be paid by a willing, but not anxious, buyer to a willing, but not anxious, seller adequately informed and acting in an open market.	Licence agreements Merger/ acquisition Transfer pricing
Liquidation value	Assumes that the intangible assets are not operating as part of a going concern and that the assets will be sold in a forced sale situation.	Security for debt finance

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