

# Federated Press

13<sup>TH</sup> M&A VALUATION TECHNIQUES FOR CFOs  
DECEMBER 7 AND 8, 2011 – TORONTO

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## VALUATION APPROACHES AND METHODOLOGIES

**Richard M. Wise, FCA, FCBV, FASA, MCBA, CVA**  
Partner  
**MNP LLP**

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The Royal Bank of Canada Building  
1 Place Ville Marie, Suite 3430  
Montreal, Quebec H3B 3N6  
[www.mnp.ca](http://www.mnp.ca)

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# COMPOSITION OF A BUSINESS ENTERPRISE



**Working Capital**



**Other Tangible Assets**

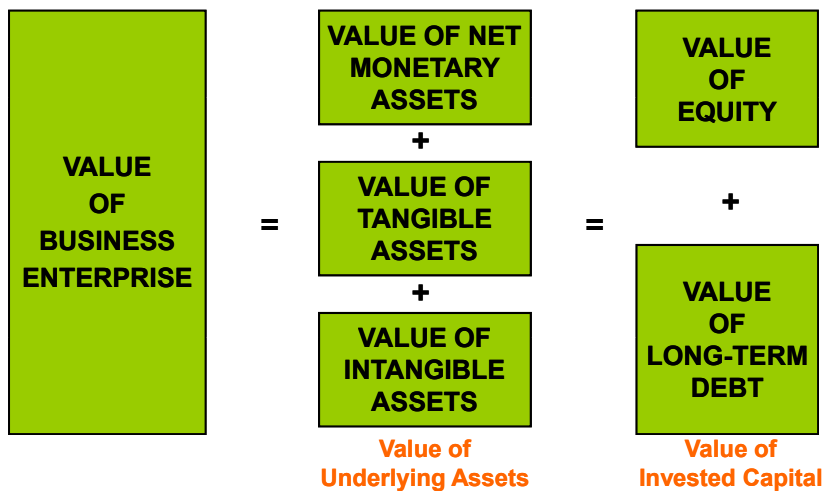


**Intellectual Property**



**Other Intangible Assets**

# THE BUSINESS ENTERPRISE EQUATION



# FAIR MARKET VALUE

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- ❑ “The highest price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arm’s length in an open and unrestricted market, when both have reasonable knowledge of the relevant facts”
- ❑ Value in Exchange

# STANDARDS OF VALUE

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## Value-to-Owner

“ ... what would [the owner], as a prudent man at that moment pay for the property rather than be ejected from it?”

*Diggon-Hibben v. King (1949) SCR 712*

# VALUATION APPROACHES

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- Income-Based
- Market-Based
- Asset-Based

# INCOME APPROACH — METHODS

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- Earnings Method (Capitalization of Earnings)
- Cash Flow Method (Capitalization of Cash Flow)
- Discounted Future Earnings Method
- Discounted Cash Flow Method
- Gross Revenues Method

## VALUATION/PRICING CONSIDERATIONS

- ❑ Valuation “formula” components
  - Numerator (earnings, cash flow)
  - Denominator (cap rate, discount rate, i.e., rate of return)



## INCOME APPROACH

### Earnings Method:

$$\frac{\text{Representative Earnings or Cash Flow}}{\text{Rate of Return}}$$

OR

### DCF Method:

Projected Stream of Future Benefits x Discount Rate

## DISCOUNTING FUTURE BENEFITS TO PRESENT VALUE — FAIR VALUE MEASUREMENT

### PRESENT VALUE METHODOLOGY

- (a) estimate of future cash flows during projection period
- (b) expectations regarding possible variations in amount or timing of those cash flows
- (c) time-value of money, represented by risk-free rate of interest
- (d) premium for bearing uncertainty (risk): additional rate of return over risk-free rate
- (e) Premium regarding other factors, including illiquidity and market imperfections

## RATE OF RETURN — WEIGHTED AVERAGE COST OF CAPITAL

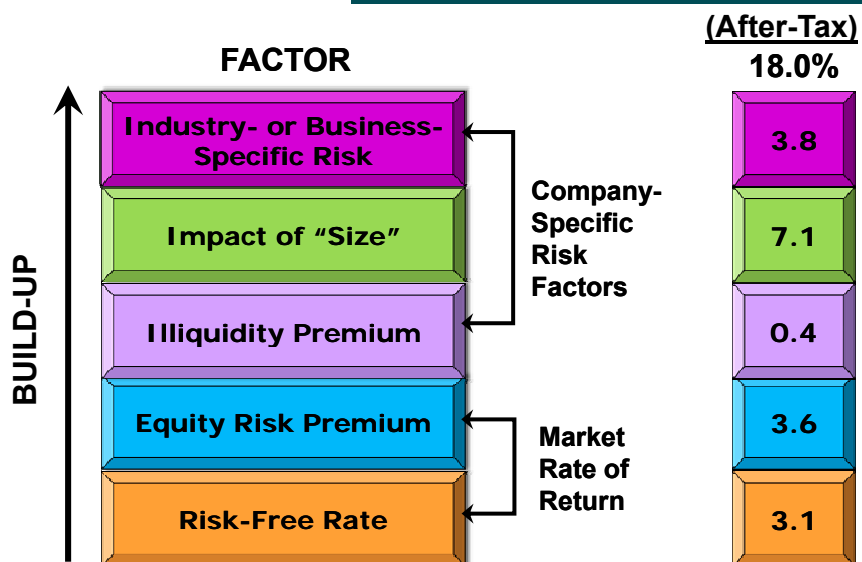
- Determine appropriate capital structure
  - Consider comparable companies for benchmark
- Calculate cost-of-equity component (*to arrive at equity rate of return*)
  - Build-Up Method, or
  - Capital Asset Pricing Model
- Calculate cost-of-debt component (*to arrive at interest rate*)

## CAPITALIZATION RATE OR DISCOUNT RATE INCLUDES FOLLOWING COMPONENTS

- a. Risk-free rate
- b. Equity risk
- c. Illiquidity
- d. Size
- e. Company-specific risk

## DEVELOPING RATE OF RETURN (DISCOUNT RATE OR CAPITALIZATION RATE)

### "BUILD-UP METHOD" — EXAMPLE



## INCOME APPROACH — DCF ANALYSIS SELLER'S PROJECTIONS

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- ❑ **Assumptions** go to heart of projections
- ❑ Often optimistic; can be unrealistic
- ❑ Assumptions must be scrutinized and challenged
- ❑ Must perform sensitivity analyses

## INCOME APPROACH — DCF ANALYSIS SELLER'S PROJECTIONS

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(CONT'D)

### Are assumptions realistic and consistent with:

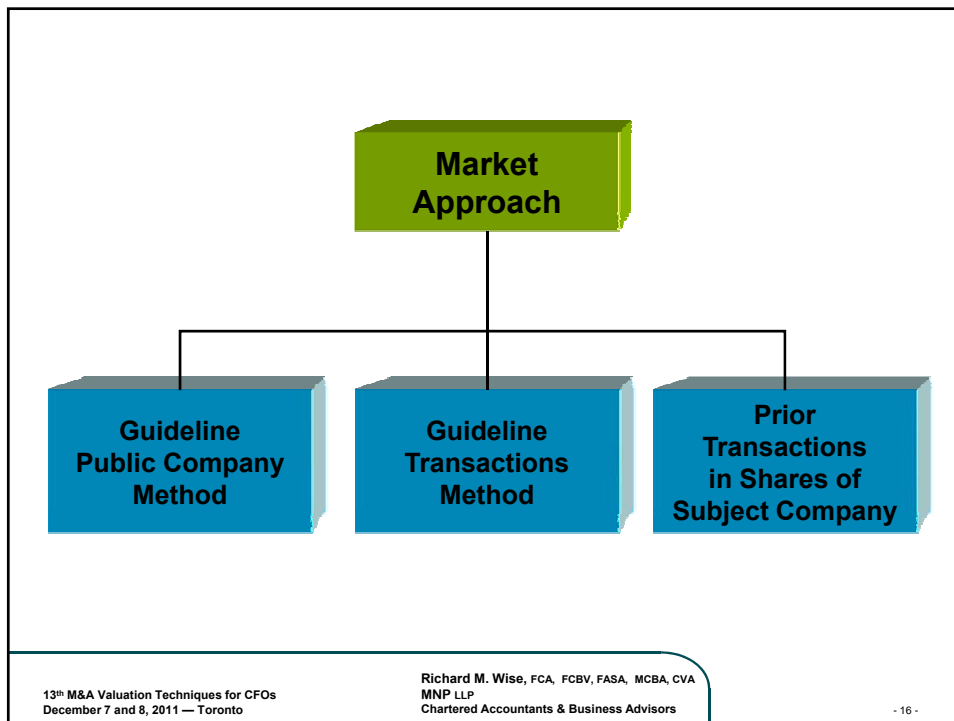
- ❑ General economic environment and entity's economic circumstances?
- ❑ Existing market information?
- ❑ Entity's plans, including management's expectations of outcome of specific objectives and strategies?



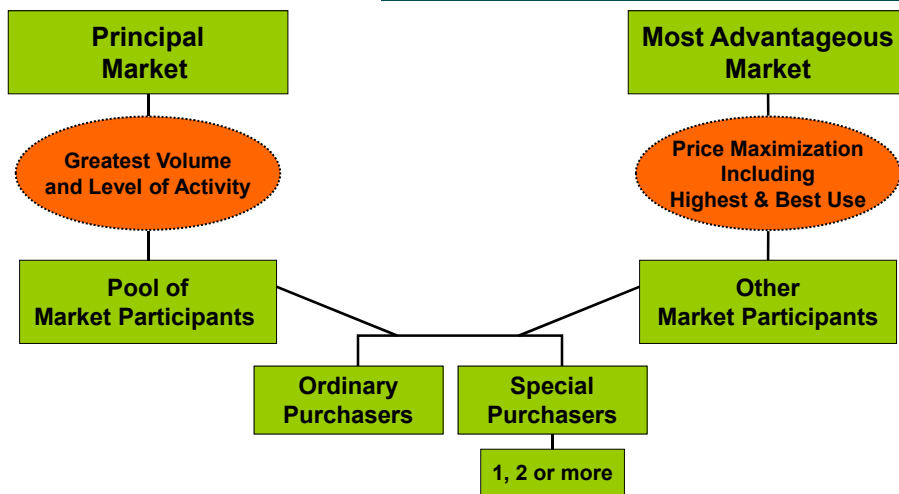
# VALUATION APPROACHES

## ☐ Market-Based

- Guideline Public Company Method
- Guideline Transactions Method
- Transactions in the subject shares



## IN WHICH MARKET WILL TRANSACTION OCCUR?



## EXAMPLES OF MARKETS

### **Example 1:**

Parking lot operation on ABC land

vs

Apartment building/condo development  
on ABC land

### **Example 2:**

Summer camp on XYZ land

vs

Condos or resort hotel on XYZ land

# EXAMPLES OF MARKETS

(CONT'D)

## THE MARKET FOR

Control of publicly-traded companies  
and  
Control of closely-held companies

vs

## THE MARKET FOR

Minority interests in publicly-traded companies  
and  
Minority interests in closely-held companies

# MARKETS, PRICES AND INFORMATION AVAILABLE

Public Companies	Private Companies
<ul style="list-style-type: none"><li>Organized market</li><li>Regulated market</li><li>Liquid market</li><li>Trading prices/ patterns (active vs thin)</li></ul>	<ul style="list-style-type: none"><li>Not organized*</li><li>Not regulated</li><li>Illiquid*</li><li>No frequent share transactions</li></ul>

\* May be affected by Shareholders' Agreements.

## MARKETS, PRICES AND INFORMATION AVAILABLE

(CONT'D)

### Public Companies

- Takeover bids influenced by stock market price
- Company's stock price may influence offer/bid
- Required information disclosure with regulators

### Private Companies

- No reference price
- No quoted market/liquid price
- Limited information/disclosure

## MARKETS, PRICES AND INFORMATION AVAILABLE

(CONT'D)

### Public Companies

- Disclosure of information on takeover
- Investment analysts' reports
- Competing bids may surface due to publicity

### Private Companies

- Takeover information not publicly available
- No published reports
- No competing bids

# MARKETS, PRICES AND INFORMATION AVAILABLE

(CONT'D)

## Public Companies

- Shareholders not active; have little information re business plans, strategy
- Stock market investors do not formulate policy
- In takeover bid, purchaser relies on filings, analyses, etc. (after, will do pre-closing due-diligence)

## Private Companies

- Shareholders generally active; have much information regarding plans and policy
- Investors consider potential strategic benefits
- In takeover, purchaser has much information regarding target

## MARKET APPROACH

IF RELYING ON (“GUIDELINE”) TRANSACTIONAL DATA,  
YOU MUST KNOW ABOUT

- Seller’s motives
- Buyer’s motives
- Special/strategic buyers vs financial/ordinary buyers
- Redundant assets, if any, included in price
- Tax structuring
- Other “consideration” included in/excluded from transaction “price”:
  - Consulting agreement with seller
  - Non-compete covenant with vendor
  - Earn-out provision

# VALUATION APPROACHES

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- Asset-Based**
  - Liquidation**
  - Going-concern**

# ASSET-BASED APPROACH

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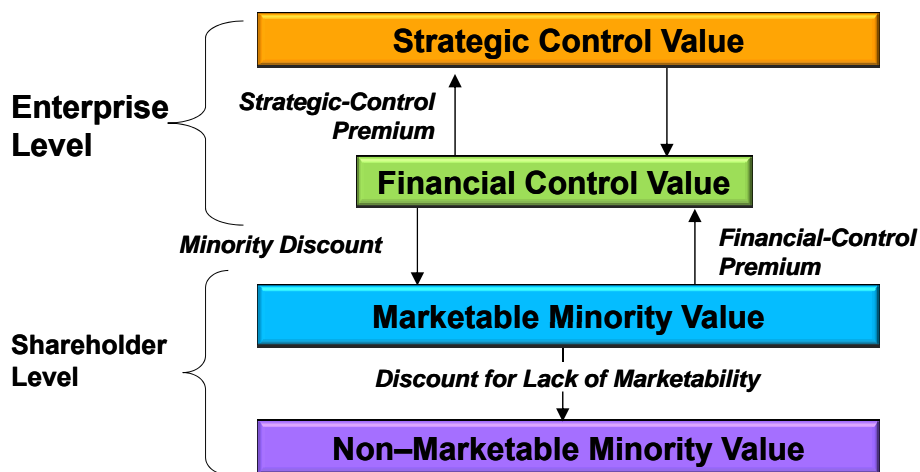
The Asset-Based Approach is generally adopted where either:

- liquidation is contemplated because the business is not viable as an on-going operation,
- the nature of the business is such that asset values constitute the prime determinant of corporate worth (i.e., vacant land, a portfolio of real estate or marketable securities, etc.), or
- there are no indicated earnings/cash flows to be capitalized.

# ASSET APPROACH

- ❑ Premise of value
  - Going concern
  - Liquidation
    - ❑ Orderly liquidation
    - ❑ Forced liquidation
- ❑ Adjusted Balance Sheet Method (Adjusted Shareholders' Equity Method)
- ❑ Minority shareholder issues
  - Inability to access company's assets (until liquidation or distribution by controlling shareholder(s))

# "FAIR MARKET VALUE" RELATIVE LEVELS OF VALUE



## VALUATION ISSUES SHAREHOLDER LEVEL — EXAMPLES






<u>Shareholder A</u>	<u>Shareholder B</u>	<u>Shareholder C</u>	<u>Total</u>
66%	34%	-	100%
67%	33%	-	100%
51%	33%	16%	100%
49%	49%	2%	100%
49%	34%	17%	100%
49%	33%	18%	100%
33 1/3%	33 1/3%	33 1/3%	100%
50%	50%	-	100%

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## TEN MOST VALUABLE GLOBAL BRANDS — 2010 (\$ U.S. Billions — SOURCE: Interbrand)

Rank	Brand	Estimated Value	Book Value of Intangible Assets (Balance Sheet)	Market Capitalization	Book Value of Shareholders' Equity (Balance Sheet)
10		26.9	7.8	97.7	40.4
9		28.7	5.1	75.3	37.5
8		29.5	4.0	39.2	18.8
7		32.0	0.0	115.3	41.7
6		43.6	0.0	79.0	14.0






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## TEN MOST VALUABLE GLOBAL BRANDS — 2010 (\$ U.S. Billions — SOURCE: Interbrand)

Rank	Brand	Estimated Value	Book Value of Intangible Assets (Balance Sheet)	Market Capitalization	Book Value of Shareholders' Equity (Balance Sheet)
5		42.8	11.9	198.5	117.3
4		43.6	0.8	196.3	36.0
3		60.9	1.2	239.7	46.2
2		64.7	2.5	184.0	22.6
1		70.4	8.6	147.0	24.8

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## VALUATION METHODOLOGY FOR INTELLECTUAL PROPERTY

- Income Approach:** Present value of future benefits
- Market Approach:** “Guideline” transactions
- Avoided Cost Approach:** Relief-from-royalty method

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## VALUATION CONSIDERATIONS FOR IP

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- Historical track record.
- Scientifically proven?
- Commercial viability proven?
- Speculation vs. worth?
- Growth potential.
- Risk of failure.
- Product-life cycle.
- Structure of deal.
- Financing requirements.

## USEFUL LIFE

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- Defined as “the period over which an asset is expected to contribute directly or indirectly to future cash flows of an enterprise”
- Relevant factors:
  - Expected use of asset by enterprise
  - Expected useful life of another asset to which intangible is linked
  - Legal, regulatory or contractual provisions
  - Effect of obsolescence, demand, competition
  - Level of maintenance expenditures required
  - Industry practice

## SELECTED FACTORS IN DETERMINING VALUE OF PATENT

- Degree of patent or trademark protection
- Exclusive vs. non-exclusive rights and development
- Strategic attraction to notional purchaser
- Ability to increase royalty rates
- Market strength (patent or trademark)
- Industry and competition
- Perspective re value-to-owner or user
- Special purchaser considerations (value to competitor)

## ABC CO.

### VALUATION OF ACQUIRED GOODWILL — PURCHASE PRICE ALLOCATION

	<u>FMV</u> (\$000's)
ABC Co.'s acquisition purchase price of target	10,000
Indicated FMV of acquired assets:	
Cash and marketable securities	500
Accounts receivable	1,500
Inventory	750
Total current assets	(A) <u>2,750</u>
Property, plant and equipment	1,500
Land	1,000
Total fixed assets	(B) <u>2,500</u>

## ABC CO.

### VALUATION OF ACQUIRED GOODWILL — PURCHASE PRICE ALLOCATION

		<u>FMV</u> (\$000's)
Identifiable intangible assets:		
Proprietary software		2,700
Trademarks		750
Patents		400
Know how		400
Total identifiable intangible assets	(C)	<u>4,250</u>
Total FMV of all identifiable assets	(A)+(B)+(C)	<u>9,500</u>
FMV of acquired goodwill	(10,000 - 9,500)	<u>450</u>