

# Valuing Hidden Liabilities



**13TH MASTERING VALUATION TECHNIQUES  
FOR SENIOR FINANCIAL EXECUTIVES**

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# Hidden Liabilities

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Hidden liabilities arise in four ways:

- Overstated Assets such as by insufficient Asset Retirement Obligations – IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*
- Unresolved Contingencies – IAS 37
- Retirement Obligations – IAS 19 *Employee Benefits*
- Earn-outs – IFRS 3 *Business Combinations*

# Hidden Liabilities

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- In valuing a reporting or cash generating unit it is almost as important to look for and value unrecorded liabilities, as it is for unrecorded assets.

# Hidden Liabilities

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- Important indicators are:
  - Credit ratings – a major risk relating to disclosed and hidden liabilities causing default, non-performance of obligations as they come due.
  - Existence of embedded derivatives such as rights to convert into equity etc.

# Hidden Liabilities

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- The Fair Value of a liability reflects assumptions that a market participant would use to establish a purchase price including all inherent risks.
- The amount the existing owner could receive through its sale as a financial asset.
- A measurement not including adjustment for non-performance risk (for example ‘marked-to-model’) is not Fair Value.

# Hidden Liabilities

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- Every Fair Value calculation should include:
  - An amount market participants would demand due to the risk (uncertainty) in a particular technique .
  - The relevant inputs.
- Determining the appropriate adjustment can be complex.
- Look at comparable entities with publicly traded debt securities as a source of market participants' views.

# Hidden Liabilities

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- Credit risks differ among an entity's liabilities depending on their term and nature.
- Those for payables or other current items are likely to be:
  - Lower than for longer term unsecured liabilities.
  - Higher than for a secured debt such as a mortgage.
- The greatest risks are in junior subordinate unsecured notes.

# Hidden Liabilities

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- Investigate every obligation of all component legal entities.
- In liquidation some may have a higher priority against key assets than the parent.
- An entity's credit rating does not necessarily show the effects of credit risks on the Fair Values of its liabilities.



# Hidden Liabilities

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- The prices of traded Credit Default Swaps, a form of liability insurance that “pays off” in the event of default, show such risks are often based on changes in sentiment without a variation in the borrower’s credit rating.
- Non-performance risks also consider any collateral or credit enhancements involved such as third party guarantees.

# Hidden Liabilities

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- To affect the Fair Value of a liability they must be an attribute of the instrument and inseparable from it.
- If the guarantee is payable directly to the holder and not to the issuer it is not part of the liability itself but a separate instrument not included in Fair Value.

# Hidden Liabilities

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- Reflecting non-performance risk in the Fair Values of an entity's liabilities means that their impact is the opposite of the financial situation.
- Deterioration of the entity's credit standing results in a higher discount rate for the future cash flows associated with a liability.
- This results in a reduction of its value as an asset.

# Hidden Liabilities

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- If the carrying amount is Fair Value the result is a reported gain in the income statement.
- Conversely a credit improvement results in a reported loss.

# Definitions

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- Liabilities are present obligations arising from past events; their settlement is expected to result in an outflow of resources.
- Provisions are liabilities of uncertain timing or amount.

# Definitions

# Definitions

14

- Contingent Liabilities are present obligations that do not meet recognition criteria:
  - It is not probable that an outflow of resources will be required to settle them.
  - A sufficiently reliable estimate of the amount cannot be made.

# Definitions

15

- Contingent Assets are possible assets that may arise from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events, not wholly within the control of the entity.



# Definitions

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Obligations are either legal or constructive.

- Legal Obligations are those from a contract (explicit or implicit), legislation, regulations or other law.

# Definitions

17

- Constructive Obligations are expectations created by an established pattern of past practices, published policies or sufficiently specific current statements that the entity will accept certain responsibilities.
- Therefore others have a valid expectation of them being discharged as they come due.

# Provisions

# Provisions

19

- Under IFRS a provision is recognized when there is a probable outflow of resources to settle the obligation.
- Probable means more likely than not, a lower threshold than Canadian GAAP.
- Even if it is not probable an obligation will result in an outflow of resources.
- The facts are disclosed when a reliable estimate can be made.

# Provisions

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- IAS 37 takes the view that a sufficiently reliable estimate can almost always be made.
- In the very rare circumstances when it cannot, the obligation is disclosed as a contingent liability.

# Provisions

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- A contingent asset is disclosed when it is probable that the benefits will be realized.
- It is recognized only if it is virtually certain.
- In some circumstances a third party (such as an insurer) may reimburse part of the costs required to settle a provision or agree to pay the amounts directly.

# Provisions

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- The entity is usually liable for the whole amount if the third party does not settle.
- Therefore that figure is recognized.
- The reimbursement is recorded only if receipt is virtually certain.

# Provisions

23

- This may cause timing issues:
  - The threshold for liability recognition (usually greater than 50%) is lower than that for a contingent asset (typically greater than 95%).
  - The result is that the liability is normally recognized but the reimbursement is not.



# Provisions

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<b>Likelihood of Outcome</b>	<b>Contingent Liability/Loss</b>	<b>Contingent Asset/Gain</b>
Virtually Certain > 95%	Recognize	Recognize
Probable 50% - 95%	Recognize	Disclose
Possible 5% - 50%	Disclose	No disclosure required
Remote < 5%	No disclosure required	No disclosure required

# Provisions

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- Probable means more likely than not, therefore any percentage in excess of 50%.
- The others are guidance not bright-lines.
- A provision is measured as best estimate of the expenditure required to settle the obligation at the balance sheet date.
- It is the amount an entity would pay a third party to relieve it of its obligation.

# Provisions

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- The “expected value” or the “net present value” of the outflow are the normal measures.
  - Expected value – when a large population of items is being measured.
  - A probability is assigned to each value and the sum of the probability weighted amounts equals the figure recognized.

# Provisions

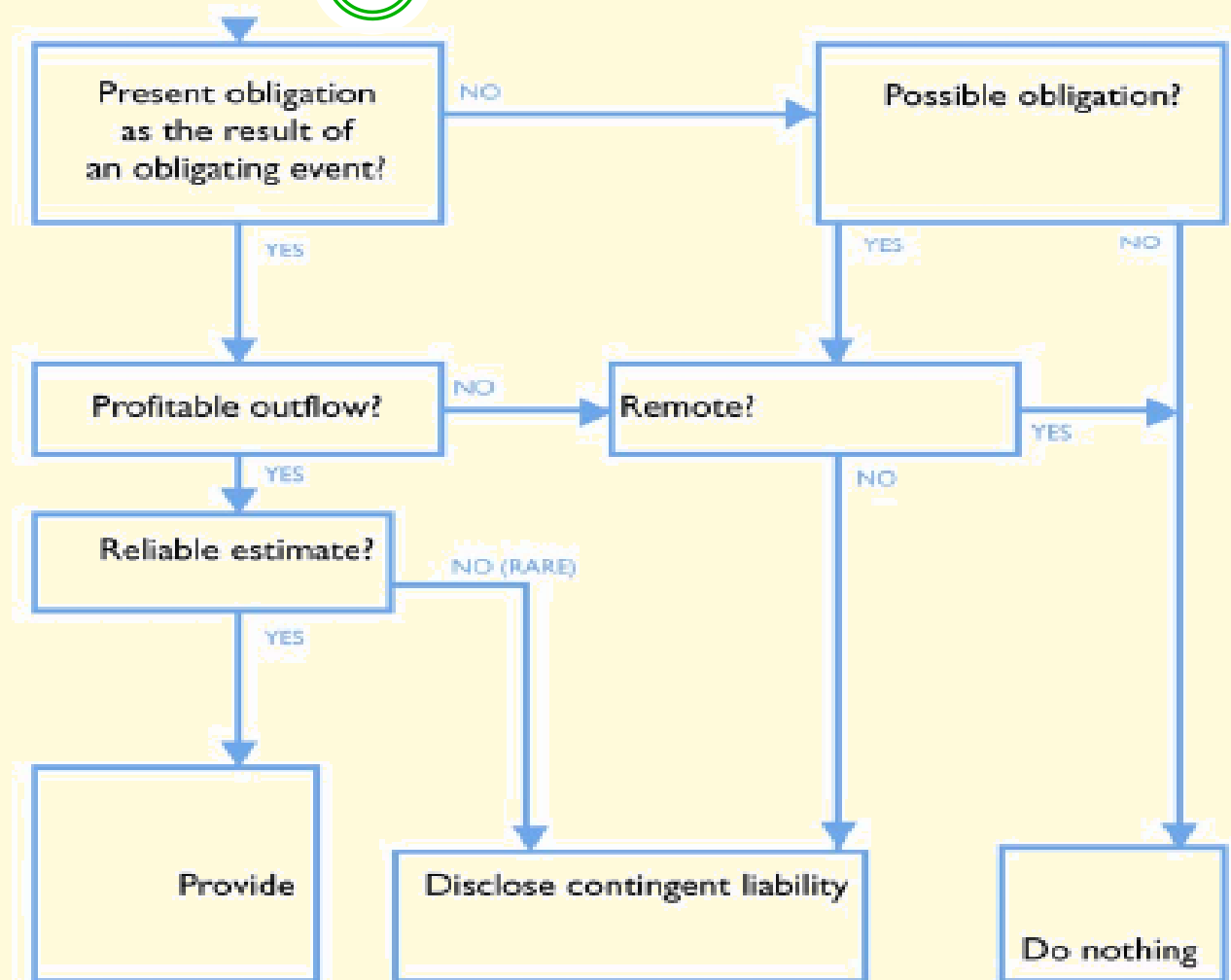
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- Net present value – where the effect of the time value of money is material.
- Mainly with long-term obligations.
- The discount rate should be pre-tax and reflect current market assessments of the time value of money and risks specific to the entity.

# Provisions

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## Accounting for Provisions



Source: BDO Dunwoody LLP

# Restructurings and Onerous Contracts

# Restructurings

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- Restructurings are programs planned and controlled by management that materially change either the scope of a business or the way it is conducted.
- Costs are recognized when they become a constructive obligation.
- They include only the direct expenditures that are necessary and not associated with any ongoing activities.

# Onerous Contracts

31

- Provisions are not recognized for future operating losses as they are not a present obligation resulting from a past event.
- However “onerous contracts” are recognized when the unavoidable costs of meeting the obligations exceed the benefits.



# Onerous Contracts

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- The amount recorded is based on net cost to exit the contract which is the lower of:
  - The cost of fulfilling the contract.
  - Any penalties arising from failure to complete it.

# Asset Retirement Obligations

# Asset Retirement Obligations

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- Both IFRS and Canadian GAAP are principle-based frameworks.
- Conceptually many of the general principles are the same.
- The application in IFRS can be significantly different as it does not have a direct equivalent to CICA 3110 *Asset Retirement Obligations* (ARO's).

# Asset Retirement Obligations

35

- AROs and all other environmental liabilities fall within IAS 37 as “decommissioning liabilities”.
- Essentially a constructive or legal obligation to remove the asset and/or restore a site to a minimum required standard.

# Asset Retirement Obligations

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- If the outflow of resources is probable and there is a reliable estimate of the amount, they are recognized.
- Differences arise in many respects especially whether an obligation even exists.

# Asset Retirement Obligations

37

- ARO measurement under IFRS is discounted cash outflows at current interest rate.
- Canadian GAAP used an initial estimate of the costs of remediation by third parties including profit margins.
- An acceptable IFRS methodology is a risk free interest rate.
- Risks are accounted for in the cash flows through various scenarios.

# Asset Retirement Obligations

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- If the discount rate is risk adjusted it must not include those already considered in the cash flows.
- Most organizations are subject to legal requirements associated with the retirement of long-lived physical assets.

# Asset Retirement Obligations

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- Entities must recognize the Fair Value of each ARO in the period in which it is incurred unless the amount cannot yet be reasonably estimated.
- The Fair Value is the payment that a willing third party of comparable credit standing would demand to assume all of the duties, uncertainties and risks inherent in the ARO.
- It is calculated under Fair Value Framework.



# Asset Retirement Obligations

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- Unit of account is the total legal obligation on retirement of the asset – the ARO is recorded at Fair Value when the requirements of IFRS are met.
- When a new ARO layer is established, for example due to a change in the timing or amount of expected cash flows, it is a separate unit of account.

# Asset Retirement Obligations

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- Valuation Premise - none is applicable for an ARO because Fair Value assumes liabilities are transferred to a market participant.
- Principle Market - AROs are unlikely to have a principal market as they are not actively traded and there is little or no observable data on the prices paid to transfer them.

# Asset Retirement Obligations

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- Most Advantageous Market - the market in which the minimal amount is paid to transfer the ARO.
- Generally management develops a hypothetical market.

# Asset Retirement Obligations

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## Valuation Methods

- All three valuation approaches must be considered.
- Quoted prices in active markets are used if available.
- Primarily an expected present value technique is applied.

# Asset Retirement Obligations

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## Market Approach

- Uses publicly available information from market transactions involving comparable items.

## Income Approach

- Uses market participants' data /inputs to develop discounted cash flows projections.

## Cost Approach

- Uses a reliably established estimation of the amount required for necessary remediation work.

# Asset Retirement Obligations

45

- Changes in the measurement of an existing decommissioning restoration or similar liability are accounted for based on the model used for the asset.
- The most common are:
  - Alterations in the estimated timing or amount of the outflow of resources required to settle the obligation.
  - A change in the discount rate.

# Asset Retirement Obligations

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## Cost Model

- If the asset is measured using the cost model the changes in the liability are added to or deducted from its depreciated cost in the current period.
- The amount deducted should not exceed its carrying amount.

# Asset Retirement Obligations

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## Fair Value Model

- If the related asset is measured using the revaluation (Fair Value) model of IAS 40 *Investment Property* then the change in the liability first grinds down any revaluation reserve with the balance flowing through profit and loss.



# Unresolved Contingencies

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- Under IFRS contingent liabilities are dealt with by IAS 37.
- There are significant problems in valuing them due to numerous uncertainties.

# Unresolved Contingencies

# Unresolved Contingencies

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- Generally provisions are recorded in the financial statements and contingent liabilities, often relating to litigation, are disclosed only in the Notes.
- Accounting tends to be very conservative.
- An old adage is “when in doubt book the liability”.
- Not the case for unresolved contingencies.

# Unresolved Contingencies

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- Read the Notes carefully before investing or lending money to an entity.
- Significant risks are sometimes not recorded.
- They are neither "probable" nor "reasonably estimable."
- There may also be undisclosed remote risks such as early stage legal claims.

# Unresolved Contingencies

52

- Product warranties a virtually universal service are assumed to give rise to probable liabilities that can be reasonably estimated.
- Warranty costs likely to be incurred on goods sold is estimated and recorded as an expense.
- The recorded provision is measured by the Cost Approach.

# Unresolved Contingencies

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- Many other costs are similar to warranties.
- Businesses may offer coupons, prizes, rebates, air miles, free hotel stays, free rentals, and similar items associated with sales activity.
- Each requires an estimated provision.
- Details may vary but the basic procedures and outcomes are similar.

# Unresolved Contingencies

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- In considering acquisitions of physical assets ascertain that they are "clean" of environmental liabilities particularly if toxic materials have been handled on the site.

# Unresolved Contingencies

55

- An acquirer must assess the probability, timing and amount of costs that may be incurred to correct environmental problems past, current or future and ensure compliance with all relevant legislation and regulations on an ongoing basis.



# Unresolved Contingencies

56

- The value of a business may be virtually erased by the costs of a clean up.
- Large profits may have been earned but the acquirer inherited the environmental liability including decontamination caused by an owner well back in the chain of title.

# Unresolved Contingencies

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- In many jurisdictions environmental legislation is far reaching and often based on the "deep pocket" theory.
- The one with the most resources pays for all the cleanup and reclamation.

# Unresolved Contingencies

58

- Auditors are not required to express an opinion on the adequacy of an entity's environmental practices or compliance with pertinent laws and regulations.
- They obtain sufficient evidence for reasonable assurance that all items in the financial statements affected by environmental considerations are fairly presented.

# Unresolved Contingencies

59

- This gives no assurance that the costs of cleanup are fully accounted for.
- It is the starting point for the assessment of this type of exposure.
- Some cases may require a consulting engineer or environmental specialist.
- Accounting has difficulty with risks that have not yet occurred and may never develop.

# Retirement Obligations

# Retirement Obligations

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- IAS 19 requires entities to recognize in the balance sheet the net total of the following as the defined benefit liability or alternative asset:
  - Present value of all defined benefit plans' obligations.
  - Fair Value of all plan assets.
  - Actuarial gains.
  - Actuarial losses not yet recognized.
  - Past service cost not yet recognized.

# Retirement Obligations

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## Example

	<b>\$ million</b>
Present value of the obligation	(1,100)
Fair value of plan assets	<u>(1,010)</u>
	(90)
Unrecognized actuarial gains	50
Unrecognized actuarial losses	(110)
Unrecognized past service cost	(70)
Unrecognized liability on adoption of IAS 19	<u>(90)</u>
Present value of available future reductions	<u>(310)</u>

# Retirement Obligations

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**\$million**

The limit under IAS 19 is as follows:

Unrecognized actuarial losses	(110)
Unrecognized past service cost	(70)
Unrecognized liability on adoption of IAS 19	<u>(90)</u>
	<u>(270)</u>



# Earn-outs

# Earn-outs

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- When entering into a business combination the parties may not always agree on the exact value of the business particularly if there are uncertainties as to the:
  - Success of various activities.
  - Worth of particular assets.
  - Outcome of uncertain events.

# Earn-outs

66

- To complete the deal they agree to an interim value.
- Additional future payments (earn-outs) will be made by the acquirer.
- The economic risks relating to the uncertainties about the future of the business are shared.

# Earn-outs

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- Future payments may be in cash, shares or other assets and are normally contingent upon:
  - The achievement of specified events.
  - Linked to future financial performance over a specified period.

# Earn-outs

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- Earn-outs can be an invitation to litigation so should be used with caution.
- When a provision leads to a dispute it is usually because the parties failed to account adequately for the many factors that can influence the calculation.

# Earn-outs

69

- Specify the applicable accounting principles.
- The use of IFRS is common but the parties might want to deviate from it.
- Consider whether to deduct items such as returns, shipping costs, duties or taxes in calculating "revenue."
- Determine if earnings for the earn-out are before or after interest, taxes, depreciation & amortization.

# Earn-outs

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- Other calculation influences:
  - Sales of products or services at reduced prices to the buyer or an affiliate.
  - Bundling of the seller's products with those of others without a proper price allocation.
  - The extent of the buyers' support.

# Earn-outs

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- If based on earnings will the buyer:
  - Make expenditures that the seller believes unfairly impact profits during the period (such as for long term R&D).
  - Improperly allocate central or administrative costs to the business.



# Earn-outs

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- The agreement must cover what happens if:
  - The buyer sells the business.
  - The business merges with another entity.
  - Due to integration into another operation revenue and earnings cannot be readily traced.
  - A product line is discontinued.
  - The seller dies, becomes disabled or is terminated.

# Earn-outs

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- Under IFRS 3 *Business Combinations* all items of consideration transferred must be measured and recognized at Fair Value on closing.
- This includes earn-outs that are consideration, transferred if some future specified event occurs.
- There is inherent uncertainty in any contingent item.
- Measuring Fair Value can be complex and has much diversity in practice.

# Earn-outs

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In valuing earn-outs first:

- Determine the classification of the payments.
- Understand the consequences with:
  - Potential additional expenses.
  - Volatility in earnings.
  - Greater liabilities.

# Earn-outs

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- Potential consequences if payments differ from those expected:
  - Financial covenants.
  - Management remuneration.
  - Return on investment.
  - Taxes.

# Earn-outs

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## Triggers

- Revenues or earnings above an agreed threshold over a fixed period.
- Approval of a patent, license or contract.
- Successful completion of specified negotiations.
- Cash flows from specified assets over a period.
- Remaining an employee for an agreed period.

# Earn-outs

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- While negotiated as part of a business combination the accounting may not reflect this particularly if payments are made to those who remain as employees.
- Depending on exact terms, payments may be treated as remuneration for services subsequent to the acquisition rather than as part of the consideration.

# Earn-outs

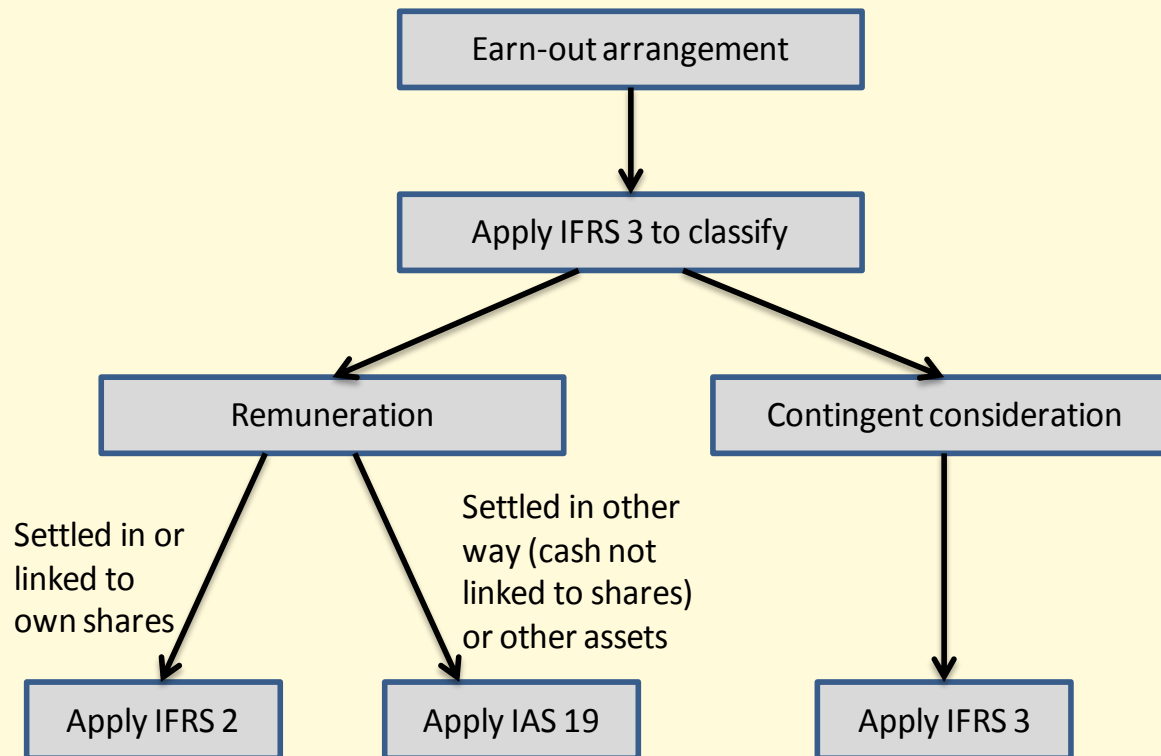
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- Payments may alternatively be treated as contingent consideration, a present obligation of the acquirer to deliver cash, shares or other assets in the future.
  - Included as part of the consideration when calculating goodwill.
  - Recognized as a liability or equity on closing.

# Earn-outs

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- Effects of changes in the value of liabilities until settlements are recognized as income.





# Earn-outs

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- Treatment of additional payments may have a significant effect on overall financial position and an entity's subsequent reported performance.
- Affect accounting based measures including:
  - Debt covenant compliance.
  - Employee remuneration plans.
  - Return on investment.

# Earn-outs

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- Where tax is tied to the accounting treatment there may be tax effects.
- Differences between accounting and tax treatments may require detailed documentation tracking them and the amount of any deferred taxes.

# Earn-outs

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	<b>Classification</b>	
	<b>Remuneration</b>	<b>Contingent consideration</b>
<b>Date of acquisition</b>	Not recognized	<ul style="list-style-type: none"><li>• Included in consideration transferred and goodwill calculation</li><li>• Creates a liability or equity</li></ul>
<b>Post acquisition</b>	Expensed in income statement	<ul style="list-style-type: none"><li>• Settlement of liability or equity</li><li>• Changes in liability until settlement recognized in income statement</li></ul>

# Earn-outs - Remuneration

# Earn-outs – Remuneration

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- Key drivers in many industries is customer relationships held by key employees or the employees' specific skills.
- Retention is critical to continued success until the relationships or skills are transferred.
- It may involve additional payments linked to continued employment.
- Often they are former owners.

# Earn-outs – Remuneration

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- A key consideration is aligning former shareholders' interest with the business'.
- One way is linking future payments to continued employment and performance.
- These arrangements will likely be treated as a post-combination expense even though the primary business purpose is an addition to the sale price.

# Earn-outs – Remuneration

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- If an employee was a shareholder, careful analysis is needed if additional payments are remuneration or contingent consideration.
- This depends on the arrangement.

# Earn-outs – Remuneration

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- Consider:
  - Contract of sale.
  - Employment agreements.
  - Other documents.
- Question:
  - Why are the terms the way they are?
  - Who initiated the terms?
  - When were they agreed upon?



# Earn-outs – Remuneration

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- Payments linked to continuing employment result in their being considered remuneration.
- IFRS 3 includes several indicators to consider when negotiating the arrangement.
- Any assessment requires judgment.

# Earn-outs – Remuneration

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<b>Lead to conclusion as remuneration</b>	<b>To consider when negotiating terms of additional payments to selling shareholders that remain employees</b>	<b>Lead to conclusion as contingent consideration</b>
Payments forfeit on termination	Continuing employment	Payments are not affected by termination
Coincides with or exceeds payment period	Duration of required employment	Shorter than payment period
Not reasonable compared to other key employees of the group	Level of other elements of remuneration	Reasonable compared to other key employees of the group

# Earn-outs – Remuneration

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<b>Lead to conclusion as remuneration</b>	<b>To consider when negotiating terms of additional payments to selling shareholders that remain employees</b>	<b>Lead to conclusion as contingent consideration</b>
Other non-employee selling shareholders receive lower additional payments (on a per share basis)	Incremental payments to other non-employee selling shareholders	Other non-employee selling shareholders receive similar additional payments (on a per share basis)
Selling shareholders remaining as employees	Number of shares owned when all selling	Selling shareholders remaining as employees owned substantially all shares shareholders receive same level of additional employees owned only a small portion of (in substance profit-sharing) consideration (on a per share basis) shares

# Earn-outs – Remuneration

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Lead to conclusion as remuneration	Indicators to consider when negotiating terms of additional payments to selling shareholders that remain employees	Lead to conclusion as contingent consideration
Formula for additional payment consistent with other profit-sharing arrangements rather than the valuation approach	Linkage of payments to valuation of business	Initial consideration at low end of range of business valuation, and formula for additional payment linked to the valuation approach
Formula is based on performance, such as percentage of earnings	Formula for additional payments	Formula is based on a valuation formula, such as multiple of earnings, indicating it is connected to a business valuation

# Earn-outs – Remuneration

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- Consider alternative arrangements:
  - Payment for non-compete agreements.
  - Employees retaining ownership interest with subsequent purchases.
- Different standards determine the accounting when classified as remuneration.
- If payment is shares or linked to their value IFRS 2 *Share Based Payments* applies.
- Otherwise, it is IAS 19 *Employee Benefits*.

# Earn-outs – Remuneration

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## EXAMPLE

- Major Corp. acquires Small Co. for \$9 million cash with an additional payment of \$3 million if its cumulative earnings reach \$6 million over three years.
- All former shareholders become employees.

# Earn-outs – Remuneration

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- At the date of acquisition the Fair Value of Small Co.'s net assets is \$8.5 million.
- The Fair Value of the additional payment is estimated at \$2.5 million.
- Over the next three years the cumulative earnings of Small Co. (before the additional payments) are \$10.5 million.

# Earn-outs – Remuneration

95

- At the end of year three Major Corp. pays \$3 million as the conditions were met.
- The next table illustrates the impact on the financial position and reported results of classifying the payments either as remuneration or contingent consideration.



# Earn-outs – Remuneration

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	<b>Classification</b>	
	<b>Remuneration</b>	<b>Contingent consideration</b>
<b>Goodwill</b>	\$500,000	\$3 million
<b>Liability to vendors</b>	\$0	\$2.5 million
<b>Reported profits over three years</b>	\$7.5 million	\$10 million

# Earn-outs – Contingent Consideration

# Earn-outs – Contingent Consideration

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- On closing, the obligation to make additional payments is either a liability or an equity instrument.
- Management assesses whether it meets the requirements to be equity.
- If the answer is no, it is a liability.

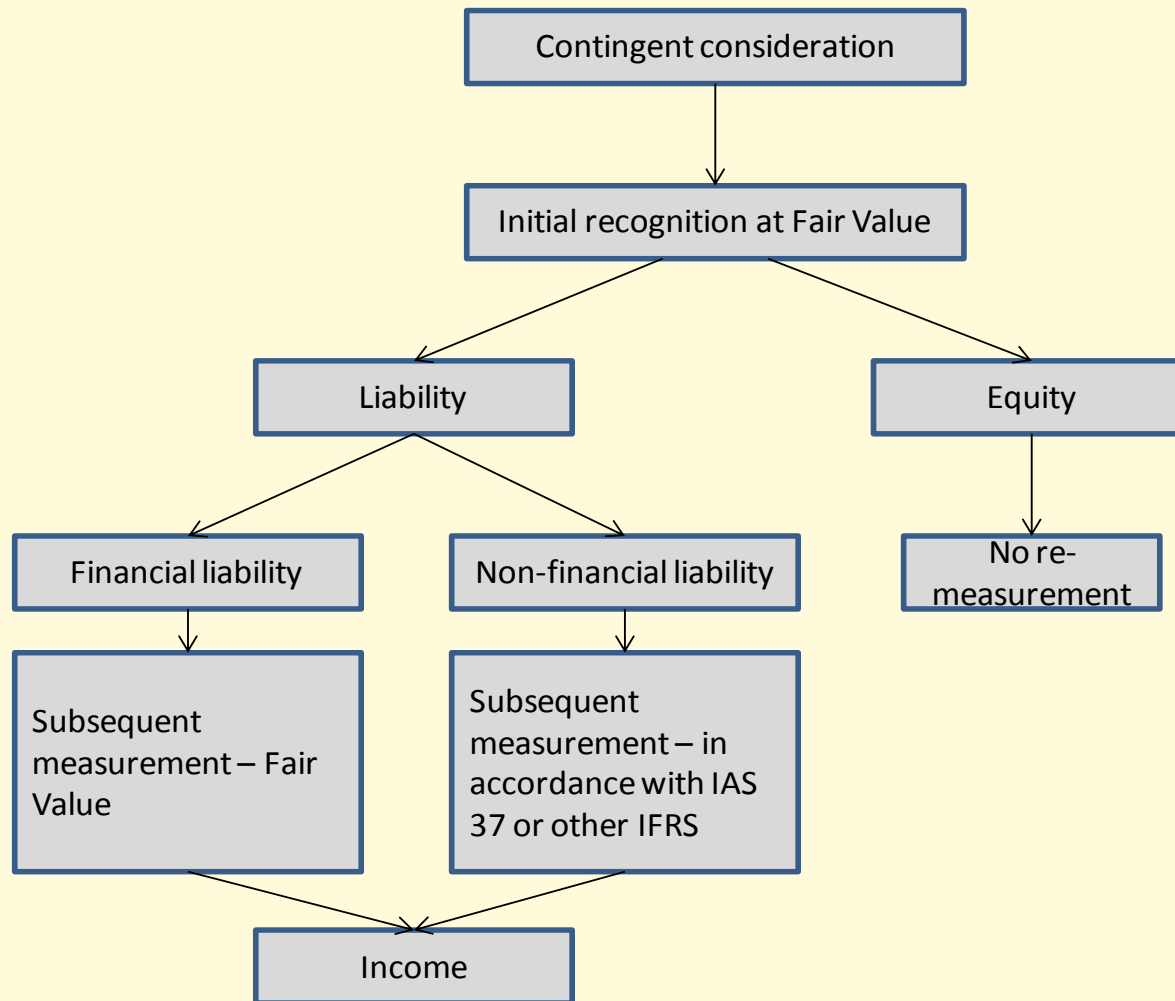
# Earn-outs – Contingent Consideration

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- Then identify the liability.
- Determine how it is subsequently measured and where changes in value are recognized.
- Most contingent arrangements are classified as financial liabilities and are measured at Fair Value.
- There is added volatility in reported results until the arrangement is settled.

# Earn-outs – Contingent Consideration

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# Earn-outs – Contingent Consideration

101

- Contingent consideration is equity when:
  1. The arrangement has no contractual obligation to:
    - ✦ Deliver cash or another financial asset to the seller.
    - ✦ Exchange financial assets or financial liabilities with the seller under conditions that are potentially unfavourable to the acquirer.

# Earn-outs – Contingent Consideration

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2. The arrangement will or may be settled by issuing equity instruments and is either:
  - ✦ A non-derivative with no contractual obligation to deliver a variable number of own equity instruments.
  - ✦ A derivative settled by exchanging a fixed amount of cash or financial asset for a fixed number of own equity instruments.

# Earn-outs – Contingent Consideration

103

- Most contingent arrangements do not meet the criteria to be classified as equity even when settled in shares.
- They tend to not have a fixed number of shares to be issued.



# Earn-outs – Liabilities/Equity/Taxation

# Earn-outs – Liabilities

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- All contingent consideration - liability or equity - is recognized.
- Remember, liabilities are recorded at Fair Value on closing.
- Amounts may not be the same as probable future cash flows as they reflect all expected outcomes.
- Reported results can be counterintuitive especially when contingent consideration is treated as a liability.

# Earn-outs – Liabilities

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- If the subsidiary performs better than expected the liability increases resulting in an additional expense.
- If no further payments are made the liability is reversed through the income statement resulting in an imaginary gain.
- Not meeting the conditions also triggers a test for impairment of goodwill.

# Earn-outs – Liabilities

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## EXAMPLE

- Major Corp. also acquires Midget Inc. for \$1,000,000 with an additional \$500,000 if its subsequent earnings reach a cumulative \$1,500,000 in five years.
- If it exceeds \$1,200,000, 20% below the target the additional payment is \$380,000.
- The Fair Value of the net assets of Midget to \$900,000.
- The Fair Value of the earn-out is \$195,000.

# Earn-outs – Liabilities

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- On closing, it is not probable that any additional payment will be made.
- Over the next five years the cumulative earnings of Midget (before the additional payments) are \$2,000,000.
- At the end of year five Major Corp. pays \$500,000 as the target was met.

# Earn-outs – Liabilities

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Goodwill at date of acquisition	\$295,000
Liability recognized on closing	\$195,000
Reported results for the five years	\$1,695,000
Settlement of contingent consideration	Liability reduced to nil
Total goodwill after payment	\$295,000

# Earn-outs – Liabilities

110

- If none of the conditions for payments were met the liability of \$195,000 would be reversed as a gain.
- An impairment test would be performed.
- If an impairment charge is recognized the amount cannot be offset against the imaginary gain.

# Earn-outs – Liabilities

111

- Contingent consideration can be a challenge to management informing shareholders.
- Prepare analyses of alternative outcomes on closing to understand the consequences for future payments or impairments.



# Earn-outs – Liabilities

112

- The subsequent effect on performance may impact all aspects of the business where accounting-based measures are used.
  - Loan covenants.
  - Management remuneration.
  - Return on investment.

# Earn-outs – Liabilities

113

- How a contingent consideration is settled affects debt covenants and debt/equity ratios.
- Discuss with bankers to clarify how they will be taken into account.
- Income statement effect is counterintuitive.

# Earn-out Equity

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## EXAMPLE

- Major Corp. buys the outstanding equity of Large Ltd. for 2 million shares.
- It also agrees to issue an additional 100,000 shares if NuPro (under development at the acquisition) receives regulatory approval within two years.

# Earn-out Equity

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- The Fair Value of the shares is \$10.25 each.
- Fair Value of net assets of Large Ltd. is \$18,250,000.
- Fair Value of Earn-out is \$410,000 shown in equity sector.
- Goodwill is \$2,660,000.
- If earn-out is not paid \$410,000 goes to profit.
- If earn-out is paid at \$12.50 share Goodwill increases by \$840,000.

# Earn-out Taxation

116

- Income tax consequences must be considered at an early stage.
- In most countries contingent consideration is incorporated in the tax base of the investment only when it is paid.
- The tax base of the asset (investment) and the liability differ from the accounting base on closing.

# Earn-out Taxation

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- It does not generate a deferred tax asset (on the liability) or a deferred tax liability (on the investment) due to exemptions in IAS 12 *Income Taxes*.
- Additional disclosure is required regarding the unrecognized deferred tax liabilities.
- While the liability is outstanding, changes in it usually do not have any tax effect.

# Earn-out Taxation

118

- If the actual payment differs from the liability recognized on acquisition, the tax base will still be different.
- This may generate a deferred tax asset or liability depending on the entity's future plans and the likelihood of realising appreciation of the investment.

# Fair Value of Contingent Considerations



# Fair Value of Contingent Considerations

120

- Fair Value of a liability is the amount for which it could be settled between knowledgeable willing parties in an arm's length transaction.
- The impact on earnings of subsequent changes in contingent consideration determine the correct value at closing.

# Fair Value of Contingent Considerations

121

- Each arrangement identifies appropriate methods reflecting the payout structure and associated risks.
- This requires more analysis and due diligence than for straight acquisitions.
- These estimates introduce new challenges and continue until the contingency is settled.

# Fair Value of Contingent Considerations

122

- The challenges stem from the processes and methodologies required to quantify the risks and rewards associated with such arrangements.
- Many criteria are specific to the target or are not directly observable in the market.

# Fair Value of Contingent Considerations

123

- The most reliable results in all circumstances are obtained from the probability-weighted payout.
- It requires considering the range of possible outcomes, their payouts and probabilities.
- The present value at closing of the probability-weighted payout is its Fair Value.

# Fair Value of Contingent Considerations

124

## EXAMPLE

- Major Corp. acquires Handy Ltd. for \$5 million plus an additional amount:
  - If the trailing twelve months (TTM) earnings in two years time are \$1 million or less, nothing.
  - If the TTM earnings in two years are between \$1 million and \$2 million twice the actual amount.
  - If the TTM earnings in two years is greater than \$2 million three times the actual amount.

# Fair Value of Contingent Considerations

125

- At the acquisition the likely twelve-month earnings of Handy Ltd. in two years are:
  - \$0.8 million — 40%
  - \$1.5 million — 40%
  - \$2.5 million — 20%

# Fair Value of Contingent Considerations

126

- The probability-weighted payout is \$2.7 million made up of:
  - $(40\% \times \$0)$
  - $+ (40\% \times \$1.5 \text{ million} \times 2)$
  - $+ (20\% \times \$2.5 \text{ million} \times 3)$
- This total is then discounted to estimate Fair Value.

# Fair Value of Contingent Considerations

127

- The discount rate requires significant judgment reflecting, for example:
    - Time value of money 3.4%
    - Underlying risks 6.5%
    - Likelihood of non-payment 1.5%
- 11.5%
- This makes the Fair Value \$2,172,000.



# Fair Value of Contingent Considerations

128

- Fair Value is re-determined at the end of each reporting period requiring additional procedures in preparing interim and year-end financial statements.
- IFRS 13 *Fair value Measurement* indicates a liability can be measured based on the trading price of corresponding asset.

# Fair Value of Contingent Considerations

129

- Based on this guidance Level 3 measurements of earn-out liabilities are often based on their value as an asset.
- In the absence of a real market a notional efficient market is assumed.
- As any arbitrage opportunity is captured, the Fair Value of the contingent consideration as a liability is the same as if it was an asset.

# Fair Value of Contingent Considerations

130

- In a typical business combination the purchase price and forecast earnings are known allowing an internal rate of return (IRR) to be calculated.
- Forecast earnings typically involves risks.
- Actual cash flows are likely be higher or lower.

# Fair Value of Contingent Considerations

131

- If cash flows are 10% higher the value of the entity will rise by a similar amount.
- The relationship between cash flows and value is generally linear.
- An earn-out is also a function of business performance but is non-linear.

# Fair Value of Contingent Considerations

132

## EXAMPLE

- A binary earn-out gives an extra \$5 million if the target's revenues in year one exceed \$80 million.
- If they equal or exceed the target the payment is made.
- If they fall short, even by 1%, the payment is zero.
- With non-linear payoffs a valuator considers multiple scenarios to address the full range of possible outcomes.

# Fair Value of Contingent Considerations

133

- When determining an earn-out discount rate three kinds of risks are considered:
  - Associated with the underlying metric - if the earn-out is based on revenues or EBITDA, this is typically the same as the firm's Weighted Average Cost of Capital (WACC).

# Fair Value of Contingent Considerations

134

- Related to the shape of the payoff - some binary earn-outs are less risky than WACC; others are option-like, paying a percentage of a metric (revenues or earnings) above a target and are much riskier.
- Counterparty risk - the acquirer is responsible for making payments so the risk of non-payment is associated with its cost of debt.
- Estimating discount rates for non-linear payoffs is difficult.

# Fair Value of Contingent Considerations

135

- A contingent payment may be \$5 million if year one revenues exceed a target.
- If less, nothing.
- Due to a non-linear payoff and the random nature of the underlying metric (revenue) consider multiple scenarios and expected future distribution of possible revenues.



# Fair Value of Contingent Considerations

136

- Option-pricing models are often the best way to value this type of earn-out.
- The risk of the underlying metric revenue is included through a volatility estimate.
- The Fair Value of the earn-out is calculated as that of a call option.

# Fair Value of Contingent Considerations

137

- A modified version of the Black-Scholes model may be used.
- The key input is volatility.
- It is measured relating to the underlying asset.

# Fair Value of Contingent Considerations

138

- There are a couple of ways to do this:
  - Look at asset volatilities for companies comparable to the target.
  - Directly observe the volatilities of the revenues or EBITDA.
- Asset volatility is considered more reliable.

# Fair Value of Contingent Considerations

139

- Many earn-outs are complex.
- Some specify that the seller gets a payment based on the amount by which some metric exceeds a target for example 50% of EBITDA over \$5 million.
- This payoff is a non-linear function of EBITDA with an asymmetrical distribution.

# Fair Value of Contingent Considerations

140

- Valuing earn-outs needs multiple scenarios or an option-pricing model.
- Expected payments are based on the buyer's and the seller's expectations and their probabilities.
- Payments are probability-weighted and are discounted at a risk-adjusted rate.

# Fair Value of Contingent Considerations

141

- Under an option-pricing model the earn-out formula is analogous to a call option instead of an all-or-nothing financing option.
- The methodology becomes complicated if path dependency exists.
  - Some specify contingent payments over multiple years with catch up provisions where disbursements in later years depend on past activities.
- This likely needs a Monte Carlo simulation model.

# Fair Value of Contingent Considerations

142

- All earn-out valuation methods are tailored to the unique factors affecting the underlying metric that triggers the payment.
- A critical step in the valuation is matching the expected distributions of the metric to an appropriate model.

# Fair Value of Contingent Considerations

143

- For EBITDA or other earnings measures the expected distribution of future results is affected by:
  - Volatility of revenues.
  - Correlation with variable costs.
  - Level of fixed expenditures.
- The result may be approximately normal, bimodal, or some other pattern.



# Fair Value of Contingent Considerations

144

- Anticipated revenues will have a very different pattern.
- Scenario-based models for EBITDA probabilities are significantly different from those of a revenue-based threshold.

# Fair Value of Contingent Considerations

145

- Valuators think about two key things:
  - The full range of outcomes for the earn-out and their probabilities.
  - How to get realistic present values taking into account the risks associated with the resulting payments.
- Option-pricing theory is a good way.
- Get the auditor onside in advance and have skilled staff to review any complex structures.