Centre for Accounting Governance and Taxation Research

The Challenge of Reporting Intangible Assets at Fair Value

Measuring Fair Value
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Presentation Outline

Common Measurement Events

Definition of Fair Value

Types of Intangibles

Measuring Value

Valuation Techniques

Case Studies

Valuation Issues

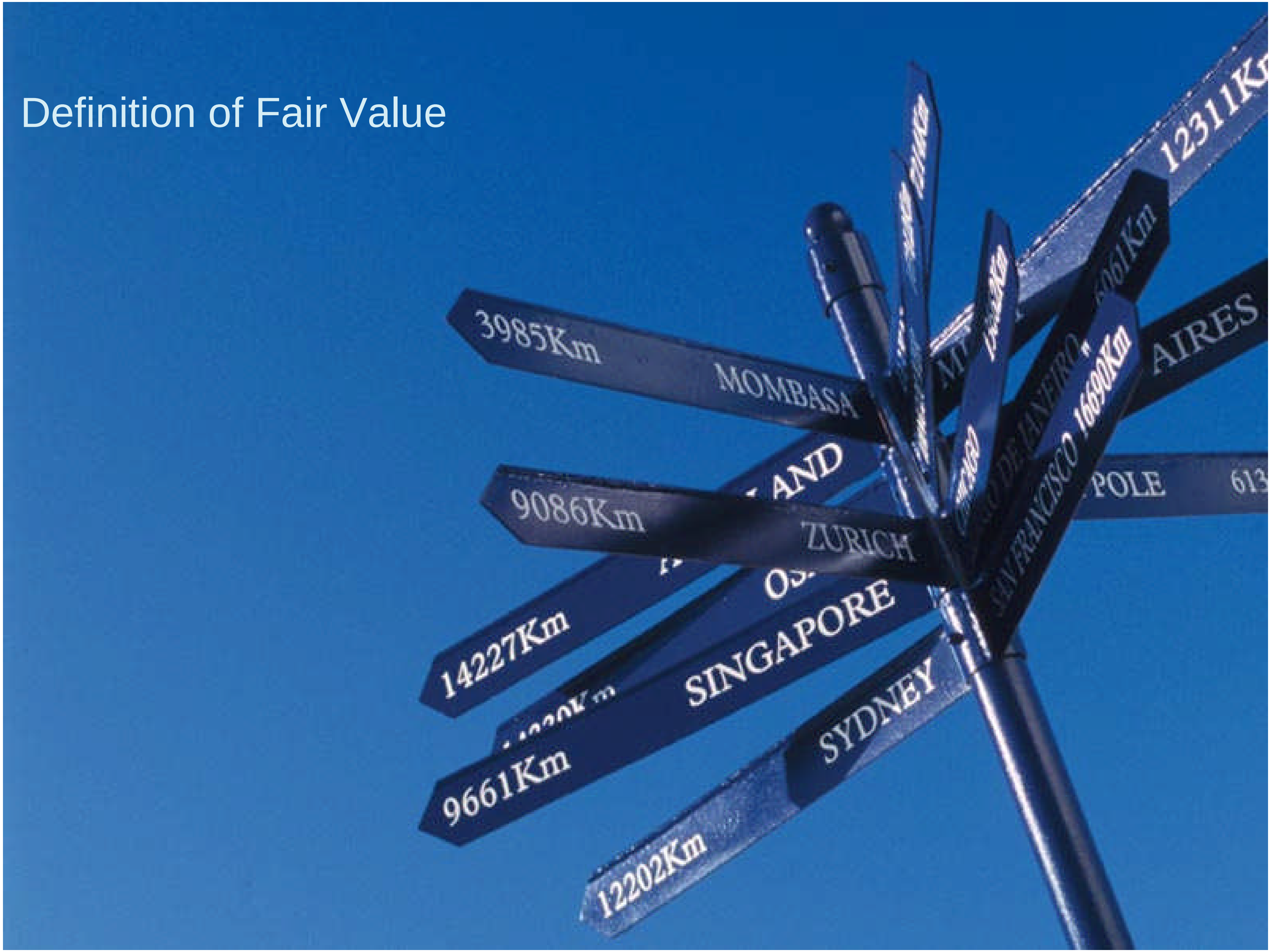
Summary

Common Measurement Events

Common Measurement Events

- Acquisition of an intangible asset
  - e.g. purchase of a brand, customer list etc.
- Purchase price allocation
  - Purchase of shares or a business
  - Allocation of purchase price across assets acquired
- Impairment
  - Carrying value of assets

Definition of Fair Value



Fair value concept

"Fair Value is the amount for which an asset could be exchanged, or a liability settled between knowledgeable, willing parties in an arm's length transaction"

Source: IFRS 3 Appendix A

Fair Value

- Hypothetical
- Assumes an active market
- Excludes non-market specific factors

Types of Intangible Assets

Types of Intangible Assets

Contract-based
- Licensing, royalty agreements
- Service or supply contracts
- Construction permits
- Employe
- U

Customer-related
- Customer lists
- Customer contracts & related relationships
- Non-contractual relationships

Artistic related
- Books, magazines etc.
- Musical works (compositions, song lyrics
- Video and audiovisual material

List is not exhaustive!

Source: IFRS 3, Illustrative Examples

Technol
- Technology (patented, unpatented)
- Trade secrets
- Databases
- Computer software

- Books, magazines etc.
- Musical works (compositions, song lyrics etc.)
- Video and audiovisual material

Measuring Value

Measuring Value

- Economic value is a function of future cash flow
- Intangibles are no different to other assets
  - Factors that drive intangible asset value no different to value drivers for other assets
  - Value dependent on cash from using or selling the asset

Measuring Value

- Valuing intangibles in practice is **challenging**
- Intangible assets often self generated
  - No purchase price
- Record of capital invested often doesn’t exist
  - No ready indicator of cost
- Cash flow and value will be bundled
  - Intangible assets may not generate cash flow in their own right
  - Value arises from use with other assets

Valuation Techniques

Valuation Techniques

- Three broad approaches:
  - Market or transactions approach
  - Earnings approach
  - Cost approach
- There are subsets of each approach
- Nature and form of asset will determine valuation approach

Market/Transactions Approach

- Benchmark value to observable market parameters/prices
- Requires a “market”
- Difficult to apply in New Zealand
  - Limited transactions (reliable data limited)
  - Translating offshore data to New Zealand

Earnings Approach

- Relief from royalty
  - Benefit of avoided cost
- Premium profits
  - Incremental profit attributable to the intangible
- Multi-period attributable cash flows
  - Cash flows attributable to the intangible
- These approaches are used in practice

Cost

- Actual costs (internal costs or acquisition costs)
- Costs to replicate the asset
  - Efficient, modern equivalent costs
- Often difficult to apply in practice
  - Lack of historical cost data
  - Cost of replicating uncertain
- Cost may not reflect intrinsic value

Earnings Approach Case Studies

- Two case studies
  - Brand (relief from royalty)
  - Customer relationships (multi-period cash flows)
- Both approaches require:
  - Attribution of earnings or cash flow
  - Market-based valuation parameters

Intangible Asset Valuations

Case Study 1

Brand Valuation

Case Study 1 : Brand Valuation

- Relief from royalty
  - Avoided cost of licensing from a third party
- Critical inputs
  - Royalty rate
  - Revenue forecasts
  - Brand costs
  - Discount rate

Case Study 1 : Brand Valuation

$000	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue	2,500	2,563	2,627	2,692	2,760
Royalty rate	*4.0%*	*4.0%*	*4.0%*	*4.0%*	*4.0%*
Royalty income	100	103	105	108	110
Brand expenses	(25)	(26)	(26)	(27)	(28)
	75	77	79	81	83
Income Tax	(23)	(23)	(24)	(24)	(25)
After Tax Royalty Cash Flow	**53**	**54**	**55**	**57**	**58**
Present Value Factor	0.9513	0.8609	0.7791	0.7051	0.6381
Present Value of Cash Flow	50	46	43	40	37
Total Present Value	216				
Terminal Value	462				
Total Value	**678**				

- Cross checks: affordability of royalty cost? Rules of thumb?

Intangible Asset Valuations

Case Study 2

Customer Relationships

Case Study 2 : Customer Relationships

- Cash flow valuation
- Cash flow attributable to individual customers/groups of customers (at the date of valuation)
- Critical inputs
  - Revenue and margin forecasts
  - Rates of churn/customer life
  - Contributory asset charges
  - Discount rate

Case Study 2 : Customer Relationships

$000	Year 1	Year 2	Year 3	Year 4	Year 5
Forecast Revenue	73,200	75,700	76,500	0	0
Attrition rate	*8.8%*	*19.1%*	*31.3%*		
Customer Attrition	(6,434)	(14,478)	(23,927)	0	0
Revenue After Attrition	66,766	61,222	52,573	0	0
EBITDA Margin %	*20.0%*	*20.0%*	*20.0%*	*0.0%*	*0.0%*
EBITDA	13,353	12,244	10,515	0	0
Income Tax	(4,006)	(3,673)	(3,154)	0	0
After Tax Cash Flow	9,347	8,571	7,360	0	0
Contributory Asset Charges					
Fixed Assets	(6,088)	(5,583)	(4,794)	0	0
Working Capital	(288)	(264)	(227)	0	0
Workforce	(267)	(245)	(210)	0	0
	(6,643)	(6,091)	(5,231)	0	0
Total Available Cash Flow	**2,704**	**2,480**	**2,129**	**0**	**0**
Present Value Factor	0.9513	0.8609	0.7791	0.7051	0.6381
Present Value of Cash Flow	2,572	2,135	1,659	0	0
Total Present Value	**6,366**				

Case Study 2 : Customer Relationships

- Contributory asset charges
- Attribution of cash flows to other assets
  - Tangible assets
  - Intangible assets
  - Work-force in place

Case Study 2 : Customer Relationships

HISTORICAL REVENUE	Year -2	Year -1
Revenue	73,792	74,365

FIXED ASSETS	Year -2	Year -1	Average
Value of Fixed Assets	46,064		
Remaining Life	12.6		
Required Return	10.5%		
Fixed Asset Charge	6,755	6,755	
Charge as a % of Revenue	9.2%	9.1%	9.1%

WORKING CAPITAL	Year -2	Year -1	Average
Net Non-Cash Working Capital	3,033	3,056	
Working Capital % of Revenue	4.1%	4.1%	4.1%
Return on Working Capital			10.5%
Charge as a % of Revenue			0.4%

Case Study 2 : Customer Relationships

HISTORICAL REVENUE	Year -2	Year -1	
Revenue	73,792	74,365	
WORKFORCE	**Year -2**	**Year -1**	**Average**
Total Staff Costs	32,629	33,104	
Annual Staff Training Costs	(228)	(378)	
Staff Costs Less Training	32,402	32,726	
Hiring Cost as % of Salary	8.3%	8.3%	
Hiring Cost	2,689	2,716	
Efficiency Cost	1,620	1,636	
Workforce establishment cost	**4,082**	**3,975**	
Post-Tax Cost	**2,857**	**2,782**	
Post Tax Cost % of Revenue	3.9%	3.7%	3.8%
Return on Workforce			10.5%
Charge as a % of Revenue			0.4%

Valuation Issues

Valuation Issues

- Avoid double counting cash flows
- Asset lives
- Availability of market data
- Reliability of data
- Discount rates
- Reconciliation and cross checks


Summary

Summary

- Intangible asset valuations are very challenging
- Techniques not difficult conceptually
- Challenges arise because of:
  - Lack of market data – intangibles not often traded in NZ
  - Value often driven by a combination of assets
    - Unbundle and ascribe value to individual assets