Advanced Financial Modelling

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Course Outline

1
- Introduction to modelling in Excel
- Key principles of financial modelling
- Setting up a model – basic principles and useful functions

2
- Review of Assignment #1 – Financial Statement
- Nuts and bolts of DCFs

3
- Review of Assignment #2 - DCF
- Revisiting Firm Value in the context of financial modelling
- Introduction to M&A structuring and modelling

4
- Review of Assignment #3 – Merger Model
- Modelling debt and credit analysis
- Introduction to inner world of leverage buy-outs

5
- Review of Assignment #4 – LBO Model
- Combining IB valuation approaches and techniques
- Final Q&A

Review of Assignment Four

Takeaways for Assignment Four

- Reviewing general framework of an LBO model
  - Sources & Uses tables drive balance sheet pro forma
  - Projected cash flows to Sponsor (!!!) plus exit assumptions drive IRR
  - S&U, ownership data, IRRs summary and credit stats form the model's dashboard (controls)
- Fixing Pro Forma Balance Sheet
  - Balance sheet adjustment rules are similar to a merger model
  - Think of this as a cash rich vehicle with new capital structure acquiring target company
- Projections
  - Rolling forward new capital structure on standard financial templates
  - Feeding credit stats for transaction dashboard

Takeaways for Assignment Four *(cont'd)*

- Manipulating Capital Structure
  - Driven by assessment of debt capacity over projected period
- Purchase Equity & Roll-over Equity
  - Watch out for non-cash elements in the deal
  - Mix of roll-over and new cash should not impact IRR!
- Calculating Equity Returns to Sponsor
  - Make sure your dividend streams and exit values to Sponsor are based on the right ownership %
  - Inserting (solving for) target IRR would produce the deal value
  - Note that Sponsor's capital infusion may not be limited to equity
  - Use XIRR if investment / exit is between year ends

Optics vs. Value Examples

LBO Valuation - Simple Illustration

Recall example from last week (lecture four)

- Assume the following:
  - Target IRR is 30%
  - Current EBITDA of $100 mm
  - 5 Year EBITDA forecast of $200 mm
  - Financing: bank $350 mm / HY $200 mm
  - Bank Debt amortises fully over five years with no headroom
  - No mez or preferred piece
  - Exit multiple of 6.0x
- How much are we prepared to pay?

LBO - Roll-Over Equity

For the purposes of modelling roll-over equity is valued “at deal”. In reality old shareholders may assign a different value vis-à-vis new money.

- New equity issued to existing shareholders
  - E.g. stock consideration
- By definition neutral to Sponsor returns, but
  - Results in limited exposure => feasible to do a deal above capital allocation limits
  - Seller may value equity in new entity differently => possibility to exploit asymmetry
- Example
  - Same terms as previous page but 49% roll-over equity
  - Target return to Seller is 20%

LBO - Seller Note

Seller Note is placement of debt selling shareholder(s) by new levered acquisition entity as part of the total consideration in lieu of cash.

- Rationale
  - Public financing is not available
  - Preserving "optical value" to selling shareholder
- Commonly will have PIK feature / junior features on non-market terms
- Example
  - Same terms as page 7, but Seller Note of $200 mm
  - Assume 5% PIK and 20% fair market yield

Thoughts on Valuation

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Thoughts on Valuation Methodologies

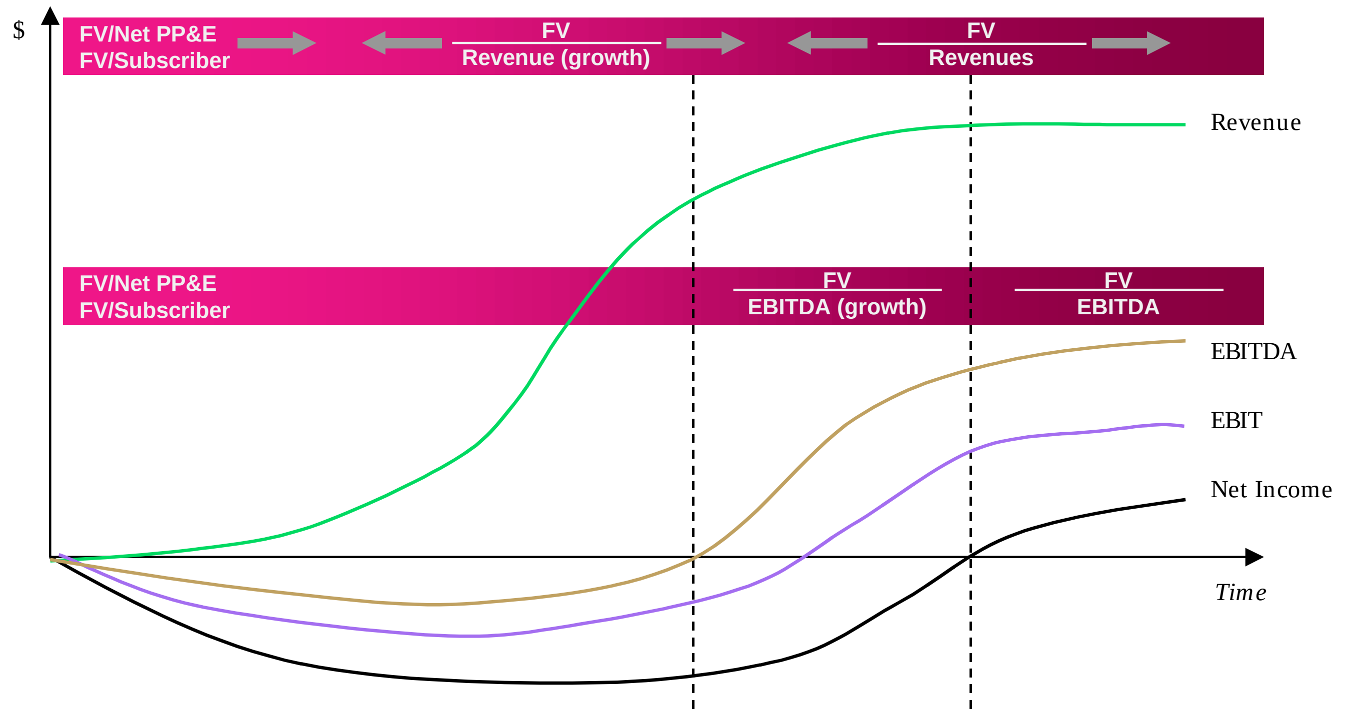
- Each methodology lacks 100% scientific basis and precision:
  - Careful consideration of several methods reduces the possibility of mistake
  - Judgement is critical - no matter what the science says!
- Some wisdom from my experience with Salomons:
  - A broker once said: you can teach a monkey to do a fairness opinion
  - Good buy-side team earns reputation by delivering sound expertise
  - Doing the numbers correctly is a prerequisite necessary to achieve the above
  - Really thinking about what the numbers tell you, meet or differ from expectations, and what the implications of those conclusions are - is what differentiates top quality valuation work

DCF vs. LBO Model

	DCF	LBO
Forecast Horizon	10 Year	5 Year
Underlying Operating Data	Long term view	More focus on each forecast interval
Capital Structure	Not Present / Constant debt level	Most Important / Dynamic Analysis
Taxation	Basic Unlevered	Very focused on tax benefits
Legal Structure	Not Present	Very focused on limitations / advantages
Cost of Capital	WACC input	Target Return to Equity Sponsor
Terminal Value	Long term industry fundamentals	Assessment of exit opportunities

Thoughts on Public Comparables

- Selecting the right multiples requires some thoughtful investigation into:
  - What is the development stage of the target company relative to comps?
  - What is the appropriate comps universe trading on?
- Relevance of different valuation benchmarks is changing over time as the target's industry eventually matures



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Public Comps - Selection Criteria

Good public comparables valuation requires understanding the specifics behind each comparable. Averaging would not get you very far!

- Lots of pre-reading required
  - All filings include "small font", not just financial statements
  - Broker research reports provide clues to what multiples an industry trades on
- Normalise operating results
  - Trailing multiples may contain extraordinary abnormal figures
- Be careful with conglomerates trading statistics
  - Conglomerates typically trade along trend for its largest business segment
  - Sum-of-the parts is helpful but requires additional assumptions => noise
- Be watchful for accounting rules
  - Identical companies with different accounting rules would not show same multiples

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Public Comps - Selection Criteria *(cont'd)*

Even if there is a good comp from fundamentals perspective its trading environment may yield distortive picture

- Relative size of companies
  - The market at times values small companies differently from larger ones
  - Indexing might also distort valuation
- Liquidity and shareholder concentration
  - Lack of liquidity distorts valuations
- Breadth of research coverage
- Outliers whose multiples diverge should generally be excluded
  - Specifically be watchful for M&A rumours, etc.
- Finally, think if exit multiples need adjustments:
  - Current trading statistics may reflect near term growth expectations and / or corporate activity rumours

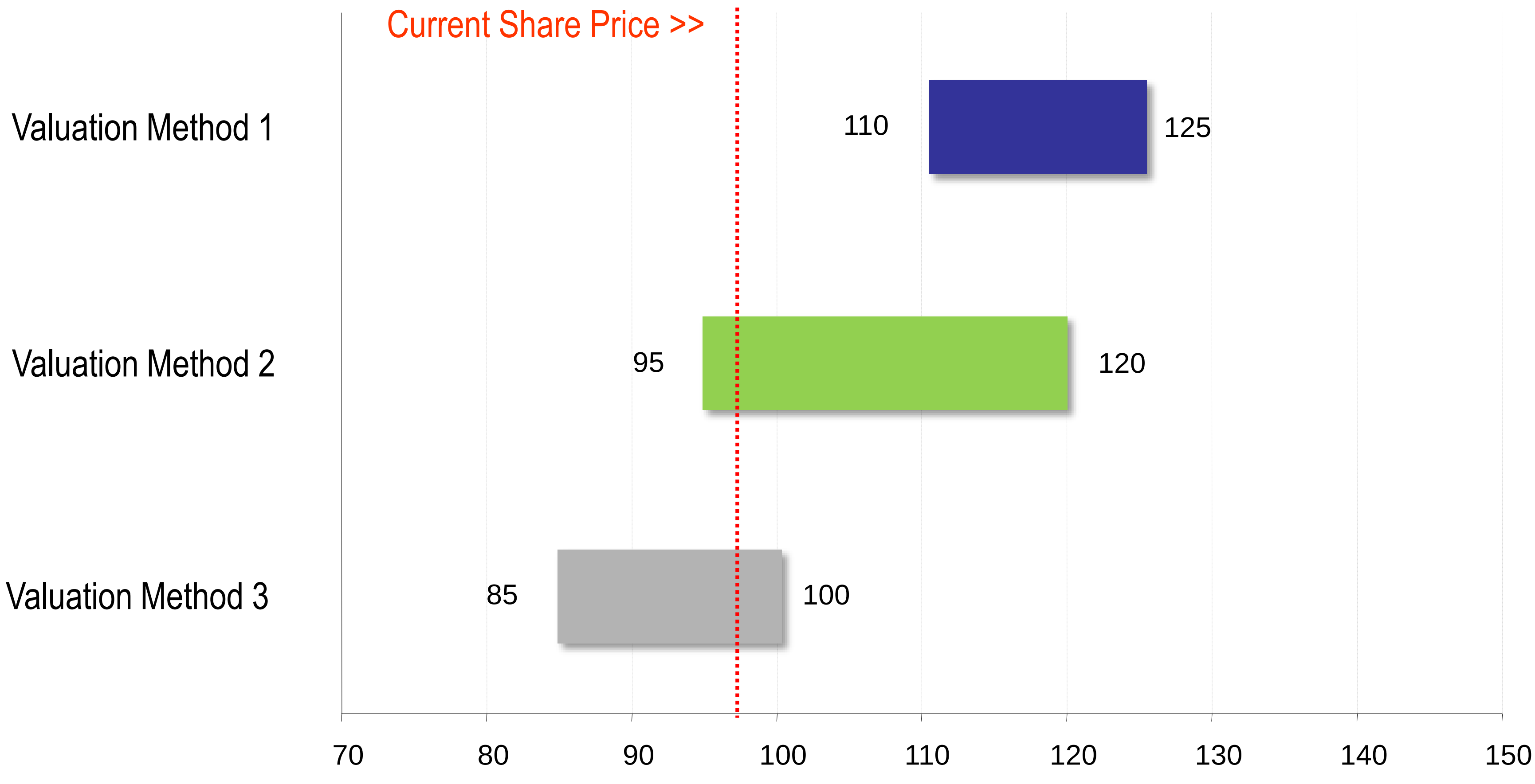
Precedent Transactions Comparables

Precedent transactions provide indication for an implied market valuation for a company, either public or private, in an acquisition context

- Assumes that an acquirer will typically pay premium to obtain control over the target
  - Note that public market valuation may also imply a strategic take-over premium
- It is usually difficult to get a large enough set of transactions to calculate a meaningful average
  - Valuation multiples tend to be widely dispersed between transactions
  - Timing differences between transactions (which point in the market cycle?)
  - Different stakes (minority vs. control acquisition) and type of consideration paid
- Relevant multiple comparison to trading comps should be based on forecast at the time of acquisition, any deferred payments PV'ed

Valuation Summary - "Football Field"

ABC Industries Valuation Summary, USD per Share



Valuation - Final Remarks

While there are circumstances in which one particular approach produces unnecessary or useless data, such situations are rare

After full set of analysis is performed, step back and think

- Which methodology is more appropriate to employ in this situation?
- Is there a reason why one methodology may give a higher answer?
- Does the fact that the analyses yield the same / different results mean at least one is invalid?
- What do these results say about the company being fundamentally overvalued / undervalued or valued appropriately
- Would competitive environment (# of possible bidders and their financial resources) play a role in your valuation / recommendations?

Thank You!

Please fill in feedback forms

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