BV 201: Principles of Business Valuation

Course Manual

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About This Course

The International Institute of Business Valuers emphasises that these course materials are not authoritative. They are intended to be used as a foundation for lectures and discussions, in conjunction with observations by the course instructors.

The valuation process and approaches presented in this course are:

1. Not the only valuation process and approaches used by competent valuers;
2. Not the only way that individual valuation methods could or should be done; and
3. Not to be taken as a "cookbook" process or approach that may be applied to any valuation situation.

Valuations must be based on full knowledge of the facts and circumstances of the subject company, its industry, and the economic environment. A particular valuation process or approach that is relevant for one company at a particular point in time may not be appropriate for another company or a different point in time.

The terminology and standards in this course are based on the International Valuation Standards ("IVS") published by the International Valuation Standards Council ("IVSC"). The IVSC is an independent organization committed to building the public's trust in the valuation profession by issuing universal standards and seeking their adoption around the world.

The IVS are referenced from the publication, *International Valuation Standards 2017,* International Valuation Standards Council. Copies of the publication can be purchased from the following website: https://www.ivsc.org/news/article/ivsc-launches-new-global-standards-for-valuation-profession. In contexts where the IVS does not specifically address a valuation topic, references to other standards and sources will be made such as the *International Glossary of Business Valuation Terms* (the "International Glossary") from the American Institute of Certified Public Accountants' (AICPA's) *Statement on Standards for Valuation Services No. 1.*

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BV Curricula and Valuation Profession

I. BV Curriculum Overview

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    - B. Valuation principles and standards
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3. BV 203: Case Study
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   A. Valuing Minority Interests

   B. Valuing Early-Stage Companies

   C. The Valuation of Intangible Assets

   D. Advanced International Cost of Capital

   E. Saudi Valuation Market

II. Valuation Practice Worldwide

1. European Practice

   A. Requirements of International Financial Reporting Standards (e.g. IFRS 2, Share-based Payment; IFRS 3, Business Combinations; IFRS 9, Financial Instruments; IFRS 13, Fair Value Measurement; IAS 36, Impairment of Assets; IAS 38, Intangible Assets)

   B. Tax valuations – corporate tax, income tax, capital gains tax, inheritance tax

   C. Mergers and acquisitions

   D. Corporate finance (e.g., initial public offerings)

   E. Corporate recovery (also called “turnaround consulting”)

   F. Litigation and expert witness services – including shareholder disputes, damages, intellectual property disputes, and divorce

   G. Other non-litigious expert services

   H. Statutory purposes (e.g. as required under Companies Act or Stock Exchange requirements in specific circumstances, including fairness opinions for directors’ transactions)

      1) Fairness Opinions are valuations that attest to value in preparation for a stock or debt issue

         a) This area of practice can be highly risky since buyers of the equity or debt may sue the stock valuer if the valuation is overstated.

         b) For your reference, see Appendix VIII for more information on Fairness Opinions.

2. North American Practice

A. Financial Reporting

1) Canada

a) IFRS-related valuation topics also apply to Canada

b) Accounting Standards for Private Enterprises

2) USA - Requirements of IFRS and US GAAP for financial reporting

a) ASC 820, Fair Value Measurements and Disclosures

b) SFAS 157, Fair Value Measurement

c) ASC 805, Business Combinations

d) ASC 350, Intangibles – Goodwill and Other

e) ASC 718, Stock Based Compensation

3) Financial reporting valuation requires expertise in the valuation of intangible assets. Mostly larger firms engage in this market niche since clients are usually publicly owned or large closely held entities.

B. The same non-financial reporting applications of valuations noted in the European practice above also apply to North American practice.

C. Details specific to North American are:

1) Litigation accounts for more than half of the business valuation profession in North America. These are specialised areas of practice since valuers need one or more areas of outside expertise

2) Estate and gifting – services of valuers are required for certain property owned by a deceased taxpayer, which results in the following:

a) Canada – taxes on deemed disposition of property at death

b) U.S. – estate and gift tax

III. Structure of the Valuation Profession

1. International

A. International Valuation Standards Council (IVSC)

1) The IVSC is the standards-setting body that develops valuation standards based on generally accepted valuation principles that promote transparency and consistency in the profession.

2) The IVSC is organised around three Boards:

a) Board of Trustees – Responsible for the governance of the IVSC and appointments to the other Boards

b) Standards Board – Responsible for development and publication of the IVS and supporting technical guidance.

c) Professional Board – Promotes the development of the valuation profession around the world.

3) The IVSC is not a professional association open to individual membership. Its membership is comprised of valuation professional societies ("VPOs"), corporations and other financial institutions located in approximately 50 countries around the world.

B. International Institute of Business Valuers (BV)

1) An international body whose membership consists of professional valuation societies

2) Promotes education, professional ethics and standards as well as communication among its member professional associations

C. Royal Institute of Chartered Surveyors ("RICS")

1) Mainly concerned with property, land, construction and related environmental issues

2) Since 2015, RICS started the accreditation in business valuation and intangible assets

2. United Kingdom

A. Institute of Chartered Accountants in England and Wales (ICAEW), Valuation Special Interest Group, SIG

B. The Society of Share and Business Valuers (SSBV)

3. Europe

A. The business valuation profession is organized by country, often around the existent accounting society or as an independent valuation group.

4. Canada

A. The Canadian government does not license business valuers. Unlike accounting, law, and medicine, anyone can legally offer their services as a business valuer.

B. Most business valuers who practice in the markets discussed above obtain a professional certification from the Canadian Institute of Chartered Business Valuators (CICBV).

1) The CICBV is the only professional business valuation organization in Canada.

2) To become a Chartered Business Valuator (CBV) a candidate must complete six business valuation courses in a program of studies, accumulate 1,500 hours of experience in securities valuation, pass a final entrance exam, and be sponsored by a practicing CBV.

3) There are over 1,400 CBVs in Canada.

5. United States

A. Government-recognised licensing does not exist in the United States for business and intangible asset valuations.

B. Professional societies include:

1) American Society of Appraisers (ASA)

a) Accredited Member designation (AM) – requires successful completion of four principles courses; ethics exam; exam in the uniform standards of professional appraisal practice (USPAP); and two years of full-time business valuation experience.

b) Accredited Senior Appraiser (ASA) – requires completion of the above and five years of full-time professional appraisal practice.

c) The ASA has approximately 5,000 members of which 2,400 are credentialed in business valuation. The rest are credentialed in machinery/technical specialties, real estate, or personal property.

2) American Institute of Certified Public Accountants (AICPA)

a) Accredited in Business Valuation (ABV) designation is open to certified public accountants that pass an 8-hour comprehensive examination.

b) It is estimated that there are 2,900 ABVs in the United States.

3) National Association of Certified Valuation Analysts (NACVA)

a) Certified Valuation Analyst (CVA) designation requires completion of a 5-hour examination in business valuation.

b) There are approximately 4,500 CVAs in the United States.

4) Institute of Business Appraisers (IBA)

a) Certified Business Appraiser (CBA) – CBAs typically work with smaller closely held businesses.

6. Asia

A. Chinese Appraisal Society

1) Includes approximately 30,000 members. The Society encompasses major valuation disciplines including business; machinery and equipment; real estate.

Chapter 1 Valuation Overview

I. Actual Market Transactions versus Notional Market Valuations

1. Value may be determined in the context of either an actual market transaction or a notional market valuation.

2. Actual market transactions are acquisitions and divestitures of business interests that are completed after exposure to the actual market.

   A. The ultimate objective of a value analysis in an actual market transaction is generally the agreement of price.

   B. The parties to a transaction each perform their own research and analysis and then engage in negotiations. Negotiations transform the parties' initial value assessments to the ultimate transaction price.

   C. Value assessments for purposes of actual market transactions are made as of a current date.

Dr. Aswath Damodaran

"Value" and "price" are two words that get used almost interchangeably by bankers, appraisers, and analysts. I think that they are two very different concepts, determined and driven by different sources, and should be differentiated.

The value of an asset is based on its fundamentals: its cash flows, its growth, its risk. It is what you find emphasized in all valuation books, including mine, and valuation classes. We use words like "intrinsic value" to describe it and tools such as discounted cash flow valuation (DCF) to estimate it.

The price of that same asset is based on demand and supply, nothing more, nothing less. It is true that fundamentals play a role in determining both demand and supply, but these are also a function of mood, momentum, and even irrational forces.

3. Notional market valuations are used where value must be determined without exposing the business interest for sale (i.e., value is determined theoretically).

   A. Notional market values may sometimes be used to influence a transaction. However, the transaction is based on the theoretical value as determined, without an arm's-length negotiation process.

   B. This notional market is defined by valuation theory. Fair value (FV) or Fair Market Value (FMV), which is discussed below, defines a notional market that mirrors hypothetical actual market transactions that are based on prudent and rational investor behaviour.

      1) The International Financial Reporting Standard (IFRS) 13, Fair Value Measurement (discussed later), encompasses the notional concept in

the context of market participants – these are defined as buyers and sellers in the principal (or most advantageous market) that are independent of each other, knowledgeable about the asset and both able and willing to enter into a transaction

C. Notional market value determinations can be made as of, either a current date, or some significant historical date.

D. Generally, valuers determine value in the context of a notional market.

II. Numbers and Narrative

1. This section is a summary of the blog "Numbers and Narrative: Modelling, Story Telling and Investing" published by prof. Aswath Damodaran on June 24, 2014.[1]

2. The numbers game

A. Many people imagine valuation to be just a pile of dense financial statements and elaborated Excel spreadsheets. Although knowledge of accounting rules and financial modelling skills is necessary, a valuer does not need to be either an accountant or an Excel guru.

1) Accounting statements are simply the raw material for the valuation, nothing more, nothing less. It is the task of the valuer to analyse, filter, and decide which financial information is relevant for a specific valuation.

2) Excel (or numbers) is a versatile and powerful multi-purpose tool, but like all tools, it can be misused or over used.

B. There are several reasons why analysts emphasize their mastery of the numbers side of the valuation:

1) The illusion of precision

a) Many analysts feel better if they attach numbers to uncertain outcomes. That, by itself, is healthy, but what is unhealthy is the belief that quantifying risk somehow makes it dissipate;

2) The illusion of objectivity

a) Analysts point to numbers as their defence against the bias charge, with the implicit argument that numbers do not lie, when the most effective way to shade the truth is with a selective use of numbers.

[1] http://aswathdamodaran.blogspot.al/search?q=narrative+and+numbers

3) The illusion of control

a) Complex calculations and numbers are often used by analysts to intimidate “non-numbers people” into mute acceptance. The intimidation factor is increased by adding more detail (500-line items) and buzzwords (free cash flow, Greek alphabet letters and a host of acronyms) to their valuation.

C. There are at least three significant dangers, when numbers are used without any narrative (or story line) in constructing valuations:

1) Valuations become plug-and-point exercises.

2) If valuation is built around line items and individual inputs there is the risk that the analyst may be creating a business that can exist only in spreadsheets.

3) Discussions and debates about inputs become shallow exercises in quibbling about the “right” values to use, with no logical tiebreaker.

3. The narrative as valuation

A. If one extreme of the numbers/narrative spectrum is inhabited by those who are slaves to the numbers, at the other extreme are those who not only do not trust numbers, but also do not use them. Instead, they rely entirely on narrative to justify investments and valuations. Their motivations for doing so are simple.

1) Story telling is a powerful attention getter/keeper

a) Human beings respond better to stories than to abstractions or numbers and remember them for longer.

2) Unrestrained creativity

a) “Creative” people have always fought back against any restraints on their creativity, especially those imposed by those that they view as less imaginative (those dealing with numbers) than they are.

3) Creative superiority complex

a) Good narrators can beat “bean counters” with superior storytelling, especially if they can back their stories up with personal experience.

B. Narrative-driven investing is common, especially with younger firms and start-ups. The argument used in favour of this is that cash flow-based valuations may work well on Wall Street and with mature companies, but they are not useful in

analysing companies where promise and potential are what is driving value. Staying with just narrative exposes the valuer to two significant risks:

1) Without constraints, creativity can carry the valuer to the outer realms of reason and into fantasy.

2) When running a business as a manager or monitoring it as an investor, you need measures of whether you are on the right path, no matter where your business is in its life cycle.

4. Narrative plus numbers

A. If numbers without narrative is just modelling and narrative without numbers is storytelling, the solution for a good valuation is the mix of numbers that are bound together by a coherent narrative and storytelling. A five-step process is recommended:

1) Step 1: Develop a narrative for the business that you are valuing or in which you are considering investing.

a) Every business has a story line and the place to start a valuation is with that narrative.

b) While managers and founders get to present their narratives first, and some of them are more persuasive and credible than others, the valuer has to develop its own narratives, sometimes in sync with and sometimes at odds with the management story line.

2) Step 2: Test the narrative against history, experience and common sense

a) The valuer has to put his narrative through multiple tests

- The history test looks at the past to see if there have been companies that have lived the narrative that you are claiming for the subject company and what they share in common.
- The test of experience where you draw on investments based upon similar narratives that you have made in the past.
- The test of common sense draws on first principals in economics and mathematics, to evaluate the valuer's narrative weakest links.

3) Step 3: Convert key parts of the narrative into drivers of value

4) Step 4: Connect the drivers of value to a valuation

a) Several valuation methods (and mathematical models) can be used to convert drivers of value into a value.

5) Step 5: Keep the feedback loop open

a) The biggest enemy a valuer (whether numbers or narrative driven) face is pride, where he/she gets locked into his/her initial points of view and view changing his/her mind as a sign of weakness.

b) Valuer has to be open to the possibility that as events unfold, his/her narrative will change or even shift, sometimes dramatically.

III. Bases of Value

1. The Basis of Value (also referred to as 'standard of value' in North America) depends on the definition of value, which is driven by the purpose of the valuation and the assumptions that the valuer makes in evaluating the business.

   A. This section presents the key Bases of Value used around the world and the assumptions under each.

   B. The valuer must disclose which Basis of Value is being used in the valuation.

   C. The Bases of Value discussed in this chapter are taken from the International Valuation Standard 2017.

2. Market Value – The estimated amount for which an asset or liability should exchange on the valuation date between a willing buyer and a willing seller in an arm's length transaction, after proper marketing and where the parties had each acted knowledgeably, prudently and without compulsion (IVS 2017, IVS 104 Bases of Value, paragraph 30.1). Market Value includes the following characteristics:

   A. It is the most probable price obtained in the market on the valuation date between the buyer and seller.

   B. The words "should exchange" refer to the distinction between the terms value and price. The value of the asset is an estimated amount based on market conditions. The price of an asset is the currency exchanged in an actual transaction that may reflect factors that are not market-based.

   C. Market Value pertains to a single valuation date. Since market conditions are constantly changing, Market Value can be expected to change on different dates.

D. A willing buyer or willing seller is a person who is motivated, but not compelled, to complete a transaction. This is an important distinction. A seller who is compelled to sell may complete a transaction at a value below market (see Liquidation Value below). A buyer who is compelled to buy may overpay for the asset given existing market conditions.

E. The willing buyer and seller are hypothetical concepts (see IVS paragraph 30.2(e)). Market Value does not consider actual buyers and sellers. If an actual buyer or seller is considered then the individual motives and needs of that participant would have to be analysed, which would depart from Market Value. The motives of an actual buyer/seller may be considered in Synergistic Value (see below).

F. The “arm’s length” term means that the buyer and seller do not have a pre-existing relationship that could affect the value exchanged. The buyer and seller are assumed independent of each other, acting independently.

G. The term “after proper marketing” means that the asset must have been exposed for a long enough time for an adequate market of prospective arm’s length buyers to be developed. There is no fixed term of time. The amount of time will vary with the type of asset being sold.

H. The market participants must be acting knowledgeably, prudently, and without compulsion. Market Value assumes that the buyer and seller have a full understanding of market conditions, are informed about the nature and characteristics of the subject asset, and act in a manner that maximises their position.

I. Market Value reflects the highest and best use of the asset (see IVS paragraphs 140.1 through 140.5). Highest and best use reflects the use of the asset that maximises the asset’s potential given what is possible, legally permissible and financially feasible. Highest and best use of the asset does not necessarily refer to its existing use. A willing buyer may use the asset in another context that would extract higher cash flows.

J. The nature and the source of valuation inputs must be consistent with the basis of value, which must be consistent with the valuation purpose. Inputs for each approach to value must be market-based reflecting conditions on the valuation date.

3. Market Rent – The estimated amount for which an interest in real property should be leased on the valuation date between a willing lessor and a willing lessee on appropriate lease terms in an arms’ length transaction, after proper marketing and where the parties had each acted knowledgeably, prudently and without compulsion. (IVS 2017, IVS 104 Bases of Value, paragraph 40.1)

A. Market Rent may be used as a basis of value when valuing a lease or an interest in a lease. The relevant issue in valuation is when Market Rent differs from the existent contract rent. Contract rent is the rent payable under the terms of an actual lease.

B. Market Rent may be an issue in the valuation of a subject company when that company pays a contract rent that is above or below Market Rent at the valuation date. In such cases the contract rent is adjusted to reflect Market Rent so that the market value of net cash flows can be determined [only when valuing a control block]

C. In calculating Market Rent, the valuer must consider the following:

1) In regard to Market Rent subject to a lease, the terms and conditions of that lease are the appropriate lease terms unless those terms and conditions are illegal or contrary to overarching legislation, and:

2) Concerning a Market Rent that is not subject to a lease, the assumed terms and conditions are the terms of a notional lease that would typically be agreed in a market for the type of property on the valuation date between market participants.

4. Equitable Value – The estimated price for the transfer of an asset or liability between identified knowledgeable and willing parties that reflects the respective interests of those parties (IVS 2017, IVS 104 Bases of Value, paragraph 50.1),

A. Equitable Value is not a hypothetical concept. The specific parties are identified and the specific interests of those parties are identified. This is the main difference between Equitable Value and Market Value.

B. The price that results from Equitable Value may differ from Market Value since the specific interests of the identified parties may vary from the interests of the market participants across the broad market.

5. Investment Value – The value of an asset to a particular owner or prospective owner for individual investment or operational objectives (IVS 2017, IVS 104 Bases of Value, paragraph 60.1),

A. This basis of value represents value to a particular investor or owner for investment or operational objectives.

B. Does not assume an exchange of the asset.

C. Investment Value is usually used to assess the value of an asset as an investment from the perspective of the asset's owner.

6. Synergistic Value – The value which results from the combination of two or more assets or interests where the combined value is more than the sum of the separate values (IVS 2017, IVS 104 Bases of Value, paragraph 70.1).

   A. If the combined value applies only to a specific buyer then Synergistic Value will differ from Market Value.

      1) Synergistic value is often seen in valuation assignments for actual market transactions in which a defined buyer acquires a defined target company. In these cases, the buyer may be a participant in the seller's industry and perceives economies of scale that would be available to the buyer but not necessarily to other market participants.

7. Liquidation Value – The amount that would be realised when an asset or group of assets are sold on a piecemeal basis (IVS 2017, IVS 104 Bases of Value, paragraph 80.1).

   A. Usually refers to a subject company or asset in which the present value of future cash flows is less than the stated value of its net asset value (i.e., assets minus liabilities, or equity value). In such a case, the company would be "worth more dead than alive."

   B. Liquidation Value should include the cost of getting the assets into saleable condition as well as the costs of disposing of the asset.

   C. There are two sub-categories under Liquidation Value:

      1) Orderly Liquidation – where the asset is sold after a proper marketing period; that is, the seller has the benefit of not being forced to sell the asset immediately to raise cash.

      2) Forced Liquidation – where the asset must be sold without a proper marketing period since the seller needs to raise cash.

8. Other Bases of Value – The bases of value defined above are from the IVSC and will be the terms used in the context of these courses. The student should understand that other professional associations and accrediting bodies around the world have different terminology for similar concepts. The definitions provided below are for information purposes so that if the student sees the terms used in practice he or she will be prepared to understand their meaning. In most cases, the concepts defined above are duplicated below, at times with the same exact term.

9. Depending on the valuer's location and employer, he or she may be required to apply one of the Bases of Value defined below.

A. Fair Value

1) IFRS 13 Fair Value Measurement

a) Released in May 2011, IFRS 13 is the output from a joint project between the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) to provide a convergent source of fair value measurement guidance. The FASB simultaneously updated Topic 820, Fair Value Measurement in the FASB Accounting Standards Codification (codification of SFAS 157, Fair Value Measurement). Fair Value is the term used in the accounting and valuation professions for valuations that are primarily used for financial reporting (purchase price allocations, impairment studies, etc.).

b) Fair value is defined in IFRS 13 and amended Topic 820 as follows:

- "The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date."

2) IFRS 13 took effect on January 1, 2013.

3) IFRS 13 and amended Topic 820 establish a hierarchy to apply to the inputs (assumptions) used to measure fair value:

a) Level 1 inputs – Quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.

b) Level 2 inputs – Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. Level 2 inputs include:

- Quoted prices for similar assets or liabilities in active markets.
- Quoted prices for identical or similar assets or liabilities in markets that are not active.
- Inputs other than quoted prices that are observable for the asset or liability, for example, interest rates and yield curves observable at commonly quoted intervals.
- Market corroborated inputs.

c) Level 3 inputs – Unobservable inputs for the asset or liability

- Level 3 inputs require using the best information available in the circumstances, which might include the entity's own data, provided these represent assumptions that market participants would make

4) Several key terms are defined in IFRS 13:

a) Active market – A market in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis

b) Highest and best use – The use of a non-financial asset by market participants that would maximize the value of the asset or the group of assets and liabilities (e.g., a business) within which the asset would be used

c) Most advantageous market – The market that maximizes the amount that would be received to sell the asset or minimises the amount that would be paid to transfer the liability, after taking into account transaction costs and transport costs

d) Principal market – The market with the greatest volume and level of activity for the asset or liability

B. Fair Market Value

1) From the International Glossary, Fair market value is defined as:

a) "The 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 neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts. (In Canada, the term "price" should be replaced with "highest price".)"

2) Fair Market Value (FMV) is probably the most commonly applied standard of value in the United States and Canada. It equates to Market Value in the IVS.

3) The FMV standard is equivalent to Market Value.

a) FMV assumes a transaction takes place on the valuation date.

- This forces the valuer to understand the issues that would have been known or knowable to most likely

buyers at the valuation date and how they would have negotiated those issues.

- Because of this provision, a valuer cannot incorporate the effects of events that occurred subsequent to the valuation date (such as the acquisition of another company or the disposition of assets or liabilities in a specific fashion).

b) FMV assumes a hypothetical buyer and seller.

- This provision precludes the assumption of a specific buyer that might dictate a very high or very low transaction.
  - ⇒ For example, the valuer cannot assume the buyer of a widget manufacturer would be that company's biggest competitor who might pay a premium to make sure the subject is removed from the market.
- However, this does require the valuer to define a "pool of willing buyers" who would be the most likely acquirers. In some extreme cases the pool of willing buyers might be one person or company, if it can be determined that no one else could or would buy the subject.
  - ⇒ This can be a very ambiguous process and is often the part of the valuation that is most overlooked.

c) FMV assumes that both parties have reasonable knowledge.

- This can cause many seemingly valid valuations to be challenged.
  - ⇒ Academic studies have shown that a significant portion of public market transactions is ill advised, do not end up well for the acquiring company, and are often driven by over-optimistic or ego-driven managers (i.e., not prudent, well-advised investors).
  - ⇒ Given this, a valuation that relies on such tainted transaction data would not comply with FMV.

d) FMV assumes a cash-equivalent price that excludes transaction costs.

- Certain tax motives of a specific buyer are excluded since the buyer is hypothetical. Hence, items like tax benefits, which could affect value during a transaction between two specific buyers, are not considered under FMV.

C. Synergistic Value

1) Synergistic value pertains to transactions with special interest purchasers. A special interest purchaser expects to enjoy post-acquisition synergies by combining the acquired business with his own. A special purchaser may be willing to pay more to acquire a business than others may if they believe they obtain benefits by combining their business with the other one.

a) Synergies include:

- Elimination of a competitor
- A reduction in business risk
- Better market coverage by product line integration
- Improved distribution of products from better utilisation of the marketing organization and distribution channels
- Immediate entries into industries/markets not previously accessible to the purchaser
- Acquisition of already-developed technology
- Vertical or horizontal integration of the businesses

2) It is difficult to identify and quantify the impact of special purchasers in a notional context unless a business is actually exposed to the market for sale. However, the valuation should not simply assume that special purchasers do not exist or that the premium is not quantifiable, without conducting an investigation.

D. Intrinsic Value

1) Defined in the International Glossary as “the value that an investor considers, on the basis of an evaluation or available facts, to be the ‘true’ or ‘real’ value that will become the market value when other investors reach the same conclusion. When the term applies to options,

it is the difference between the exercise price and the strike price of an option and the market value of the underlying security."

2) Intrinsic value assumes that one investor or one group of investors have information that is not available to the general market, or if available, has not yet been fully analysed by the general market.

3) Consistent with efficient market theory, there should be only a relatively short period of time during which a specific investor has information that would validate an intrinsic value that differs materially from FMV or fair value.

4) Intrinsic value is not the subject of business valuation assignments but does form the basis for the investment profession.

IV. Price versus Value

1. There may be significant differences between price and notional value:

   A. Buyers and sellers may have different knowledge, negotiating abilities and financial strengths.

   B. There are emotional considerations that may override objective analysis and evidence.

   C. Not all potential purchasers may be identifiable.

   D. Legal and contractual restrictions are enforceable and cannot be assumed away.

   E. A price may be struck as the result of forced or compulsive acts on behalf of either the buyer or the seller.

   F. The price may not be all cash and earn-outs, or other structures may be relied upon to bridge the price "gap" between the buyer and the seller.

2. Regardless of the context under which the value is to be determined, the valuer must be aware of the possible differences between price and a notional value and should communicate this concept to the user of the value information.

V. Key Valuation Principles

1. Value is determined at a specific point in time. It is a function only of facts known and forecasts made at that particular point in time

   A. In a notional valuation context, hindsight evidence is generally inadmissible, but it is sometimes allowable to corroborate or assess assumptions formed at an earlier date.

2. Value is prospective. It is equivalent to the present value of all future benefits anticipated to accrue from ownership.

3. Depending on the basis of value adopted, value may have two distinct components: commercial (transferable) value, and/or non-commercial (non-transferable) value.

4. Value is influenced by liquidity. When other factors are equal, in both a notional valuation and an actual market context, the greater the liquidity of the business (i.e., defined in terms of number of prospective buyers), the greater the value of the business.

5. The value of a non-controlling interest may be less than the value of a controlling interest where each is viewed on a "per share" basis.

VI. Premise of Value

1. A Premise of Value describes the circumstances of how an asset or liability is expected to be used (see IVS 2017, page 24, paragraph 130). The context of how an asset is used, or how a subject company is expected to operate in the future, will affect how the valuation is performed. The IVS describe four Premises of Value, although these are not the only permissible premises.

2. Highest and Best Use

   A. The use that would produce the highest value for an asset. The use must be physically possible, financially feasible, and legally permissible.

   B. The highest and best use premise usually applies to tangible asset valuations but may also apply to companies.

      1) Example: a holding company operates a retail business on land that is located in a resort area. The highest and best use of the property may be as a resort hotel, residential property developer, etc. If the latter use yields a higher value than the value of the retail business then the valuer, under a highest and best use premise, should consider the alternate highest and best use.

   C. The highest and best use usually represents the current use of the asset. However, the highest and best use may be different from a current use and may even be derived from the liquidation of the asset.

3. Current Use

   A. The current, or existing, use of the asset or the subject business. The current use may not necessarily equal the highest and best use of the asset.

B. Current use is similar to what other jurisdictions call the “going concern” premise that assumes that the existing business or asset will continue to operate in its current form.

4. Orderly Liquidation Premise

A. Assumes that a company is not expected to continue to operate in the short to medium-term future.

B. The owner is better off selling the assets than to continue generating cash flow.

C. The valuer may consider a liquidation premise of value if the value that is derived from other approaches is at or below the value of the net assets of the business. A liquidation premise may take one of two forms:

D. Under an orderly liquidation premise, the owner has enough time to sell the assets in an orderly fashion and earn the highest price possible in the market.

E. The assets are sold piecemeal, not as part of a going concern. That is, the value of each asset is not equivalent to its cash flow generating ability in the existing company.

F. This means that an equipment in another company, or a building by changing its usage destination, can reach the highest and best use.

5. Forced liquidation

A. Due to the circumstances of the seller, the assets must be sold with some expediency, probably to satisfy imminent debt obligations.

B. The seller has limited options and time, a fact that becomes known to the market. Hence, buyers use the seller’s limitations against him in negotiation. The seller may be limited to an auction scenario.

1) Assets are sold as soon as an offer is made in order to raise cash.

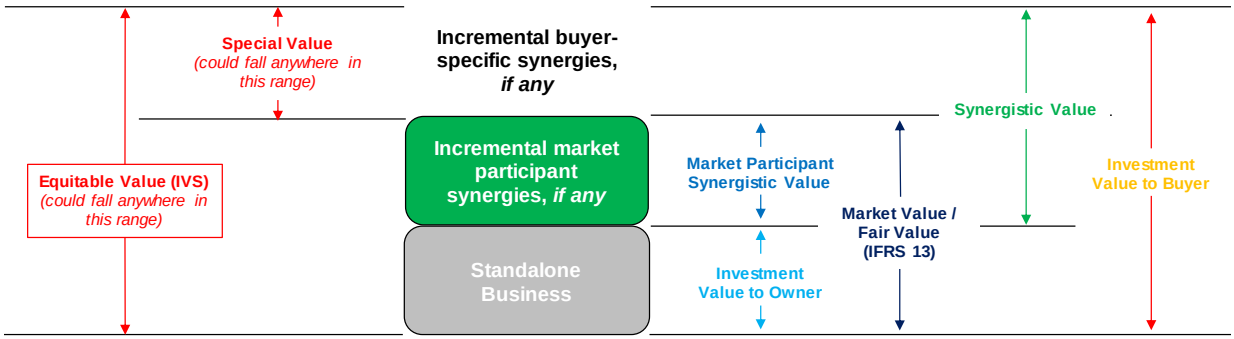
2) A forced liquidation value is considered the lowest value for which a company could be sold.

C. Both the orderly and forced liquidation premise will often require the services of a real estate appraiser and/or a machinery & equipment appraiser.

1) When using the services of a tangible asset appraiser (real estate, machinery, and equipment) for any valuation, it is the responsibility of the business valuer to inform the tangible asset appraiser which premise of value he should assume.

VII. Summary of Different Bases of Value

1. In order to provide a better understanding of the different meaning of the Bases of Value described above, here below it is shown an example and the related scheme:



Professor M. Bini (Bocconi University), OIV International Conference, Nov. 2013

2. A manufacturing company is contemplating the acquisition of another company. As part of the M&A analysis, the following results have been estimated:

   A. Target Standalone Value = €10,000 thsd

   B. Acquirer Standalone Value = €20,000 thsd

Opportunity	Value of Opportunity		
	Target	Acquirer	
EUR 000		Market Participant	Specific
G&A Savings		100	
Transportation savings			300
Distribution channel leverage		2,000	
Product line opportunity*	3,000 in total		3,000 in total
Waste reduction/productivity increase	500		

** a jointly enabled opportunity*

   C. The M&A team has identified the following improvements:

      1) Any market participant will be able to increase its value (as Acquirer) by saving in G&A expenses around €100 thsd and leveraging the distribution channel with €2,000 thsd in value.

      2) The Acquirer (as a specific investor) can do even better than the market participant by increasing its value through another savings in transportation costs, estimated around €300 thsd.

3) Both Target and Acquirer can increase their respective value by €3,000 thsd each through different product lines.

4) The Target value will increase by another €500 thsd through waste reduction and productivity increase.

D. Based on the data above the following bases of value are estimated:

1) Market Value of the Target

Standalone Valuation of Target	10,000
Market Participant Synergies	
G&A savings	100
Distribution channel leverage	2,000
Waste reduction/productivity increase	500
Market Value of the Target	**12,600**

a) All value improvements that are identified by any market participant have to be added to the Standalone Value of the Target in order to arrive at the Market Value.

2) Investment Value of Specific Acquirer

Standalone Valuation of Target	10,000
G&A savings	100
Transportation savings	300
Distribution channel leverage	2,000
Product line opportunity	3,000
Waste reduction/productivity increase	500
Standalone Valuation of Acquirer	20,000
Investment Value to Specific Acquirer	**35,900**

a) The Investment Value represents the combined value of the Target and Acquirer by taking into consideration value improvements of both market participant and those specific to this Acquirer.

b) It can also be expressed as:

Market Value of the Target
+ Standalone Value of the Acquirer
+ any synergy identified by the specific Acquirer
= Investment Value

3) Synergistic Value to the Acquirer

Investment Value to Specific Acquirer	35,900
- Standalone Valuation of Target	(10,000)
- Standalone Valuation of Acquirer	(20,000)
Synergistic Value to Acquirer	**5,900**

a) The Synergistic Value to the Acquirer is represented by the added value of the combined business compared to the standalone value of both companies.

Market Participant Synergistic Value	
Market Value of the Target	12,600
- Standalone value of the Target	10,000
Market Participant Synergistic Value	**2,600**

b) This additional value to the Target is identified by any market participant.

4) Specific Synergistic Value to the Acquirer

a	**Standalone Valuation of Target**	**10,000**
	Market Participant Synergies	
	G&A savings	100
	Distribution channel leverage	2,000
	Waste reduction/productivity increase	500
b	**Market Participant Synergistic Value**	**2,600**
	Transportation savings	200
	Product line opportunity	1,200
c	**Special Value**	**1,400**
d=b+c	**Total Synergistic Value to Acquirer**	**4,000**
e=a+c	**Equitable Value (IVS)**	**14,000**
f=a+b	**Market Value**	**12,600**

a) Let suppose that transportation cost savings and product line opportunity value initially estimated at €300 thsd and €3,000 thsd, respectively, were negotiated at arm's length and agreed to be €200 thsd and €1,200 thsd, respectively.

b) Based on the above Total Synergistic Value negotiated is €4,000 thsd. Therefore, the Equitable Value (IVS) will be the sum of the standalone value of the Target plus all the synergies identified and negotiated (10,000 + 4,000).

VIII. Three Valuation Approaches

1. There are three approaches used to value a business. Under each valuation approach, there are different methodologies (also called valuation "methods" or valuation "techniques"). (See IVS 105 – Valuation Approaches and Methods, page 29)

   A. Income approach (IVS 2017, page 36)

      1) The income approach provides an indication of value by converting future cash flow to a single current value. Under the income approach, the value of an asset is determined by reference to the value of income, cash flow, or cost savings generated by the asset.

   B. Market approach (IVS 2017, page 30)

      1) The market approach provides an indication of value by comparing the asset with identical or comparable (that is similar) assets for which price information is available.

   C. Cost approach (IVS 2017, page 42)

      1) The cost approach provides an indication of value using the economic principle that a buyer will pay no more for an asset than the cost to obtain an asset of equal utility, whether by purchase or by construction, unless undue time, inconvenience, risk or other factors are involved. The approach provides an indication of value by calculating the current replacement or reproduction cost of an asset and making deductions for physical deterioration and all other relevant forms of obsolescence.

2. The Income Approach

   A. Definition: The income approach is defined in IVS 105 as follows:

      1) "The income approach provides an indication of value by converting future cash flow to a single current value. Under the income approach, the value of an asset is determined by reference to the value of income, cash flow, or cost savings generated by the asset." (IVS 2017, page 36)

   B. Under the income approach, the valuer forecasts some measure of economic benefit into the future and calculates the present value of that stream of benefits by discounting it at a rate that reflects its risk profile.

      1) BV 202 (the Income Approach), the follow-up to this course, discusses the income approach to value, including a derivation of rates of return.

   C. There are several methodologies under the income approach.

1) Constant Growth Model (also referred to in practice as the Capitalisation of Earnings Method) (see IVS 2017, page 41)

2) The constant growth model assumes that the asset grows (or declines) at a constant rate into perpetuity. The economic benefits from the asset are converted to value through a division by a capitalization rate.

3) The Constant Growth Model is used when the company or security being valued is expected to generate cash flows that either remain the same into perpetuity or grow at a fixed rate into perpetuity.

4) The Constant Growth Model is as follows:

$$\text{Value} = \frac{\text{Economic Benefit}}{\text{Capitalisation rate}}$$

a) In the value equation, the economic benefit is the numerator and the discount rate is the denominator. Therefore, growth is accounted for in the numerator and risk is accounted for in the denominator.

b) The equation can be expressed on an enterprise or equity value basis. Enterprise value and equity value cash flow differences will be explained in detail in Chapter 8.

c) This zero-growth capitalisation model is usually appropriate for measuring the value of a security with a constant income stream such as a perpetual fixed interest bond. Perpetual fixed interest bond values are calculated as follows:

$$\text{Perpetual Fixed Interest Bond Price} = \frac{\text{Coupon}}{\text{Bond Yield}}$$

d) The bond coupon is a fixed return and the yield is the rate of return.

e) If there is a constant growth rate, the general model (known as the “Gordon Growth Model”) is shown as:

$$\text{Value} = \frac{CF_1}{K_e - g}$$

Where:

CF_1 = Equity cash flow in first year of forecast or CF_0 * (1+g)

K_e = Cost of Equity

g = Constant growth rate

- The denominator (Ke – g) is called a capitalisation rate. The capitalisation rate includes the long-term growth.
- A capitalisation rate is the inverse of a market multiple (covered in detail in BV 202). Algebraically, the above formula could be restated as:

$$\frac{\text{Value}}{\text{CF}_1} = \frac{1}{\text{K}_\text{e} - \text{g}}$$

- The left side of the equation is the equivalent of a price multiple, which is the inversion of the capitalisation rate. For example, a simple price to earnings market multiple of 5.0x gives rise to a capitalisation rate of 20.0%.
- The capitalisation of earnings method is often appropriate for companies that have predictable cash flows such as service businesses (medical practices, insurance agencies, etc.).
- This model projects the cash flow growing at a constant rate of growth into perpetuity.
- The formula can be expanded if there is both real growth and inflationary perpetual growth as follows:

$$\text{Value} = \frac{\text{CF} * (1 + \text{i}) * (1 + \text{r})}{(1 + \text{d}) - [(1 + \text{i}) * (1 + \text{r})]}$$

Where:

CF = cash flow immediately before the perpetual growth
i = inflationary growth
r = real growth
d = discount rate

- The above formula can be simplified as follows:

$$\text{Value} = \frac{\text{CF} * (1 + \text{g})}{\text{d} - \text{g}}$$

If: (1+g) = (1+i) * (1+r) that is, “g” is a compound growth rate

- The above formula can be simplified even further if there is no growth in perpetuity:

$$\text{Value} = \frac{\text{CF}}{\text{d}}$$

5) Discounted Cash Flow Method (also called the "Discounted Future Earnings Method") (see IVS 2017, page 37)

a) Under the discounted cash flow method ("DCF") economic benefits are forecast for a specific number of periods (the discrete forecast), followed by a capitalization model which captures cash flows after the discrete period into perpetuity.

b) This method considers varying cash flows. If sales and cash flows are expected to vary during a discrete period, those cash flows are specifically forecast for each year until operations are expected to stabilise.

$$\text{Present Value} = \frac{\text{CF}_1}{(1+\text{k})^1} + \frac{\text{CF}_2}{(1+\text{k})^2} + \frac{\text{CF}_3}{(1+\text{k})^3} + \cdots \frac{\text{CF}_\infty}{(1+\text{k})^\infty}$$

c) In this model, the cash flows for the first three years (CF1, CF2, and CF3) are projected and are individually discounted to present value by dividing by $(1+k)^x$, called the discrete projection.

d) The discrete period is projected until a constant rate of growth can be projected. The residual or terminal year calculation is the equivalent of a capitalisation of earnings model above.

- The present value of all cash flows between year 3 and perpetuity is calculated in the residual year. This amount is then discounted from the beginning of year 4 back to present value.

- In the example below the company generated Euros 2.25 million of cash flow (after tax) in the year ended December 31, 2017, and management expects growth of 12.0%, 9.0%, and 7.0% in the years ended December 31, 2018, 2019, and 2020 respectively. After 2020, they project long-term growth of 5.0% into perpetuity. The valuer estimates that the required rate of return, or discount rate, for this company is equal to 19.0% (after tax). Given these facts, the net present value as of December 31, 2017 is calculated as shown.

	Actual	Projected Operations				
EUR	2017	2018	2019	2020		Residual
Net cash flow	2,250,000	2,520,000	2,746,000	2,939,076		3,086,030
Growth =		12.0%	9.0%	7.0%		5%
Discount rate		19.0%	19.0%	19.0%		19%
Period to discount		1	2	3		
Net present value factor		0.8403	0.7062	0.5934		
					Residual =	22,043,071
Present Value		2,117,647	1,939,129	1,744,094		13,080,706

Net Present value	EUR	18,881,576

e) The residual calculation of €22,043,071 equals:

$$\frac{2{,}939{,}076 * (1 + 5\%)}{19\% - 5\%}$$

f) The net present value factor equals:

$$\frac{1}{(1 + \text{discount rate})^{\text{periods}}}$$

g) This value is discounted from January 1, 2021 to present value as at December 31, 2017. Hence, both the interim cash flow for 2020 and the residual calculation are discounted back three years, resulting in a value of €18,881,576.

D. Advantages and Disadvantages of the Income Approach

1) Advantages

a) The income approach to value requires an explicit analysis of both growth and risk.

b) Users of the valuation can critique the analysis by identifying specific elements of the forecast that are overstated or understated.

c) The approach captures the cash flow generating ability of the company and therefore encompasses all of the tangible and intangible assets of the subject.

2) Disadvantage

a) Since the quantification of growth and risk require the valuer's judgment, users may suspect the results are disconnected from reality and dismiss the valuation as a subjective opinion.

3. The Market Approach

A. The Market Approach is defined in the IVS as follows:

1) "provides an indication of value by comparing the asset with identical or comparable (that is similar) assets for which price information is available."

B. The Market Approach to value is covered in Chapter 8.

C. This approach is based on the concept that the value of an asset can be derived by observing the values of similar assets that have been sold in the market.

1) This is known as the Principle of Substitution, which states that a prudent investor will pay no more for an asset than it would cost to acquire a similar asset with the same utility.

2) For closely held businesses, there are two sources of data for the sale of similar assets: 1) the per-share trading prices of publicly held companies on public exchanges; and 2) the transaction prices of public and private companies that are available through online research providers.

3) These two sources define the two methodologies under the market approach, the Guideline Public Multiple Method and the Guideline Transaction Method.

D. The Guideline Public Company Method (see IVS 2017, page 33)

1) This method utilises information on guideline publicly-traded comparables that are the same or similar to the subject asset to arrive at an indication of value

2) Required elements to use the guideline company multiple method:

a) A reliable and applicable public stock exchange

b) A selection of publicly-held companies that are similar to the closely-held subject and that are driven by similar economic forces

c) Trading prices and historical financial data for the comparable company

3) Financial data for each comparable is analysed, and relevant market multiples are developed.

4) A comparative financial analysis is conducted between the subject and each comparable company to determine which subset of guideline companies is most relevant and which guideline companies are least relevant.

   a) Depending on the analysis, adjustments may be made to the multiples prior to applying them to the subject company's operating metrics.

5) Example

Guideline Company Multiple Example	
Public Company	
Price per Share	8.50
Shares Outstanding	122,550,000
Value of Equity	1,041,675,000
Long-Term Debt	54,000,000
Enterprise Value	1,095,675,000
Earnings before Interest, Taxes Depriciation and Amortization ("EBITDA")	142,638,000
Enterprise Value / EBITDA multiple	7.68
Subject Company	
EBITDA	9,750,000.00
Enterprise Value / EBITDA multiple	7.68
Enterprise Value	74,880,000

6) Advantages and Disadvantages of the Guideline Company Multiple Method

   a) Advantage

      - The information is objective and easy for users to understand.

   b) Disadvantages

      - It may be difficult to find publicly held companies that are sufficiently similar to closely held companies, especially if the subject company is small.
      - Some regions of the world do not have actively public markets with a robust source of publicly traded companies.
      - The method can be easily manipulated by omitting guideline companies that do not support a desired result.

E. The Guideline Transaction Methods (see IVS 2017, page 31)

1) Uses information on transactions involving assets that are the same or similar to the subject asset to arrive at an indication of value.

2) Transactions are one of four types:

a) Public company buying public

b) Public company buying private

c) Private company buying public

d) Private company buying private

3) Transaction data is available from either:

a) Public available data such as public company filings

b) Companies that compile transaction data and make it available by subscriptions online

4) Similar to the guideline method, market multiples are developed and applied to the subject company's relevant metric.

5) Example

Transaction Multiple Example		
Public company		
Public company transaction, 100% assets	EUR	1,350,000,000
EBITDA		142,638,000
Enterprise Value/EBITDA multiple		9.46
Subject company		
EBITDA		9,750,000
Enterprise Value/EBITDA		9.46
Subject company enterprise value	EUR	92,279,056

6) Advantages and Disadvantages of the Guideline Transaction Method

a) Advantage

- Transaction data is simple to understand.

b) Disadvantages

- It may be difficult to find transactions that have sufficient data to perform an adequate analysis.

- Private companies are not required to make the details of their transactions public. Hence, perhaps the most relevant transactions for a subject company cannot always be analysed.
- Errors or omission of data, or insufficient data, may undermine its validity.

F. Prior transactions of the subject company's stock

1) A prior arm's length transaction of the subject company's stock could provide an indication of Fair Value.

a) The transaction should be timely. If significant time has passed between the transaction and the valuation date, the transaction multiple may not be relevant.

2) The transaction should be arm's length. Many transactions are completed according to a contractually set formula or some ulterior motive that may not represent value.

4. The Cost Approach

A. This approach is also referred to as "The Asset Approach" and the "Net Asset Approach". IVS 2017 discusses this approach primarily in the context of tangible assets such as machinery & equipment or real estate. Toward that end, the IVS Standards review the following Cost Approach methods:

1) Replacement Cost Method – the cost that a participant would pay to replace the utility of an asset, not the exact physical properties of the asset.

2) Reproduction Cost Method – the cost of a replica of an asset. This method is used when the value of a modern equivalent asset is greater than the cost of a replica of the asset or when the utility of the subject asset could only be replaced by a replica rather than a modern equivalent of the asset.

3) Summation Method – the Summation Method is used in the valuation of companies that are a collection of tangible and intangible assets. Each component asset of the holding entity is valued and the value equals the summation of the values less any outstanding debt against those assets (see IVS 2017, pages 44-45).

B. The Cost Approach is also discussed in IFRS 13 as follows:

"A valuation technique that reflects the amount that would be required currently to replace the service capacity of an asset (often referred to as current replacement cost)"

C. The Cost Approach is defined in the International Glossary as:

"A general way of determining a value indication of a business, business ownership interest, or security using one or more methods based on the value of the assets net of liabilities."

D. Theoretically, this approach involves the restatement of all tangible and intangible assets and liabilities to fair value, and then deducting the fair value of liabilities from the fair value of assets to arrive at the fair value of equity.

1) Identifiable intangible assets and off-balance sheet liabilities need to be identified and valued.

2) Assets are separately valued based on market prices or by reference to the cash flows, they are expected to generate, by a specialist valuer.

a) The value of the assets is based on the cost to replace them. This is another example of the Principle of Substitution.

E. In practice, many valuers simply mark the recorded assets to fair value without a separate analysis of intangible assets, unless they are specifically retained to conduct an analysis under IFRS 3.

1) If intangible assets are not identified and valued, it is unlikely that the resultant balance sheet will capture all of the cash flow generating value of the business.

2) This approach is often viewed as providing a base or "floor" value for a company.

a) If the value derived under the income and market approach is at or below the value derived under the asset approach as described under 4.a above, then the valuer must consider whether the business is a going concern.

F. The Cost Approach is most relevant for valuing companies that hold assets (e.g., real estate holding companies), or capital-intensive companies that depend on a large asset base to conduct operations.

G. Advantages and Disadvantages of the Cost Approach

1) Advantage

a) Involves fundamental concepts and is easy to understand

2) Disadvantage

a) This approach is less relevant to a company with material intangible value.

IX. Valuation Standards

1. There are multiple sets of business valuation standards that exist worldwide. In many parts of the world, valuation practitioners are effectively not subject to any standards and accepted practice can vary widely.

A. One of the goals of the BV is to bring all regions of the world under one umbrella organization that will adhere to the International Valuation Standards (IVS) promulgated by the International Valuation Standards Council (IVSC).

1) Local standards may be more specific and stringent than the IVS but would not have the option of being less stringent. Worldwide business valuation practice should adhere to the minimum thresholds within the IVS.

B. Prior to achievement of that goal, it is necessary for practitioners to be aware of the major sets of standards in the world so that they may be aware of differences and adaptations that may be necessary depending on where they practice.

2. International Valuation Standards – IVS (www.ivsc.org)

A. The International Valuation Standards are listed in Exhibit 1 (page 37).

3. Canadian Valuation Standards – CICBV

A. Valuation practitioners who hold the CBV designation from the Canadian Institute of Chartered Business Valuators must adhere to the CICBV's Practice Standards, which are listed in Exhibit 1 (page 37).

4. American Valuation Standards – ASA

A. Valuation practitioners who are members of the American Society of Appraisers must follow two sets of valuation standards, both of which are summarised in Exhibit 1 (page 37).

1) The Uniform Standards of Professional Appraisal Practice (USPAP)

a) USPAP is issued by The Appraisal Foundation and includes statements on muliple valuation disciplines. Statements 9 and 10 specifically address business valuation and are listed in Exhibit 1 (page 37).

2) The business valuation standards issued by the Business Valuation Committee of the ASA

a) These standards deal only with business valuation. This document includes eight Standards, followed by Statement on Standards, Advisory Opinions, and Procedural Guidelines. See Exhibit 1 (page 37).

B. Members of The American Institute of Certified Public Accountants (AICPA) must adhere to the AICPA's Statements on Standards for Valuation Services (SSVS).

5. Other Standards

A. There are other professional accounting or financial societies, most of which have their own sets of valuation standards.

B. It is important to note that there is a substantial overlap in content between each set of business valuation standards.

C. While it makes sense for the various professional societies and valuation institutions to combine and issue one set of international standards, that has not happened to date.

1) Most of these valuation organizations see their standards as an essential part of their mission and identity and are concerned that merging standards would dilute their presence in the profession.

Chapter 2 Levels of Value

I. Introduction

1. This chapter addresses the valuation of interests in a subject company in which the owner may, or may not, control the company's operations or cash flows. Such ownership interests are usually illiquid in the marketplace relative to publicly traded interests. Valuation adjustments to address these issues are addressed briefly in IVS 105, paragraph 30.17. References to other sets of standards dealing with discounts for lack of marketability and control and control premiums are contained in the text below.

2. Certain segments of the valuation profession deal with the valuation of fractional interests in companies.

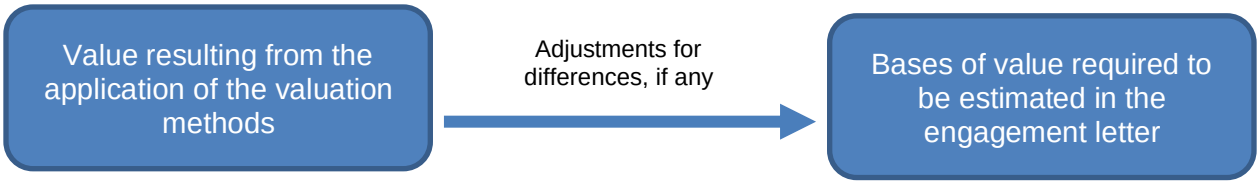
   A. We distinguish between the valuation of two initial levels of value, control and non-controlling.

      1) Control – the power to direct the management and policies of a business enterprise. A controlling shareholder generally owns more than 50% of the equity of a business (unless local laws require a "supermajority" in which an investor, by statute, would have to own a certain percentage interest above 50% to control a company).

      2) Non-Control (minority) – generally an ownership interest less than 50% of the equity investment. A non-controlling interest owner cannot unilaterally exert control over the company.

      3) The IASB has recently issued IFRS 10, 'Consolidated Financial Statements', which is effective from 2013. IFRS 10 defines control more extensively from the 50% threshold noted above in terms of 'power', 'relevant activities' and 'variable returns'. In particular, IFRS 10 identifies situations in which de facto control exists and looks at veto or protective rights of non-controlling shareholders. Thus, the rights, including exercisable options, of other shareholders need to be considered before it is decided which party controls an entity. In addition, the power delegated to parties through the Articles of Association, Shareholders' Agreements, and Consortium Agreements must be considered.

3. Each valuation will yield a specific "level" of value (control or non-controlling) depending on the assumptions used in the valuation. A valuation "adjustment" may be needed if the assignment is to conclude on a level of value other than that yielded by the valuation methods used.



4. The valuation adjustments are as follows:

A. Control Premium – if the assignment is to value a controlling interest and the valuation yielded a non-controlling equivalent value, then a control premium is needed. A control premium is defined in the International Glossary as:

> *All else being equal, market participants would generally prefer to have control over a subject asset than not. However, market participant's willingness to pay a Control Premium or DLOC will generally be a factor of whether the ability to exercise control enhances the economic benefits available to the owner of the subject asset.*
>
> IVS 105, para 30.17 (b)

1) "An amount or percentage by which the pro rata value of a controlling interest exceeds the pro rata value of a non-controlling interest in a business enterprise to reflect the power of control."

2) The Control Premiums are observed in the market and reported by several databases, such as FactSet Mergerstat Control Premium Study.

B. Discount for Lack of Control (DLOC) (also called "Minority Discount") – conversely, if the assignment is to value a non-controlling interest and the valuer has used a method which yielded a control value, then a discount for lack of control is required. This is defined in the International Glossary as follows:

1) "An amount or percentage deducted from the pro rata share of value of 100% of an equity interest in a business to reflect the absence of some or all of the powers of control."

2) DLOC is not observed in the market. The valuer can derive the DLOC from the Control Premium using the following formula:

$$\text{DLOC} = 1 - \frac{1}{1 + \text{ Control Premium}}$$

C. Discount for Lack of Marketability (DLOM) – the profession distinguishes between a loss in value due to an inability to control operations and a loss in value due to an inability to easily liquidate an investment. The two concepts are related though since illiquidity may be associated with a non-controlling interest. That is, a non-controlling interest is less valuable for two reasons:

1) The non-controlling investor cannot control operations and is subject to another investor's decisions; and

2) For privately held companies, the non-controlling interest is less liquid since the market for a fractional interest in closely held companies is light relative to a controlling interest.

3) The discount for lack of marketability is defined in the International Glossary as:

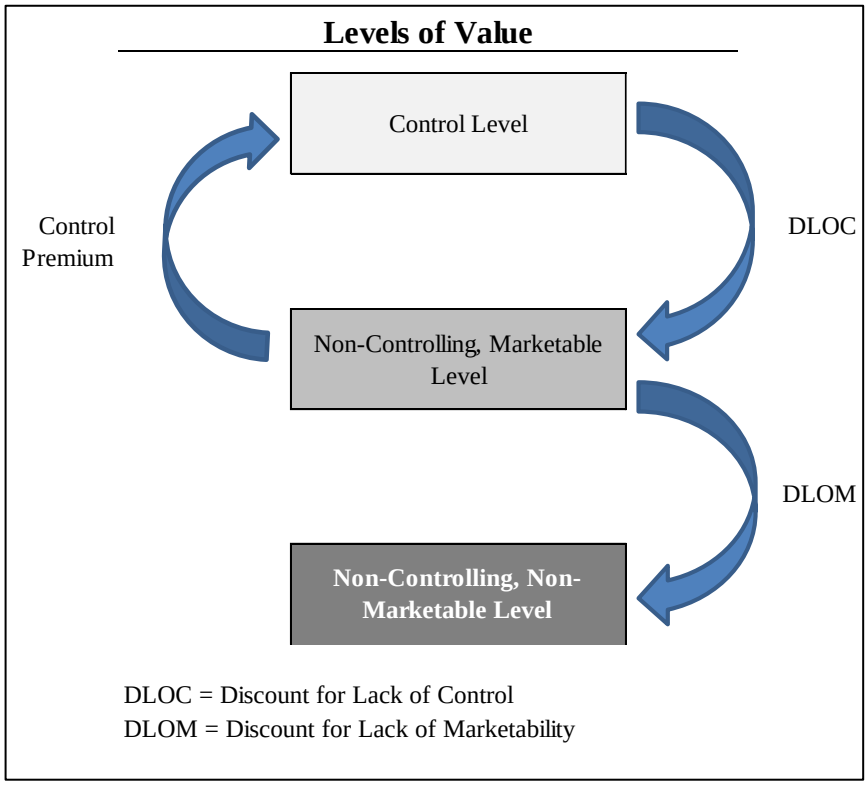
   a) "An amount or percentage deducted from the value of an ownership interest to reflect the relative absence of marketability."

4) When you buy a stock, bond, real estate, or a business, you sometime experience buyer's remorse, where you want to reverse your decision and sell what you just bought. The cost of illiquidity is the cost of this remorse.

D. This chapter provides an overview of the different levels of value and the ways in which valuers quantify valuation adjustments.

II. Levels of Value

1. There are three levels of value, as seen in the chart below:



2. As shown, the non-controlling level of value is further categorized into two categories:

   A. Non-controlling, Marketable – this level represents a non-controlling interest that does not suffer from a lack of marketability. This is usually relevant to a non-controlling interest in a publicly held company. Non-controlling shares in public companies are traded on public exchanges and therefore are considered "marketable."

   B. Non-controlling, Non-marketable – as discussed above, the non-controlling investor in a closely held business cannot access a public exchange and therefore the investment is worth less than an otherwise identical non-controlling interest in a public company.

3. Synergistic Value – synergistic value includes the economies of scale that would be gained in the combination of two companies. It is usually greater than control value.

   A. Synergistic value is not usually part of fair value assignments since it does not relate to a market participant.

   B. Valuation consultants are often retained to opine on synergistic value especially if they work on merger and acquisition assignments.

III. Levels of Value and Valuation Methodologies

1. The level of value is a direct result of the valuation method applied and the assumptions that the valuer uses in the analysis.

Valuation Approach & Methodology	Level of Value
Income Approach	
Control adjustments made	Control Value
Control adjustments not made	Non-Controlling, Marketable Value
Market Approach - Guideline Company Methodology	
Control adjustments made	Control Value
Control adjustments not made	Non-Controlling, Marketable Value
Market Approach - Transaction Methodology	Control Value
Asset Approach	Control Value

2. The valuer assesses which level of value is required in the assignment, which level of value results from the method used, and makes adjustments (control premium, DLOC, or DLOM) accordingly.

3. The issue of control adjustments, and whether they are made or not made, relates to the level of cash flows that are discounted in the income approach or subject to a price multiple in the market approach.

4. Example:

Sales (000)	EUR	1,000	
Expenses			
Officer salary		250	
Building rent		50	
Selling expense		375	
Admin expense		280	
Total expense		955	
Reported Earnings	EUR	45	→ **Minority cash flow**
Adjustments			
Officer salary		125	
Building rent		25	
Total adjustments		150	
Adjusted earnings	EUR	195	→ **Control cash flow**

A. In the example above, the valuer made two adjustments to add back above-market officer compensation and to add back above-market building rent. These expenses are examples of how a controlling shareholder distributes income to himself.

1) It is sometimes the case that a controlling shareholder, in the absence of constraints posed by a Board of Directors or a government regulating authority, will divert all cash flow to himself, making sure that the non-controlling shareholder receives zero dividends each year.

B. If the €195 income is used in the income approach or in a price to earnings multiple in the market approach, then the resultant value would be considered a control level. It is control since only a control shareholder has the ability to access the value.

C. If €45 income were used in the income or market approach then the resultant value would be considered non-controlling, marketable. It is non-controlling since a non-controlling investor could access the €45 income that drives value.

D. It is important that the valuer understand what level of value results from each valuation approach applied and what type of adjustments are needed to arrive at the value requested in the assignment.

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Chapter 3 Engagement and Initial Analysis

I. Five Steps Involved in a Business Valuation

1. Step #1 - Defining the engagement

   A. Who is the Client and who are other Intended Users?

      1) The valuer, before taking over the valuation engagement, needs to define who the client is. The client is the person and/or entity who engages the valuer to perform the valuation and to whom the valuer has a duty care.

         a) Although in most of the engagements the client and the person paying the valuer are the same entity/person, the valuer has to make a clear distinction between the two.

      2) The valuation report can also be used by other entities, such as banks, insurance companies, PE funds etc. The valuer need to clarify right from the very first contact with the client, if there are other intended users of the valuation and if they may have specific requirements to be considered in the valuation.

         a) For example, if the valuer determines the value of a business based on the market value bases of value and the report is going to be used by an insurance company, which is primarily interested to the cost of replacement, the valuation report may be of little use. The valuer needs to avoid such situations.

   B. What is the subject business interest that is being valued?

      1) Unincorporated entities (e.g., partnerships, sole proprietorships, limited liability companies)

      2) Incorporated companies

         a) United States:

            ♦ C corporation, S corporation, etc.

         b) Canada:

            ♦ Private corporations, Canadian-controlled private corporation, etc.

c) Europe

- United Kingdom:
  - ⇒ Private limited company
  - ⇒ Public limited company
  - ⇒ UK limited liability partnership
  - ⇒ UK limited company by guarantee

d) Middle East – Commercial law varies between the different countries in the Middle East. As an example, The United Arab Emirates allows for the following seven corporate structures:

- General partnership
- Simple limited partnership
- Joint participation
- Public joint stock
- Private joint stock
- Limited liability
- Partnership limited with shares

C. Identify the specific business interest to be valued

1) Business unit, company, group of companies

2) Name(s) of owners and percentage interest owned

3) Location of company

4) Equity shares versus assets

a) Specify the number of shares valued and total outstanding shares

5) Options or warrants

6) Non-controlling versus controlling interest

a) See discussion of levels of value in Chapter 2

D. Valuation Date(s)

1) The date of the event which is the purpose of the report

2) Value is determined at a specific point in time

a) Hindsight information is not permissible in determining value

E. Purpose of the engagement

1) Financial reporting, taxation, litigation, etc.

a) The purpose of the engagement may dictate the standard of value to be used.

F. Standard of value

1) Fair value, Fair Market Value, etc. (see chapter 2)

G. Other engagement requirements and considerations:

1) The valuer must have the knowledge, competence, and capacity to complete the engagement.

2) There are no conflicts of interest

a) Conflicts of interest are any interests, financial or otherwise, any business or professional activities, or any obligations that are incompatible with the proper discharge of a valuer's duties, such as:

- Currently providing services to client
- Currently providing services to opposing party
- Information obtained in the past
- Reputation for taking a position contrary to the matter at hand

3) The valuer is independent

a) Independence is freedom from control or influence of others.

b) Maintaining independence in appearance, as well as independence in fact, is becoming increasingly important in today's litigious society.

c) Valuers working for public accounting firms are also subject to independence rules that govern their accounting practices, for instance:

- England and Wales (and other countries) – ICAEW Code of Ethics
- Sarbanes-Oxley Act of 2002 – describes services an audit firm may provide to an audit client
- U.S. – AICPA Code of Conduct
- Canada – CICA Code of Ethics

4) Will other experts need to be engaged?

a) The business valuer normally does not have the expertise to conduct a real property or machinery/equipment valuation.

5) Engagement letter should also include:

a) Deadlines

b) Management representations

c) Type of valuation report

d) Fee arrangements

- Generally, it is not allowed for a valuer to be contracted with a professional fee that is dependent on the value conclusion, such a percentage of value.

e) Distribution restrictions on the valuation report

6) See Appendix I for sample engagement letter

Assignment 1. Defining the Valuation Engagement (10 minutes)

2. Step #2 – Data Discovery

   A. Discussed in more detail in Chapters 4 and 6.

   B. The information required includes (but is not limited to):

      1) Company information

         a) Financial

            - Financial statements, tax returns
            - Budgets and forecasts
            - Access to accounting books and ledgers

         b) Operational

            - Legal agreements (buy-sell, shareholder, employee agreements)
            - Organizational chart

      2) Industry information

         a) Trade association literature

      3) Economic information

   C. See Appendix II for sample information request

3. Step #3 - Data Analysis

   A. Qualitative Analysis – emphasis is on assessing qualitative risk and competitive advantages or disadvantages. See Section II of this Chapter for full discussion.

      1) Company background

         a) Description and analysis of the subject company's:

            - History
            - Operations
            - Competitive environment
            - Customer profile
            - Management and employee profile

- Physical plant

b) SWOT analysis (strengths, weaknesses, opportunities, threats)

2) Macroeconomic and microeconomic research

a) Analysis of the macro and microeconomic forces which affect performance and outlook

3) Industry research

a) Size in pounds/euros of industry revenues

b) Size characteristics of industry

- Is the industry dominated by a few large companies or is there a large number of smaller competitors?

c) Do companies compete on price? Service? Product quality?

B. Quantitative Analysis

1) Analysis of subject company on basis of:

a) Growth

b) Profitability

c) Asset management

d) Coverage

e) Leverage

4. Step #4 - Valuation Conclusion

A. Reconciliation of results from income, market and book value approaches

1) Valuer should be sure that each valuation approach used is expressed on the same level of value (control, minority-marketable, minority-nonmarketable) prior to reaching a preliminary conclusion.

2) After a preliminary conclusion is reached, consideration is given to premiums and discounts, if necessary.

5. Step #5 - Report Issuance

A. Once the fieldwork and working paper file have been completed, the valuer is ready to prepare a draft report setting out his/her valuation conclusions.

B. The report must be objective, unbiased, fully documented and must include certain key components.

C. The valuer must ensure that his/her report is in accordance with all required practice standards.

D. The required components of a draft report may differ slightly amongst differing professional organizations, but they typically include the following (this list was compiled from the practice standards of the ASA, the CICBV, and the IVSC):

1) Introduction with the following information:

   a) Subject of valuation

   b) Valuation date

   c) Reason for the valuation

   d) Standard of value used and other important definitions

   e) Statement of the valuer's independence and objectivity

   f) Type of report being issued

2) Key assumptions made in arriving at the conclusion

3) Scope of review and any restrictions on the scope which affect the conclusion

4) Description of economy and industry (for higher-level reports)

5) Description of subject-company or asset

6) A summary of relevant financial information

7) Identification of the valuation method selected and the reasons therefore

8) Description of valuation calculations

9) Restrictions and qualifications

   a) On use of report

   b) Denial of responsibility for losses resulting from improper use

   c) Statement giving valuer right to make revisions

10) Conclusion on value

E. Management/Shareholder Review

1) Valuer must ensure that all assumptions are accurate

2) Should attempt to review each activity of the business with a management official who is directly associated with the subject area

a) This may not always be possible due to restrictions on access to individuals.

3) Recognise that most individuals connected with the valuation will favour either a low or high value result

a) Be aware of each individuals' connection with the subject transaction and his/her potential biases.

b) Where possible, information provided by owners or management should be correlated with externally obtained qualitative data and checked for consistency with the financial data analysis.

4) Maintain independence and do not bow down to management/ shareholder influence

F. Management Representation Letter

1) Obtain before the report is issued in final

2) Signed by management officials upon whose representations reliance was placed in reaching the opinion as to value

3) Serves a legal purpose in protecting the valuer

4) Acts as a psychological tool - management may take more care in providing answers if they know they will be asked to attest to their belief in the validity of those answers

5) Specifically, the appropriate management officials should confirm, in writing, that:

a) They did make specific representations to the valuer

b) They have reviewed the draft report and are satisfied with the explanations as to the approach used and the factors considered

c) They have no information or knowledge of any facts that are not included in the draft report that, in their view, might affect the valuation conclusions

G. Final Report

1) Name and signature of the valuer

2) Date of report

3) In the event that the Draft and Final Reports are discoverable:

a) Be able to explain differences in numbers and assumptions

b) Retain all supporting documentation for the above

II. Company Analysis

1. Purpose is to obtain an understanding of factors that affect risk and value:

A. Company's recurring or expected earnings/cash flows (Quantitative Analysis – discussed in Chapter 5)

B. Relative risks in achieving those earnings/cash flows (Qualitative Analysis)

1) Internal risks (discussed in this chapter) – within management's ability to control or influence

2) External risks (discussed in Chapter 6 and 7) – not within management's ability to control or influence

C. Operational versus non-operational assets and liabilities

2. The four basic types of company analysis are:

A. Operational analysis (discussed in this chapter)

1) Valuer must ensure that the qualitative analysis undertaken:

a) Is in accordance with all appropriate practice standards

b) Meets the needs of the specific assignment

B. Financial analysis (discussed in Chapter 5)

C. General economic analysis (discussed in Chapter 6)

D. Industry analysis (discussed in Chapter 7)

III. Sources of Qualitative Information

1. Company-specific:

A. Common sources

1) Financial statements, annual reports, and other filings

2) Business or strategic plans

3) Reports submitted to lending institutions for financing

4) Board minutes

5) Websites and other marketing publications

6) Meetings with management and key personnel at the company's facilities

B. A SWOT analysis

2. Economic databases and statistics

3. Industry publications and statistics

4. Reliability of Sources

A. Be aware that certain information produced by the company may have been produced with an intended result in mind and may be biased.

B. Ask for corroboration if information is questionable.

C. Data gathering via the internet.

1) There are no limitations on who can contribute to it or on the content of the offerings.

a) Do not assume that all sources of data are equal in quality.

b) Use more than one source to verify and expand results.

2) Internet-based data is dynamic (information available today may not be available next week).

a) Must have thorough documentation of information obtained online

b) "Wayback" machine allows users to see archived versions of web pages (http://wayback.archive.org/web/).

IV. SWOT Analysis

1. A framework used to evaluate a company's strengths, weaknesses, opportunities, and threats.

2. Some factors to consider in a SWOT analysis are as follows:

Strengths and Weaknesses (Internal Factors)	Opportunities and Threats (External Factors)
• Financial capital	• Industry - marketplace
• Physical capital	• Industry - competitive forces
• Human capital	• Industry - suppliers
• Customer capital	• Political
• System capital	• Economic
• Organisational capital	• Socio-cultural
	• Competitors

3. A SWOT analysis can be used for the following purposes:

   A. As an audit of a company's current situation

   B. For strategic planning

   C. As a problem-solving tool

   D. As a decision-making tool

   E. As a resource allocation tool

4. The italicised points in the chart below are the main, overriding questions to consider in a SWOT analysis, and the non-italicised points are more specific.

Strengths (internal)	**Weaknesses (internal)**
▪ *What do you do better than your competitors do?* ▪ *What unique resources or property do you own?* ▪ How strong is the company in the market? ▪ What is its market position or share? ▪ Does the company have a clear communicable vision or direction?	▪ *What do your competitors do better than you do?* ▪ *What do you need to do to compete more effectively?* ▪ Is there a significant degree of reliance on one, or a small group of, customers or suppliers? ▪ Are operations heavily dependent on a particular individual in the company? ▪ What systems need to be improved? ▪ Does the company have the financial resources to purchase needed equipment, technology, or facilities? ▪ Does the company have the financial resources to withstand a downturn or unforeseen negative circumstances? ▪ Can the company support its growth rate?
Opportunities (external)	**Threats (external)**
▪ *What changes are occurring in the industry or in customer demands of which you can take advantage?* ▪ *What weaknesses of your competitors can you take advantage of?* ▪ Is the company entering new markets? ▪ Can the company upgrade its technology to lower costs? ▪ Can the company expand its geographic coverage?	▪ *What changes are occurring in the industry or in consumer demands that your competitors can take advantage of better than you can?* ▪ *What are your competitors doing to attract your customers?* ▪ What obstacles/challenges is the company facing? ▪ Are regulations or customer demands forcing a change in your products or services? ▪ Is technology threatening your market position? ▪ If there is pressure on your profit margins, what is its source?

5. Exhibit 2 (page 60) provides an example of a formal questionnaire for collecting input from management. The questionnaire has been developed using capital resources, economic, and political categories. It can be modified for industry-specific application.

6. Stages in a formal SWOT analysis:

   A. Stage 1 – collect input from the management team and tally the results to determine similarities and differences amongst management's opinions.

   B. Stage 2 – identify and understand the implications of management's collective input. For example, if the management team states that financial resources are their primary strength, the question should be asked, "What specifically about our financial resources are strengths?" It may be the cash reserves, the borrowing capacity, etc.

   C. Stage 3 – exploring with management what implications these strengths, weaknesses, opportunities or threats have on the company's strategy, risks, future growth potential, and financial performance.

V. Company-Specific Value Drivers (Operational and Financial)

1. Every company has specific operational and financial value drivers.

2. Generally, these value drivers are related to the industry and to the company's critical success factors.

3. Unless the valuer can identify the company's specific value drivers, it will be impossible to select the appropriate comparable companies.

4. Financial value drivers influence return on equity, enterprise value, and cash flows.

5. Operating value drivers are the operational procedures that allow the company to:

   A. Provide high-quality products and services

   B. Sell its products and services at a price that provides the company with a sufficient return on equity and is acceptable to the paying customer

Assignment 2, Part 1 – Qualitative Analysis of the Company (15 minutes)

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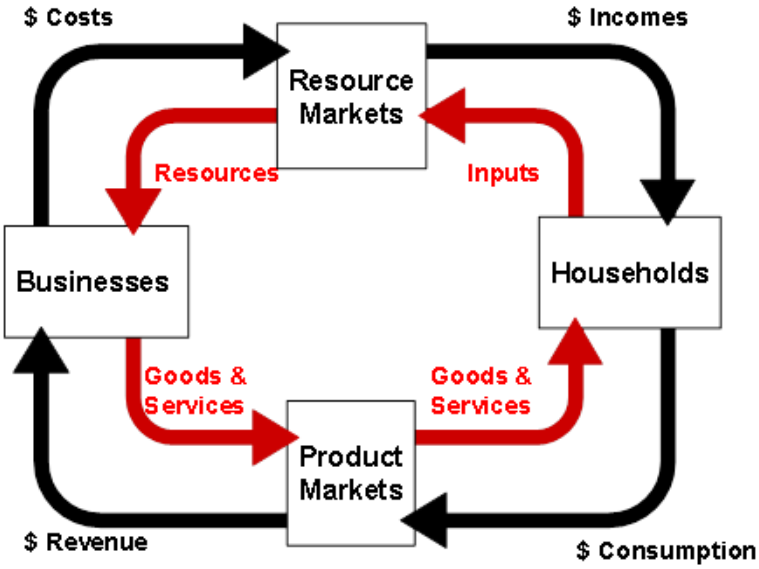
Chapter 4 Economic and Industry Analysis

I. Economic Analysis

1. Business is an integral part of an economy, particularly a free market economy.



2. On the most basic level, businesses purchase resources in the marketplace and sell goods and services in the marketplace.

3. Analysing and understanding the economic environment in which a business operates is fundamental to assessing risk and its impact on value.

4. The economic and related political environments in which a business operates can be viewed from three perspectives:

   A. The global environment

   B. The national environment

   C. The regional and local environment

5. Sources of economic data

   A. Company-specific industry databases

   B. Industry-specific data and publications prepared by trade associations

II. The Globalization of Economic Factors

1. Globalization is the worldwide movement toward cross-border flows of information, capital, and people.

2. Economic globalization creates both new opportunities and challenges for firms.

   A. The opportunities include:

      1) Access to new markets that were previously closed due to cost, regulation or indirect barriers

      2) The ability to tap resources such as labour, capital, technology, and knowledge on a worldwide basis

      3) The opportunity to participate in global production networks that are becoming prevalent in many industries such as automotive, electronics, toys and textiles

      4) Consumers are given access to a larger variety of goods at lower prices

   B. Challenges come from:

      1) Lower-cost foreign competitors entering a firm's domestic markets

      2) Domestic competitors reducing their costs through global sourcing, moving production offshore or gaining economies of scale by expanding into new markets

      3) Forcing firms to become more streamlined and efficient while simultaneously extending the geographic reach of their operations

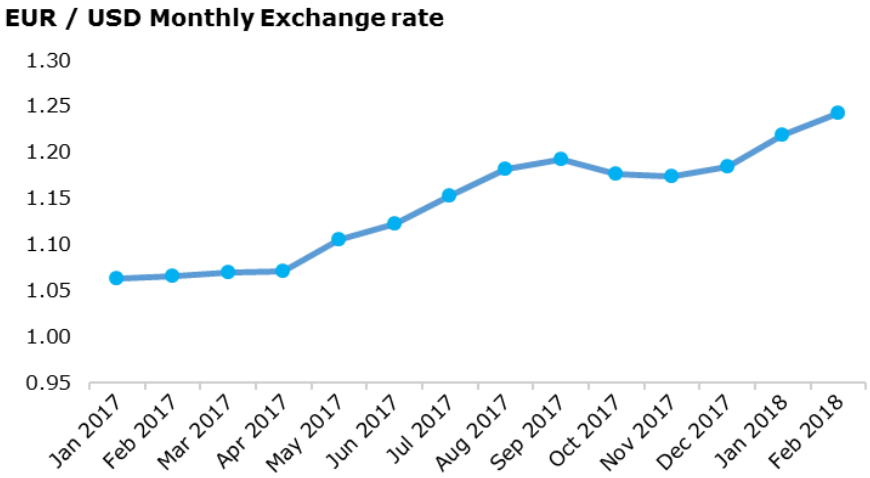
3. Global-specific risks

   A. Country risk – the risk that a country will not be able to honour its financial commitments. When a country defaults, it can harm the performance of all other financial instruments in that country as well as other countries with which it has relations. Country risk applies to stocks, bonds, mutual funds, options and futures that are issued within a particular country. This type of risk is most often seen in emerging markets or countries that have a severe deficit.

   B. Exchange rate risk – relative changes in currency exchange rates between the subject company's "home" currency and the currency for which the company buys from or sells into.

      1) Example: the U.S. dollar lost value against euro during the 2017.

2) A US company with a one-year contract denominated in €with an EU-based company saw an increase in the cost of its contract of 11.5% between January 2017 and December 2017. Suppose a US consulting company signed a contract in January 2017 to receive consulting services over a one-year period from an EU-based company for a payment of €1,000,000 due at the end of December 2017. In U.S Dollars, the company would have paid $1,062,243 if the contract were payable up front in January. By paying in December, the US Company pays $1,183,881, all due to a strengthening of the Euro during the one-year period.



C. Political risk – represents the financial risk that a country's government will suddenly change its policies (this is a major reason why second and third world countries lack foreign investment).

1) For foreign countries investing in China, the Chinese government designates, by industry, the percentage of the investment that must be owned by a domestic Chinese company.

4. Implications of globalisation on valuation

A. Globalisation increases the complexity of risk analysis.

B. Valuation opportunities exist outside domestic borders.

C. Need for valuers to understand foreign conventions in financial reporting, taxation, regulation, and culture on the valuation subject.

III. Country-Specific Economic Factors

1. Macroeconomic factors that affect business value are generally driven at the national level. These macroeconomic factors include:

A. General economic conditions – Each country has standard economic variables that portray the health of the economy. The valuer must research those variables and determine the relevance of each to the subject company and its industry.

1) Example: What is the relevance of the following macro variables on the following two companies?

a) German original equipment manufacturer that produces springs, screws, bolts, and other parts made to specification primarily to aerospace companies such as BAE Systems, Rolls Royce, Bombardier, and Boeing.

b) Office equipment and supplies manufacturer whose major clients include the German government offices (55%), German steel (17%).

2) GDP

a) German's gross domestic product growth forecasted at 1.84% for 2018. GDP growth is expected to slow down until 2022 to 1.22%.

3) Consumer spending and confidence

a) Real household disposable income grew by 1.95% in 2017.

4) Government spending

a) German government consumption projected to grow by 2% in 2018.

5) Business investments and inventories

a) Private consumption in Germany grew by an average of 3.2% in 2017.

6) Trade deficit

B. Inflation

1) Germany's consumer price index inflation forecast at 1.52% for 2018.

C. Interest rates

D. Unemployment

1) 2018 unemployment rate for Germany forecast at an average of 3.6%.

E. Equity and debt markets

F. Construction and manufacturing activity

G. Economic growth

H. Regulatory environment

1) Taxation

2) Industry regulation

3) Employment laws

4) Trade barriers/protection

IV. Regional and Local Economic Factors

1. Typical regional and local economic factors include:

A. Labour pool or lack thereof

B. Facility availability and cost

C. Distribution infrastructure

D. Local regulatory environment

1) Land use

2) Business regulations

3) Labour laws

4) Taxes and fees

V. Sources of Information for Economic Data

1. Standard & Poor's
2. Bloomberg
3. Capital IQ
4. European Commission (EUROPA, Eurostat)
5. Euromonitor
6. Key Note

7. Datamonitor

8. Economist Intelligence Unit

9. Thomson Reuters Datastream

VI. Industry Analysis

1. Every company operates within an industry. Some industries are clearly defined (e.g., fast food restaurants), while others are harder to define (e.g., consulting services firms).

2. Understanding the industry is extremely important to making value-based decisions or placing a value on a particular company within the context of that industry.

3. To effectively analyse an industry, it is recommended that the valuer use a structured analytical process to ensure that no material factors affecting the subject company are overlooked or misunderstood.

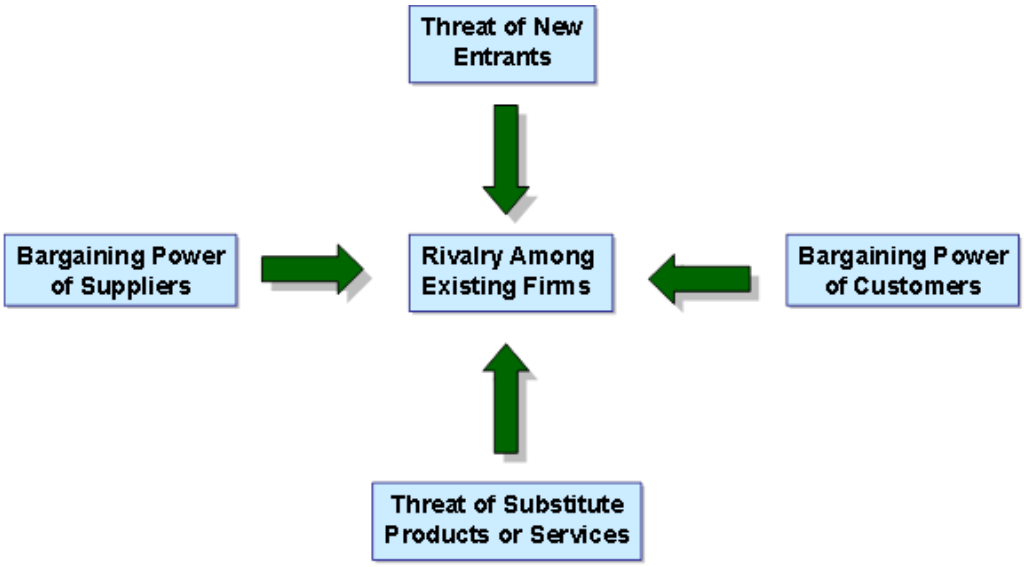
4. With experience, a valuer can quickly narrow down the factors relevant to a particular assignment.

5. One structure for analysing an industry was outlined by Michael Porter in 1979 (Porter's Five Forces). Porter is a Professor at the Harvard Business School and is a leading authority on competitive strategy, the competitiveness and economic development of nations, states, and regions, and the application of competitive principles to social problems.

VII. Porter's Five Forces

1. Porter's model is utilised to understand an industry and the forces that influence a company and its strategies.

2. Commonly used in North America



3. Porter's model should only be the foundation of an analysis. It does not constitute an entire analysis, and it will not result in a comprehensive analysis of a company's industry and its competition.

4. Five Forces Analysis

   A. Threat of new entrants

      1) Profitable markets that yield high returns will attract new competitors. Factors affecting the profitability of a market include:

         a) Economies of scale or other cost advantages

         b) Product differentiation

         c) Capital requirements

         d) Switching costs to buyers

         e) Access to distribution channels

         f) Government policies

      2) Barriers to entry are characteristics that reduce the rate of entry of new firms.

         a) Can be created or exploited to enhance a firm's competitive advantage.

         b) Can arise from several sources:

- Governments (e.g., laws regarding competition and monopolies, regulations)
- Proprietary knowledge and patents
- Asset requirements (special/difficult; low resale value; high initial costs)
- Organizational economies of scale (level of maximum cost-efficiency)

c) Barriers to exit are similar to barriers to entry.

- Exit barriers limit the ability of a firm to leave the market
- Unable to leave the industry, a firm must compete

d) Certain entry and exit barriers can be summarised as follows:

Easy to Enter if:	**Difficult to Enter if:**
· Common technology	· Patented/proprietary know-how
· Little brand awareness	· Loyalty to brand
· Good access to distribution channels	· Restricted distribution channels
· Low regulation	· Highly regulated
Easy to Exit if:	**Difficult to Exit if:**
· Saleable assets	· Specialized assets
· Low exit costs	· High exit costs
· Independent businesses	· Interrelated businesses

B. Threat of substitute products or services

1) The existence of products in other industries which offer a similar utility (motorcycles versus motor scooters)

2) Market conditions affecting the impact of substitutes:

a) Relative price of substitutes

b) Relative quality and level of differentiation of substitutes

c) Switching costs to customers

C. Bargaining power of customers (buyers)

1) The ability of customers to put a company under pressure

2) Market conditions affecting the impact of customer bargaining power:

a) Number of customers relative to suppliers

b) Product differentiation

c) Switching costs to use other product

d) Customer's profit margins

e) Customer's use of multiple sources

f) Customer's threat of backward and forward integration

g) Importance of product to customer

h) Customer's volume

3) Customers are powerful if:

a) They are few and/or concentrated (there are a few customers with significant market share – e.g., military arms of governments which use defence contractors)

b) They purchase a significant proportion of output (hold significant share of end customers – e.g., department stores)

c) They possess a credible backward integration threat (can threaten to buy producing firm or rival – e.g., auto manufacturers purchase of tires)

4) Customers are weak if:

a) Suppliers can threaten forward integration (e.g., movie production companies purchasing movie theatres)

b) Customer switching costs are high (products not standardised and customer cannot easily switch to another product – e.g., Honda versus Mercedes)

c) They are fragmented (little or low influence – e.g., most consumer products)

d) Suppliers supply critical portions of customers' input (e.g., Intel's relationship with PC manufacturers)

D. Bargaining power of suppliers

1) The ability of suppliers to put a company under pressure.

2) Market conditions affecting the impact of supplier bargaining power:

a) Supplier integration

b) Availability of substitute products

c) Importance of supplier's input to buyer

d) Supplier's product differentiation

e) Importance of industry to suppliers

f) Customer's switching costs to other input

g) Supplier's threat of forward integration

h) Customer's threat of backward integration

3) Suppliers are powerful if:

a) They pose a credible forward integration threat (e.g., a manufacturer of hospital supplies purchasing the supply distribution company)

b) They are few and/or concentrated (e.g., the drug industry's relationship with hospitals)

c) There is a significant cost to switch suppliers (e.g., Microsoft's relationship with PC manufacturers)

d) End customers are powerful (e.g., customers boycotting a retail establishment for the sale of foreign products; employee unions)

4) Suppliers are weak if:

a) There are many of them, and the products are standardised (e.g., tire manufacturer relationship to automobile manufacturers)

b) Customers can purchase commodity products (e.g., grocery stores with brand-name products)

c) There is a credible backward integration threat by customers (e.g. timber producer relationship to paper companies)

d) End customers are concentrated (e.g., garment industry relationship to major department stores)

e) End customers are weak (e.g., travel agent relationship with airlines)

E. Competitive rivalry among existing firms

1) Factors that affect rivalry:

a) Number of competitors

b) Relative size of competitors

c) Industry growth rate

d) Fixed costs versus variable costs

e) Product differentiation

f) Customer's switching costs

g) Diversity of competitors

h) Exit barriers

i) Strategic stakes

2) Competitive responses to rivalry:

a) Changing prices (raising or lowering prices to gain a temporary advantage)

b) Improving product differentiation (improving features, implementing innovations in the manufacturing process and in the product itself)

c) Creatively using channels of distribution (using vertical integration or using a distribution channel that is novel to the industry)

d) Exploiting relationships with suppliers

3) Factors increasing intensity of rivalry:

a) A larger number of firms (more firms must compete for the same customers and resources)

b) Slow market growth

c) High fixed costs (when total costs are mostly fixed costs, the firm must produce near capacity to attain the lowest unit costs, and high levels of production lead to a fight for market share)

d) High storage costs or highly perishable products

e) Customers have low switching costs

f) Low levels of product differentiation

g) When strategic stakes are high (e.g., a firm is losing market position or has potential for great gains)

h) When high exit barriers place a high cost on abandoning the product (e.g., asset specificity)

i) When competitors are diverse in terms of culture, history and philosophies

5. General strategies for effectively competing in light of the five forces

A. Cost leadership

1) A focus on low costs, which involves:

a) Facilities that maximum efficiency

b) Attention to cost reductions gained through experience

c) Tight control on costs and overhead

d) Elimination of marginal customer accounts

e) Minimisation of costs in areas like service, sales teams, advertising, and research and development (but this can be dangerous)

f) Utilisation of an information infrastructure that is capable of providing frequent, detailed cost control reports

g) Operation of a highly structured organization with defined responsibilities

h) Implementation of compensation incentives based on meeting quantitative goals

2) Risks include:

a) Technological advances making the prior capital investments obsolete

b) Focus on cost may overshadow need for product or marketing changes

c) Increases in inflation cannot be passed onto consumers by pricing products higher

B. Differentiation

1) Product uniqueness in terms of:

a) Design or brand image

b) Technological leadership

c) Product/service features or quality

d) Strong dealer network

2) Highly successful product innovators generally differentiate themselves by using more than one approach. Commonly required skills and resources include:

a) High-quality marketing skills

b) Strong product-engineering capabilities

c) A creative flair

d) A highly competent basic research team

e) A reputation for technological or quality leadership

f) A unique combination of skills drawn from related industries

g) A high level of cooperation amongst channels of distribution

3) Risks include:

a) Customers may be willing to sacrifice image, features or service to benefit from large cost savings

b) Customers' needs change, and they are no longer attracted to the company because of its differentiating characteristics

c) Imitation by competitors narrows or eliminates the perceived differentiation (mature industries)

C. Focus on a particular customer group

1) Providing the most effective or efficient services to a highly focused target group (customer group, segment of the product line, or geographic area).

2) Requires a combination of the same skills and resources as the differentiation strategy.

3) Risks include:

a) The cost advantages of serving an extremely focused target market become less than the cost savings of the low-cost provider serving a broad market

b) The differences in the products or services desired by the target market and those desired by the marketplace as a whole are narrow or are eliminated

c) Competitors identify a submarket within the company's target market and effectively out-focus the company

6. Correlation of the five forces and the generic strategies

A. The following table compares some characteristics of the generic strategies in the context of Porter's five forces.

	Cost Leadership	Differentiation	Focus
Entry Barriers	Ability to cut price in retaliation deters potential entrants.	Customer loyalty can discourage potential entrants.	Focusing develops core competencies that can act as an entry barrier.
Customer Power	Ability to offer lower price to powerful buyers.	Large customers have less power to negotiate because of few close alternatives.	Large customers have less power to negotiate because of few alternatives.
Supplier Power	Better insulated from powerful suppliers.	Better able to pass on supplier price increases to customers.	Suppliers have power because of low volumes, but a differentiation-focused firm is better able to pass on supplier price increases.
Threat of Substitutes	Can use low price to defend against substitutes.	Customers become attached to differentiating attributes, reducing threat of substitutes.	Specialized products and core competency protect against substitutes.
Rivalry	Better able to compete on price.	Brand loyalty to keep customers from rivals.	Rivals cannot meet differentiation-focused customer needs.

VIII. Sources of Information for Industry Data

1. Online providers of data such as Reuters, Bloomberg, Capital IQ, Standard & Poor's, Key Note, Datamonitor, Economist Intelligence Unit, Datastream.

2. Country or region-specific industry databases

   A. North America – Statistics Canada, Industry Canada, U.S. Bureau of the Census Statistical Abstract

   B. Europe – Eurostat (European Commission), Yahoo! UK & Ireland, Capital IQ (a Standard & Poor's business), Mergerstat

3. Industry-specific data and publications prepared by trade associations

Assignment 2, Part 2 – Company, Macroeconomic, and Industry Analysis (20 minutes)

Chapter 5 Quantitative Company Analysis

I. Introduction

1. As discussed at the beginning of Chapter 4, a quantitative analysis is necessary to obtain an understanding of the recurring or expected earnings or cash flows.

2. Valuer must ensure that the quantitative analysis is undertaken:

   A. Is in accordance with all appropriate practice standards

   B. Meets the needs of the specific assignment

II. Objectives of Financial Statement Analysis

1. Identify trends and what caused them

2. Identify unusual and non-recurring items, and understand why they happened

3. Enable a comparison of a subject company to an industry norm or peer group

4. Create a basis for developing financial projections or assessing company projections

III. Types of Financial Analysis

1. Trend Analysis

   A. Analysis of a multi-year spread of income statements, balance sheets, and possibly the statements of comprehensive income and cash flows.

   B. Goal is to:

      1) Identify positive and negative trends

      2) Review past growth patterns

      3) Assess what is “normal” for the company

   C. Number of periods in the analysis:

      1) Five years is common but will depend on specific case facts.

      2) For a cyclical company, should capture a full business or economic cycle

      3) If there have been dramatic changes in business condition or strategy, data from even two or three years ago may be irrelevant.

a) Consider obtaining forecasted or projected information if available and reliable

D. Income statement trends

1) Review levels and trends in sales and key expense items.

2) Review levels and trends in profitability: EBITDA, EBIT, pre-tax and post-tax profits (losses).

3) Identify reclassifications, new items, nonrecurring items, non-operating items.

E. Balance sheet trends

1) Note significant classes of assets and liabilities.

2) Review levels and trends in:

a) Working capital (current assets less current liabilities), with and without interest-bearing debt

b) Fixed assets

c) Interest-bearing debt and equity

F. Statement of cash flow trends

1) Reports cash inflows and outflows for a specific period and reconciles the accrual income statement to the cash flow generated by the business.

2) Cash flows are generally classified into three categories:

a) Cash flow from operating activities (CFO) – cash generated/used in the firm's normal operating activities, including sales, expense and changes in working capital items

b) Cash flow from investing activities (CFI) – cash used/received from acquisition or disposal of plant, equipment and other investments

c) Cash flow from financing activities (CFF) – cash used/received from transactions with sources of capital, e.g. proceeds from borrowing or issuing equity, outflows for payment of debt principal, dividends or repurchase of equity (interest payments are included in CFO because they are deducted as an expense on the income statement)

3) Uses for cash flow trend analysis:

a) Assessing liquidity – trends in cash generation, receivables collection, and timing of cash flows versus accrual income

b) Assessing financial strength – trends in cash flow from operations, ability to finance capital expenditures and debt service from operating cash flow

c) Assessing financial decisions – review of fixed asset purchases/disposals and investment trends

4) Cautions and potential pitfalls of cash flow trend analysis

a) Misclassification among the three types of cash flows can distort a firm's financial picture

b) Negative cash flows may be a positive sign for the business, if it is the result of growth

c) Leasing versus buying fixed assets results in CFO (lease expense is in CFO; purchased assets are in CFI)

2. Common-size analysis

A. Each line item on the income statement is expressed as a percentage of sales. Each line item on the balance sheet is expressed as a percentage of total assets.

B. Useful in comparing companies, particularly companies of different size.

C. Identifies relative trends.

D. Helps in making projections or evaluating budgets

Balance Sheet

	As of June 30			Common size		
	2018	2017	2016	2018	2017	2016
Assets						
Current assets:						
Cash & equivalent	7,131	3,541	1,260	*17.4%*	*12.8%*	*6.4%*
Trade notes	357	316	271	*0.9%*	*1.1%*	*1.4%*
Inventory	629	469	497	*1.5%*	*1.7%*	*2.5%*
Other current assets	1,473	1,279	895	*3.6%*	*4.6%*	*4.5%*
Total current assets	**9,590**	**5,605**	**2,923**	***23.5%***	***20.3%***	***14.7%***
Fixed assets:				-	-	-
Leasehold improvements	23,737	17,825	13,562	*58.0%*	*64.4%*	*68.4%*
Equipment	9,087	6,691	5,225	*22.2%*	*24.2%*	*26.3%*
Construction in progress	4,205	1,665	743	*10.3%*	*6.0%*	*3.7%*
Total fixed assets, cost	37,029	26,181	19,530	*90.6%*	*94.6%*	*98.5%*
Accumulated depreciation	(7,629)	(5,802)	(4,063)	*(18.7%)*	*(21.0%)*	*(20.5%)*
Total fixed assets, net	**29,400**	**20,379**	**15,467**	***71.9%***	***73.7%***	***78.0%***
Other assets	1,903	1,683	1,447	*4.7%*	*6.1%*	*7.3%*
Total Assets	**40,893**	**27,667**	**19,837**	***100.0%***	***100.0%***	***100.0%***
Liabilities & Equity						
Liabilities:						
Current Liabilities:						
Accounts payable	2,303	1,998	1,488	*5.6%*	*7.2%*	*7.5%*
Curren portion of long term debt	259	240	422	*0.6%*	*0.9%*	*2.1%*
Other curent liabilities	2,604	2,061	1,585	*6.4%*	*7.4%*	*8.0%*
Total current liabilities	**5,166**	**4,299**	**3,495**	***12.6%***	***15.5%***	***17.6%***
Long term debt:						
Long term debt	10,000	-	1,800	*24.5%*	-	*9.1%*
Capital lease obligation	477	478	479	*1.2%*	*1.7%*	*2.4%*
Total long term debt	**10,477**	**478**	**2,279**	***25.6%***	***1.7%***	***11.5%***
Other debt:						
Royalty fee obligation	-	259	499	-	*0.9%*	*2.5%*
Deferred income taxes	324	332	276	*0.8%*	*1.2%*	*1.4%*
Total other debt	324	591	775	*0.8%*	*2.1%*	*3.9%*
Total liabilities	**15,967**	**5,368**	**6,549**	***39.0%***	***19.4%***	***33.0%***
Equity						
Common stock	63	63	47	*0.2%*	*0.2%*	*0.2%*
Additional paid-in capital (a)	15,685	15,638	9,861	*38.4%*	*56.5%*	*49.7%*
Retained earnings (a)	9,238	6,598	3,591	*22.6%*	*23.8%*	*18.1%*
Less: treasury stock	(60)	-	(211)	*(0.1%)*	-	*(1.1%)*
Total shareholders' equity	**24,926**	**22,299**	**13,288**	***61.0%***	***80.6%***	***67.0%***
Total Liabilities & Equity	40,893	27,667	19,837	*100.0%*	*100.0%*	*100.0%*

Profit & Loss Statement

	As of June 30			Common size		
	2018	2017	2016	2018	2017	2016
Revenues:						
Restaurant sales	50,046	40,948	29,920	*94.5%*	*94.6%*	*94.6%*
Franchise income	2,785	2,217	1,609	*5.3%*	*5.1%*	*5.1%*
Net rental income	108	108	96	*0.2%*	*0.2%*	*0.3%*
Total net revenues	**52,939**	**43,273**	**31,625**	***100.0%***	***100.0%***	***100.0%***
Total cost of goods sold	12,491	10,309	7,611	*23.6%*	*23.8%*	*24.1%*
Gross margin	**40,448**	**32,964**	**24,014**	***76.4%***	***76.2%***	***75.9%***
Operating expenses:				-	-	-
Restaurant operating expenses	24,526	19,769	14,395	*46.3%*	*45.7%*	*45.5%*
General and administrative	5,808	5,037	4,116	*11.0%*	*11.6%*	*13.0%*
Depreciation and amortization	2,337	1,798	1,309	*4.4%*	*4.2%*	*4.1%*
Advertising and promotion	1,206	993	798	*2.3%*	*2.3%*	*2.5%*
Total operating expenses	**33,877**	**27,597**	**20,618**	***64.0%***	***63.8%***	***65.2%***
Operating income	**6,571**	**5,367**	**3,396**	***12.4%***	***12.4%***	***10.7%***
Other recurring income (Exp.)				-	-	-
Investment income	150	118	78	*0.3%*	*0.3%*	*0.2%*
Interest expense	(185)	(295)	(186)	*(0.3%)*	*(0.7%)*	*(0.6%)*
Other income (Exp.)	(299)	-	-	*(0.6%)*	-	-
Total other recurring	**(334)**	**(177)**	**(108)**	***(0.6%)***	***(0.4%)***	***(0.3%)***
Pretax income, continuing operations	6,237	5,190	3,288	*11.8%*	*12.0%*	*10.4%*
Provisions for income taxes	2,678	2,183	1,362	*5.1%*	*5.0%*	*4.3%*
Net income from continuing operatic	**3,559**	**3,007**	**1,926**	***6.7%***	***6.9%***	***6.1%***
Other nonrecurring income (Exp.):				-	-	-
Cum. Effect of acct. change	-	-	120	-	-	*0.4%*
Litigation settlement	-	-	-	-	-	-
Total other nonrecurring	**-**	**-**	**120**	**-**	**-**	***0.4%***
Net income	**3,559**	**3,007**	**2,046**	***6.7%***	***6.9%***	***6.5%***

3. Ratio Analysis

   A. Appendix III provides the basic financial ratios relevant to this course. Several ratios reflected in the discussion below contain additional analytical concepts. Ratios should express relationships that have significance (i.e., average accounts receivable collection period for a fast-food restaurant is not meaningful).

   B. To interpret ratios for a subject company, they need to be compared with an industry average, peer group, or comparable companies, or to the company's historical trends.

   C. It is helpful to calculate the same ratios for historical results and for projections. Any changes in future performance can then be identified and explained.

D. Ratio categories:

1) Liquidity ratios

a) Measure a company's ability to pay off its short-term debts and obligations

b) In addition to the current and quick ratios, it is common to analyse a company's cash position for two purposes:

- Cash is the most liquid asset and sheds light on a company's liquidity.
- The valuer should determine an operating level of cash in working capital. To the extent that a company has excess cash or an inadequate amount of cash, adjustments may be considered.
- Some straightforward cash measurements are:
  - ⇒ (cash + marketable securities)/total assets
  - ⇒ (cash + marketable securities)/revenues
  - ⇒ These ratios are compared to industry norms or the guideline public companies.

2) Activity or turnover ratios

a) Measure how effectively a company employs its assets

b) Turnover ratios combine a flow measurement from the income statement in the numerator with a point-in-time value from the balance sheet in the denominator. Because of this, these ratios can be calculated two ways:

- With the denominator expressed as an average of the beginning and ending balance sheet account amount (this is theoretically more correct)
- With the denominator expressed as at the ending balance sheet amount

c) In addition to the formulas shown in Appendix III, the cash cycle analysis can uncover shortcomings in a company's working capital management.

- Cash Cycle = Days Inventory Ratio + Days A/R Ratio – Days Payable Ratio

- The cash cycle analysis looks at the average amount of time it takes a company to move inventory plus the amount of time it takes to collect cash from the sale of inventory, minus the amount of time it takes the company to pay its suppliers for inventory.

  ⇒ The cash cycle is meaningful when compared to reliable industry norms. A higher ratio here may indicate that the company is not managing its working capital properly.

3) Leverage/coverage ratios

   a) Measure financial risk:

      - The extent to which debt is used in a company's capital structure
      - The company's long-term ability to meet payments to creditors

   b) Addresses the utilisation of "financial leverage" (the use of debt)

   c) In its broadest meaning, debt can be thought of as all capital supplied by investors other than equity holders, including:

      - Trade accounts payable and accrued expenses
      - Deferred (future) taxes
      - Interest-bearing debt
      - All other claims of stakeholders on the future income of the business that are senior to those of the equity holders

   d) Financial leverage is generally measured either as a ratio of total liabilities "debt" to total assets or as a ratio of debt to equity investment.

4) Profitability ratios

   a) Measure how effectively the company manages expenses and profits.

   b) Addresses the ability of the enterprise to control its operating costs relative to its sales stream.

   c) Profitability is usually measured as a "profit margin" (the percentage ratio of profits to sales).

- The "bottom line" traditionally is defined as "post-tax profit (loss) (or net income after tax)", although other measures of profitability such as gross profit and operating profit are also important to consider.

- Measures of profitability differ depending upon whether enterprise value or equity is being valued.

  ⇒ If invested capital is being analysed, then a return on assets (ROA) or return on invested capital (ROIC) should be considered. Instead of equity earnings, these ratios use returns to all stakeholders in the company such as earnings before interest and tax (EBIT); earnings before interest tax, depreciation, and amortization (EBITDA); or net operating profit after tax (NOPAT).

$$\text{Invested Capital ROA} = \frac{\text{EBIT}}{\text{Total Assets}}$$

$$\text{ROIC} = \frac{\text{EBIT}}{\text{Total Equity} + \text{Interest bearing debt}}$$

  ⇒ The significance of these ratios is that they comment on the company's operating performance before consideration of capital structure.

d) Volatility of profit margins, as with volatility in sales, is an indication of risk regarding future returns, and therefore tends to increase the perception of investment risk and reduce value.

5) DuPont Formula

a) A three-factor analysis focusing on how well the company is managing the company's financial returns (return on equity – post-tax profits (losses) /equity) on an enterprise investment level.

b) Developed in the early 1900s at either General Motors or the DuPont Corporation, but made famous by the DuPont CFO.

c) The three financial factors noted in the DuPont Formula are:

- Profitability (measures operating efficiency)

- Turnover (measures asset-use efficiency)
- Leverage (measures how effectively management is controlling a company's financial capital structure)
- The DuPont formula can be applied on a pre-tax or after-tax basis. It can also be applied on an equity basis (using ROE) or invested capital basis (using ROIC).
- The classic DuPont formula is:

$$\text{ROE} = \frac{\text{EBT}}{\text{Sales}} * \frac{\text{Sales}}{\text{Assets}} * \frac{\text{Assets}}{\text{Equity}}$$

⇒ For example, consider two retail chains, one that sells high end, high cost products, and a second that sells discount items.

⇒ The first chain will generate ROE through high EBT/Sales and a relatively low Sales/Asset ratio, while the second will generate ROE through a low margin and a high turnover.

d) Known for its breakdown of the "classic" formula for return on equity.

4. Comparative Financial Analysis

A. To compare a subject company to industry ratios or comparable companies, be sure there is consistency in how the ratios are calculated.

1) Most financial ratios can be calculated in a number of ways. For example, return on assets can be calculated based on end-of-year assets or on average assets and it can be calculated with different measurements of income in the numerator.

B. Industry financial data

1) Online providers of data such as Reuters, Bloomberg, Standard & Poor's, Mergerstat, etc.

2) Company-specific industry databases

a) Europe – European Commission (Eurostat and EUROPA), Yahoo! UK & Ireland

b) Canada – Statistics Canada, Industry Canada

c) United States – U.S. Bureau of the Census Statistical Abstract

3) Industry-specific data and publications prepared by trade associations

C. Comparable publicly traded or transaction data

1) This is the most important comparison for the market approach

2) Used to analyse the performance of the subject company compared to the performance of chosen comparable companies

3) Must consider adjustments required to be made to the market multiples (market approach) or discount rate (income approach) applied to the subject company

IV. Financial Statement Adjustments

1. Adjustments depend on the valuation method used and whether a non-controlling or controlling interest is being valued.

2. Four types of financial statement adjustments:

A. Financial presentation adjustments – allows for a better comparison between the subject company and industry counterparts or comparable companies

1) Restate assets or liabilities from book value to fair value

2) Depreciation method

B. Discretionary expenses of the business

1) Owners' (and related party) compensation and perks

2) Travel and entertainment

3) Above or below market rent, when property is owned by a related party

C. Non-operating or excess items – assets not necessary for operating the business and their related income and expense

1) Non-operating (redundant) assets – e.g., vacation homes, boats, etc.

2) Excess assets – e.g., excess cash, investments, excess plant capacity

D. Non-recurring items – items not expected to occur in the future

1) Nonrecurring items or unusual

2) Continuing vs. discontinued operations

3) Expense or sales levels that have changed significantly (e.g. increased rent)

E. Adjustments to balance sheet are illustrated in the chart below:

	Current Year EUR	Adjustments EUR		Adjusted EUR
Assets				
Current Assets				
Cash and cash equivalents	740,000			740,000
Financial Assets at Fair Value	100,000			100,000
Accounts Receivable	2,155,409			2,155,409
Inventory	1,029,866			1,029,866
Prepaid expenses	2,500			2,500
Total Current Assets	4,027,775	-		4,027,775
Fixed Assets				
Land & Building	302,865	(49,760)	**a**	253,105
Furniture & Fixtures	155,347	(113,120)	**a**	42,227
Automobiles	478,912	(391,981)	**a**	86,931
Machinery & Equipment	759,888	(343,622)	**a**	416,266
Total Fixed Assets (at cost)	1,697,012	(898,483)		798,529
Accumulated Deprec.	(1,298,325)	1,298,325	**b**	-
Total Fixed Asset (net)	398,687	399,842		798,529
Real Estate (non-operating)	90,879	43,121	**c**	134,000
Other Assets				
Goodwill (net)	95,383	(95,383)	**d**	-
Organization Cost (net)	257	(257)	**d**	-
Investments	150,000	20,000	**e**	170,000
Patents	-	100,000	**d**	100,000
Total Other Assets	245,640	24,360		270,000
Total Assets	4,762,981	467,323		5,230,304
Liabilities & Equities				
Current Liabilities				
Accounts Payable	1,935,230			1,935,230
Notes Payable-Current	50,000			50,000
Accrued Expense Payable	107,872			107,872
Income Taxes Payable	-	267,049	**f**	267,049
Total Current Liabilities	2,093,102	267,049		2,360,151
Long Term Debt	350,000			350,000
Deferred Income Taxes	100,000			100,000
Total Liabilities	2,543,102	267,049		2,810,151
Equity				
Ordinary shares	502,500			502,500
Retained Earnings	1,717,379	200,274	**g**	1,917,653
Total Equity	2,219,879	200,274		2,420,153
Total Liabilities and Equity	4,762,981	467,323		5,230,304

Notes

A Deduct economic depreciation
B Remove accounting depreciation
} (an accounting policy adjustment)
C Add appreciation in valur, per real estate appraisal
D Remove historical goodwill. Value identifiable intangibles and put on books
E Add appreciation in value of other investments and adjust to market value
F Add tax liability of total adjustments at 40% tax rate
G Summation of adjustments

V. Growth Rates

1. The expected future growth of returns to the enterprise investors is a key determinant of value.

2. An investor in an enterprise (or an asset owned by an enterprise) receives two types of return: current cash distributions and growth in the value of the investment. The "capital appreciation" of the investment is directly dependent upon the expected growth in future returns.

3. Volatility in growth rates indicates uncertainty regarding future returns and tends to increase investment risk and reduce value.

4. Two methods of measuring growth are:

   A. Average annual growth – the average of growth for one period calculated for two or more consecutive periods

   B. Compound average annual growth rate (CAGR) – calculated as follows:

$$\left[\left(\sqrt[(n-1)]{\frac{\text{Amount in } period\ n}{\text{Amount in } period\ 1}}\right) - 1.0\right] \times 100$$

or

$$\left[\left(\frac{\text{Amount in } period\ n}{\text{Amount in } period\ 1}\right)^{1/(n-1)} - 1.0\right] \times 100$$

   Where:
   n = number of data points
   n–1 = number of compounding periods

   C. Average and compound growth rates are important but can be misleading because they are based only on the beginning and ending years. They say nothing about what happened in the years in between.

Assignment 3 – Financial Statement Adjustment and Analysis (30 minutes)

Chapter 6 Market Approach

I. Introduction

1. A way of determining value based on the stock market trading prices or transaction multiples of shares or assets of similar businesses.

2. Based upon the principle of substitution: a prudent buyer will pay no more for an interest in an asset or business than it would cost to acquire a substitute property with the same utility.

3. The businesses that are deemed comparable enough for effective comparison are called “comparable” or, “guideline” companies, because they will provide guidance to the valuer during the analysis.

4. Public (or listed) versus Private Companies

   A. There are differences between the public equity markets and the market for private companies that can make a comparison relatively difficult for a private subject company:

      1) Public companies are often vertically or horizontally integrated, while private companies usually are not.

      2) Management, financial stability, strategic planning, board of directors, products, supply-chains, and market presence are more developed and/or mature for public companies than private companies.

      3) Private companies typically have limited geographic reach as compared to public companies.

      4) Public companies generally have a greater management depth as compared to private companies.

      5) Management typically focuses on accounting-based earnings for public companies, while private companies tend to focus on cash flows.

      6) Public companies generally have greater access to financial markets and funding sources and have a greater amount of financial resources as compared to private companies.

II. Guideline Public Company Multiple Method

1. Introduction

   A. Valuer uses share price multiples of guideline public (i.e., listed) companies in conjunction with some other factors (such as earnings, cash flow, book value, etc.) to create a value multiple, which is applied to the subject company's corresponding parameter to arrive at a value.

   B. A value multiple is a ratio that uses a comparable company's market capitalisation (through the share price), or enterprise value, as the numerator and a parameter such as a measure of the comparable company's operating results, financial position or other metric (e.g., capacity, employees, assets under management.) as the denominator.

   C. Comparability – for the market approach to be properly applied, the subject company must be similar to the companies that it will be compared to:

      1) Industry

      2) Size (sales, total assets, or market capitalisation)

      3) Past growth of sales and earnings, and growth expectations

      4) Length of time in operation

      5) Quality of management

      6) Financial risk, financial position and liquidity

      7) Stability of past earnings and dividend rates and records

      8) Competitive position (market penetration, geographic dispersion)

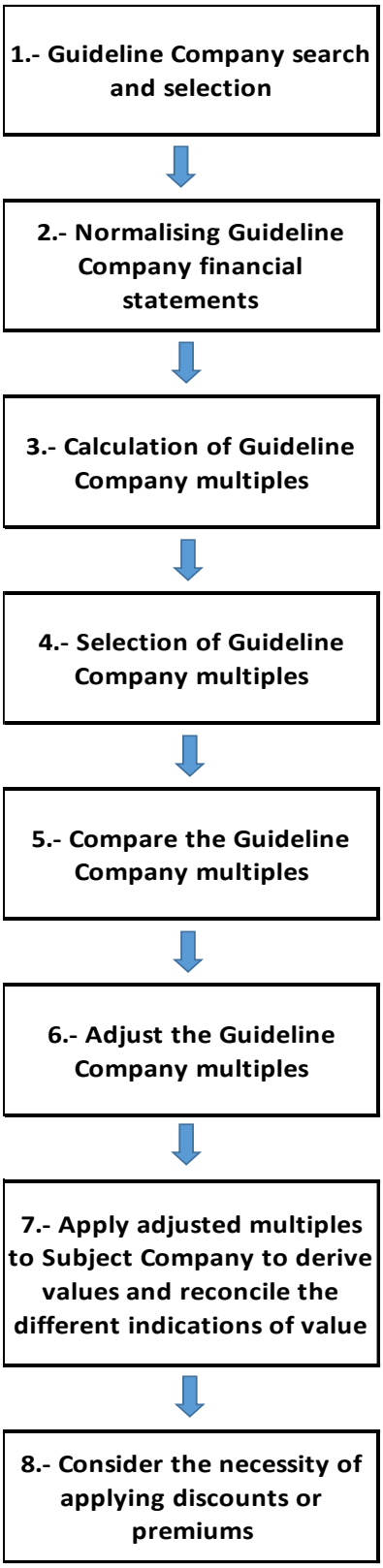
      9) General types of goods or services produced

      10) Number and type of different business segments

      11) Labour versus capital employed and amount of investment in plant and equipment.

      12) Level of technology employed, and the skill requirements of the workforce

D. Basic steps involved in the Guideline Public Company Method:



E. Key Advantages of the Guideline Public Company Method

1) Objective and empirical

2) Data is relatively easy to obtain

3) Data is easy to understand and apply

4) Data typically includes all assets (tangible and intangible)

5) Does not usually rely on subjective forecasts

6) Incorporates current market conditions – reflecting investor growth and risk expectations

F. Key Disadvantages of the Guideline Public Company Method

1) Requires ability to identify comparable companies

2) Unknown or hidden assumptions regarding risk or growth

G. The following chart illustrates a simple example of the guideline public company multiples method, using historical data for a business. You will understand the information in this chart once you have gone through this chapter.

		Selected Types of Market Multiples		
		Enterprise Value/ EBIT		Equity Value/ Profit After Tax
Guideline Public Company A		17.9		29.8
Guideline Public Company A		10.5		16.4
Guideline Public Company B		11.3		18.3
Guideline Public Company C		15.0		22.2
Guideline Public Company D		12.0		18.0
Guideline Public Company E				
Average		**13.3**		**20.9**
Median		12.0		18.3
Range high point		17.9		29.8
Range low point		10.5		16.4
Slected Market Multiples				
Median		**12.0**		**18.3**
+/- Adjustments (-)	X	80%	X	80%
Adjusted Multiples		**9.6**		**14.6**
Subject company financial metric		1,250,000		510,000
		(EBIT)		(Net Income)
Indicated Value (Rounded)		12,000,000		7,466,400
Less Debt for Enterprise Value		3,675,000		-
Indicated Equity Values		**8,325,000**		**7,466,400**

* - a reduction in applied market multiples due to perceived greater risk and more moderate outlook for growth for the subject company

EXAMPLE RECONCILIATION				
Indicated Equity Values		**8,325,000**		**7,466,400**
Final Weighting	X	70%	X	30%
		5,827,500		**2,239,920**
Reconciled Value (Rounded)		**8,067,420**		

It is not advisable to use arbitrary weighting to arrive at the value conclusion

2. Step 1 – Guideline Public Company Search and Selection

   A. Create a list of potential guideline public companies (as many as practical) through:

      1) Discussions with subject company management

      2) NACE/SIC code search

We have used as few as two or three guideline companies. However, in those cases we would be reluctant to rely on the guideline publicly traded company method exclusively. Our confidence rises sharply when we can find four to seven good guideline publicly traded companies.

Shannon P. Pratt, Valuing Closely-Held Businesses, *p. 274*

a) Could possibly use multiple codes to search for guideline public companies

b) Use an internet search engine to find companies by industry code

c) If the subject has one major business and a number of relatively small businesses, then overall value will be driven by the major business segment, or the assignment may need to be split and valued separately.

d) The fact that you may find a guideline public company within a SIC code search, it does not mean the market value of that guideline company is driven by that specific SIC code. The valuer needs to carefully search in which SIC code the guideline public company generates the majority of the revenues.

3) Key word search

4) Online databases

5) Industry research

B. Examine each guideline public company's business description to obtain a better understanding and eliminate certain companies.

C. Consider size restrictions to eliminate certain companies

1) Many valuers believe that size restrictions should not be placed on the comparable company search criteria, and that the size differential should be made up in the multiple because of the risk factors relative to the size differential.

2) Must use common sense (e.g., can't compare a small software developer to Microsoft).

D. Consider geographic restrictions to eliminate certain companies.

1) As discussed in Chapter 6 (Macroeconomic Analysis), caution must be used when comparing companies located in different countries because of differing:

a) Tax rates and regulations

b) Political, social, and economic issues

c) Available market

E. Ensure that the guideline public companies' shares are actively traded (liquidity)

1) When they are thinly traded, valuer should investigate whether the trading that took place is among market participants or insiders.

2) If insiders are involved, they may have knowledge that the hypothetical market participant may not have, and therefore, the true definition of fair value may be violated.

3) If your search results in a large number of companies that are thinly traded, it may be better than having no guideline public companies at all.

4) For example:

	Average Daily Volume	Public Float	Shares Outstanding	Public Float/Shares Outstanding	Average Daily Volume/Public Float	Average Daily Volume/Shares Outstanding
Company A	97,000	40,500,000	42,000,000	96.4%	0.2%	0.2%
Company B	300,000	23,000,000	30,000,000	76.7%	1.3%	1.0%
Company C	50,000	500,000	1,000,000	50.0%	10.0%	5.0%

5) Based on the above exhibit:

a) Company A is the most widely held security of the group (the public float as a percentage of shares outstanding is the highest for Company A), which would positively affect an assessment of its liquidity. However, given that both the public float and average daily volume of Company A comprise such a small percentage of its shares outstanding, one may consider this security illiquid relative to the others. It would likely take some time for a large block of shares (blockage, as discussed below) to be fully absorbed by the market (based on historical trading volumes).

b) Company C would be viewed as the most actively traded since the average daily volume, as a percentage of both its public float and shares outstanding is the highest for this company as compared to Company A and Company B.

6) Liquidity is also impacted by factors related to blockage (where a large holding of shares creates an imbalance in the average trading volumes).

7) The greater the block of shares, as compared to average daily volumes, the greater the downward influence on value, since it will take longer for the market to fully absorb the shares (assuming average trading volumes).

F. Consider share price history

1) Large price swings could indicate changes in the economy, industry, or company, and you will need to understand these factors to properly apply comparable company multiples.

G. For companies that have been deemed comparable enough for initial consideration, gather financial and other information at and preceding the valuation date (annual and interim financial statements, press releases, etc.) from sources such as Standard & Poor's, OneSource, Hoovers, Bloomberg, Thomson Reuters, Yahoo!Finance, Capital IQ, Capital IQ Compustat, Mergent, and Moody's.

1) Extract financial information for the desired timeframe (as close to the valuation date as possible).

a) Last Twelve Months (LTM) data is often used.

b) For instance, assume that:

- The valuation date is January 31, 2011
- The comparable company's year-end is September 30 and it issues quarterly statements
- The market is pricing companies based on all available information, including the December 31, 2017 information:

December 31, 2017 Quarterly EBIT
+ September 30, 2017 Annual EBIT
- December 31, 2016 Quarterly EBIT
= December 31, 2017 LTM EBIT

- Consider obtaining forecasted financial information, if available and reliable.

3. Step 2 – Normalising the Guideline Public Company Financial Statements

A. The historical financial performance statements of the guideline public companies may need to be adjusted in order to make them more relevant.

B. The following types of "normalisation" adjustments may be required:

1) Accounting Policy Adjustments (for comparability) (also called Translation Adjustments) – to reflect the same accounting policy for the guideline public companies and the subject company.

a) Accounting for inventory, capital asset depreciation, etc.

2) Unusual/Nonrecurring Adjustments (for predictability) – to enable the historical earnings to be made more predictive of future financial performance.

3) Surplus or Non-Operating Asset Adjustments (for core operations) – to restate the historical earnings so that they reflect only the economic performance of the normal business operations.

C. With the financial statements normalised, the valuer can now:

1) Calculate the financial ratios and market multiples using adjusted operating metrics for the denominators.

2) Perform the comparative analysis between the guideline public companies and the subject company, which will allow the final application of adjusted market multiples to derive indications of value.

4. Step 3 – Calculation of the Multiples

A. Multiple = Price/Financial Metric

1) Numerator can be on an equity or enterprise value basis

a) Equity value = market capitalisation (# shares x price per share)

b) Enterprise value = equity value + interest-bearing debt

- Some valuers will net the excess (surplus) cash balance against the interest-bearing debt. Judgement is required in identifying how much of cash is surplus to day-to-day requirements.

- The enterprise value is usually used when there are significant differences in the financial leverage between the subject and comparable companies. See Exhibit 3.

EQUITY VALUE	
Metric	**Appropriate Use**
Price/ Equity Cash Flow	-w hen company has low income compared to depreciation, or w hen depreciation reflects a low level of physical, functional, or economic obsolscence.
Price/ Net Income	-w hen company has high income compared to depreciation, or w hen depreciation reflects actual or economic physical w ear and tear, and company has “normal” tax rates. -w hen investment and debt are more closely related to operations than to pure financing activities
Price/ EBT	-w hen company has high income compared to depreciation, or w hen depreciation reflects actual or economic physical w ear and tear, and company has "abnormal" tax rates (e.g., smaller companies, w hich generally try to minimize taxes.
Price/ (Seller's) Discretionary Earnings	SDE = EBITDA + primary ow ner's salary and perks. -smaller, ow ner-operated businesses
Price/ Sales	-w hen company is "homogenous" in cost structure to guideline companies -smaller businesses w hich are cash-driven -service companies and companies that are light in tangible assets -w hen net income or other measures of earnings (EBIT, EBITDA, etc.) are negative.
Price/ Book Value	-w hen there is a strong correlation betw een book value and return on equity (i.e., w here tangible assets are an important component of value), and w hen data for a specific date is available (rather than a period in time).
Price/ Dividends (or Dividend-Paying Capacity)	-w hen company regularly pays dividends, or has the ability to regularly pay dividends. -"capacity" means ability to fund dividends after financing current operations and grow th. -for valuation of a minority interest, actual dividends are more important than capacity, since minority cannot force dividends to be paid.

ENTERPRISE VALUE	
Metric	**Appropriate Use**
Enterprise Value/ Net Cash Flow before Interest	-w hen company has low income compared to depreciation, or w hen depreciation reflects a low level of physical, functional, or economic obsolscence.
Enterprise Value/ Net Operating Profit After Tax (before	-w hen there is similarity in capital expenditures depreciation methods and tax rates.
Enterprise Value/ EBIT	-w hen there is similarity in capital expenditures and depreciation methods; eliminates effect of differences in tax rates.
Enterprise Value/ EBITDA	-w hen there are differences in capital expenditures and depreciation methods. -need to consider costs that may be expensed in some companies, but capitalized and amortized in others.

c) Denominator can use a variety of financial performance metrics over a specific period.

2) Various comparable companies’ multiples should be analysed, and the valuer should be able to explain any significant differences.

3) The multiples derived from the marketplace should be adjusted for the differences between the subject company and the comparable companies. This is discussed later in this chapter. The result is that the multiple that will ultimately be applied to the subject company to estimate value will probably not be the same as any of those derived from the comparable companies.

a) Risk and other characteristics influence the adjustment of the multiples.

B. Different industry sectors may use different types of multiples. Those multiples include both financial and operational metrics. Here below are presented only a few industries:

1) Manufacturing industry

a) EV/EBITDA, EV/EBIT, EV/NOPAT, EV/Sales, P/E are the most used multiples.

2) Oil & Gas industry

a) In addition to EV/EBITDA and EV/EBIT, there are two other multiples widely used EV/daily production (BOE) and EV/Reserves

- Daily production is expressed in barrels of oil equivalent (BOE)
- Reserves can be expressed as (1) Proven (or 1P), (2) Proven + Probable (2P) and (3) Proven + Probable + Possible (3P). However, the 2P reserves are mostly used

3) Financial Industry

a) This industry (both banks and insurance companies) uses equity multiples

b) The most used multiples are:

- For banking sector MVE/Net Profit, MVE/NBV, but also MVE/Deposits, and MVE/Loans
- For the insurance sector MVE/Net Profit, MVE/Premiums and MVE/NBV.

5. Step 4 - Selection of the appropriate type of market multiples to use

A. The selection of the appropriate multiple (historical vs. forecasted; enterprise vs. equity) is difficult because it involves substantial informed judgement.

B. The valuer will end up with a range of multiples (and values, later in the process), so he or she should consider the applicability of each value indicator in each specific case.

C. Time period of financial metrics (denominator)

1) Historic

   a) Last twelve months (LTM) – uses the most recent financial information but may require use of interim statements.

   b) Last financial year

   c) Historical or weighted averages – useful when historical earnings vary significantly.

   d) Complete business cycle – usually longer than three to five years.

2) Projected/ Forecasted

   a) May be useful, particularly when future earnings will be significantly different, but may include biases and may not be available.

      - For example, suppose we need to value Company A's equity at 31 Jan 2018.
      - We found a comparable public company with market capitalisation of €25 million and debt of €5 million at 31 Jan 2018.
      - Assume that we want to apply an EBIT multiple and that the comparable company had EBIT of €5 million at 31 Dec 2017 and forecasted EBIT of €7 million at 31 Dec 2018.
      - So, the historic EBIT multiple as at 31 Jan 2018 = (25+5)/5 = 6x. The forecasted EBIT multiple at 31 Jan 2018 = (25+5)/7 = 4.3x.
      - If Company A had EBIT of €10 million at 31 Dec 2017, forecasted EBIT of €15 million at 31 Dec 2018, and debt of €3 million at 31 Jan 2017:

        ⇒ Applying a historic multiple, enterprise value = 6x * €10 million = €60 million.

        ⇒ Applying a prospective multiple, enterprise value = 4.3x * €15 million = €64.5 million

        ⇒ Therefore, the enterprise valuation range is €60 million to €64.5 million.

⇒ The equity value range is €57 million to €61.5 million.

D. Equity versus Invested Capital Multiples

1) A list of commonly used equity and enterprise value multiples and their most appropriate uses are reflected in the charts above.

2) Equity multiples are more appropriate when the subject and comparable companies have similar capital structures.

3) Enterprise value multiples are more appropriate when there is dissimilarity in capital structure between the subject and comparable companies.

a) When an enterprise value method is used, the valuer will determine the value of the company's enterprise value (equity plus debt at market values) rather than just the equity.

b) When a valuer values a company based on the total enterprise value, some modifications are generally made during the valuation process, including the following:

- Add the market value of the comparable company's equity (price per share times the number of shares outstanding) to the comparable company's market value of the interest-paying debt. The sum of these two items is commonly called “enterprise value”, “total invested capital”, or “market value of invested capital”.

- Interest expense is added back to the earnings (or cash flow) used in the denominator of the various multiples. If the valuer is using an after-tax basis, interest expense is added back, net of taxes, since there is a tax benefit that is derived from the deductibility of interest expense.

- Once an estimate of value has been reached on an enterprise value basis, the valuer then deducts the market value of the appraised subject's debt to determine the value of the company's equity.

- The chart below illustrates the difference in equity and enterprise value multiples.

	A	B	C	D	E	F		E+F=G	G/A	G/B	G/C	E/D
	EBITDA (Pre Interest)	EBIT (Pre Interest)	Sales	Profit Before Tax (Pre Interest)	Market Cap (Equity)	Net Debt	Debt/ Equity	Enterprise Value	Enterprise Value/ EBITDA	Enterprise Value/ EBIT	Enterprise Value/ Sales	Price/ Profit before Tax
Company A	300	150	1,000	125	1,500	500	33.33%	2,000	6.67	13.33	2.0	12.00
Company B	300	150	1,000	138	1,750	250	14.29%	2,000	6.67	13.33	2.0	12.68

- Based on the above, the enterprise values of Companies A and B (i.e., Enterprise Value/EBITDA, Enterprise Value/EBIT, and Enterprise Value/Sales) are identical and not directly influenced by the capital structure.

  ⇒ Keep in mind that the market prices Company A differently due to risk it takes on with higher amounts of debt. Higher debt means greater financial risk and a potentially lower stock price.

- The equity multiples for Company A and B though are different since the equity multiple reflects the different capital structure. Company A has a higher debt load, greater financial risk, and a lower equity multiple (i.e. Price/profit before tax).

E. Subject company circumstances

1) Financial results of company may eliminate the use of certain multiples.

   a) If the subject company has had net losses in recent years, then a price/earnings multiple cannot be used.

2) Owners and key management are likely to have a good idea of how companies in their industry are valued.

3) Industry practices are the best source of information about which value measures are most important (articles about recent acquisitions).

F. Rules of thumb may be used as a check for other approaches.

G. Statistical Tools

1) No two comparable companies will have the same level of market multiples. Hence, for each type of market multiple, our sample of comparable companies will display a range, a median, an average, a coefficient of variation and a harmonic mean (assuming we have at least two or more in the sample).

2) See Appendix V (Statistics for Valuation) for a more detailed discussion on statistics.

3) Using Median and Percentiles

a) Various percentiles can be shown for each of the pricing multiples, as well as some of the other comparative financial information about the comparable companies. For example, the 25th, median, and 75th percentiles could be shown.

b) Using percentiles rather than simple averages or composites has the advantage of providing a range of values and any outliers are less likely to affect all of these statistics. The average and composite measures may weigh the outliers more heavily than appropriate.

c) Outliers may indicate an unusual or non-recurring situation for the industry or the company. It should be noted, however, that while outliers may result from anomalies, these apparent anomalies should be examined. They might contain important information about trends in the industry.

4) Arithmetic Mean (Averages)

a) Simple average – the mean average of the values.

b) Composite (or portfolio average) - all of the companies in the group are added together to make one large company, and the various ratios are then computed. If the group of companies represented all those in the industry, then this composite would be an industry composite.

5) Harmonic Mean - the reciprocal of the average of the reciprocals. This can be a useful measure when looking at a set of margins or pricing multiples that are particularly dispersed. However, it is not used very often.

$$H = \frac{n}{\sum_{i=1}^{n} (1/m_i)}$$

Where:

H = the harmonic mean

n = the number of companies for which the ratio is computed

m = the multiple of a guideline company

6) Coefficient of Variation

a) The relative dispersions (or, the size of the range of values) of the valuation measures. This statistic measures the dispersion of the data relative to its average value. It is computed by dividing the standard deviation of the data by their mean (average). The higher the coefficient of variation, the greater the dispersion of the data.

b) Because the coefficient of variation is scaled by the mean, it can be used to compare the dispersions of any data sets, whether or not they are similar in order of magnitude. For example, this statistic can be used to compare the dispersion of revenues to post-tax profits (losses), even though revenues are much larger than post-tax profits (losses).

c) Its usefulness in the valuation process can be viewed in this way. If the companies in the guideline group are really viewed similarly by the market, then the key valuation indicator(s) used by the market to price their stocks should be also similar. The coefficient of variation can help the valuator to find this (these) key valuation indicator(s).

7) Close Clustering: calculation of various statistics on the sample of comparable companies and their market multiples.

a) Range, percentiles, median, average, coefficient of variation.

b) Observe the range and clustering of the multiples generated by the selected sample of comparable companies. A good statistic to use that measures clustering is the coefficient of variation (standard deviation / mean). The smaller this statistic, the closer the data points are to the mean (i.e., average) and the smaller the level of dispersion.

c) Closely clustered multiples are multiples that investors tend to use to make their buy/sell decisions, and therefore may be more reliable indications of value.

6. Step 5 – Compare the Guideline Public Company Multiples

A. Next, the valuer needs to compare the subject company and the guideline companies in terms of relative risk and relative growth, which is accomplished through:

1) Qualitative analysis (SWOT)

2) Quantitative analysis (recent and forecasted financial performance)

B. The steps in this process include:

1) Identify key differences between the subject and the guideline public group.

2) Identify differences within the guideline public companies themselves.

3) Discover if any single guideline public company or subset of guideline public companies is more similar to the subject than the group overall.

4) Provide support for the selection of each multiple, whether it is a mean, median, or something other than a central tendency measurement.

C. Qualitative analysis – a comparison of the following factors between the subject company and the guideline public companies:

1) Primary risk factors

a) Economic risk – how the company is affected by changes in the economic environment in which it operates.

b) Business risk – the risk inherent in business operations (e.g. volatility in sales or growth).

c) Operating risk – factors such as the fixed versus variable cost structure.

d) Financial risk – pertains to the amount of leverage used and the company's ability to cover its debt payments.

e) Companies that are over-capitalised or under-capitalised are not necessarily "comparable" to companies that have a normal capital structure.

2) Secondary risk factors (may be a subset of the primary risk factors)

a) Asset risk – the age and condition of the company’s assets

b) Product risk – the amount of diversification in the product or service line

c) Market risk – the geographical diversification of the company

d) Technological risk – the importance of technology to the company’s operations, and the ability to improve the current technology

e) Regulatory risk – effects of actions of regulatory agencies

f) Legal risk – ability to survive through a litigation process

D. Quantitative analysis – a comparison of the financial performance of the guideline public companies to each other and to the financial performance of the subject company

1) Types of analysis include trend analysis and peer analysis.

2) Measures of financial performance:

a) Size (e.g. total sales, total assets, market capitalisation, and enterprise value). Small size is associated with a number of risk factors, including:

- Lack of management depth
- Lack of product diversification
- Lack of geographic or global diversification
- Reduced access to capital to fund growth
- Limited R&D and marketing resources

b) Measures of historical growth rates (e.g., growth in sales, profits, dividends)

c) Profit margins (a measure of profit to sales)

d) Measures of asset management and reinvestment (e.g., asset turnover ratios)

e) Measures of financial leverage, solvency, and liquidity (e.g., debt to market value of equity, times-interest-earned)

f) Measures of return on investment (measure productivity of asset base in terms of its ability to provide a return on the financial capital)

g) Other financial performance ratios which may be specific to the industry or company (e.g., hospitals – sales per bed)

E. Questions to ask when researching and analysing guideline public companies:

1) Which multiple or benchmarks are most relevant for the subject company and its industry? Why?

2) Is there uniformity among the ratios within the guideline public company group?

3) Is there a variance between the average ratios within the guideline public company group and the averages expressed in the industry survey?

4) Because of the financial analysis, can any of the guideline public companies be discarded?

5) Are any of the guideline public companies more similar to the subject company?

6) Are there any upward or downward trends in any of the ratios?

7) What information from the economic and industry research can explain the financial performance of the guideline public company ratios?

8) Is there a trend in the implied growth rates in the market multiples?

9) How does that implied growth rate compare to the growth rate that was used in the income approach?

10) What are the key differences in risk between the guideline pubic companies and the subject?

11) What are the key differences in growth prospects between the guideline public companies and the subject?

7. Step 6 – Adjust the Guideline Public Company Multiples

A. The guideline public companies' multiples should be adjusted before they are applied to the subject company to calculate initial indications of value. These adjustments are performed to the guideline companies' multiples, aiming to have guideline companies with the same risk profile and growth rate of the subject company.

B. The adjustment of the market multiples is the key valuation judgment the valuer must make in the application of market approaches.

C. The key concept underlying the guideline public company multiple is the recognition that market multiples are essentially the inverse of capitalisation rates. Hence, embedded within each market multiple is the investment market's estimate of both a risk-adjusted cost of capital and a present-value-weighted expected growth in the value of the investment (i.e. both k and g). This concept is discussed further in more advanced courses.

$$\text{Market Multiple} = \frac{\text{Market Price}}{\text{Operating Performance}} = \frac{1}{k - g}$$

D. In adjusting the multiples, consider the following:

1) Do not simply use the average or median. Analysis must accompany any conclusion.

a) Should the 25th percentile, median, 90th percentile, average, etc., multiple be chosen? This must be based on comparison of the subject company to the comparable companies. Presumably the stronger the subject company relative to the comparable companies, the greater the value and, maybe the higher the pricing multiple.

2) Be careful not to double-count. Examples:

a) Using a lower pricing multiple to account for the small size of the subject company when the multiples have already been adjusted for size

b) Using a higher multiple to account for high growth of the subject when the multiples have been adjusted for growth

c) Using a high price/earnings multiple to account for the subject's higher than average profitability (the advantage of the higher profitability is captured by using an earnings-based pricing multiple).

3) Always remember to consider relative risk and relative growth.

E. Qualitative basis for market multiple adjustments:

1) If the outlook for the subject company relative to the guideline public companies is for less risk and/or more growth, we will choose a multiple somewhat higher than the median. If the outlook is for average risk and/or future growth, we will choose a multiple at the median. If the outlook is for higher risk and/or lower growth, we will choose a multiple below the median.

2) Most valuers use "informed judgment" when making their choice as to the amount of adjustment they apply to the guideline public companies' market multiples. There is nothing wrong with this, but there are some quantitative techniques that add precision to the direction and amount of market multiple adjustments.

F. Quantitative models for market multiple adjustments

1) Adjusting the multiples based upon an analysis of the correlation of changes in a financial performance metric and changes in the market multiples (e.g., correlation between profit margin and price/sales).

2) Adjusting the multiples for differences in risk factors

a) In case the subject company operates in undeveloped or emerging markets, where the business environment differs significantly, and the subject company is much smaller than the guideline companies are, the direct use of the multiples would produce distorted results, mostly overestimating the subject company.

b) As the risk is represented by the cost of capital, the differences between the guideline companies and the subject company may include:

- Differences in risk free rate (including country risk), if the guideline company and the subject company operate in different countries
- Differences in size, if the two companies being compared have a different size
- Differences in company specific risks

c) Following there is an example of the adjustment done by considering only the size differences. Assume the original market value of equity/after-tax profit multiple is 15.0x, the comparable company is in the sixth decile for size (discussed further in more advanced courses), and the subject company is in the 10th. The steps in adjusting the comparable company multiple for the size of the subject are:

- Compute the benefit/value ratio (which is just the reciprocal of the pricing multiple): 1/15 = 6.67% (capitalization rate).
- Add the size differential between the comparable company and the subject (as computed above): 6.67% + 6.26% (this is given in this course – it is discussed further in more advanced courses) = 12.93%.
- Take the reciprocal to get the new pricing multiple adjusted for size: 1/0.1293 = 7.7x, which is the

comparable company pricing multiple to be applied to the subject.

- The above procedure can be presented with the following formula:

$$\text{Multiple}_{\text{adjusted}} = \frac{1}{\frac{1}{\text{Multiple}_{\text{original}}} + (\text{SRP}_{\text{s}} - \text{SRP}_{\text{GLC}})}$$

d) This procedure is applicable to P/E ratio. In case EV multiples are used, additional adjustments are required. The EV multiple equivalent of P/E is EV/NOPAT.

- Given that the size risk premium is part of the cost of equity, it will affect WACC only to the extent that equity participates in the enterprise value. Therefore, the adjustment factor ($SRP_{subject}$ - SRP_{GLC}) = 6.26% is to be multiplied by the equity weight in the WACC before applying it to the NOPAT multiple.

- Assuming an EV/NOPAT multiple of the guideline company equal to 10x and an equity weight of 60% in the EV, the formula above becomes:

$$\text{EV/NOPAT}_{\text{adjusted}} = \frac{1}{\frac{1}{10\text{x}} + 60\% * (6.26\%)} = 7.2\text{x}$$

- If other economic measures, say EBITDA, EBIT or Sales, are intended to be used as multiple, other adjustments are necessary to take into account the difference between net profit and these other economic measures, such as the ratio Sales/NOPAT or EBITDA/NOPAT.

e) Differences in country risk can be considered by adjusting for the difference in the yields of the government bonds with the same maturity of the country where the guideline public company and the subject company operates.

$$\text{Multiple}_{\text{adjusted}} = \frac{\text{YTM}_{\text{GLC}}}{\text{YTM}_{\text{S}}} * \text{Multiple}_{\text{original}}$$

Where:

YTM_{GLC} = Yield to maturity of the government bonds of the country of the guideline company

YTM_S = Yield to maturity of the government bonds of the subject company.

f) Both government bonds used in this procedure need to have the same maturity period (preferably long-term bonds). The valuer needs to pay attention also to the currencies of the government bonds, although it is not necessary for the currencies to be the same.

3) Adjusting the multiples for differences in the outlook for growth

a) The same basic approach can also be used to adjust for growth.

b) For example: Assume the original pricing multiple is 15x, the perpetual growth of the guideline public company is 5.00% and that of the subject is 7.00%. The steps in the calculation are as follows:

- Compute the benefit/value ratio (which is just the reciprocal of the pricing multiple): 1/15 = 6.67%.
- Add the growth differential between the guideline public company and the subject: 6.67% + (5.00% - 7.00%) = 4.67%. This is the adjusted benefit/value ratio.
- Take the reciprocal to get the new pricing multiple adjusted for growth: 1/0.0467 = 21.4x, which is the guideline public company pricing multiple to be applied to the subject.

$$\text{Multiple}_{\text{adjusted}} = \frac{1}{\frac{1}{\text{Multiple}_{\text{original}}} + (g_{GLC} - g_s)}$$

4) Adjusting multiples for a combination of risk and growth factors

a) The valuer is appointed to perform the valuation of a subject company with a cost of equity and WACC at 19.0% and 13.2%, respectively (both cost of equity and WACC are explained in details in BV202 course). The financial analysis has indicated an expected sustainable long-term growth of 5.0% and 4.0% for net profit and NOPAT, respectively.

b) The valuer found a very good guideline company, which operates in a more developed market. The respective cost of equity and WACC of the guideline company are 10.0% and 7.1%, while the sustainable long-term growth rate is 4.0% and 1.5% for the net profit and NOPAT, respectively.

c) In order to use the market approach, the valuer has to perform the necessary adjustments of the P/E and EV/NOPAT multiples for both risk and growth factors.

d) The formula used to calculate the multiple adjustments is:

- For P/E multiple

$$P/E_{adjusted} = \frac{1}{\frac{1}{P/E_{original}} + (CoE_s - CoE_{GLC}) + (g_{GLC} - g_s)}$$

- For EV/NOPAT

$$EV/NOPAT_{adjusted} = \frac{1}{\frac{1}{EV/NOPAT_{original}} + \frac{E}{E+D}(CoE_s - CoE_{GLC}) + (g_{GLC} - g_s)}$$

- The numerical solution of the above formulas is presented in the table below:

	Subject	Guideline company
Cost of Equity	19.0%	10.0%
WACC	13.2%	7.1%
E/D+E	60%	60%
Growth of Earnings	5.0%	2.0%
Growth of NOPAT	4.0%	1.5%

Equity multiples		Enterprise Multiples	
P/E	**15.0**	**EV/NOPAT**	**12.0**
Cap rate P/E	6.7%	Cap rate EV/NOPAT	8.3%
Risk Adjustment		Risk Adjustment	
CoE differential	9.0%	CoE differential	9.0%
		E/(D+E)	60.0%
Adj Cap rate	15.7%	Adj Cap rate	13.7%
growth adjustment		growth adjustment	
g differential	-3.0%	g differential	-2.5%
Adj Cap rate	12.7%	Adj Cap rate	11.2%
Adj P/E	**7.9**	**Adj EV/NOPAT**	**8.9**

- As you can see the P/E multiple decreased from 15x of the guideline company to 7.9x of the subject company, while EV/NOPAT decreased from 12x to 8.9x for the subject company.

8. Step 7 – Apply Adjusted Multiples to Subject Company

   A. If using more than one multiple, the valuer must decide which multiples will be given the most weight.

      1) Instead of giving the multiples different weightings, the valuer may decide that one particular multiple is most appropriate (the "primary" multiple), and therefore the other multiples (the "secondary" multiples) are used to confirm the value arrived at using the primary multiple.

         a) For instance, the valuer may decide that a multiple on the high end of the range of adjusted multiples is most appropriate because the subject company's recent results of operations or forecasted results of operations indicate that the subject company is financially stronger and less risky than the comparable companies are.

   B. Reconciliation of differing value indications derived from the same method (or even from different methods/approaches) relies upon the valuer's judgment:

      1) The weighting should be the result of informed judgment and clearly explained in the report. Often, a numerical weighting may not be applied, and the "weights" are dependent on the valuer's sense of relative confidence in the value indication from each type of market multiple.

      2) Confidence in the value indication derived from a particular market multiple depends upon both a theoretical and practical understanding of the key determinants of value for the type of industry and the specific characteristics of the subject company.

      3) The factors considered in selecting multiples are also considered in the reconciliation of values and the choice of weighting method(s).

   C. Refer again to the table below (which calculates multiples based on historic data), which was introduced at the beginning of this chapter.

	Select Types	Market Multiples
	Enterprise Value/ EBIT	Equity Value/ Profit After Tax
Guideline Public Company A	17.9	29.8
Guideline Public Company B	10.5	16.4
Guideline Public Company C	11.3	18.3
Guideline Public Company D	15.0	22.2
Guideline Public Company E	12.0	18.0
Average	**13.3**	**20.9**
Median	12.0	18.3
Range high point	17.9	29.8
Range low point	10.5	16.4
Slected Market Multiples		
Median	**12.0**	**18.3**
+/- Adjustments (-)	X 80%	X 80%
Adjusted Multiples	**9.6**	**14.6**
Subject company financial metric	1,250,000	510,000
	(EBIT)	(Net Income)
Indicated Value (Rounded)	12,000,000	7,466,400
Less Debt for Enterprise Value	3,675,000	-
Indicated Equity Values	**8,325,000**	**7,466,400**

* - a reduction in applied market multiples due to perceived greater risk and more moderate outlook for growth for the subject company

EXAMPLE RECONCILIATION		
Indicated Equity Values	**8,325,000**	**7,466,400**
Final Weighting	X 70%	X 30%
	5,827,500	**2,239,920**
Reconciled Value (Rounded)	**8,067,420**	

9. Step 8 – Consider the Necessity of Applying Discounts/Premiums

   A. A variety of different types of discounts and premiums may apply to the subject company.

   B. After reconciling the various value indications and arriving at an indication of value (or a range of indicated values), the application of any appropriate premiums or discounts finishes the valuer's tasks under the market multiples method.

   C. A discount or premium may be warranted if comparable companies are located in different countries.

   D. Discounts and premiums are discussed further in more advanced BV courses.

10. Example of Guideline Public Company Multiple Method

A. This exhibit illustrates a simple example illustrating the application of the market approach using comparable company information. As you review this exhibit, there are several points to keep in mind:

1) The multiples in the first chart below are equity multiples based on historical data.

2) The selection of the guideline public companies would have come from a careful review of many of the items discussed previously that makes these companies comparable to the subject company.

3) The median multiple rather than the average multiple is calculated. This is because the median is often a better statistical measurement, since it eliminates highs and lows that may skew the average.

4) Assume that the selected multiples in the chart below were based on the subject company's results of operations and most of its financial ratios were not as strong as any of the guideline public companies. Accordingly, multiples slightly lower than the low end of the range were selected.

Guideline Public Company	Price / Pre-Tax Profit	Price/ Sales
ABC Toy Company Plc.	8.7x	55.30%
XYZ Funtime Plc.	9.3x	47.43%
Toyz, Plc.	8.5x	35.25%
Games Plc.	6.6x	54.80%
Fun Plc.	7.8x	48.20%
Median multiple	8.5x	48.20%
Selected multiple	6.2x	44.00%

5) The selected multiples are now applied against the figures of the subject company (note that these figures are assumed; the financial statements have not been provided):

	Price / Pre-Tax Profit	Price/ Sales
Pre-tax profits	950,000	
Gross sales		14,500,000
Book value (without non-operating (redundant) assets)		
x Multiple	6.20x	0.44x
= Capitalized Value	5,890,000	6,380,000
+ Plus non-operating (redundant) assets	250,000	250,000
= Total Value - rounded	6,140,000	6,630,000

6) This example intentionally omits any calculation of valuation discounts or premiums, which are discussed in more advanced BV courses.

B. The selection of the multiple is a subjective process based on the analysis that the valuer performs throughout the valuation assignment. This process considers the risk elements, as well as the differences between the guideline public companies and the subject company with respect to growth expectations, size, financial performance, etc. The differential in the multiples has to consider the differences between the companies under analysis, and you have to test your conclusion to see if it makes sense and to spot any obvious mistakes.

C. Note that price/ sales multiples generally have limited applicability because they do not reflect any degree of profitability in the subject company or the guideline public companies.

D. You will notice that the multiplication of the base amount by the multiple results in the capitalised value. This amount is the value derived by the business from all the operating assets and liabilities. The non-operating (redundant) assets are added from the capitalized value to reach the final value. Note that this assumes that the non-operating income and expenses were already adjusted.

E. Now, calculate the enterprise value of the subject company. There are several different steps that the valuer must take to accomplish this.

F. Use one of the guideline public companies from above. ABC Toy Company, Plc. had a price-to-pre-tax profit multiple of 8.7x. If ABC's share price was €47.50, this means that ABC's pre-tax profit would have been €5.46 per share. The price-to-earnings multiple would have been calculated as follows:

Price / Pre-tax Profit = Multiple
€ 47.50 / € 5.46 = 8.7x

G. To convert the price-to-pre-tax profits multiple from an equity value multiple to an enterprise value multiple, we need to adjust both the price and the earnings.

1) First, the “price”. To determine the market value of the company's equity, we multiply the price per share by the number of outstanding shares. The outstanding shares can be obtained from the annual report, which is not necessarily at the valuation date. It is important to update the number of shares outstanding to the valuation date (e.g., for exercisable, but unexercised options). Assume that there were one million shares outstanding. This would make the market value of ABC's equity €47.5 million (1,000,000 shares x €47.50 per share).

2) Assume that ABC's balance sheet has interest-bearing debt of €5 million, with a market rate of interest throughout its life (so that the book

value and fair value of the debt are the same). ABC's enterprise value is €52.5 million (€47.5 million + €5 million), or €52.50 per share. The enterprise value of €52.50 per share becomes the numerator (it replaces the "Price") in the "Price / Post-tax Profits" multiple.

3) Now we need to adjust the pre-tax profits. The per-share pre-tax profits previously calculated for ABC were €5.46. This means that the pre-tax profits were €5.46 million (€5.46 x 1,000,000 shares). Upon review of the company's income statement, you find that the interest expense was €500,000 for the year. The adjustment to the pre-tax profits would be as follows:

Pre-tax Profits	€ 5,460,000
Interest expense (before tax)	€ 500,000
Earnings before interest and taxes ("EBIT")	**€ 5,960,000**

4) ABC's multiple of enterprise value to EBIT would be:

$$\frac{€52.50}{€5.96} = 8.81\text{x}$$

5) This same calculation would be performed for each of the guideline public companies. The valuer then selects the appropriate multiple to apply to the subject company's EBIT.

6) The chart below shows the enterprise value/EBIT multiples for the guideline public companies. Again, for the reasons discussed above, a multiple slightly lower than the low end of the range was selected.

	Enterprise Value/EBIT
Guideline Public Company	
ABC Toy Company Plc.	8.81x
XYZ Funtime Plc.	9.80x
Toyz, Plc.	9.45x
Games Plc.	7.00x
Fun Plc.	8.30x
Median multiple	8.81x
Selected multiple	6.90x

H. The selected multiple above is now applied to the EBIT of the subject company. Assume the subject company's EBIT is €1,000,000.

EBIT	€ 1,000,000
Enterprise Value/ EBIT Multiple	6.90x
Enterprise Value - Rounded	**€ 6,900,000**

I. For this course, we have ignored any potential valuation discounts or premiums.

J. The example above illustrates the use of an enterprise value multiple. If you look at the multiples for the guideline public companies, you will see that they were higher on an enterprise value basis. The result is that the multiple used for the appraisal subject was also higher (6.9x for EV/EBIT instead of 6.2x for the Price/Pre-tax multiple).

K. A similar type of analysis of the qualitative differences between the comparable companies and the subject company would have been performed to derive the selected multiple.

L. It is important to reconcile your enterprise value and equity value conclusions. Accordingly, from the €6,900,000 enterprise value figure noted above, you should deduct the subject company's interest-bearing debt and add non-operating (redundant) assets to arrive at equity value. If we assume that the subject company's interest-bearing debt is €675,000 and non-operating assets are €250,000 (from above), we arrive at an equity value of €6,475,000. This is within the range concluded upon earlier.

Enterprise Value - Rounded	€ 6,900,000
Interest bearing debt	(€ 675,000)
Plus non-operating (redundant) assets	€ 250,000
	€ 6,475,000

Assignment 4 – Market Approach Case Study (1 hour)

III. Guideline Transaction Method

1. Introduction

   A. Also called the “Precedent Transaction Method” or the “Merger and Acquisition” Method

   B. Involves a review of recent transactions of similar companies to provide indicators of rates of returns or prices required by investors.

   C. Valuation multiples are derived from actual market transactions of companies engaged in the same or similar lines of business as the subject company.

   D. Can use the same multiples as discussed in the guideline public company multiple method.

   E. Similar to the guideline public company multiple method, except that instead of looking at public companies trading on a stock market, the valuer develops valuation multiples by reviewing and analysing companies that have recently been bought or sold in the marketplace.

2. Key Advantages

   A. Many guideline transactions can involve smaller private companies and thus be more comparable to the subject company than listed companies are.

   B. Since most guideline transactions represent the purchase of the en-bloc interest in an acquired company instead of a non-controlling interest, comparable transactions can often be a better reflection of the value of an entire business, if that is what is being valued.

   C. Industry transactions often assist the valuer in identifying special interest purchasers, and in some cases, quantifying synergies. However, care must be taken to consider the basis of value and whether synergies should or should not be included.

   D. Can be used to test the reasonableness of another valuation analysis or be used as a primary valuation approach.

3. Key Disadvantages

   A. Relevant information:

      1) Is generally not publicly available (especially transactions between private companies)

      2) May be outdated

3) Can be difficult to identify and obtain

4) Can often require a significant amount of investigation to derive relatively small amounts of relevant data

5) Can vary depending on whether the companies involved in the transaction are public or private

B. Sufficient information about the transactions and the target company must be obtained and thoroughly analysed to be able to reasonably interpret the transaction and properly apply the implied multiples to the financial results of the subject company.

1) When there are insufficient details and it is not possible to understand the given reasoning behind the price paid by the purchaser, the use of publicly available transactional data can lead to inappropriate and/or unsupportable conclusions.

2) Without direct knowledge of the transaction and related information, adjustments to render the transaction comparable may not be possible.

3) Transactions often reflect synergies and buyer-specific value

a) Information about the acquired company and terms of the deal may be inadequate

C. Differences in negotiating ability, highly competitive bidding, vendor and/or specialised knowledge, and post-acquisition synergies could distort the purchase price paid.

D. Balance sheet issues of capital structure and working capital are often not reported.

1) Enterprise value to sales multiples are most commonly used in analysing actual market transactions because, in the majority of cases, this is the only financial information made publicly available by the parties to the transaction.

4. Considering the Structure of the Comparable Transactions

A. Does the information represent enterprise value or equity value?

B. Was the transaction an acquisition of shares or the underlying operating assets? Was real estate included in the purchase price?

C. Was the transaction for 100% of the shares or for a lesser interest?

D. Was the transaction on an arm's-length basis? Were the owners compelled to act, or did they negotiate under distress?

E. Was the deal all-cash, or did the consideration paid include earn-out provisions, non-competition agreement(s), and other non-cash and/or intangible components which would not be obvious in the transaction price?

F. Is it possible to identify (and quantify)?

1) Special purchaser considerations

2) Post-acquisition synergies

3) Strategic advantages

4) These could provide insight into the reasoning behind the multiples paid and/or inherent in the industry. In addition, they could help the valuer reconcile other valuation approaches being applied.

5. Considering the Characteristics of the Guideline Transactions

A. Comparability of industry (luxury versus discount hotels; regional versus international airlines)

B. Contingent assets and/or liabilities and their impact (if any) on the transaction data

C. Dependency on any customer, supplier, employee, management, and/or a key person(s)

D. Nature, extent, and timing of new products to be launched by any of the comparable companies

E. Historical and projected research and development expenditures

F. Impact of unionisation status (if any) on the transaction

6. Other Important Considerations

A. Transactions and multiplies that are closer to the valuation date are more relevant than older transactions and multiples.

B. The length of time the comparable company was exposed for sale in the marketplace could have affected the transaction price.

1) In general, the longer the company has to expose itself to the market, the higher the price it should be able to obtain.

C. Consider whether the industry is “over heated” or if the guideline transactions occurred during a time when the industry was in a cyclical downturn.

D. Consider whether the earnings and performance levels were unusually high or low and inconsistent with the environment at the valuation date.

7. Sources for Identifying Guideline Transactions

A. Discussions with management

B. Discussions with other valuations professionals

C. On-line data providers, such as Bloomberg, Thomson Financial Securities Data, The Mergers and Acquisitions Advisor, Capital IQ, Mid Market Comps, Mergerstat, BizComps, Pratt`s Stats

D. Search engines which provide information on publicly traded companies

E. Stock market or brokerage firm studies

8. Procedures

A. Identify transactions in which the target (or acquired company) is similar to the subject using the same or similar criteria as used in guideline public company method.

B. Obtain adequate data on the publicly reported transactions. Industry research can often yield additional information about the transaction.

C. Obtain adequate data on the closely held, or private, transactions (if possible).

D. Refine selection of relevant transactions based on additional information and quality of data. Older transactions may be less relevant if substantial economic and industry changes have occurred.

E. Adjust numerator for non-cash terms of the deal:

1) Restricted shares:

a) Common when acquirer is a public company.

b) Share price may need to be discounted from the quoted price on the deal date to account for any time restrictions on trading.

2) Employment agreements and non-compete agreements:

a) Common in small deals with closely held companies.

b) Selling shareholder may receive an employment agreement or consulting agreement, which allows a pay out over time in return for some form of consulting. If consulting is not performed, then the payout terms on a present value basis may be considered part of the deal value.

c) Value implications of non-compete arrangements are difficult to determine if the seller has the desire and capability to compete.

3) Earn-outs – contracts, which allow variable pricing, where part of the deal price is contingent on the achievement of specific operational goals such as sales or profit levels, are difficult to quantify value. The likelihood of achieving the targets must be assessed and the present value of any additional consideration payable determined.

4) Seller's note – if the interest rate is not a market rate, revalue the note with the market rate at the deal date.

F. Develop transaction multiples.

Assignment 5 – Guideline Public Company Transaction Multiples (20 minutes)

IV. Rules of Thumb Method

1. A mathematical formula developed over time, based on experience, observation or hearsay, or a combination of these factors, associated with a specific industry.

   A. May provide value for subject company as a whole or only its goodwill.

   B. May provide value of the subject company's assets or its shares.

2. The application of industry rules of thumb can also be based on what active acquirers indicate they are willing to pay for guideline companies.

3. Commonly used by business brokers and other intermediaries for a preliminary estimate of transaction value of saleable business segments.

4. Typical rule of thumb multiples

   A. Multiple of sales

B. Multiple of cash flow, usually referred to as seller's discretionary cash flow (SDCF) or seller's discretionary earnings (SDE).

C. Multiple of some level of assets

5. Disadvantages

A. Because rules of thumb are developed over time, they may not reflect the current economic reality.

B. Based on averages – may not be applicable to the subject company.

C. No access to the companies that were transacted or the terms of the transactions.

V. Prior Transactions in the Subject Company's Shares

1. Must consider the following:

A. Control transactions and acquisitions of other companies are more likely to be arm's length deals.

1) If the company merged with a competitor in a control transaction, the deal may have synergistic value.

B. Buyouts of family members or retiring or deceased shareholders may not be at market value.

C. Timeliness is often a problem, given that these transactions may be dated and reflect external and internal circumstances different from those of the valuation date.

VI. Prior Acquisitions Made by the Subject Company

1. Subject companies often make acquisitions of similar companies during periods of expansion.

2. The terms and multiples provide an indication of value reflecting the subject company's owner/management view of similar property value but may not be conclusive evidence of current value of the subject company as a whole.

3. Prior acquisitions reflect different economic and industry circumstances.

4. Incorporation of the new divisions or operations may require time to absorb.

5. Economies of scale and synergies are often the result of acquisitions.

VII. Bona Fide Offers to Buy

1. A bona fide offer is viewed as a good faith, authentic, genuine offer from a qualified buyer who has the intention and capacity of consummating the offer at the level proposed.

    A. May or may not come from an arm's length party.

    B. Most offers from outside buyers reflect the whole company (control) situations.

2. A rejected, but bona fide, offer may provide insight into a minimum value.

3. Offers often reflect investment (or strategic) value considerations, such as synergies and potential economies of scale.

4. Terms are often variable and may incorporate employment agreements and agreements not to compete.

5. Timeliness is often a problem, given that offers may be dated and reflect external and internal circumstances different from those of the valuation date.

Assignment 6 – Audit Review of Market Approach (2.5 to 3.0 hours)

VIII. Sample Exam Questions

1. Which of the following statements about the comparable transactions method is most accurate?

    A. Data is relatively easy to get.

    B. Many comparable transactions can involve smaller private companies and thus be more comparable to the subject company.

    C. It provides more timely data than the comparable company multiple method.

    D. Industry transactions provide concrete proof of synergies.

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Chapter 7 The Asset-Based (Cost) Approach

I. Introduction

1. Theory

   A. Principle of substitution

      1) A buyer will pay no more for the company or portfolio of assets than it would cost for him/her to build, acquire, and assemble a company or portfolio of assets that together provide the same risk-adjusted benefits of ownership.

   B. Used when a company's value is based on the value of the net assets of the business as opposed to its future earnings capacity (e.g., real-estate holding companies, investment companies).

   C. The value of a company's equity is equal to the market (or fair) value of the assets less the market (or fair) value of the liabilities.

   D. All assets and liabilities are adjusted to market value at the valuation date.

      1) Assets and liabilities are stated in the financial statements at their book value (depending on the accounting policy adopted, book value may be based on historical cost or a revalued amount).

         a) Asset book value is not often representative of current market value.

         b) Some assets are fully depreciated but are functional and so still have value.

2. Asset-Based Methodologies

   A. Methodologies include:

      1) Adjusted net book value method

         a) Also called "adjusted book value", "net asset value", "adjusted net asset value"

         b) Used when the subject company is determined to be a going concern

2) Liquidation value method

a) Used when the subject company is determined to no be a going-concern

3. Terminology

A. Going-concern: an ongoing operating business enterprise.

B. Book value: value as stated in financial statements or accounting records.

C. Net realisable value: the net proceeds obtainable on sale of an asset, after providing for all costs of disposition, including taxes.

D. Reproduction cost (new): the current cost of an identical new item.

E. Replacement cost (new): the current cost of a similar new item having the nearest equivalent utility.

1) Same materials or design may not be used, reflecting changes in technology, design, building techniques and costs.

F. Depreciated replacement cost (new): replacement cost less depreciation.

1) Recognises the loss of value of the property resulting from age, wear and tear, or obsolescence.

a) Physical obsolescence: loss in value caused by deterioration from age, wear and tear from use, and lack of maintenance.

b) Functional obsolescence: loss in value caused by lack of utility, excess capacity, changes in design or technology, and efficiency.

c) Economic obsolescence: loss in value caused by external factors such as government regulation, availability of raw materials, availability of labour supply, or reduced demand for the products produced by the asset.

G. Value in continued use: in practice, usually depreciated replacement cost new plus delivery, installation and other make-ready costs

II. The Adjusted Net Book Value Method

1. This share valuation method requires the adjustment of a business' assets and liabilities to their current market values.

2. Summary of calculation (the adjustments are further discussed later in this chapter):

Shareholders' equity (per the financial +/ After-tax profit (loss) for stub period (between balance sheet date and valuation +/ Adjustment of assets and liabilities to market = Adjusted Net Book

3. Used when the business is continuing as a going concern, and

   A. Value is closely related to the company's underlying assets as opposed to its earnings capacity (e.g. real estate companies, investment companies), or

   B. A business' income is attributable to personal goodwill – that is, goodwill that is attributed to an individual's personal skills and reputation, and is not transferable to a purchaser (e.g. a medical doctor's practice), or

   C. There is no expectation of any type of non-identifiable intangible value:

      1) That is, there is no commercial goodwill (that is, goodwill that is attributed to a business' general operations and is transferable to a purchaser).

      2) Occurs when an operating business does not generate sufficient earnings to realise a reasonable return on the net tangible assets, but value as a going concern is still higher than liquidation value (e.g. some manufacturing companies with heavy investment in fixed assets).

         a) For instance, if a business has annual earnings of €100,000 and a multiplier of 5x is appropriate, the capitalised value of that business is €500,000. If that business has net tangible assets with a market value of €550,000, the business is not earning sufficient earnings to realise a reasonable return on the net tangible assets.

4. Adjustments to shareholders' equity:

   A. Post-tax profit/(loss) between closest financial statement date and valuation date.

   B. All of the assets and liabilities recorded on the balance sheet are restated to reflect value-in-use. For example:

      1) Book value of investments is adjusted to market value.

      2) Net book value of property

         a) Land is adjusted to current market value.

b) Buildings are adjusted to depreciated replacement cost.

c) May require the services of a real estate appraiser, i.e. a surveyor.

3) Net book value of equipment is adjusted to reflect market value (usually depreciated replacement cost)

a) Consider items that were expensed instead of capitalised (e.g. small tools, moulds, etc.).

b) May require the services of an equipment appraiser.

4) Inventory book value is adjusted to reflect its replacement value

a) Consider unsalable, damaged, or obsolete inventory.

5) Accounts receivable book value is adjusted to its market value

a) Review for collectability

b) Consider accounting policy for recognition of sales/revenue.

6) Mortgages and notes receivable book values are adjusted to their market value

a) Review for collectability

b) Compare interest rates to current market rates.

- If the current market interest rate is lower than the interest rate of a mortgage receivable, the market value of the mortgage receivable may be greater than the book value.
- If the current market interest rate is higher than the interest rate of a mortgage receivable, the market value of the mortgage receivable may be less than the book value.

7) Non-identifiable intangible assets (i.e. goodwill) are assigned a value of nil

8) Identifiable intangible assets are restated at fair value, by applying an appropriate valuation method, such as:

a) Relief from royalties

b) Excess earnings

c) Cost to recreate the service capacity of the asset

9) Liabilities are usually taken at book value, except:

a) Debt with interest rates that differ materially from market rates – this concept is discussed further in BV 202.

- If the current market interest rate is lower than the interest rate of the debt, the market value of the debt may be greater than the book value.
- If the current market interest rate is higher than the interest rate of the debt, the market value of the debt may be lower than the book value.

b) Unrecorded/contingent liabilities (lawsuits, environmental remediation)

- Consider likelihood and amount of liability

c) Future/deferred taxes (see below).

5. Income tax implications of adjustments to shareholder's equity

A. The Valuer needs to carefully consider any tax implications related to the adjustments performed to the shareholder's equity.

B. In case Valuer is not familiar with the tax jurisdiction of the country where the subject company operates, he/she has to ask for the assistance of the tax experts.

III. Example of the Adjusted Book Value Method

1. Mike Lodge owns 100% of the shares of a company, ML Lodging Plc. ("ML"). ML owns and operates a small (but successful) inn and other related assets. Mike has recently separated from his spouse, and his lawyer has requested a valuation of ML at the date of separation (August 30 of the most recent year) for family law purposes. ML's balance sheet at the date of separation is as follows:

	EUR
ASSETS	
Current	
Cash	40,000
Accounts receivable	55,000
Inventory	25,000
Prepaid expenses	15,000
	135,000
Notes Receivable	135,000
Fixed Assets	1,750,000
Future Income Taxes	95,000
	2,115,000
LIABILITIES	
Current	
Bank operating line	150,000
Accounts payable	35,000
	185,000
Mortage Payable	1,295,000
	1,480,000
SHAREHOLDERS' EQUITY	
Retained earnings	634,000
Share capital	1,000
	635,000
	2,115,000

2. Additional information related to ML's fixed assets, goodwill, and other items is as follows:

	Cost	Accumulated Depreciation	Net Book Value	Market Value
Land	250,000	-	250,000	400,000
Buildings	1,700,000	1,150,000	550,000	2,500,000
Groundskeeping Equipment	400,000	275,000	125,000	70,000
Furniture and fixtures	1,400,000	650,000	750,000	600,000
Office equipment	150,000	75,000	75,000	40,000
	3,900,000	2,150,000	1,750,000	3,610,000

A. Mike recently learned that a corporate customer has gone bankrupt. The accounts receivable from this customer accounted for 40% of ML's accounts receivable at June 30.

B. Future income taxes relate to timing differences with respect to the recognition of capital cost allowance versus amortisation.

C. ML's income-tax rate is 26%. For this example, disregard the taxes on disposal of capital assets.

D. The notes receivable are due from related parties and are fully collectible.

3. Your task is to calculate the value of ML. Provide reasoning for your choice of valuation method.

4. Answer:

   A. In estimating the value of ML, an adjusted book value method is considered appropriate because the value of the company lies in the value of the assets it owns. Further, ML is a successful company and is most likely a going-concern, thus the liquidation value method would not be applicable.

Shareholders' Equity	635,000
Less uncollectible accounts receivable (55, x 40%)	(22,000)
Related income tax consequences (26% x 22,000)	5,720
Less net book value of fixed assets	(1,750,000)
Add market value of fixed assets	3,610,000
Less future income tax assets	(95,000)
Fair market value	2,383,720

Assignment 7 - Adjusted Net Book Value Method (20 minutes)

IV. Liquidation Value Method

1. Summary of calculation:

Realizable value of the assets (gross proceeds on sale)
-
Direct disposition costs (e.g., sales commissions)
-
Debt (at net realizable value)
+/-
After-tax profits (losses) during the liquidation period
-
Liquidation costs (e.g., payroll severance costs)
+/-
Corporate taxes on the sale of assets
=
Funds available for distribution to shareholders (Share Value)
=
Liquidation value of net assets (net realizable value)

2. Quantifies the net proceeds available to shareholders in the event of a liquidation of a business after:
    A. Assets are sold
    B. Debts are paid off
    C. Costs of liquidation are deducted
        1) Commissions or other fees on disposal of assets
        2) Income taxes on interim period income or on disposal of assets
        3) Legal and accounting fees and other shutdown costs
        4) Severance
    D. Costs of distribution (i.e. taxes on dividends) are deducted (should consider the time value of money)
3. Used when:
    A. A business is not viable as a going concern (company is contemplating bankruptcy or is bankrupt), or
    B. Liquidation value is higher than going-concern value, even if the business is viable.
        1) Projected net cash flow produces less value than what could be realised from liquidating the assets (“worth more dead than alive”).
4. Similar to the adjusted net book value method in that similar adjustments are made to shareholder’s equity (with the exception of tax-related adjustments – see below).
5. Differs from the adjusted net book value method because it assumes the business is not a going concern:
    A. Tax implications - because a sale of assets is imminent, the book-to-market adjustments are tax-affected at 100%.
    B. There are no adjustments for tax shield differences
6. Types of Liquidation Value Calculations:
    A. Orderly Liquidation Value Method
        1) A reasonable period is used to maximize proceeds received for specific assets (business is wound-down).

2) Asset proceeds are assumed to be generated from:

a) An orderly sale process

b) A complete sale of all assets “as is, where is”, with the buyer assuming all costs of removal

3) Will usually result in a higher value than the forced liquidation value method.

a) A forced liquidation may result in higher net proceeds if the price of the assets is expected to decrease over time.

4) Must take into account the “time value of money” over the period of liquidation

a) For example, if the taxes that will be chargeable on the disposal of assets are €1,000, but such taxes will not be incurred for six more months, the present value of such taxes will be less than €1,000.

5) Must take into account the risks associated with the liquidation.

a) For example, if the business is a manufacturer with a significant inventory, the valuer must determine whether the inventory would fetch a higher price if it were completed and sold as finished goods or if the items should simply be sold in their existing stage of completion.

- If the goods are to be completed, the valuer must also evaluate the overhead costs of operating the plant over the completion period.

B. Forced Liquidation Value Method

1) An immediate cessation of business and disposition of assets is assumed.

2) Asset proceeds are assumed to be generated from:

a) Forced sale conditions with a sense of immediacy

b) Properly advertised and conducted “auction” setting.

C. Choice as to whether an orderly or forced liquidation is used depends on the nature of the underlying assets and the specific circumstances of the business.

7. Liquidation Value of Shares

A. When the liquidation value method is adopted, an asset value is usually being determined for a business that is not a going concern (i.e. the net amount available to the equity owners, if any, on the liquidation of the assets and liabilities of the business).

B. A share value can also be determined using the liquidation value method, but this is not common.

V. Example of the Liquidation Value Method

1. It is September 1 of this year. One of your firm`s clients, Mr. Jones, intends to liquidate his investment in a company in his investment portfolio, and requires a determination of the value of the company.

2. The company in question is Quickcraft, a manufacturer of recreational speedboats located in France. The Quickcraft name is well known among boaters, although recent competition has caused the company to lose market share and cut sales prices to boat dealerships. The speedboat industry has always been extremely competitive, although the industry has been particularly cutthroat in the last few years in the face of declining consumer demand.

3. Quickcraft is currently in breach of certain covenants contained in its credit agreements with its bank and long-term debt holders. These parties are not willing to extend further financing to the company. Management has been in discussions with other lenders in an attempt to raise financing, although discussions are at a very preliminary stage.

4. As shown in the chart below (which includes interim results of operations for the 6 months ended June 30 of this year), Quickcraft's business has been relatively stagnant in recent years due to competition. The company has cut prices in an attempt to maintain sales levels.

	This Year (6 months)	Last Year	2nd Last Year	3rd Last Year	4th Last Year
Sales	24,000	47,000	49,000	51,000	50,000
Cost of Goods Sold	16,320	31,960	32,830	32,130	30,000
Gross Margin	7,680	15,040	16,170	18,870	20,000
Operating Costs	7,150	14,700	15,600	14,200	14,000
EBITDA	530	340	570	4,670	6,000
Depreciation	800	1,700	2,300	2,400	2,200
Interest Expense	1,650	2,920	2,870	2,700	500
Profit before tax	(1,920)	(4,280)	(4,600)	(430)	3,300

5. Quickcraft's most recent balance sheet and other information is set out below.

	EUR
ASSETS	
Current	
Cash	950
Accounts receivable	10,500
Inventory	24,000
Prepaid expenses	11,850
	47,300
Fixed Assets	15,300
Total Assets	62,600
LIABILITIES	
Current	
Bank operating line	10,000
Accounts payable	30,400
	40,400
Mortgage Payable	33,000
	73,400
SHAREHOLDERS' EQUITY	
Share capital	1,000
Deficit	(11,800)
Total Equity	(10,800)
Total Liability and Equity	62,600

A. The book value of the inventory approximates the market value.

B. Based on an appraiser's report, the market value of the fixed assets is €100,000. Selling costs of these fixed assets is approximately 2.5% of market value. Their original cost is €80,000.

C. Corporate tax rate is 26%.

D. Mr. Jones' tax rate on dividends received is approximately 25%.

6. Required:

A. It is September 1 of this year. Provide your analysis of value of Quickcraft, as well as the liquidation value of the net assets to Mr. Jones. Provide reasoning for your choice of valuation method.

7. Answer:

A. Although it is evident in the "Required" section of this question, in estimating the value of Quickcraft, a liquidation value method is considered appropriate because:

1) Quickcraft has generated historical losses and the year-to-date results indicate losses.

2) There is recent intense competition in the industry and overall consumer demand is decreasing, putting downward pressure on margins, which may further increase losses.

3) There is a breach of the bank covenants, coupled with the fact the bankers appear unwilling to provide further financing. Thus, it is unclear whether the company will continue as a going concern.

B. As such, Quickcraft is not expected to generate a positive return on investment in the future. An orderly liquidation is assumed in these circumstances, since the shareholder intends to liquidate its investment and would do so on an orderly basis in order to maximize the net proceeds. There is no indication that the company will be forced into liquidation by the bank.

8. As discussed in this chapter, the calculation of the value of shares under a liquidation value method is not common. This is because it is rare that shares in a company that is not a going concern would be purchased, unless the purchaser could foresee significant synergies. For this example, we first calculate the value of the Quickcraft shares for illustrative purposes.

	Book Value at June 30	**Market Value at August 31**
Cash	950	950
Accounts receivable	10,500	10,500
Inventory	24,000	24,000
Prepaids and other	11,850	11,850
Fixed assets	15,300	100,000
Bank operating line	(10,000)	(10,000)
Accounts payable	(30,400)	(30,400)
Long-term debt	(33,000)	(33,000)
Net proceeds before items below		73,900
Deduct interim profit before tax from July 1 to August 31 (based on profit before tax incurred between January and June 30)		
(1,920 / 6 months x 2 months)		(640)
Less selling costs on fixed assets, after tax		
(2.5% x 100,000) x (1-26%)		(1,850)
Corporation taxes on chargeable gains		
26% x (100,000-80,000-2,500)		(4,550)
Funds available for distribution to shareholders (Fair Market Value of Shares) - Rounded		**67,000**
Personal taxes on dividend income of (25% x 67,000)		(16,750)
Liquidation value of net asses (net realizable value)		**50,250**

Assignment 8 – Liquidation Value Method (20 minutes)

VI. Real Estate and Equipment Valuations

1. Real estate and equipment may need to be revised to fair value when a valuer is using the asset-based approach to value a business.

2. Real Estate Valuations

   A. Real estate appraisers generally use a combination of three approaches when valuing a property:

      1) The income approach – the appraiser assesses the future income-producing potential of the property

      2) The market approach – the appraiser develops a property value referable to sales of comparable properties around the valuation date

      3) The cost approach – the appraiser estimates the cost of constructing new facilities with the same utility, and then applies depreciation factors reflecting wear and tear, economic obsolescence, and functional depreciation.

   B. When using the services of a real estate appraisal expert, the valuer must clarify at the outset the appraiser's specific terms of reference.

      1) Appraiser needs to know whether market value (value-in-exchange) or going-concern value (value-in-use), or both, are required.

   C. Real estate values can be problematic:

      1) Where the property is not being utilised in its highest and best use.

      2) Where excess land has value that is separable from the component currently being used.

      3) Where a building is of a special-use nature.

   D. Real property may have a different value-in-use relative to the existing occupant than its market value if it were sold for general use.

3. Equipment Valuations

A. Valuer must ensure that the machinery appraiser understands how the appraised values will be used.

B. The going-concern value of a business' tangible operating assets is generally based on value in continued use.

1) Assesses equipment value on an installed basis.

C. Where machinery is several years old, technological changes may be such that an identical replacement does not exist.

1) Equipment appraiser must use depreciated replacement cost.

D. Orderly and forced liquidation values are also often used in business equipment valuations.

1) What individual pieces of equipment might fetch at auction, either on an "as is, where is" basis or after reconditioning.

VII. Sample Exam Questions

1. For which of the following companies would the adjusted book value method be most appropriate?

A. A start-up technology company with a staff who are knowledgeable and experienced about the company's industry and its potential.

B. A company that has modest but stable cash flows and a significant investment in capital assets.

C. A company which sells one main product, the market for which has been shrinking in recent years.

D. A company that imports and distributes commodities throughout Western Europe.

Appendices

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Appendix A. Listing of CICBV, ASA, and USPAP Valuation Standards

1. Note: The IVSC includes its Code of Ethics in its Practice Standards. The CICBV and ASA have separate Code of Ethics Documents. USPAP has separate “Rules” for Ethics, Competency, Scope of Work, and Jurisdictional Exceptions. Codes of Ethics and Professional Conduct is discussed in detail in Appendix VII – Professional Conduct.

2. IVSC (http://www.ivsc.org/standards/index.html).

    A. Introduction

    B. Glossary

    C. IVS Framework

        1) Compliance with Standards

        2) Assets and Liabilities

        3) Valuer

        4) Objectivity

        5) Competence

        6) Departures

    D. General Standards

        1) IVS 101 Scope of Work

        2) IVS 102 Investigations and Compliance

        3) IVS 103 Reporting

        4) IVS 104 Bases of Value

        5) IVS 105 Valuation Approaches and Methods

    E. Asset Standards

        1) IVS 200 Business and Business Interests

        2) IVS 210 Intangible Assets

3) IVS 300 Plant and Equipment

4) IVS 400 Real Property Interests

5) IVS 410 Development Property

6) IVS 500 Financial Instruments

3. CICBV (https://cicbv.ca/practice-standards/)

A. Standard No. 110: Valuation Report Standards and Recommendations

1) Appendix A: Valuation Reports Prepared for Purposes of Securities Legislation, Regulation or Policies

2) Appendix B: Valuation for Financial Reporting

B. Standard No. 120: Valuation Reports – Scope of Work Standards and Recommendations

C. Standard No. 130: Valuation Reports – File Documentation Standards and Recommendations

D. Standard No. 210: Advisory Reports – Report Disclosure Standards and Recommendations

E. Standard No. 220: Advisory Reports – Scope of Work Standards and Recommendations

F. Standard No. 230: Advisory Reports – File Documentation Standards and Recommendations

G. Standard No. 310: Expert Reports – Report Disclosure Standards and Recommendations

H. Standard No. 320: Expert Reports – Scope of Work Standards and Recommendations

I. Standard No. 330: Expert Reports – File Documentation Standards and Recommendations

J. Standard No. 410: Limited Critique Reports – Reporting Standards and Recommendations

1) Appendix A: Labour Sponsored or Venture Capital Fund Valuation Reports Report Disclosure Standards and Recommendations

K. Standard No. 420: Limited Critique Reports – Scope of Work Standards and Recommendations

L. Standard No. 430: Limited Critique Reports – File Documentation Standards and Recommendations

M. Standard No. 510: Fairness Opinions – Disclosure Standards and Recommendations

N. Standard No. 520: Fairness Opinions – Scope of Work Standards and Recommendations

O. Standard No. 530: Fairness Opinions – File Documentation Standards and Recommendations

4. ASA (http://www.appraisers.org/ProfessionalStandards.aspx)

A. BVS-I: General Requirements for Developing a Business Valuation

B. BVS-II: Financial Statement Adjustments

C. BVS-III: Asset-Based Approach to Business Valuation

D. BVS-IV: Income Approach to Business Valuation

E. BVS-V: Market Approach to Business Valuation

F. BVS-VI: Reaching a Conclusion of Value

G. BVS-VII: Valuation Discounts and Premiums

H. BVS-VIII: Comprehensive Valuation Report

I. BVS-IX: Intangible Asset Valuation

5. USPAP (http://www.uspap.org/USPAP/frwrd/uspap_toc.htm)

A. Standard 1: Real property appraisal, development

B. Standard 2: Real property appraisal, reporting

C. Standard 3: Appraisal review, development and reporting

D. Standard 4: Real property appraisal consulting, development

E. Standard 5: Real property appraisal consulting, reporting

F. Standard 6: Mass appraisal, development and reporting

G. Standard 7: Personal property appraisal, development

H. Standard 8: Personal property appraisal, reporting

I. Standard 9: Business appraisal, development

J. Standard 10: Business appraisal reporting

Appendix B. SWOT Questionnaire and Common Value Enhancers and Detractors

1. This is an example of a SWOT questionnaire, which serves to assist the organization with a disciplined approach to understanding its strengths, weaknesses, threats, and opportunities. In undertaking such an analysis, management is enabled to develop strategies to leverage the organization's strengths and opportunities and to minimise the impact of the organization's weaknesses and external negative forces.

2. Strengths and Weaknesses

   A. An organization's strengths and weaknesses relate to its internal characteristics that affect its performance, especially as compared to the performance of its competitors. These characteristics will drive the organization's competitive position in the marketplace and will affect the organization's ability to implement its corporate strategy. This questionnaire groups an organization's potential strengths and weaknesses into six categories.

3. Financial Capital

Characteristic	NA	Major Weakness	Weakness	Minor Weakness	Minor Strength	Strength	Major Strength
Financial Resources							
Cash management							
Inventory level & turns							
Profitability							
Asset Turnover							
Operating Cash Flow							
Working Capital							
Credit terms & administration							

4. Physical Capital

Characteristic	NA	Major Weakness	Weakness	Minor Weakness	Minor Strength	Strength	Major Strength
Degree of capacity utilization							
Asset management							
Location of outlets/sales force							
Manufacturing facilities							
Warehousing capacity							
Location of facilities							
Technological capabilities							
Risk management							
Environmental concerns							
State of the art facilities							
Attractiveness to skilled/creative people							

5. Customer Capital

Characteristic	NA	Major Weakness	Weakness	Minor Weakness	Minor Strength	Strength	Major Strength
Brand recognition							
Market Share							
Advertising & promotion							
Quality of product service							
Product/service							
Customer service							
Breadth of product line							
Depth of product line							
Customer satisfaction & loyalty							
Customer identification							
Understanding why consumers buy							

6. Organizational Capital

Characteristic	NA	Major Weakness	Weakness	Minor Weakness	Minor Strength	Strength	Major Strength
Responsiveness to change							
Management teams leadership							
Organization culture & values							
Strategic planning process							
Relationships with suppliers							
Market research							
Pricing of product & services							
Sarbanes Oxley compliance							
Internal cooperation between departments							
Employee motivation							
Building leadership							
Competitor assessment							
Ability to innovate							
New product/service development capabilities							

7. Human Capital

Characteristic	NA	Major Weakness	Weakness	Minor Weakness	Minor Strength	Strength	Major Strength
Ability to attract & retain the best people							
Employee's capabilities & skills							
Compensation & benefits							
Sales force productivity							
Management communication							
Employee commitment							
Employee training							
Age of employees							

8. System Capital

Characteristic	NA	Major Weakness	Weakness	Minor Weakness	Minor Strength	Strength	Major Strength
Use of technology to improve profitability							
New product development							
R&D capabilities/resources							
Supply chain management							
Manufacturing productivity							
Procurement process							
Distribution systems							

9. Core Competencies

   A. Based on the analysis above, what are the four most important core competencies of the organization?

      1) The organization's most important core competency is:

      2) The organization's second most important core competency is:

      3) The organization's third most important core competency is:

      4) The organization's fourth most important core competency is:

10. Greatest Strengths

   A. Based on the analysis above, what are the four greatest strengths of the organization?

      1) The organization's greatest strength is:

      2) The organization's second greatest strength is:

      3) The organization's third greatest strength is:

      4) The organization's fourth greatest strength is:

11. Biggest Weaknesses

   A. Based on the analysis above, what are the four biggest weaknesses of the organization?

      1) The organization's biggest weakness is:

      2) The organization's second biggest weakness is:

      3) The organization's third biggest weakness is:

      4) The organization's fourth biggest weakness is:

12. Opportunities and Threats

   A. Every organization encounters external environmental forces that provide opportunities and threats that will affect its future performance. Identifying and understanding the organization's future opportunities and threats is necessary to adopt a strategy or modify a strategy that takes advantage of its biggest opportunities, while minimizing its material threats. The following section of the questionnaire groups an organization's potential opportunities and threats in to seven categories.

13. Industry – Marketplace

Characteristic	NA	Major Threat	Threat	Minor Threat	Major Opportunity	Opportunity	Minor Opportunity
Market & growth rate							
Changes in market share							
Access to new markets for our products/services							
Technology change							
Size of our market							
Changing customer needs & preferences							
New replacement products							
Degree of product differentiation							
Changing demographics							
Internet							
Location of customers							
Bargaining power of customers							
Bargaining power of buyers							
Potentional product/service substitutes							

14. Industry – Competitive Forces

Characteristic	NA	Major Threat	Threat	Minor Threat	Major Opportunity	Opportunity	Minor Opportunity
New competitors entering our market							
Innovation in the industry							
Capacity utilization in the industry							
Cyclicality/seasonality in the industry							
Industry profitability							
Intensity of competition							
Merger/Acquisition acitivity in industry							
Fragmentation of market							
Dominance of one or a few competitors							

15. Industry – Suppliers

Characteristic	NA	Major Threat	Threat	Minor Threat	Major Opportunity	Opportunity	Minor Opportunity
Price of raw materials							
Access to raw materials							
Forward & backward integration							
Quality of raw materials							
Suppliers capabilities & resources							
Number of suppliers							
Foreign suppliers							
Competition from alternative uses of raw materials							
Just in time inventory							
Multiple product use of raw inventory							
Bargaining power of suppliers							

16. Political

Characteristic	NA	Major Threat	Threat	Minor Threat	Major Opportunity	Opportunity	Minor Opportunity
Changes in domicile government regulations							
Changes in foreign government							
Changes in trade barriers							
Changes in economic conditions							
Changes in tax policies							

17. Economic

Characteristic	NA	Major Threat	Threat	Minor Threat	Major Opportunity	Opportunity	Minor Opportunity
Changes in transportation costs							
Changes in cost of debt							
Currency risk							
GDP							
Inflation							
Unemployment							
International trade levels							
Changes in customer disposable income							
Change in access to capital							
Change in union status							
Financial community views industry as favorable							

18. Socio-cultural

Characteristic	NA	Major Threat	Threat	Minor Threat	Major Opportunity	Opportunity	Minor Opportunity
Changes in social values & norms							
Changes in demographics of population							
Availability of qualified & skilled employees							
Values, beliefs & expectations of workers							
Wage & salary costs							
Costs of benefits & other employee programs							
Health & safety risks related to product							
Industry or company viewed favourably by society							

19. Competitors

Characteristic	NA	Major Threat	Threat	Minor Threat	Major Opportunity	Opportunity	Minor Opportunity
Competitor's pricing policies/practices							
Competitor's products/service offering							
Competitor's products/service quality							
Competitor's strategies							
Size of competitors							
Location of competitors							
Number of competitors							
Financial strength of competitors							

20. Biggest Opportunities

    A. Based on the analysis above, what are the four biggest opportunities of the organization?

        1) The organization's biggest opportunity is:

        2) The organization's second biggest opportunity is:

        3) The organization's third biggest opportunity is:

        4) The organization's fourth biggest opportunity is:

21. Biggest Threats

    A. What are the four biggest threats of the organization?

        1) The organization's biggest threat is:

        2) The organization's second biggest threat is:

        3) The organization's third biggest threat is:

        4) The organization's fourth biggest threat is:

22. Common Value Enhancers and Detractors

Businesses generally have favourable and unfavourable characteristics that cause it to stand apart from other businesses in general or within its own industry. The following characteristics can be ranked from one to three (three being highly significant and one being a minor enhancer or detractor), or 0 if not applicable.

23. Enhancers

Maintains higher gross margins than industry
Has audited or reviewed financial statements
Has made significant historical capital expenditures
Part of an industry with a consistent demand
Has low working capital requirements to support future growth
Has good internal financial controls
Requires little ongoing research & development
Cost to obtain new customers is minimal
Has historical sales growth rates higher than industry growth rates
Has a strategic planning process in place
Serves a growing market
Has a strong market position
Competitors have high barriers to entry (ie capital, skills, etc.)
Industry attractive to multiple buyers - both economically & synergistically
Has intellectual property (patents, copyrights, trade secrets, etc.)
Part of stable industry - not subject to volatility
Has own private label products
Sells brand name products recognizable to customers
Has high investment in priority software or production equipment
Has significant backlog and/or work in progress
Has contracts with customers/suppliers
Established business - years in business
Has established reputable name with customers and in the market place
Key player in a "niche" market
Has a quality customer base
Has a defined product line is not a job shop
Customers buy because quality or cost/benefit - not because of price
Has an established management team - not owner dependent
Trained & stable work force in place (non-union, low turn over, etc.)
Pays competitive salaries, wages, and benefits - within 10% of market
Has seasoned managmenet in all key positions
Maintains a high percentage of repeat business
Has a diverse customer base which serves several markets and/or industries
Has a broad customer base - no customer accounts for more than 5% of sales
Has modern, attractive and efficient facilities
Has an established and effective quality control program in place
Has license agreements with brand names
Has established products/services
Has a franchisee agreement with a strong franchisor or a master franchisee
Has products at the beginning of their product life cycles vs. mature products
Has a favorable facility lease - (assignment rights are an additional enhancer)
Has products with life cycles - minimal product obsolescence
Weak competitive environment

24. Detractors

Has high customer concentration - more than 10% of sales to any one customer
Is a job shop - always dependent on next order
Is a sub contractor - always dependent on the success of prime contractors
Low price multiples paid for companies in the industry (no to minimal goodwill)
Its owner(s) or key management are ready to retire or depart immediately
Has low barriers to entry (requires minimal capital, skills, etc.)
In industry attractive only to a few buyers (eg with special skills, etc.)
Has non-competitive salaries, wages, and benefits and/or high turnover
Has minimal repeat business from customers
Has high cost to obtain new customers
It's historical sales growth rate is lower than the industry's growth rate
Has no strategic plan in place
Has a union work force with near term contract renewals
Has aggressive competitors on price and/or quality
Has a history of work disruption (strikes, stoppages, etc.)
Is in a tight labor market and work force requires many highly-paid skilled employees
Has short-term leases on facilities and location is important
Has a limited number of and/or controlling suppliers
Has a low gross margin, may be inadequate to fund future growth
In a poor market with unfavorable economic trends
Located in inadequate facilities (functional obsolescence, poorly maintained, etc.)
Has poor quality financial statements and cost records
Has made inadequate capital expenditures (especially, if in capital intensive business)
Is a start up company (less than 3 years old or has not reached breakeven)
Is in a flat or declining market
Has commodity products and sells mostly on price, not on product features
Is owner dependent and has no depth in management
Has unproven products or new technology that has just entered the market place
Has products at the end of their life cycles
Products have short life cycles and/or high product obsolescence
Requires high R&D costs (maybe more than 15% for high tech business)
Has high working capital requirements to support future growth
Has poor internal financial controls
Has unfavorable facility leases (or leases that cannot be assigned)

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Appendix C. Sample Engagement Letter

February 6, 2018

Private and Confidential

Mr. Jones
Acme Items Plc.
1000 Main Street
London
W12 7RJ
United Kingdom

Dear Mr. Jones

Re: Valuation of Acme Items Plc.

You asked us, as independent experts, to provide you with an Estimate Valuation Report outlining our assessment of the Fair Market Value of the issued and outstanding ordinary shares of Acme Items Plc. (the "Company"). We set out herein for our mutual understanding, the terms of our engagement.

The valuation date to be used in our report is December 31, 2017. You asked us to prepare this report in connection with retirement and estate-planning purposes.

For the purpose of this report, the term Fair Value is defined as, "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 neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts."

Our report is not intended for general circulation or publication. It is not to be reproduced or used for any purpose other than that outlined above, without our written permission. We are not responsible or liable for losses of any party because of the circulation, publication, reproduction or use of our report contrary to the provisions of this paragraph. We reserve the right (but are not obligated) to review all calculations and conclusions in the report and, if we consider necessary, to revise them in light of any facts, trends or conditions which later become known to us.

Our report will outline our conclusion as to Fair Value as defined above. The price at which the Shares would actually sell, if exposed for sale in the actual market, may differ from the value conclusions in our report because our report will be based upon a hypothetical sale in accordance with the Fair Value definition above. Further, the report will be applicable at a point in time only and may not be relevant at any other time. The report will contain information about the differences between price and value.

To prepare our report, we will rely on the accuracy and reliability of the financial and other information that has been provided and will be provided to us, so long as it is plausible based on our experience and consistent with the other information provided. A list of the information

we need accompanies this letter. We may later identify additional information and we will follow up with further requests for information. You agree to provide us with all information in your possession or control which, at our sole discretion, is required by us to complete our research and analysis and to complete our report. At the conclusion of the engagement, we may ask any parties from whom any significant amount of information is received, to sign letters of representation regarding the accuracy and reliability of all information used to prepare the report.

We understand that our final report and statement of account are to be addressed to the Company. As agreed, our price for the above-described services is £20,000 plus taxes and expenses. Please note that any changes to the scope of our mandate may result in an increase to this price. Such changes could include an adjustment of the valuation date or an unexpected increase in the volume of analysis required if we do not receive all information requested in our accompanying list and subsequent requests.

The price above includes all work required to produce our report in DRAFT form, plus a budget for up to one hour of discussions with you to address any questions or concerns. When we issue a DRAFT version of our report, appropriate for release in final from our point of view and in complete compliance with professional standards, we ask that you review the report and provide us with any comments, questions or additional information that we should consider or issues you would like us to investigate further. Once you are satisfied with the contents and conclusions of the report, we will issue the report in its final form. Since we cannot predict the additional assistance we will provide to give all parties the comfort required to move forward, or the time necessary to attend future meetings relating to the report and its intended purposes, we will calculate the price of any additional assistance (above the one-hour budget discussed above) based on our standard hourly rates.

Please note that you are responsible for retaining and compensating other necessary experts. In particular, a real estate appraiser and equipment appraiser may be required for this assignment. We would be happy to provide you with various references, but it is your responsibility to retain these individuals. We will provide direction as to the appropriate standard of value to use.

It is our typical arrangement with our clients that our price be paid in two instalments, a deposit at the beginning and the balance upon completion of the report. Kindly submit a deposit in the amount of £10,000. A final invoice will be rendered upon issuance of the report in DRAFT form. The final invoice will be due for payment upon receipt and must be paid before we release our final report.

Please note that the DRAFT form of the report is subject to substantial revisions and is not to be given to anyone other than legal counsel for their review and comments.

The price quoted above relates only to the preparation of the requested report and does not include any other work required in connection with other matters such as correspondence with your legal counsel. We will provide whatever additional assistance you wish and will discuss the cost of such additional assistance at that time.

At your earliest convenience, we would like to have a tour of the Company's plant and any other relevant premises. At that time, we would appreciate the chance to meet with the Company's key personnel. We will inform you as to whom we would like to speak with at a later date.

We anticipate a date of completion of mid-December for our draft valuation report. This timeframe will hold true only if we receive all requested information (including meetings and physical tours).

Our liability to you, the Company, any subsidiary companies, or any shareholders, principals or any other parties related to our report and the services described in this letter is limited to the amounts paid to us for this engagement.

If these terms and conditions are acceptable, kindly sign one copy of this letter where indicated and return it directly to us.

Yours faithfully,

SHINELAFF LLP
ACCOUNTANTS AND ADVISORS

Jill Copley, Senior Manager

Above terms of engagement agreed to and accepted

_____ _____

Mr. Jones Date

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Appendix D. Sample Information Request Letter

1. Financial Information

    A. Financial statements for each of the five years leading up to the valuation date

    B. Interim financial statements (if the valuation date is not a financial year-end)

    C. Corporate income-tax returns for each of the five years leading up to the valuation date

    D. Information about any unusual or non-recurring transactions that took place in each of the five years up to the valuation date

    E. The valuation-date values of all assets for which book value was not equal to current value

    F. A description of and the market value of all inter-company transactions

    G. Any operating or financial budgets and forecasts, both historical and prospective

2. Company Information

    A. A general description of the nature and history of the Company, including its incorporation date and any major changes over time

    B. Information about the Company's main product lines, including the details of any patents and proprietary products

    C. An ownership organization chart inclusive of related companies

    D. An internal organization chart indicating the decision-making hierarchy

    E. Information about any share sales between shareholders or outside parties within the last ten years

    F. Information about any letters of intent or discussions with potential purchasers for either the shares or assets of the Company within the last five years

    G. A list of the top ten customers for each of the five years leading up to the valuation date and the total sales to each for each year, as well as whether the Company primarily sells to other companies, or to the end individual consumers

    H. A list of the top ten suppliers for each of the five years leading up to the valuation date and the total purchases from each for each year

I. Information about the sales cycle and the average length of contracts (if any) in place at the valuation date

J. Information about the Company's information management computer systems, indicating the type of software used

K. A copy of all shareholders' agreements

3. Management Information

A. For each owner and related party, a description of job responsibilities and the compensation and benefits paid or accrued in respect of each year leading up to the valuation date

B. Key managements' background and experience, including degrees and designations

C. Information (from trade journals or industry surveys) regarding wages that are normally paid to company presidents or general managers in the industry

4. Strategic Information

A. A copy of the Company's strategic plan

B. Management's perspectives on the key success factors and competitive advantages

C. Information about the Company's marketing and business development strategy including details about the influence key management has on business relationships

5. Other Corporate Information

A. A list of all assets that the Company owns but are not used in operations

B. Management's estimate of the average capital asset purchase requirements to sustain the Company's operations (i.e. not considering growth) for the five to ten-year period after the valuation date

C. A list of all of the Company's operating sites, including a description of the primary activities at each site and the ownership or terms of lease for each location

D. Information about any contingent liabilities at the valuation date, including environmental liabilities

6. Industry and Market Information

   A. The Company's market share (local, provincial, national, North American or worldwide), and whether it is increasing or decreasing

   B. The life cycle of the Company's main product lines

   C. The seasonality or economic cyclicality of the Company's main products

   D. Information about the Company's main competitors

   E. Information about industry trends (demand and supply of products and materials, merger and acquisition activity, and any rules of thumb used in sales of companies)

   F. A list of trade publications and journals associated with the industry and copies of any recent articles written about the Company, its customers or suppliers, or particular new trends or innovations

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Appendix E. Financial Ratios

1. Liquidity ratios

$$\text{Current Ratio} = \frac{Current\ Assets}{Current\ Liabilities}$$

$$\text{Quick (Acid Test) Ratio} = \frac{Cash\ \&\ Equivalents + Accounts\ Receivable\ (Net)}{Current\ Liabilities}$$

2. Asset management or turnover ratios

$$\text{Inventory Turnover} = \frac{Cost\ of\ Goods\ Sold}{Inventory}$$

$$\text{Accounts Receivable Turnover} = \frac{Sales}{Accounts\ Receivable}$$

$$\text{Average Collection Period} = \frac{Accounts\ Receivable}{Sales\ Per\ Day}$$

$$\text{Fixed Asset Turnover} = \frac{Sales}{Fixed\ Assets}$$

$$\text{Working Capital Turnover} = \frac{Sales}{Working\ Capital}$$

$$\text{Total Asset Turnover} = \frac{Sales}{Total\ Assets}$$

3. Leverage/coverage ratios

$$Debt\ /\ Assets = \frac{\text{Total Debt}}{\text{Total Assets}}$$

$$\text{Interest-Bearing Debt / Equity} = \frac{Interest\text{-}Bearing\ Debt}{Total\ Equity}$$

$$\text{Times Interest Earned} = \frac{Earnings\ Before\ Interest\ \&\ Taxes\ (EBIT)}{Interest\ Expense}$$

$$\text{Fixed Charges Coverage} = \frac{EBIT + Fixed\ Charges}{Interest\ Expense + Fixed\ Charges}$$

$$\text{Total Assets/Total Equity} = \frac{\text{Total Assets}}{\text{Total Equity}}$$

4. Profitability ratios

$$\text{Gross Profit Margin} = \frac{Gross\ Profit}{Sales}$$

$$\text{Operating Profit Margin} = \frac{Operating\ Income}{Sales}$$

$$\text{Net Profit Margin} = \frac{Net\ Income}{Sales}$$

$$\text{Return on Assets} = \frac{Net\ Income}{Total\ Assets}$$

$$\text{Return on Equity} = \frac{Income\ Available\ to\ Stockholders}{Stockholders'\ Equity}$$

$$\text{Return on Invested Capital} = \frac{Net\ Operating\ Profit\ After\ Tax}{Total\ Capital\ (Debt + Equity)}$$

5. DuPont Formula

$$\text{Return on Equity} = \text{Profitability x Asset Turnover x Leverage}$$

A. The “classic” formula” is:

$$\frac{\text{Net Income}}{\text{Stockholder's Equity}} = \frac{\text{Net Income}}{\text{Sales}} X \frac{\text{Sales}}{\text{Total Assets}} X \frac{\text{Total Assets}}{\text{Stockholder's Equity}}$$

B. Can be modified to monitor a specific type of financial performance. In general terms, the formula is:

$$\frac{\text{Earnings}}{\text{Type of Investment}} = \frac{\text{Earnings}}{\text{Type of Revenue}} X \frac{\text{Type of Revenue}}{\text{Type of Asset}} X \frac{\text{Type of Asset}}{\text{Type of Investment}}$$

Appendix F. Statistics for Valuation

1. Introduction

   A. An understanding of statistical theory and its application aids business appraisers in analysing company, industry, and market data.

   B. Statistics are often used to:

      1) Evaluate company performance over time and against some set of peer data

      2) Evaluate the predictability of market multiples and other valuation variables

2. Central Tendency Measurements

   A. Mean – also known as the "arithmetic mean", is typically what is meant by the word "average". The mean is perhaps the most common measure of central tendency. The mean of a variable is given by:

$$\frac{\text{the sum of all its values}}{\text{the number of values}}$$

   B. Median – a popular measure of central tendency. It is the 50th percentile of a distribution. To find the median of a number of values, first order them, and then find the observation in the middle: the median of 5, 2, 7, 9, and 4 is 5. (Note that if there is an even number of values, one takes the average of the middle two: the median of 4, 6, 8, and 10 is 7.) The median is often more appropriate than the mean in skewed distributions, or in situations with large outliers.

   C. Mode – the most common value in a distribution and is the least often used measure of central tendency.

3. Variation Measurements

   A. Range – the simplest measure of variation to find. It is the highest value minus the lowest value. Since the range only uses the largest and smallest values, it is greatly affected by extreme values, that is, it is not resistant to change.

   B. Standard deviation – the most commonly reported measure of variability or spread is the standard deviation.

      1) Also called the root-mean-square deviation, which describes the way it is calculated. First, the deviations from the mean are calculated, then,

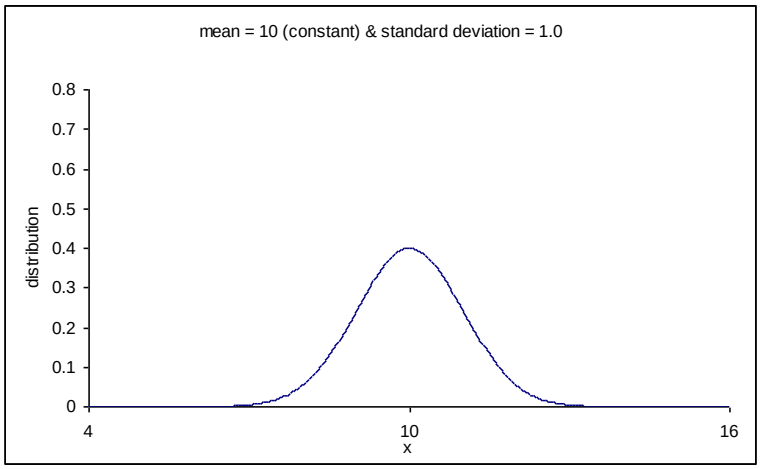
the deviations are squared. Next, the mean of the deviations is calculated and finally, the square root of the mean is taken to obtain the standard deviation.

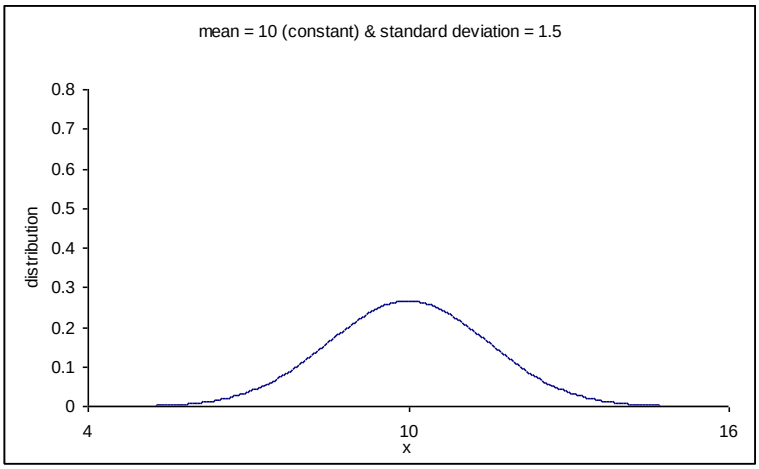
2) When data are approximately normally distributed, approximately 68% of the data lie within one standard deviation of the mean, approximately 95% of the data lie within two standard deviations of the mean, and approximately 99.7% of the data lie within three standard deviations of the mean.

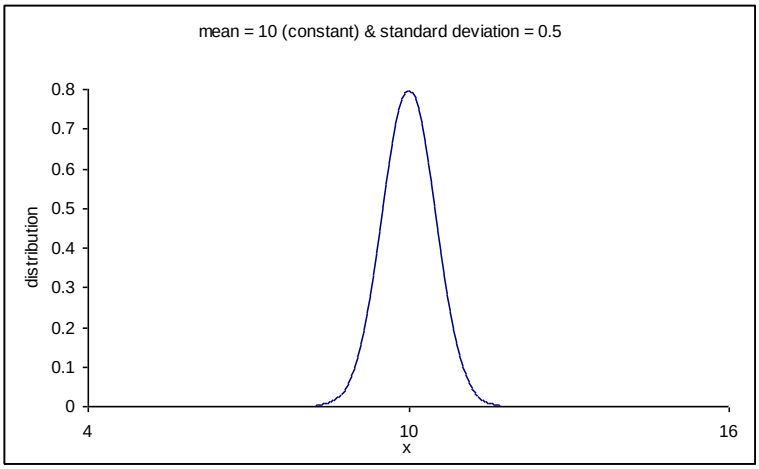
C. Coefficient of variance – the degree to which a set of data points varies. It is often called the “relative standard deviation”, since it takes into account the mean (average). The larger this number is, the greater the variability in your data. The coefficient of variance is calculated by dividing the standard deviation by the mean and is typically displayed as a percentage. When assessing precision, the lower the coefficient of variance percentage, the better the precision between replicates.

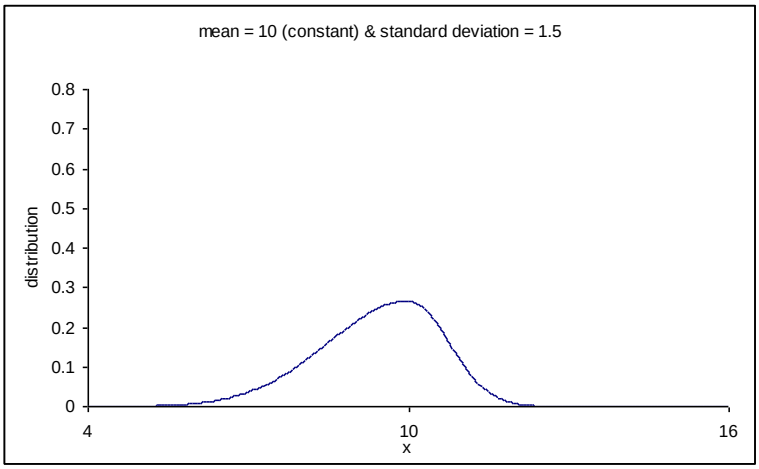
D. Graphical Representations of Central Tendency and Variation

4. Normal Distributions – the below three graphs have the same mean, but the standard deviation (or σ) for the first graph is larger than for the second, and the σ for the third is still smaller than for the first.









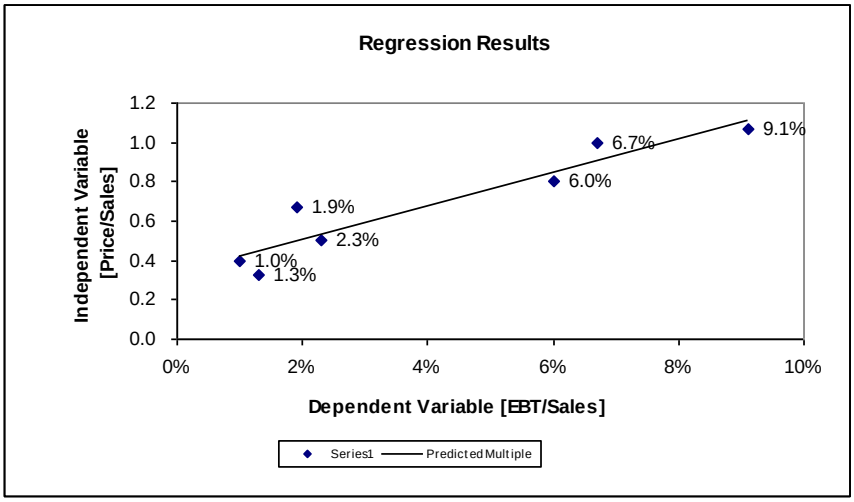
5. Skewed Distributions – A distribution is skewed if one tail extends out further than the other. A distribution has positive skew (is skewed to the right) if the tail to the right is longer. A distribution has a negative skew (is skewed to the left) if the tail to the left is longer.

A. Variance in Valuation

1) When measures of central tendency are applied, measurements of variance help develop an impression of how closely concentrated around the expected value the distribution is. It is a measure of the 'spread' of a distribution about its average value. For example, if we calculate the mean and median price/book equity ratio, but find there is a large variance, then the “average” price/book equity ratio may be meaningless as a predictor of value.

6. Correlation

A. Regression analysis—Regression analysis is a statistical tool for the investigation of relationships between variables.



B. Correlation coefficient – a number between -1 and 1 that measures the degree to which two variables are linearly related.

1) If there is perfect linear relationship with positive slope between the two variables, the correlation coefficient is 1; a positive correlation exists when one variable displaying a high value (on the “X” axis) is shown to be related to a high value in the other variable (on the “Y” axis), and vice versa.

2) If there is a perfect linear relationship with negative slope between the two variables, the correlation coefficient is -1; a negative correlation exists whenever one variable displaying a high value (on the “X” axis) is shown to be related to a low value on the “Y” axis—and vice versa.

3) A correlation coefficient of zero means that there is no linear relationship between the variables.

C. Correlation in valuation

1) Often used to identify relationships between measurable market data and financial data in order to measure the predictive nature of the relationship between the market data and the financial data. For example, if there is a high correlation between the price/earnings ratio of publicly traded companies and the post-tax profits of those companies, then the price/earnings ratio may be a good predictor of value.

VIII. Role of a Business Valuer

1. Introduction

A. The education, skills, and qualifications of a business valuer are diverse and well respected.

B. As a result, a business valuer has the potential to be able to perform a wide variety of roles, including:

1) Independent expert

2) Non-independent expert

3) Alternative dispute resolution professional

2. Independent (Testifying) Expert

A. An independent expert may ultimately provide expert evidence in court or a similar venue. As a result, independent experts must:

1) Ensure that they are acting independently and objectively.

a) A testifying expert's role is to serve the court, not the client, or the client's legal counsel.

b) The valuer's report is the property of the valuer. It does not belong to the client or legal counsel.

- Prior to finalizing the report, the valuer must discuss it with counsel and the client to obtain factual and reasonable subjective input.
- Legal counsel may be tempted to rewrite important parts of the valuer's report, directly or indirectly (i.e. through suggested edits).

- The valuer must be careful to maintain his/her independence and must remain in control of the report writing and editing process.

2) Be able to prove that they have specialised knowledge about business valuation and related topics, beyond that of which the court is expected to possess.

   a) Education

   b) Experience (work, presentations, testifying)

3) Provide opinions only on matters that are within the expert's expertise.

   a) The expert should make it clear when questions or issues are outside of his/her expertise.

4) Be careful about any written product, including handwritten notes or spreadsheets showing alternate scenarios.

   a) Contradictory statements could be attacked by opposing legal counsel.

   b) Anything that gives the appearance of the valuer acting as an advisor could be attacked by opposing legal counsel.

B. Tips for acting as an expert witness

1) Before testifying:

   a) Meet with legal counsel

      - Discuss the types of questions that will be asked on direct examination (examination-in-chief) and may be asked on cross-examination.

      - The valuer can fully explain or clarify his/her report.

   b) Review the Expert Report

      - Memory-refresher

        ⇒ Significant amounts of time may have passed between finalizing the report and being called as an expert witness.

      - Determine if there are any corrections or clarifications that are necessary.

⇒ As soon as possible, advise (through counsel) the opposing party of any change of opinion which has arisen or which could arise potentially through reading the report.

- Consider past articles, publications, or court decisions on the topic

2) While testifying:

a) Most importantly, remain objective in fact and appearance.

b) Do not rush responses.

c) Respond honestly, clearly and directly to the question raised.

d) Be selective about which issues should be argued to avoid the appearance of bias.

e) If an error is discovered in the report, request enough time to verify the error.

- If an error does exist, admit it and comment on the impact of the error on the conclusions.

f) If opposing counsel requests alternate calculations employing a different set of assumptions than those contained in the report, and counsel who has retained the expert's services does not object:

- Ask for a recess to perform the alternate calculations accurately and completely.
- In subsequent testimony, stress that the calculations are not an opinion.

g) Be prepared, but not overly prepared.

C. Pitfalls in Direct Examination (Examination-in-Chief)

1) The expert strays from the facts stated in the report (or gleaned from the evidence presented at trial) to assume additional facts that have not been presented to the court.

2) The expert strays into hypothetical situations that have not been fully thought through.

3) The expert over-sells the conclusions or method.

a) If there are legitimate difficulties with the method that can be explained to the court, it is better to explain them than to pretend they do not exist.

4) The expert tries to comment on the law as it applies to the expert's conclusions.

5) The expert appears as an advocate for the client.

3. Non-Independent Expert

A. Advisor to client

1) The valuer provides advice to the client with the objective of supporting and advocating the position of that client.

2) Includes situations such as the purchase or sale of a business interest or the negotiation of contracts.

B. Advisor to legal counsel

1) Legal counsel may retain a non-testifying valuer (also called a consulting expert, litigation expert, or shadow expert) to assist them in preparing for trial.

a) The work product of the non-testifying expert is not presented in the court as evidence, and so the non-testifying expert does not need to be independent.

b) Legal counsel also retains an independent expert, who will testify at trial.

2) Ways in which a non-testifying expert can assist legal counsel:

a) Identify potential heads of damages.

b) Provide in-depth analysis and offer creative approaches to the valuation, accounting and financial issues.

c) Assist in developing a case strategy.

d) Review work done by the independent expert and point out areas of strength and weakness.

e) Comment on opposing expert's report, method, assumptions, and logic.

f) Assist in developing questions to be directed at the opposing expert.

4. Alternative Dispute Resolution Professional

A. Alternate dispute resolution (ADR) is becoming a popular forum used to achieve dispute determination without incurring the full costs and risks of a trial process.

1) In most cases where ADR is utilised, it is agreed to by opposing parties, either in advance (through an ADR clause in a contract), or at the time of the dispute.

2) The ADR may be binding or non-binding and the terms of the ADR are decided together by the parties.

B. Two types of ADR are:

1) Mediation

a) A non-binding process whereby one or more neutral persons (mediators) attempt, with the parties, to find a solution that will be acceptable to both parties.

- The people with the dispute, not the mediator, decide whether they can resolve things, and what the outcome should be.
- Helps the parties manage communication problems.

b) What is discussed in mediation cannot normally be used in court later unless both parties agree.

c) Types of mediation in the UK include:

- Facilitative mediation – the mediator does not direct the parties towards any particular settlement.
- Evaluative mediation – the mediator makes suggestions as to the likely outcome of the dispute.
- Rights-based mediation – the mediator ensures that any mediated agreement reflects statutory rights and legal entitlements.

d) There are no set outcomes in mediation, and the parties are not restricted to the outcomes that a court could order.

2) Arbitration

a) A process similar to (but less formal and more flexible than) a court proceeding whereby one or more neutral persons (arbitrator) renders a legally binding decision on a matter.

- Because decisions are legally binding, there are very limited grounds for their challenge.
- Usually, appeals can only be based on a claim that the arbitrator behaved unfairly.

b) Arbitration clauses are very common in contracts, whereby disputes arising under the contract must be resolved by an arbitrator or a panel of arbitrators rather than by the court.

c) In the UK, arbitration is governed by The Arbitration Act 1996, which came into force on 31 January 1997.

d) Prior to accepting an engagement as an arbitrator, a valuer must:

- Understand the technical and financial aspects of the case.
- Ensure that they are in a position to render the services to both parties and not jeopardise their other client relationships.
- Disclose any past or present relationship with any of the parties or their legal counsel.
- Immediately disclose any circumstances that may affect his/her impartiality and independence, including any bias or any financial or personal interest in the results of the arbitration, when such circumstances become known.

C. A valuer can participate in ADR by:

1) Acting for one of the parties

2) Acting as (one of the) arbitrators or mediator

5. References:

A. Chartered Institute of Arbitrators. www.ciarb.org

B. ADRnow. www.adrnow.org.uk

Appendix G. Professional Conduct

1. Introduction

   A. Most major professional organizations have codes of professional conduct with which its members must abide.

      1) Codes of conduct are enduring and are only rarely subject to change, whereas practice standards may adapt as the body of knowledge and practice methods within the profession evolve.

      2) Codes of conduct generally set out the minimum acceptable conduct that is expected of members (and usually registered students).

   B. Codes of professional conduct aim to:

      1) Protect the public by ensuring the quality of professional services.

      2) Protect the reputation of the profession by setting a minimum level of acceptable professional conduct.

      3) Foster an environment of professional courtesy amongst the members of a professional organization.

   C. Codes of professional conduct generally deal with the following topics:

      1) Professional behaviour with clients

      2) Professional behaviour amongst members

      3) Independence and objectivity

      4) Professional competence, fiduciary duty, and due care

   D. As illustrated in the chart below, the components of the codes of professional conduct of various accounting and valuation organizations around the world are very similar.

	ICAEW	CICBV	ASA	USPAP
Professional Behaviour with Clients	√	√	√	√
Professional Behaviour amongst Members	√	√	√	
Independence and Objectivity	√	√	√	√
Professional Competence and Due Care	√	√	√	√

E. A valuer who is a member in good standing of multiple professional organizations may be required to abide to the codes of professional conduct for each of those organizations.

F. Codes of professional conduct usually apply to both members and registered students.

2. Professional Behaviour with Clients

A. Integrity:

1) Conduct should reflect the good reputation and integrity of the profession and the organization and their ability to serve the public interest.

a) Services should not be withdrawn from a client except for good cause and upon appropriate notice.

b) Members should not associate with any report or communication which is known (or should have been known) to be false or misleading.

c) Members should report serious breaches of conduct by other members to their organization.

2) Conduct should not be regarded as disgraceful, dishonourable, or unprofessional (within reason).

a) Advertising should be in good taste and not false or misleading.

b) Reports should only be signed by a person who did the work, or by someone who directly supervised someone who did it.

B. Confidentiality

1) Members should keep current and former clients' affairs confidential.

2) Members should not disclose information obtained in the course of their duties, except as specifically required by law.

3) Members should not exploit any information obtained in the course of their duties.

3. Professional Behaviour amongst Members

A. Professional courtesy

1) Other members should be treated with professional courtesy and consideration.

a) Members should not make false or malicious comments, either directly or by innuendo, about other members.

b) Criticism directed at other members should be warranted and professional.

- Interaction among members should be conducted in a professional and non-confrontational manner.
- Review or critiques of the work or views of another member should be done in a professional, objective, and non-confrontational manner.

4. Independence and Objectivity

A. Independence and objectivity

1) When providing independent professional services:

a) Members should remain free of any influence, interest, or relationship that impairs, or could reasonably be seen to impair, professional judgment or objectivity.

b) Members should remain free of bias.

c) Members should not advocate the cause or interest of the party in question.

d) Members should not accept fees contingent on a certain value or result.

2) When providing professional services where independence is not required, this should be clearly disclosed.

3) Members should consider independence when the same firm provides audit and valuation services.

B. Conflict of interest

1) Members should not provide independent professional services in circumstances that result in, or could reasonably be perceived to result in, a conflict of interest between the interests of the client and the interests of the member or any parties directly related to the member.

5. Professional Competence and Due Care

A. Members should always be in compliance with the professional organization's by-laws, practice standards, and codes of professional conduct.

B. Members should engage in continuing education on a regular basis.

C. Members should provide professional services only when:

1) Competent to provide such services by virtue of training or experience, or

2) Able to become competent without undue delay, risk, or expense to the client.

6. Significance of Key Court Cases

A. Valuers should be aware of court cases that provide decisions on the issues discussed in this appendix.

B. Caution must be used because case decisions are very case-specific.

1) Incorrect or improper interpretation of such decisions may lead to incorrect valuation calculations or conclusions.

Appendix H. Professional Conduct Scenarios

1. For each of the scenarios presented below:

   A. Identify the main issues, and

   B. Discuss how you would approach and resolve each issue.

2. Scenario 1:

   A. You are working on a business valuation for ABC Plc. ABC Plc.'s CEO would like to completely renovate his basement with a bar, entertainment room, and exercise room. The CEO heard that your brother-in-law is an excellent handyman who owns his own construction business, and he asks if you if you could put him in contact with him.

   B. Suggested Response

      1) Main Issue: Your independence may be perceived as being threatened - could you be giving in to the CEO's bias in order to secure your brother-in-law a job?

      2) Approach and Resolve: This is not likely to be a serious independence issue. You will not personally gain from providing a biased value. Further, the contract between you and the CEO was established before the referral to your brother-in-law was made.

3. Scenario 2:

   A. You are a professional valuer and your sister has just told you that she is separating from her husband, who owns a successful coffee franchise. She has asked you to prepare a valuation report on the franchise for property equalisation purposes. You agree because her cash situation is tight because of her escalating legal fees. She is grateful and tells you that she will pay you 10% of the equalisation payment from her husband (she wants to pay you well, but she will not know how much money she has until she receives her payment).

   B. Suggested Response

      1) Main Issue: It would be difficult for you to maintain your independence and objectivity while working for your sister. Further, valuers should not accept contingency fee payments for valuation assignments as it might further impair their objectivity (bias to overstate value in this case).

2) Approach and Resolve: Refer sister to another valuer, preferably in different firm. Let her know why valuers cannot accept contingency fee payments for valuations.

4. Scenario 3:

A. You are approached to prepare a valuation report for a client of your accounting firm.

B. Suggested Response

1) Main Issue: Are there any potential independence issues or is there a conflict of interest?

2) Approach and Resolve: Should consider the following:

a) What is the purpose of the report? If it is for internal use by management (e.g., reorganization for tax purposes), there likely are no issues.

b) In some cases, a valuer who works for the same firm as an external accountant or auditor may not be perceived as being independent, particularly if the valuer previously performed accounting/auditing work for the client. To be safe, a referral to another valuer may be required (but this will depend on the circumstances of the situation).

c) If it is for a purchase or sale transaction:

- Is the other party also a client of the firm? If so, is your firm also providing advice to the other client? These points bring up conflict of interest issues.
- Is the other client aware of your relationship with the first client? If so, and if they acknowledge this in writing, this may negate the conflict of interest issues.

d) If it is for a sale of the business, are you being engaged as an independent valuer or as an advisor for the client trying to assist in obtaining the best possible price? In such circumstances, is your report going to be made available to other parties? If so, you must include a statement that you are not independent in your report.

3) As illustrated by the points above, this scenario does not have any clear answers. It is a common scenario encountered by valuers who work for public accounting firms. Each valuation case (in general) must be

approached on an individual basis, and the decision to take on a particular case will depend on its facts and circumstances.

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Appendix I. Website References

1. Canadian Institute of Chartered Business Valuators. www.cicbv.ca
2. American Society of Appraisers. www.appraisers.org
3. The Institute of Chartered Accountants in England and Wales. www.icaew.com
4. Uniform Standards of Professional Appraisal Practice. www.uspap.org

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Appendix J. Fairness Opinions

1. Introduction

   A. An opinion usually prepared in a brief letter format in which an independent financial advisor renders their opinion that a proposed transaction is fair, from a financial point of view, to the security holders (or to a special group of security holders) of a company.

   B. Normally issued to a company's full board of directors or to special, independent committees or boards.

   C. The opinion is qualitative (i.e. it will state that the proposed transaction is "fair from a financial point of view") and is not indicative of value.

2. Importance

   A. In recent years, there has been a global push for greater oversight of corporate activity.

   B. Deals will be subject to much scrutiny in the upcoming years and companies and their boards may find themselves defending their decisions more frequently.

   C. There has been a heightened desire for transparency emerging in both Europe and North America.

      1) A 2009 survey by Duff & Phelps (Fairness Opinion Insight, February 2009) of 50 senior executives and board members from the U.S. and Europe revealed that:

         a) 86% of respondents believe that companies should obtain fairness opinions when making a significant acquisition.

         b) 62% of respondents expect demand for fairness opinions to increase in the U.S.

         c) 78% expect demand to increase in Europe, where fairness opinions have been used less frequently in the past.

            - 56% of respondents expect the use of fairness opinions to grow most in the UK, while Germany was chosen by 24% of respondents. However, all European countries are expected to see an increase in fairness opinion demand.

3. Objectives

   A. Designed to assist directors in making reasonable business judgments and to provide protection under the business judgment rule, which generally requires that:

      1) A business decision is made.

      2) The board exercises due care in the process of making that decision.

      3) The board acts independently and objectively.

      4) The board's decision is made in good faith.

      5) There is no abuse of discretion in making the decision.

4. Suggested Content

   A. Recipient/addressee.

   B. Description of the proposed transaction and the consideration being offered to the security holders.

   C. Purpose of the fairness opinion.

   D. Identity and credentials of the fairness opinion issuer.

   E. Description of any past, present or anticipated relationship between the fairness opinion issuer and any interested party that may be relevant to the fairness opinion issuer's independence for purposes of providing the fairness opinion.

   F. Effective date.

   G. Statement that the fairness opinion was prepared by the issuer acting independently and objectively (or disclose facts that might result in the possible actual or perceived lack of independence and objectivity).

   H. Description of the relevant business, assets, or securities to allow the reader to understand the rationale of the fairness opinion, the approach, and various factors influencing financial fairness that were considered.

   I. Statement that the fairness opinion issuer's compensation is not contingent on an action or event resulting from the use of the fairness opinion (or disclose the nature of the actual or perceived contingent consideration).

   J. Scope of review (summary of the type of information reviewed and relied upon).

   K. Description of any valuation work performed or relied upon.

L. Discussion of any bona fide offer or prior valuation or other material expert report considered by the Fairness Opinion issuer in coming to his/her conclusions.

M. Statement of key assumptions.

N. Discussion of the factors considered important by the Fairness Opinion issuer in performing the Fairness Opinion analysis.

5. The Role of the Valuer

A. Determines the nature and value of the securities or ownership interests to be given up or the reasonable range of value in exchange for the securities or consideration to be received, which also must be valued (within a reasonable range), and their nature (e.g. degree of marketability).

B. Evaluates the remaining financial terms and conditions of the proposed transaction (and compares with terms and conditions of other deals when feasible).

C. Performs “appropriate” due diligence or investigation, given the nature of the proposed transaction.

D. Examines the documentation relating to the deal.

E. Advises the board of directors of issues, concerns, or problems with a proposed deal.

F. Opines, from a financial point of view, as to the fairness of a proposed transaction from the standpoint of a specific group of security holders (e.g. all the security holders, the non-controlling security holders, the holders of a particular class of securities, etc.).

6. The Range of Fairness

A. Fairness is a subjective evaluation, to a certain extent, as the following points illustrate:

1) Deals are negotiated based upon relative strengths and desires of the negotiators.

2) There may be a range of outcomes at which a deal can be “fair” (some deals are fairer than others are).

3) Fairness is normally judged from the viewpoint of one side only in a deal.

4) Some deals are very fair, while some are not fair and others are close calls.

5) A fairness opinion is no guarantee for a board of directors or a company's security holders that the proposed deal is the best possible deal.

7. Importance of Price

A. Price is an important consideration in evaluating fairness; however, not all "prices" are comparable.

B. Stock deals are usually "priced" at the current market price times the number of shares to be issued, but how should a stock deal compare with an all-cash deal?

1) Attractiveness

a) Not all stocks have equivalent attractiveness:

- Liquidity of stock.
- Historical performance of the potential acquirer(s) must be considered, and the outlook for future performance of the combined entity.
- Consider potential for rapid appreciation.

2) Difficulties in determining price

a) Volatile securities that are to be received can be difficult, if not impossible, to value.

b) Contingent payments must be carefully evaluated (risks associated with their eventual receipt).

c) In a stock-for-stock deal, a thorough analysis of the investment characteristics of the shares is vital to determine price.

C. The relative importance of pricing

1) Deal pricing can be compared with the following:

a) Prior transactions in a company's stock.

b) Transactions of the shares of similar companies.

c) Change of control transactions with other companies in the same or related industries.

2) Important points to consider:

a) Appropriate premise of value:

- Strategic purchase – value at the control strategic level.
- Financially driven purchase – value at control level for "financial" buyers.
- "Merger of equals" – value at marketable non-controlling interest level concept (neither side can pay much of a premium if the benefits of the proposed deal are to be "equally" shared).

b) Relative consideration

- Do all shareholders receive the same consideration for equivalent shares sold?
- If one group of shareholders receives an apparently preferential pricing, what is the justification for it? Is it valid?
- If there are different categories of securities being sold, is the pricing effectively equivalent (or at least, reasonable) for each category of securities given their individual characteristics?

8. Dilution Analysis

A. In most fairness opinions, an analysis of accretion/dilution of the stock of the acquiring company is performed.

B. Involves the analysis of the impact that a proposed transaction will have on earnings per share (EPS) of the acquiring company.

C. If a proposed transaction is dilutive to EPS, it may not be well received by the market and could lead to a decrease in the per-share price of the acquiring company.

D. Typically, the accretion/dilution analysis includes an evaluation of the effect on the EPS of the acquiring company on the proposed transaction, with consideration of:

1) The target company's earnings

2) The cost of the acquisition

3) Its financing

4) Its accounting consequences

5) The resulting synergies

9. The Process of the Proposed Transaction

A. Valuer should examine the negotiating process that occurred prior to the proposed transaction (was the process performed diligently or was the proposed transaction agreed to with no analysis?)

B. Examples of the types of questions that should be asked of the client's representatives are as follows:

1) Was the transaction shopped?

a) If not, what procedures were followed to help "cure" the lack of shopping?

b) If so, who did the shopping and how?

2) Who initiated the transaction, performed the pricing analysis, and negotiated the transaction?

3) Was a financial advisor or legal counsel involved?

4) Were all major terms, including financial and non-financial issues, agreed to at the time the price was settled?

5) Was the board of directors fully apprised of the process?

6) Are there non-competition agreements or employment contracts with key owners that could be interpreted as shifting value away from the remaining shareholders?

7) If management is perceived as having a potential lack of objectivity, was a special committee of the board of directors established to handle negotiations?

a) If not, was legal counsel and/or a financial advisor involved and did they report to the board?

Appendix K. Other Types of Reports (CICBV)

1. In Canada, Chartered Business Valuators (CBVs) often prepare other types of reports that are not valuation reports, but nonetheless require similar skills, professional judgment, and knowledge as valuation reports.

2. The reports discussed below each have their own practice standards, to which the CBV must adhere when preparing these reports.

3. Advisory Reports

    A. Prepared by CBVs who have not been engaged to act in an independent manner.

    B. Includes any written communication containing:

        1) A conclusion as to the value of shares, assets, an interest in a business, a conclusion as to the quantum of financial gain/loss, or any conclusion of a financial nature in the context of litigation or a dispute, or

        2) Comments on a report containing a conclusion on such matters.

        3) Generally prepared for:

        4) Actual purchase and sale transactions.

        5) Litigation, where the CBV is advising or assisting a party with the negotiation of a dispute.

4. Expert Reports

    A. Require CBVs to act in an independent manner.

    B. Includes any written communication (other than a valuation report) containing a conclusion as to the quantum of financial gain/loss, or any conclusion of a financial nature in the context of litigation or a dispute.

    C. In some situations, one measure of financial loss is the decline in the value of a business or asset, and so the expert report must contain a valuation report.

        1) In these cases, the CBV must meet the practice standards for both expert reports and valuation reports.

5. Limited Critique Reports

    A. Require CBVs to act in an independent manner.

B. Involves critiques or comments on valuation, expert, or advisory reports prepared by another professional.

C. Cannot include a conclusion on value or financial gain or loss, because in most cases the CBV has not done sufficient work to be able to provide a supported conclusion (this is why it is called “limited”).

D. CBVs must abide by the CICBV Code of Ethics in preparing these.

Appendix L. Table of Contents of a Typical Valuation Report

Assignments

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Assignment 1. Defining the Valuation Engagement

(10 minutes)

1. You are a senior manager in the Business Advisory department of an accounting firm. One of the firm's partners, Mr. Smith, approaches you one day for assistance. Mr. Smith tells you that a sole shareholder (Mr. Jones) of one of his manufacturing clients (Acme Items Plc.) is planning to retire in the next few years. Mr. Smith would like you to prepare a valuation of Acme Items Plc.

2. What other information do you need to define the assignment, including the fee?

3. Sample Answer contained in Handout #1

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Assignment 2. Company, Macroeconomic, and Industry Analysis

1. An attorney, Mr. Smith, called you two weeks ago and reported that one of the shareholders (Mr. Burns) of Culligan Forestry Corporation ("the Company") died one month ago. A valuation of the 500,000 ordinary shares (25% of the total issued and outstanding) which Mr. Burns owned in the Company is required for inheritance tax purposes.

2. Since his call, Mr. Smith has formally engaged you to perform a valuation and has sent you some documentation. You have also had the chance to gather information for your analysis.

3. Mr. Smith would like you to contact him after you have had a chance to analyse the information you currently have, but before you start any type of valuation calculations. He would like to get a better idea of the Company so that he can more clearly communicate your eventual findings to Mr. Burns' family.

4. Information regarding the Company's financial performance and operations can be found on the following pages. The suggested answers are reflected in Handout #2.

I. Part 1 (15 minutes)

1. Given the information provided in the following pages and Exhibit 2 (page 60); perform a qualitative analysis of the Company. Ensure your analysis includes the following:

   A. A SWOT analysis.

   B. An identification of the significant value drivers.

   C. An identification of any significant economic or industry factors that are present.

II. Part 2 (20 minutes)

1. Perform the following financial analysis on the Company:

   A. Complete the common-size balance sheet and income statement on the following pages (i.e., balance sheet items as a percentage of total assets and income statement items as a percentage of total sales). Note any items of significance. Mr. Smith has also provided you with forecasted income statements for 2015 to 2017, which were prepared in 2014 as part of a strategic plan.

B. Complete the calculation of the financial ratios on the following pages to assist in your analysis of the Company.

C. Discuss the trend of the Company's financial condition and operations over the past five years.

2. Note any questions you have or any further information you would like to receive to further your analysis.

III. Company Background

1. Culligan Forestry Corporation (the "Company") is a leading integrated forest products company based in Sweden. The Company employs approximately 10,100 personnel across Europe, and has production facilities in Sweden, Finland, Spain, Germany, and Belarus.

2. The Company has three main operating segments – lumber, pulp and paper, and panel products. Lumber operations consist of harvesting trees and processing the timber into wood materials of various lengths and dimensions for use in residential and commercial construction. The Company has the capacity to produce 4.5 billion board feet of lumber annually and holds harvesting rights to 6 billion board feet annually. Pulp and paper operations consist of processing wood chips, sawdust, and other interim wood product into pulp, which is then used to make various grades of paper (specialty paper, newsprint etc.). The Company currently has the capacity to produce 1 million tonnes of pulp annually. The Company sells the majority of the pulp that it produces, but also uses some of its pulp to manufacture approximately 140,000 tonnes of paper per year.

3. The Company's panel product operations consist of processing timber into wood sheet materials, which can then be used for flooring (hardwood strips, laminate etc.), wall panels, and roofing. The Company has the capacity to produce 1.7 billion square feet of panel materials annually. Approximately 80% of the Company's product is sold within Europe; 10% is exported to North America, and the remaining 10% is exported to China.

4. In the last financial year, the Company's Chief Executive Officer replaced the Chief Operating Officer and the director of finance because of certain operating targets and benchmarks not being met. Quarterly and annual sales, EBITDA, and net income have, with a few exceptions, been below management forecasts. The Company's management has pointed out that actual results for many companies in the forestry products industry have been below forecast. However, some industry insiders feel that the Company's new management team has demonstrated a lack of vision with respect to helping reposition the Company for the future. Competitors have aggressively cut production capacity in response to reduced global demand for forestry products, while focusing on more profitable products such as specialty papers instead of "declining"

products such as newsprint. However, the Company has been much slower to implement such changes.

IV. Industry Background

1. General

   A. The EU is one of the world's biggest producers of forest products, with about 20% of the world's production. The northern countries of the EU produce mainly coniferous wood, whereas the Mediterranean countries produce as much non-coniferous as coniferous wood. Forest coverage ranges from 1.1% in Malta to 72% in Finland, with the largest forested areas in Sweden, Finland, Spain, and France.

   B. Forest ownership in Europe varies considerably. In many countries, there is a high proportion of private forest: about 80% in Austria and Sweden, 72% in Denmark and Slovenia, 68% in Finland, and more than 90% in Portugal. In Europe as a whole, half the forest is privately owned. In Finland and Sweden, there is significant ownership by forest companies.

   C. In forest products markets, the most notable trend in recent years has been the collapse of production and consumption in Eastern Europe following the recent global financial crisis, followed by the gradual recovery in most of these countries. The figures vary by country and product but, overall, production and consumption fell by between one-third and two-thirds in most of these countries up until 2010. Since then, recovery has been mixed, with the most rapid and dramatic recoveries in markets taking place in the Baltic States, followed by most of the rest of Eastern Europe.

2. Product Prices

   A. Globally, historical trends in the prices of wood products have shown a great deal of fluctuation, with periods of price increases, declines, and stability. In nominal terms (i.e. unadjusted for inflation), prices increased throughout the 1960s, in many cases faster than the rate of inflation. At the start of the 1970s, prices peaked at the time of the first oil price shock (as did the prices of many other commodities). From this point until the 1990s, trends in prices have varied by product and region. For some products in some regions, prices continued to rise faster than inflation. In other cases, nominal prices rose by less, leading to constant or falling real prices (i.e. prices adjusted for inflation). During and subsequent to 2010, prices of wood products have generally remained about the same or fallen in nominal terms at the global level, leading to significant declines in real prices.

3. Mergers and Acquisitions

A. Through mergers and acquisitions, the number of sawmills in Europe has fallen dramatically over the past two decades. Mergers and acquisitions in the pulp and paper segment have been on the rise for at least two decades. Recently, they accelerated further as consolidations involved multinational companies.

4. Technology

A. In Europe, intensified competition has been a major driving force behind technology innovation and structural change in the wood industry. During the past two decades, the pulp and paper industry has developed into a high-tech sector. This progress is evident at all stages of the production chain, from handling of incoming raw material delivered at the mill “just in time”, to the automated operations of packing, storage and preparation for shipment of finished products. Mills and companies are also becoming increasingly specialised allowing them to run bigger batches of products on fewer and better-equipped lines.

5. Competition and International Trade

A. International trade in wood products has increased in importance across most regions of the world over the last four decades. International trade within Europe and between Europe and the rest of the world has followed this pattern. Across all categories of forest products, the proportion of production that is exported has increased over the last three decades, due to the increased globalisation of forest products markets in the 1990s. Within Europe, it is also due to the rapid development of forest products exports and low growth in domestic demand in Eastern Europe in recent years. At the global level, Europe remains an important exporter of forest products, accounting for about half of global forest products exports (by total value).

B. The gradual removal of trade barriers has exposed the industry to further competition from neighbours and overseas manufacturers of wood and substitute products and materials. In the EU, many non-profitable sawmills have closed down, giving way to larger production units with increased vertical and horizontal integration.

C. Key players in the forest sector are acting more and more globally, shifting capacities toward Eastern Europe because of lower production costs and expected increases in the demand of forest products.

6. Labour Issues

A. Since the 1970s, outsourcing of forest work has become more and more common. The combined effect has been a dramatic fall in the number of forest workers and the emergence of contractors, which are most extensively used in logging operations.

B. In some Central and Eastern European countries, the rapid shift into contractor work has led to deteriorating standards, notably in safety. In many countries throughout Europe, the forestry sector has been moving backwards in terms of skill levels, work safety, and health, working conditions and work quality. The forestry industry is commonly regarded as having one of the worst working conditions in any industry. Forestry workers are also beset by serious health problems, few reaching normal retirement age.

C. In many countries the wood products industry has a poor image and often faces an uphill struggle in attracting new entrants. Noise, dust, injuries, exposure to chemicals and high labour turnover are still features of many woodworking enterprises. However, the recent modernisation of sawmilling and wood processing plants has improved the safety and health conditions in the industry. The new technology has also brought improvements in the physical environment in woodworking factories.

V. Regulations and Government Influence

1. Three main topics regarding government intervention in the European forestry sector are as follows:

A. International efforts to tackle illegal logging have reached an all-time high with Europe joining the United States in establishing legally binding timber legislations.

B. In October 2010, a new EU timber regulation (Regulation (EU) No. 995/2010: Placing Timber and Timber Products on the Market) was released, which laid down the obligations of operators who place timber and timber products on the market. This regulation is also known as the (Illegal) Timber Regulation, and it counters the trade in illegally harvested timber and timber products. The regulation requires operators to exercise due diligence when placing timber or timber products on the market. The due diligence system should provide access to information about the sources and suppliers of the timber and timber products being placed on the internal market for the first time, including relevant information such as compliance with the applicable legislation, the country of harvest, species and quantity. Further, traders shall be able to identify the operators or traders who have supplied the timber and timber products and the traders to whom they have supplied timber or timber products.

C. One of the main pillars of forestry policy in most European countries is the principle that the forest area should not decline. A recent review of forest legislation in Europe shows that many European countries have specific legal measures that support this objective by ensuring that forests are replanted after harvesting. The review also shows that most other countries have rules or regulations to control forest management and harvesting that tend to serve the

same purpose. In addition, the deliberate conversion of forest to other land uses is generally quite difficult in most European countries.

D. A significant feature of forestry policies in Europe is the level of public support given to the sector. A number of European countries have offered some form of incentives for forestry for many years. Forestry incentives have included favourable tax treatment of the income from forest operations; subsidies to cover part of the costs of afforestation, forest management or specific forestry activities; and, more recently, compensation payments to cover the loss of income from afforestation of agricultural land. The level of incentives for forestry in Europe is quite high.

VI. General Outlook for the Industry

1. The outlook for the forestry industry can be summarized as follows:

A. The total forest area in Europe is expected to increase by around 5% between 2010 and 2030. This will occur due to a mixture of afforestation and natural processes. However, the area available for wood supply might decrease, due to increasing demands to set-aside forests for other functions, such as biodiversity conservation, recreation, and protective functions.

B. Production and consumption of forest products is expected to increase to the year 2020, due to continued growth in Western and Eastern Europe. These expected increases are due to the growth expected in Eastern Europe and increased consumption in Western Europe.

C. The technology used by end-users of forest products may influence demand for such products. Changes in the way that information is stored, reproduced, and communicated could have a profound impact on the future markets for paper and paperboard. In some cases, increased use of computers has not led to the “paperless office” but has tended to increase the consumption of printing paper. However, changes in the way that people communicate (e.g. e-mails) could lead to lower demand for printing paper and newsprint.

D. A new range of engineered wood products are gradually gaining acceptance in the market place (e.g., high-density fibreboard, laminated veneer lumber). Greater use of these products in the future is expected, which may result in some substitution between wood products as they are used instead of older, traditional, and usually more expensive, wood products.

E. International trade, both within Europe and between Europe and the rest of the world, is expected to increase in the future. Intensified trade is expected between Western Europe and Eastern Europe. Furthermore, the European forest sector is also expected to face increasing competition from producers

outside the region (especially from countries with extensive areas of fast-growing forest plantations).

F. The European population has been gradually aging. Over the next decade, this aging will be felt mostly in Western Europe. The impact of this trend will be felt in two ways. Firstly, labour is likely to become more scarce and expensive. This will encourage the greater substitution of capital for labour in end-use markets (e.g. construction), which is likely to lead to greater demand for engineered wood products as opposed to traditional products. Secondly, the forestry sector is likely to be faced with difficulties in finding adequate employees with timber qualifications, particularly within industrialized Western Europe. Continuing mechanization in the industry means that logging companies will require more from their employees in terms of qualifications, responsibility, and reliability. The workforce of the future will be composed of fewer unskilled and manual workers. Training must therefore receive more attention, even in countries with well-established training traditions.

Culligan Forestry Coorporation
Historical Income Statements
For the Fiscal Years Ended December 31

EUR millions	2017		2016		2015		2014		2013	
	EUR	%	EUR	%	EUR	%	EUR	%	EUR	%
Sales										
Lumber (sawnwood)	1,446		1,509		1,638		1,491		1,163	
Pulp and paper	900		901		1,036		951		918	
Panels	190		200		215		170		39	
Total sales	2,536		2,610		2,889		2,612		2,120	
Cost of Goods Sold										
Manufacturing and product costs	1,439		1,418		1,352		1,252		1,127	
Freight and other distribution costs	472		513		498		476		410	
Total Cost of Goods Sold	1,911		1,931		1,850		1,728		1,537	
Gross Profit	625		679		1,039		884		583	
Expenses										
Amortization	142		146		150		171		155	
Selling and administrative costs	394		352		496		401		231	
Finance costs	7		7		8		8		9	
Total Expenses	543		505		654		580		395	
Profit before Income Tax	82		174		385		304		188	
Income Tax	25		52		116		116		116	
Profit for the Year from Continuing Operations	57		122		269		213		72	
Loss from restructuring, mill closure, and severance	-		-		(54)		(30)		-	
Gain on sale of mill property	-		-		-		45		-	
Profit after Income Tax	57		122		215		228		72	

Culligan Forestry Coorporation
Forecasted Income Statements (prepared in 2014)
For the Fiscal Years Ended December 31

EUR millions	2017		2016		2015	
	EUR	%	EUR	%	EUR	%
Sales						
Lumber (sawnwood)	1,800		1,700		1,600	
Pulp and paper	1,300		1,200		1,100	
Panels	300		300		300	
Total sales	3,400		3,200		3,000	
Cost of Goods Sold						
Manufacturing and product costs	1,450		1,420		1,400	
Freight and other distribution costs	580		550		500	
Total Cost of Goods Sold	2,030		1,970		1,900	
Gross Profit	1,370		1,230		1,100	
Expenses						
Amortization	150		150		150	
Selling and administrative costs	550		520		500	
Finance costs	7		7		8	
Total Expenses	707		677		658	
Profit before Income Tax	663		553		442	
Income Tax	199		166		133	
Profit after Income Tax	464		387		309	

Culligan Forestry Coorporation
Historical Balance Sheets
As at December 31

EUR millions	2017		2016		2015		2014		2013	
	EUR	%	EUR	%	EUR	%	EUR	%	EUR	%
ASSETS										
Current Assets										
Cash and cash receivable	400		380		362		133		140	
Accounts receivable	85		90		106		137		128	
Other receivables	65		80		94		42		60	
Inventory	350		375		405		283		275	
Prepaid expenses	42		35		35		36		36	
	942		960		1,002		631		639	
Other Assets										
Deferred tax assets	32		29		31		30		27	
Property, plant, equipment and timber	1,772		1,785		1,799		1,821		1,900	
Total Assets	2,746		2,774		2,832		2,482		2,566	
LIABILITIES										
Current Liabilities										
Operating lines of credit	42		36		25		15		20	
Accounts payable and accrued liabilities	700		660		635		550		547	
Income taxes payable	48		65		80		75		70	
Current portion of long-term debt	138		153		168		150		251	
	928		914		908		790		888	
Other Liabilities										
Reforestation obligations	103		102		96		86		90	
Long-term debt	306		400		575		609		797	
Deferred tax liabilities	219		225		242		201		223	
Total liabilities	1,556		1,641		1,821		1,686		1,998	
SHAREHOLDERS' EQUITY										
Share capital	500		500		500		500		500	
Retained earnings	690		633		511		296		68	
Total liabilities and Shareholder's Equity	2,746		2,774		2,832		2,482		2,566	

Culligan Forestry Coorporation
Industry Benchmark Information - Forestry and Timber Operations

	Industry	2017	2016	2015	2014	2013
Liquidity Ratios						
Quick Ratio	0.56					
Current Ratio	1.15					
Activity Ratios						
Inventory Turnover	5.91					
Accounts Receivable Turnover	25.18					
Average Collection Period	5.35					
Fixed Asset Turnover	1.63					
Working Capital Turnover	28.97					
Leverage/Coverage Rotios						
Total Debt/ Total Equity	103.35%					
Interest-Bearing Debt/ Total Equity	62.98%					
Tines Interest Earned	1.95					
Profitability						
Gross Profit Margin	37.50%					
Operating Profit Margin	9.00%					
After-Tax Return on Total Assets	8.25%					

Assignment 3. Financial Statement Adjustment and Analysis

(30 minutes)

1. Branton Bureau, SA is an office equipment and supply company that sells and leases office equipment to corporations and small businesses. The company's product line includes laptop and desktop computers, postage machines, copiers, printers, office furniture, and a line of stationary items. Much of the heavier equipment, such as postage machines, copiers, and computers are marketed through leases. The company also generates revenue by servicing the equipment that it leases and sells.

2. The company is privately owned and management has provided the following information in Handout #3:

   A. Three years of balance sheets and income statements for the fiscal years ended December 31, 2014, 2015, and 2016. In addition, interim statements for the nine-month period ended September 30, 2017 was provided.

   B. Adjustments were made to the historical income statements to remove non-operating expenses and to adjust historical officer compensation up to a market rate. Information was not available to investigate potential adjustments to the interim statements.

   C. Management revealed that several assets on the balance sheet are not operating in nature since they are not used to generate operating revenues. These assets have been isolated and are shown in Handout #3, page 3 "Adjusted Equity Analysis". After removing these items, the amount of adjusted operating equity and operating assets was calculated and shown.

   D. Financial ratios for Branton were calculated and are shown on page 4 of Handout #3. Financial ratios are based on adjusted financial statement metrics. The last column in the ratio schedule reflects the average ratios for the group of guideline companies that were selected for this valuation.

3. Complete a financial analysis for Branton Bureau that discusses pertinent issues on the topics of growth, profitability, asset management, coverage, and leverage. Also, compare Branton to the guideline companies addressing potential reasons why the subject company is stronger or weaker than the guideline company average.

4. Key Questions to answer in the financial analysis include:

   A. Branton's EBT margin is considerably lower than the guideline company average. Why? Is this a concern?

B. What are the annualized sales for 2017? What are the possible ways in which management increased revenues in the 2017 interim period?

C. Which is the probably the most important of the four business segments (equipment sales, supply sales, service sales, and computer sales)?

D. What are possible reasons why Branton's total asset turnover is lower than the guideline group?

E. Branton's cash cycle is more than twice as high as the guideline group. Discuss reasons for this. Does this indicate a problem with Branton's cash management?

F. Fixed asset turnover is very low compared to the guideline group. Why?

G. What is the single biggest difference between the subject company and the companies to which it is compared? How would this affect the type of multiples that are used in the market approach?

H. What happens to the non-operating assets in the valuation process?

5. Handout #4 contains suggested responses to these questions.

Assignment 4. Market Approach Case Study

(1 hour)

1. Hartmann Asset Management ("HAM" or "the Company") is a German based asset management company with assets under management (AUM) of €4.1 billion as at January 7, 2011. The Company was originally launched in 1979 by Mr. Hartmann, a well-known fund manager for a large publicly traded asset management company, who decided to leverage off his reputation and contacts and launch his own fund. Mr. Hartmann started the Company with initial client commitments of €85 million and 13 staff and has since grown the business to the current AUM of approximately €4.1 billion, and over 150 staff. Since its launch, Mr. Hartmann has owned 100% of the issued and outstanding ordinary shares of HAM.

2. Mr. Hartmann is a long-time tax client of your firm and is looking to retire. As such, he has been considering the sale of his 100% interest in HAM and is considering selling his shares to a group of key employees. Mr. Richmond has approached Charles Tupper, a partner at the London based boutique valuations firm Tupper and Associates LLP, to help him determine the current enterprise value of the business.

3. The partner has asked you to assist in the valuation engagement. Based on your initial review of information and discussions with the partner, he has indicated to you that he wants to adopt a market approach, based on publicly traded comparable companies, as your primary approach to calculate HAM's enterprise value. In addition, he has asked you to cross check the results to any relevant transactions in the asset management sector, if available. As part of your planning and initial research for the engagement, you have collected the following information:

   A. Background reading on the asset management industry and HAM, which is summarised in Handout #5.

   B. Meeting notes from your initial meeting with HAM's CFO and controller, which covered your initial questions and information request, are set out in Handout #6.

   C. Financial Statements for HAM, which are contained in Handout #7.

   D. After a detailed review of relevant industry codes and Bloomberg/Capital IQ, you have identified a preliminary list of 10 publicly traded companies that are "somewhat" comparable to HAM. You have summarised the nature of these companies, in addition to their key financial metrics sourced from their financial statements and Bloomberg/Capital IQ, in Handout #8.

E. Based on a review of the Mergerstat database for the asset management industry, you have identified five “somewhat” comparable transactions in the German asset management industry over the past three years. Details of these transactions and key metrics (where available) are set out in Handout #9. The partner has requested that you prepare a brief memo, with supporting schedules, setting out for him the following:

4. Your selection of an appropriate valuation metric/multiple (e.g. considering enterprise value or equity value, revenue or earnings, historic (trailing) or prospective (forward)) to adopt for the purpose of your market approach valuation and your justification for the selection;

5. Your refined selection of publicly traded companies that are most comparable to HRM based on your initial list of 10 “somewhat” comparable companies. In doing so, you should set out your justification for your selection of guideline public companies in addition to your rationale for excluding the other somewhat guideline public companies;

6. Your preliminary valuation conclusion of the Company’s enterprise value based on your selected metric/multiple and guideline public companies. In your memo/schedules, you should include major assumptions made, including:

   A. The calculation of the metric/multiple you have selected for HAM and the rationale for any adjustments you have made; and

   B. Any normalising adjustments you have made to your selected based metric for HRM (e.g. revenue, EBITDA, cash flow, etc.), including your rationale for any required adjustments.

7. Consider the following crosschecks to the multiple/metrics implied by your primary valuation approach calculated in (3):

   A. Cross check your multiple selected in (3) to any relevant transactions in the UK asset management sector. In doing so, provide justification for your selection of any particular transactions and why differences may arise between your selected multiple/metric in (3) and the transaction multiples; and

   B. Crosschecks to an additional valuation metric/multiple based on the guideline public companies and/or transactions. Provide rationale for any differences in the multiple implied by your valuation calculated in (3) and the multiples of the guideline public companies and/or transactions.

8. A suggested response to this Assignment is reflected in Handout #10.

Assignment 5. Guideline Transaction Method

(20 minutes)

1. Access Manufacturing Plc. ("the Company") is a privately held window and door manufacturing company located in London with sales of £35 million, EBITDA of £5 million, EBIT of £4 million and post-tax profits income of £2.5 million in the year 2017.

2. The window and door manufacturing industry is highly fragmented with a number of privately held manufacturers. Windows and doors are generally manufactured from vinyl, wood, or metal. Over the past few years, demand for wood-based products has remained stable; vinyl products have become more popular, while demand for metal products has declined.

3. Required:

   A. Recent transactions involving window and door manufacturers are set out below. These are all Western European companies that have been the subject of a transaction. Discuss how you would incorporate and assess each of these transactions into a valuation of the Company as at December 31, 2017. It is not necessary to calculate value. "TEV" in the table below refers to "Total Enterprise Value", being the aggregate price paid by the acquirer for equity and debt assumed.

No.	Date	Acquiror	Description of Target	TEV EUR million	TEV / Revenue	TEV / EBITDA	Form of Consideration
1	Jan-18	Window manufacturer	Manufacturer of wood windows	15.0	0.8	5.0	Shares
2	Feb-17	Private equity group	Manufacturer of doors and door systems	300.0	0.9	7.7	Cash
3	Dec-17	Building product manufacturer	Manufacturer of doors and door systems	250.0	1.1	8.0	Cash
4	Oct-17	Window manufacturer - income trust	Manufacturet of windows	125.0	1.1	7.6	Units
5	Feb-17	Window manufacturer	Manufacturer of vynil windows and siding	450.0	1.1	N/A	Cash
6	Feb-17	Building product manufacturer	Manufacturer of vynil and wood windows	550.0	1.0	7.7	Shares

4. Handout #11 contains the suggested response.

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Assignment 6. Audit Review of Market Approach

(2.5 to 3.0 hours)

1. An audit client of your firm retained a valuation expert to conduct a valuation analysis in connection with an impairment study as of December 31, 2016. Your client, Ambro Holdings, PLC, is a software company located in the UK, which conducts business primarily in the UK but also in Australia. The formal business description is as follows:

2. Ambro Holdings, PLC is a software company whose business software solutions are targeted toward clients' internal accounting control and backroom operations. The Company produces spend control and eProcurement software for mid- to large-size entities in the private, public, and non-profit sectors. The software automates the requisition-to-check process for various types of indirect goods and services. The company also offers e-invoicing software, which is an accounts payable package. Other products provide solutions for employee reimbursement, supplier management, sourcing management, and contract management. Ambro is headquartered in London, UK and has operations in the UK, Australia, and North America. The company has 52 employees. Ambro generated £1.2 million of operating earnings on £7.4 million in sales in 2017.

3. As part of the valuation team, you have been assigned the task of reviewing the comparable company analysis prepared by the valuation expert. The valuer's market approach analysis consists of 14 comparable companies, seven of which are UK companies trading on the London Stock Exchange (LON) and seven of which are based in Australia, trading on the Australian Securities Exchange (ASX). The subject appraisal report contains Enterprise Value (EV) to Revenue multiples and EV to EBITDA multiples.

4. Prepare a list of questions that address the problem areas that you uncover in the analysis. You can assume for the purposes of this assignment that the raw operating data was entered accurately for the guideline companies.

5. Excel spreadsheets are included, which contain the following:

   A. Handout 12 - Comparable company descriptions for Ambro

   B. Handout 13 - Ambro Holdings PLC financial statements for the FYE July 31, 2007 through July 31, 2017

   C. Handout 14 - Operating data and multiple analysis for 14 public companies from the London and Australian Stock Exchanges

   D. Handout 15 – Guideline Company Analyses and Conclusion

1) Comparison of financial ratios

2) Summary of enterprise value multiples

3) Regression analysis on sales multiples

4) Regression analysis on EBITDA multiples

5) Conclusion

I. Your Tasks

1. Review the information provided for the subject company and the selected guideline companies. After the valuer provides an overview of his market approach template in class, take a closer look at the analysis and develop questions that you have on assumptions, analysis, and conclusions. Suggested topical areas for questions include:

   A. Comparable company selection

   B. Financial analysis

   C. Multiple derivation and adjustment

   D. Multiple selection and conclusion

2. It is recommended that the group divide the review with half the members looking at the UK comparable companies and the other half reviewing the Australian companies. The group leader will serve as the valuer and respond to questions.

3. Handout 16 - Ambro Holdings Case Study Suggested Response.

Assignment 7. Adjusted Net Book Value Method

(20 minutes)

1. Georgian Manufacturing Plc. ("Georgian") is an audit client of your firm. One of its wholly owned subsidiaries is Plastic Parts Plc. ("PPI"), which specialises in plastic injection moulding and the manufacture of injection moulding tools.

2. The CEO of Georgian (Ms. Cruickshank) is interested in focusing Georgian's investments on a narrower range of companies and industries. Because PPI is the only moulding company in Georgian's portfolio, Ms. Cruickshank believes that a divestiture of PPI is appropriate. PPI's balance sheet as at February 28 of this year is summarised as follows:

	EUR
ASSETS	
Current	
Cash	215,831
Accounts receivable	468,250
Inventory	517,820
Prepaid expenses	76,000
	1,277,901
Fixed Assets	869,782
Total assets	2,147,683
LIABILITITES	
Current	
Bank indebtedness	136,945
Demnand loan	75,000
Accounts payable and accrued liabilities	379,620
	591,565
Long-Term Debt	240,000
Mortage Payable	368,400
Due To Shareholder	76,451
	1,276,416
EQUITY	
Ordinary shares	1,000
Retained Earnings	870,267
	871,267
TOTAL LIABILITIES AND EQUITY	2,147,683

3. You met Ms. Cruickshank on May 31, and PPI's year-end is February 28. Your notes from the meeting, and other points of information that you have gathered since the meeting, are as follows:

   A. She would like an estimate of value as at May 31 of this year.

B. Interim financial statements at May 31 are not available.

C. PPI's profit after tax has been consistent at approximately €250,000 per year.

D. Cash is not required to sustain ongoing business operations.

E. Ms. Cruickshank has indicated than an appropriate capitalisation rate for net earnings for companies in PPI's industry is approximately 20%.

F. PPI's corporate tax rate is 26%. For this example, disregard the taxes on disposal of capital assets.

G. Ms. Cruickshank hired an appraiser to provide the market value of PPI's fixed assets. His findings and other details regarding PPI's fixed assets are as follows:

	Net Book Value	Market Value
Vacant land (investment)	75,000	130,000
Land	100,000	175,000
Buildings	365,875	525,000
Office furniture and fixtures	108,461	105,000
Vehicles	115,135	116,000
Manufacturing equipment	105,311	75,000
	869,782	**1,126,000**

4. Required:

A. Calculate the value of PPI as requested by Ms. Cruickshank. Provide reasoning for your choice of valuation method.

Assignment 8. Liquidation Value Method

(20 minutes)

1. Mrs. MacLean is the founder and manager of a flower shop called “Flowers are Us”. Flowers are Us was established in 1983, to help individuals express feelings and thoughts more effectively using flowers. The flower specialist invested considerable time and travelling to develop new floral arrangement concepts based on Yoga and spiritual values to reflect specific moods of individuals and expressions of special feelings.

2. The recent years have been tougher with increased competition from more diversified, cheaper products appealing better to the general population offered by big box grocery stores and roadside vendors. Mrs. MacLean has injected much of her savings into the business to cover the losses. A friend of Mrs. MacLean, a real estate agent, has indicated that the store is in a historic location and is likely worth €1,000,000, but an agent would take 3% in commission.

3. The historical financial statements (for years ended December 31) are set out below.

EUR	2017	2016	2015	2014	2013
ASSETS					
Current					
Cash	-	-	-	-	11,533
Accounts receivable	326	11,355	14,725	14,223	5,913
Inventory	111,945	73,938	65,000	62,209	51,391
Prepaid expenses	1,234	1,376	2,030	1,987	1,865
	113,505	86,669	81,755	78,419	70,702
Fixed Assets	594,113	593,110	478,484	547,953	529,127
Total assets	707,618	679,779	560,239	626,372	599,829
LIABILITITES					
Current					
Cheques issued in excess of funds on deposit	50,470	40,171	45,000	43,962	61,048
Demand loan	35,000	30,000	25,000	23,200	42,582
Accounts payable and accrued liabilities	56,543	41,908	67,000	66,633	56,475
Estimated principal due within 1 year on long-term debt	-	-	-	-	13,677
	142,013	112,079	137,000	133,795	173,782
Due to Shareholder	512,158	406,964	73,185	57,331	-
	654,171	519,043	210,185	191,126	173,782
EQUITY					
Ordinary shares	100	100	100	100	100
Retained Earnings	55,347	160,636	349,954	435,146	425,947
	55,447	160,736	350,054	435,246	426,047
TOTAL LIABILITIES AND EQUITY	709,618	679,779	560,239	626,372	599,829

EUR	2017	2016	2015	2014	2013
Sales	2,000,064	2,007,621	2,133,206	2,254,408	2,234,976
Cost of Sales	1,760,056	1,766,706	1,834,557	1,883,698	1877380
Gross profit	240,008	240,915	298,649	370,710	357,596
	12.0%	**12.0%**	**14.9%**	**18.5%**	**17.9%**
Expenses					
Wages and benefits	220,000	225,360	209,594	188,496	183,634
Advertising	4,000	1,627	495	2,593	427
Insurance	3,800	3,845	3,876	3,674	3,598
Interest on long-term debt	30,000	36,266	38,133	36,239	36,469
Bank charges and interest	8,700	7,763	8,241	6,951	7,771
Professional fees	6,700	8,453	8,872	11,255	7,671
Office supplies	3,700	2,102	2,199	1,676	1,292
Utilities	54,000	51,993	44,217	47,761	43294
Property taxes	14,000	14,487	12,411	9,068	9,978
Telephone	1,700	1,827	2,382	2,660	1863
Repairs and maintenance	18,800	27,698	16,480	10,140	13,518
Vehicle	3,300	3,327	4,241	4,822	4,560
Travel and entertainment	650	265	-	116	97
Amortization	53,400	45,279	32,700	32,117	31476
	422,750	430,292	383,841	357,568	345,648
Profit before tax	(182,742)	(189,377)	(85,192)	13,142	11,948
	-9.1%	**-9.5%**	**-4.3%**	**0.7%**	**0.6%**
Income taxes	-	-	-	3,943	3,584
Profit (loss) after tax	(182,742)	(189,377)	(85,192)	9,199	8,364

4. Other relevant facts are as follows:

   A. Other costs involved in winding the business up amount to approximately €80,000, net of tax.

   B. The land and building cost €630,000 in total as of Valuation Date.

   C. The corporate tax rate is 26%.

5. Required:

   A. It is May 30 of the current year. Mrs. MacLean has just turned 60 years old and would like to retire. As a long-time friend of the family, Mrs. MacLean has requested that you assist in her retirement and inheritance tax planning. Calculate the liquidation value of the net assets to Mrs. MacLean.