

After a careful examination of the arch communication inc.

[Sociology](#), [Communication](#)



After a careful examination of the Arch Communications Inc. case and the valuation done by the Analyst, we believe that there are following issues with a valuation that should be examined very closely.

1. Technicality Error in the preparation of the Free Cash Flow: In the FCF prepared by John Adams: Tax and Change in Net Working Capital items cannot be observed. We may assume that this was done on purpose since both of these values were accepted as " 0" throughout the forecast period. In the absence of knowledge about the details for tax implications in the US and the effect of the expected Westlink Holdings acquisition on the existing tax base, we accepted the tax assumption made by John Adams as correct. In normal conditions, we need to investigate thoroughly the tax issue and the permitted number of years that loss can be carried forward in the US. We think that accepting the " Change in Net Working Capital" as " 0" throughout the forecast period is a strong assumption. The negative Net Working Capital (for 2005 Current Assets-Current Liabilities = 33, 671-49, 172 = 15, 501) structure may change within the forecasted period against to company due to increasing competition. But we still continue with the " 0"? Net Working Capital assumption of John Adams.

2. WACC Estimate: John Adams used the following parameters/assumptions in his WACC calculations: Rf: 7% Market Risk Premium (" MRP"): 7% Beta Arch: 1. 6 Borrowing Rate: 11% Equity/Debt Ratio: 40% / 60% And based on these: $Re = Rf + \text{Arch} \times \text{MRP} = 7\% + 1.6 \times 7\% = 18.2\%$ $WACC = 0.4 \times Re + 0.6 \times Rd$ and accepted tax shield from cost of debt as " 0" due to the " 0" tax cost of the company

during the forecasted period. $WACC = 0.4 \times 18.2\% + 0.6 \times 11.0\% = 13.88\% \Rightarrow 13.9\%$ * In the absence of details about the Arch calculation of John Adams we accepted this assumption as accurate. [Dear All: Please feel free to comment on Beta and cost of debt assumptions, also on 0 tax assumption in WACC calculation]

3. Terminal Value Calculation: John Adams calculated the Terminal Value of the company in the year 2005 as \$3,568m with 10x EBITDA multiple. Although 10x EBITDA multiple seems close to the existing average EV/EBITDA multiple (the average is 10.6 for the above 6 companies), this multiple reflects the existing company growth/market expectations. A multiple of 10-12 multiple can use for corporations with high growth expectations but it is unusual and flawed to accept the same multiple for ArchCommunication even after 10-years. Normally for mature companies using EV/EBITDA multiple in the range of 6-7 times can be more acceptable. When \$854. m PV of Terminal Value is double-checked with the calculation method by Perpetual Growth Rate at the 10th Year Free Cash Flow: $3,568 = 277.3(13.9\% - g) \Rightarrow g = 6.118\%$. Assumption of 6.12% perpetual growth is both unusual and irrational. It seems that the discounting formula used for calculating the PV of Terminal Value seems false. It is discounting 1 more year than the actual 9 years. Hence for discounting the PV of Terminal Value in the Year 2005, it is needed to use the discount rate of 0.3099. * When a usual market practice was used for the growth in perpetuity (for the calculation of TV) $i. 2.0\% \Rightarrow TV = 277.3(13.9\% - 2.0\%) \times (0.3099) \Rightarrow \$722m$. instead of \$854.1m.

4. Cash Flow Assumptions: When we check the reliability of the assumptions and the cash flows we observe that: * EBITDA margin is increasing from 36. 2% to 46. 9%. We believe that 46. 9% at a maturing market seems very aggressive. * The book value of Fixed Assets (PP&E and Intangible Assets) decreases to \$ 52. 2 m. levels at \$ 760. 7 m sales figures. We believe that this seems some problematic for us. Whether EV/EBITDA is the right method for calculating the terminal value of Arch Communications Inc.? If at all EV/EBITDA is the right multiple, is it justified to use a multiple of 10x for valuing the terminal value when it is assumed that the business has achieved a stable perpetual growth rate? Is it valid to use FCF and EBITDA simultaneously in calculating the full enterprise value? The valuation at hand calculates the terminal value using EBITDA multiple and value generated over the next ten years using FCF d. Even if the business is not generating any profit at all currently, is it valid to assume no taxes even for the rest of the forecasting period? Is it efficacious to use a WACC of 13. 9%? Problem: Whether EV/EBITDA is the right method for calculating the terminal value of Arch Communications Inc.? Argument: Since the company is highly leveraged, it may be more prudent to value equity just by using Flow to Equity or levered cash flows. The unlevered cash flows and EBITDA may not ...(CHOON TO ADD) Problem: If at all EV/EBITDA is the right multiple, is it justified to use a multiple of 10x for valuing the terminal value when it is assumed that the business has achieved a stable perpetual growth rate?

Argument: The companies that have achieved a stable growth rate do have EV/EBITDA of 10x by any industry standard. A multiple of 10-12x is used for growing organizations but it is not guaranteed that Arch Communication would be a rapidly growing organization even after 10-years. Even if the valuation using EV/EBITDA is validated - it could only be in the range of 6-7x. Currently, the industry standard is of 10x multiple EV/EBITDA but that is not guaranteed after 10-years

Problem: Is it valid to use FCF and EBITDA simultaneously in calculating the full enterprise value? The valuation at hand calculates the terminal value using EBITDA multiple and value generated over the next ten years using FCF

Argument: We would also prefer to calculate the terminal value using FCF rather than using EBITDA since the value generated in the next 10-years is also calculated using FCF. We believe that FCF would provide a better approximation of the terminal value.

Problem: Even if the business is not generating any profit at all currently, is it valid to assume no taxes even for the rest of the forecasting period?

Argument: FCF is calculated as Problem: Is it efficacious to use a WACC of 13.9%?