20th M&A Valuation Techniques for CFOs

Toronto, 26 November 2015

James P. Catty
MA, CA•CBV, CPA/ABV, CVA, CFA, CGMA, CFE

President, Corporate Valuation Services Limited

Chair Emeritus, International Association of Consultants, Valuators and Analysts

Valuing Hidden Liabilities
Earnouts

Corporate Valuation
Services Limited

Earn-outs

Earn-outs

- 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

- 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

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

Earn-outs

- 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

- 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, or sometimes and R&D Project.

Earn-outs

- Other common 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

- 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.
  - Charge fees for “services”.

Earn-outs

- 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

- 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 will be 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

In valuing earn-outs first:

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

Earn-outs

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

Earn-outs

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

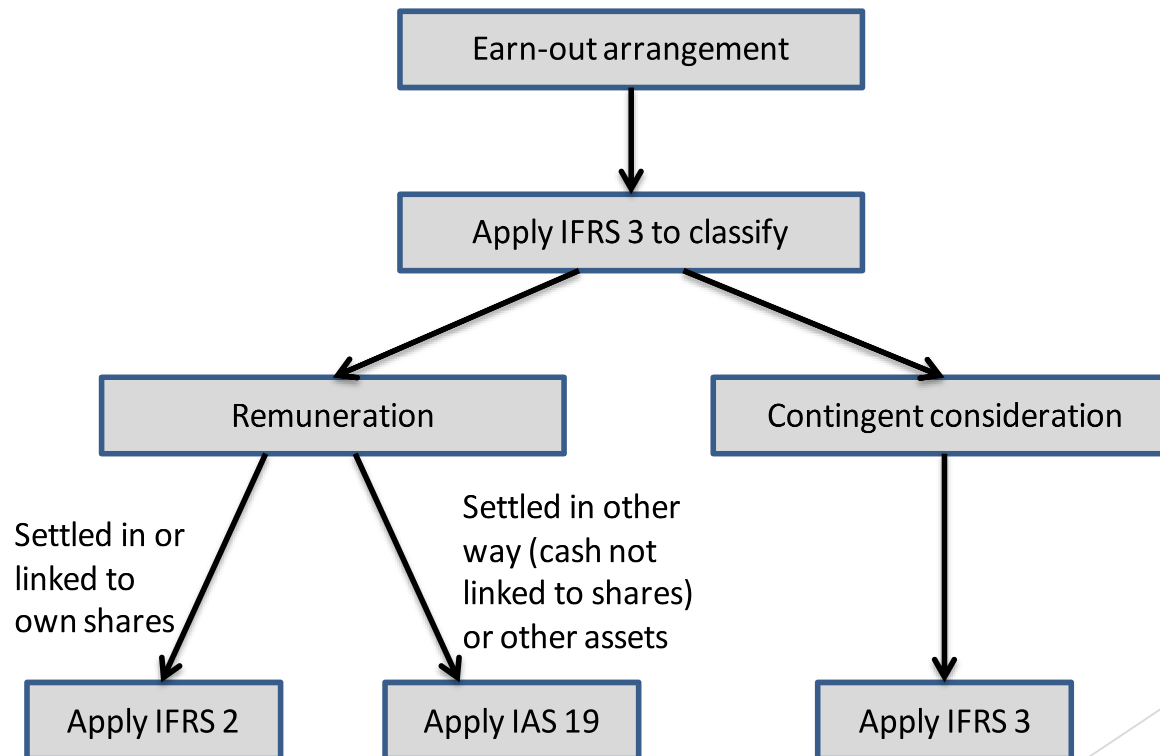
- While negotiated as part of a business combination the acquisition accounting may not reflect reality particularly if payments are made to those who remain as employees.
- Depending on exact terms, such amounts may be treated as remuneration for services subsequent to the transaction rather than as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

Earn-outs

- Alternatively payments may 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

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



Earn-outs

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

Earn-outs

- Where tax is tied to the accounting results 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

	Classification	
	Remuneration	Contingent consideration
Date of acquisition	Not recognized	• Included in consideration transferred and goodwill calculation • Creates a liability or equity
Post acquisition	Expensed in income statement	• Settlement of liability or equity • Changes in liability until settlement recognized in income statement

Earn-outs - Remuneration

Earn-outs –Remuneration

- 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

- 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

- 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

- 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

- 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

Lead to conclusion as remuneration	To consider when negotiating terms of additional payments to selling shareholders that remain employees	Lead to conclusion as contingent consideration
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

Lead to conclusion as remuneration	To consider when negotiating terms of additional payments to selling shareholders that remain employees	Lead to conclusion as contingent consideration
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

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

- 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

Example

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

Earn-outs –Remuneration

- 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

- 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

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

Earn-outs – Contingent Consideration

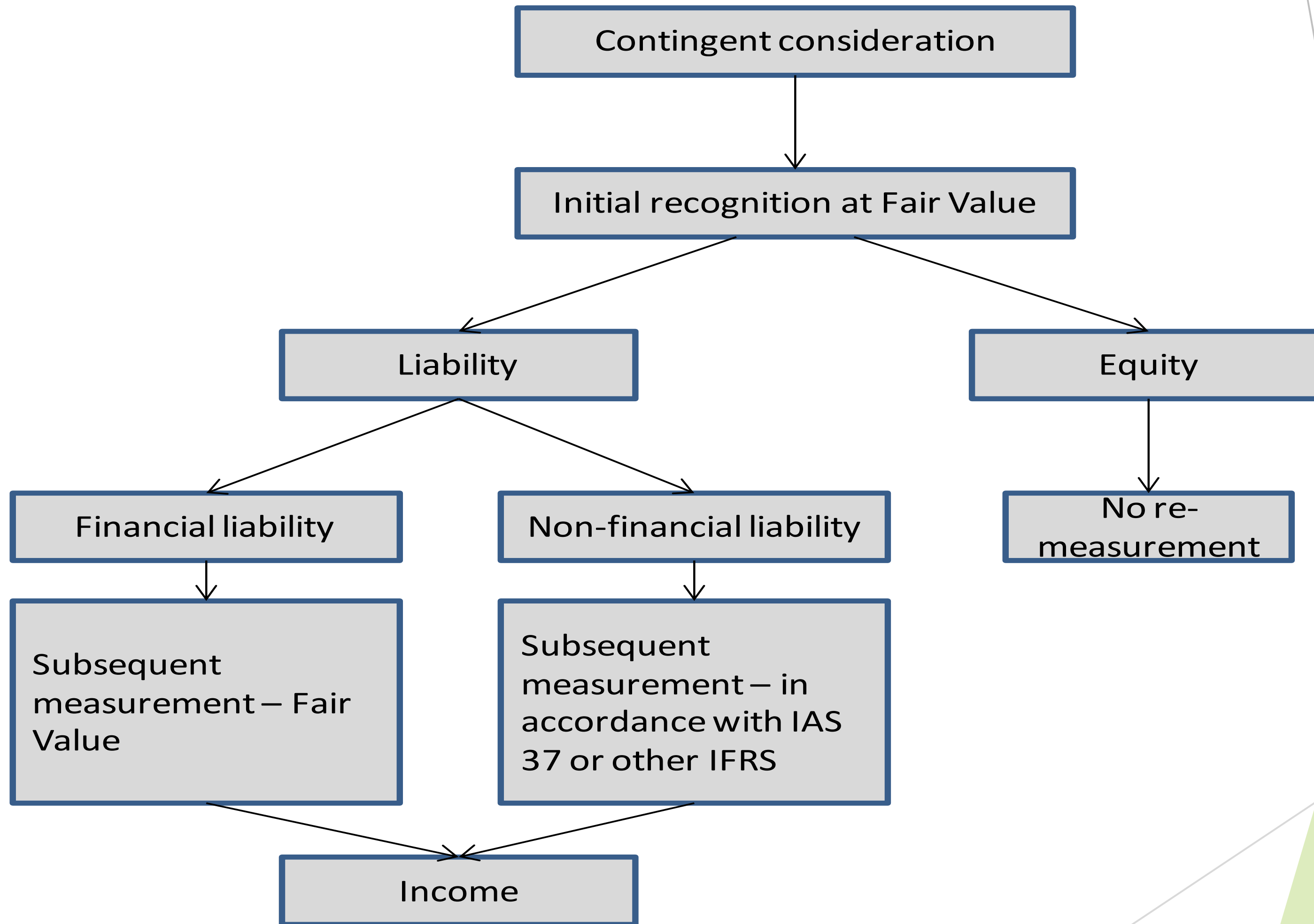
Earn-outs – Contingent Consideration

- 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

- 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



Earn-outs – Contingent Consideration

- 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

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

- 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

- 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.

Earn-outs – Liabilities

- Reported results can be counterintuitive especially when contingent consideration is recorded as a liability.
- If the subsidiary performs better than expected the liability increases resulting in an additional expense.

Earn-outs – Liabilities

- 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

Example

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

Earn-outs – Liabilities

- 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

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

- If none of the conditions for payments were met the liability of $195,000 would be reversed as an imaginary gain.
- An goodwill impairment test would be performed on Midget.
- If an impairment charge of $100,000 is recognized that amount cannot be offset against the imaginary gain.

Earn-outs – Liabilities

- How shareholders are informed about contingent consideration can be a challenge for management.
- Prepare analyses of alternative outcomes on closing to understand the consequences for future payments or possible impairment.

Earn-outs – Liabilities

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

Earn-outs – Liabilities

- 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

Example

- Major Corp. buys the outstanding equity of Medium 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

- Fair Value of shares is $10.25 each.
- Fair Value of net assets is $18,250,000.
- Fair Value of Earn-out is $410,000 shown as equity.
- 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

- 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

- 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

- 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

- 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

- 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

- 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

- The most reliable results in all circumstances are obtained from a 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

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

- At the acquisition the projected twelve-month earnings of Handy in two years are:
  - High - $0.8 million – 40%
  - Budget - $1.5 million – 40%
  - Low - $2.5 million – 20%

Fair Value of Contingent Considerations

- The probability-weighted payout is $2.7 million made up of:
  - (40% x $0)
  - + (40% x $1.5 million x 2)
  - + (20% x $2.5 million x 3)
- This total is then discounted for the two year period to estimate Fair Value.

Fair Value of Contingent Considerations

- 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%

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

- 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

- 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

- 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

- 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

Example

- Major Corp. acquires NewCo for $50 million cash plus simple earn-out based on first 12 months sales of new product just launched.

Scenarios	$'000
Success (budget)	44,000
Survival (<20%)	35,200
Failure (>20%)	35,000

Fair Value of Contingent Considerations

Payment

Success	5,000 +20% of excess
Survival	5,000 -50% of shortfall
Failure	zero

Fair Value of Contingent Considerations

- Decision tree

Scenario	Sales	Change	Payment	Probability	Product
	$'000				
Success	48,400	10%	5,880	5%	294
	46,200	5%	5,440	10%	544
	44,000	0%	5,000	55%	2,750
Survival	41,800	-5%	3,900	5%	195
	39,600	-10%	2,800	5%	140
	37,400	-15%	1,700	5%	85
	35,200	-20%	600	5%	30
Failure	35,000		-	10%	-
				100%	4,038
Discount	1 year		12%		(485)
					3,553
Fair Value				Rounded	3,550

Fair Value of Contingent Considerations

- 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 WACC.

Fair Value of Contingent Considerations

<u>Related to the shape of the payoff</u>

- 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.

Fair Value of Contingent Considerations

Counterparty risk

- 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

- 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

- 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

- 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

- 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

- Valuing earn-outs needs multiple scenarios plus decision trees 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

- 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.

Fair Value of Contingent Considerations

- 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

- 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

- 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

- 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.

Questions?

THANK YOU