PRINCETON UNIVERSITY

COMPANY VALUATION I: MULTIPLES

Roadmap

1. P/E (Price-Earnings Ratio)

2. EV/EBITDA (Enterprise Value-EBITDA Ratio)

BDM [Chapter: Valuing Stocks]

Why?

- Investment context
- Corporate context

How?

- Two main methods:
  1. Multiples
  2. Discounted Cash Flows analysis

(Trading) Multiples

- Most popular:
  - P/E ratio = stock price / earnings-per-share (EPS)
  - EV/EBITDA ratio = enterprise value / EBITDA

- Many others:
  - P/BV = stock price/book value of equity (per share)
  - EV/EBIT, EV/Sales, etc.
  - Some are industry-specific: EV/Subscribers, EV/Reserves, etc.
  - Some are strange: Price/PhDs, Price/Patents during dotcom bubble

Price-Earnings Ratio
(PER or P/E)

Apartment

- Similar apartments: Location, size, etc.
- Observe the price at which they were sold and size in m^2
- Price/m^2 for each similar apartment
- Take the average
- Multiply by size of my target apartment

Company

- Similar companies: Industry, size, etc.
- Observe their stock price and EPS = net income/shares
- Stock price/EPS for each similar company
- Take the average
- Multiply by EPS of my target company

Example - ARCADIS

ARCADIS

Infrastructure · Water · Environment · Buildings

- Earnings per share 2015: 2.008
- Share price: 23.9
    - Is ARCADIS fairly valued?
        - Use P/E multiple from competitors for valuation

Steps

1. Select publicly traded Arcadis peers: industry, size, etc.

2. For each peer
   - Earnings per share (EPS) = Earnings (i.e. Net income)/ Share number
   - Divide most recent stock price by EPS ➔ P/E ratio

3. Average the peers' P/E ratios

4. Multiply by Arcadis' EPS ➔ Estimate of Arcadis' value per share

PEERS	Currency	Share price	Earnings per share (EPS) 2015F	PER 2015F
Grontmij	EUR	3.72	0.165	22.5
WS Atkins	GBP	13.79	0.919	15.0
Sweco	SEK	102.50	7.218	14.2
Jaako Poyry	EUR	3.58	0.245	14.6
URS	USD	60.07	3.319	18.1
Tetra Tech	USD	25.57	1.693	15.1
AECOM	USD	37.22	2.678	13.9
Average				16.2

ARCADIS		
2015F EPS (EUR)		2.008
× Average Peer PER		16.2
= Implied value per share (EUR)		32.6
Actual stock price (EUR)		23.9
÷ 2015F EPS (EUR)		2.008
= Actual PER		11.9

ARCADIS
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Enterprise Value to EBITDA Ratio (EV/EBITDA)

Enterprise Value (EV)

- Value of operating assets irrespective of financing (equity, debt, etc.)
- Idea: comparable to industry peers (even if different financing)

EV = **Market capitalization** (≡ stock price × number of shares)

+ Net Debt =

- **+ Debt** (long + short-term, but not accounts payable) from balance sheet (B/S) as an approx. of value
- **– "Cash"** = Cash + Cash equivalents

ARCADIS

Infrastructure · Water · Environment · Buildings

PEERS	Currency	Share price	Number of Shares (millions)	Market Capitalization (millions)	Debt (millions)	Cash and Equivalents (millions)	Enterprise Value (millions)	EBITDA 2015F (millions)	EV/EBITDA 2015F
Grontmij	EUR	3.72	64	238	100	46	292	27	10.9
WS Atkins	GBP	13.79	104	1 434	55	237	1 252	153	8.2
Sweco	SEK	102.50	91	9 328	1 642	317	10 653	1 184	9.0
Jaako Poyry	EUR	3.58	59	211	57	72	196	28	7.1
URS	USD	60.07	61	3 664	1 830	283	5 211	660	7.9
Tetra Tech	USD	25.57	64	1 636	205	189	1 652	233	7.1
AECOM	USD	37.22	99	3 685	1 040	510	4 215	611	6.9
Average									8.2

ARCADIS (implied)	
2015F EBITDA (EUR millions)	269.0
× Average Peer EV/EBITDA	8.2
= Implied EV (EUR millions)	2 194.3
- Net Debt (EUR millions)	607.0
= Equity Value (EUR millions)	1 587.3
÷ Number of shares (millions)	73.0
= Implied value per share (EUR)	21.7

ARCADIS (actual)	
Actual stock price (EUR)	23.9
× Number of shares (millions)	73.0
= Equity Value (EUR millions)	1 744.7
+ Net Debt (EUR millions)	607.0
= Actual EV (EUR millions)	2 351.7
÷ 2015F EBITDA (EUR millions)	269.0
= Actual EV/EBITDA	8.7

Conclusion?

1. P/E
   - ARCADIS undervalued:
     - Implied share price: 32.6
     - Actual share price: 23.9

2. EV/EBITDA
   - ARCADIS (slightly) overvalued
     - Implied share price: 21.7
     - Actual share price: 23.9

- Use several multiples
- Examine general pattern

How It’s Done and Used In Practice

ING

EQUITY RESEARCH

Change in recommendation

26 August 2014

Buy (previously Hold)

Price (25/08/14)
€23.90

Target price (12-mth)
€28.00 (maintained)

Industrial Goods & Services
Netherlands
Bloomberg: ARCAD NA
Reuters: ARDS.AS

Arcadis

Acquisition strategy returns to the surface

Although the battle might not be over, we foresee Arcadis as taking out Hyder. Together with the acquisition of Callison, net revenue will increase pro forma to €2.3bn. Whereas we believe Callison is priced at an attractive rate, Hyder is acquired at a demanding multiple depending on synergy effects. Not including any equity issue, we have raised our estimates materially. Together with a weak share price performance, Arcadis' multiple has come down, again making the shares attractive. We upgrade Arcadis from Hold to BUY.

Fig 19 Peer group table

	Share price* (lc)	EV/EBITDA (x) 2014F	2015F	2016F	PER (x) 2014F	2015F	2016F
Grontmij	€3.72	24.2	10.9	7.9		22.5	11.9
WS Atkins	GBp1379	9.0	8.2	7.7	16.4	15.0	13.7
Sweco	SEK102.5	10.2	9.0	8.4	16.8	14.2	12.8
Jaakko Poyry	€3.58	23.7	7.1	5.4		14.6	10.2
Average - Europe		**16.8**	**8.8**	**7.4**	**16.6**	**16.6**	**12.2**
URS	US$60.07	8.1	7.9	7.5	18.5	18.1	15.8
Tetra Tech	US$25.57	7.4	7.1	n/a	15.8	15.1	13.0
AECOM	US$37.22	9.4	6.9	8.4	14.9	13.9	12.0
Average - US		**8.3**	**7.3**	**7.9**	**16.4**	**15.7**	**13.6**
Average - International		**13.2**	**8.2**	**7.5**	**16.5**	**16.2**	**12.8**
Arcadis	**€23.9**	**11.1**	**8.7**	**7.8**	**14.2**	**11.9**	**10.5**
Premium/discount (%)		*-17*	*7*	*3*	*-13*	*-27*	*-17*

*Share price as of close of 22 August 2014

Source: Bloomberg, ING estimates

Valuation

EV/EBITDA to peers method continued

We look at the valuation on the basis of EV/EBITDA and PER compared with engineering peers. Arcadis trades at a 2015F EV/EBITDA of 8.7x versus the sector at 8.2x or a small average 5% premium. This compares with our February report when Arcadis traded at 8.8x versus the peer group at 7.2x or at a 20% premium to the market. In PER terms, Arcadis is valued at 11.9x for FY15F, at a 27% discount to its peer group compared with a premium of 22% previously. Even without Grontmij's FY15F PER of 22.5x, the discount on FY15F PER is still 21%.

20% was justified, still the case?....

In previous reports we said that a 20% premium on EV/EBITDA for Arcadis was justified given its excellent track record, business mix, clear strategy etc, but we also believed that there was no justification for a higher premium as it is still an engineering firm with the same characteristics as other engineering firms.

....Yes, it is!

Today we believe that Arcadis should continue to deserve a premium of around 20% to its peer group. On one hand, there is more uncertainty with regard to the acquisition of Hyder as the Japanese consider their options and also there is no visible benefit yet from such a highly priced acquisition as Hyder is. Additionally, although with no impact on EV, equity raising is not excluded, which will automatically cause dilution. On the other hand, Arcadis' earnings will get a boost both from this acquisition, with FY13 EPS growing from €1.54 to €2.20 in FY16F, delivering a CAGR13-16F of 12.5%. Given the fact that our FY16F EBITDA is only €12m or 5% higher than FY15, there is upside to these numbers (Arcadis guides for £15m). We also believe that these acquisitions offer attractive strengthening of market positions in certain parts of the world where massive spending in infrastructure, building is planned like in the Middle East whereas an engineering firm with experience in natural resources, Australia's market is attractive. Yes, there are challenges ahead, but there is also a good outlook for a company with strong management and dedicated strategy.

Standard Issues

Simple issues

- *Should the peer group be inclusive or focused?*
- *Should we use the average or median (i.e. middle) of peers' ratios?*
- *What if a peer has negative earnings or EBITDA?*
- *What if the firm to be valued has negative earnings or EBITDA?*

Trickier issues

- *Should we use most recent earnings and EBITDA or 1-year forecast?*

- *Should we correct for the fact that faster-growing firms have higher ratios because earnings and EBITDA will be higher in the future?*