2.6.5 Valuation of Yule Catto Exercise Answer

Unit: Unit 1 – Treasury Strategy

Module: Module 2 – Valuation

Date: 1 September 2014

Summary: Answers to the exercise valuation of Yule Catto.

Answer 1

Refer to the accompanying exercise spreadsheet answer

Financial data tab

To obtain a DCF valuation we first have to calculate Sustainable Cash Flow. Although the latest year's data is probably the most influential, it is important to consider earlier years as we are trying to identify a position that will be sustainable into the future. We therefore need to adjust the latest year's data if it is off-trend.

The data used in calculating SCF is shown in the column headed SCF. The P&L and Margin Analyses don't suggest that we shouldn't use the 2010 data as there was substantial sales growth in 2010 and the margin for 2010 is within the range of recent years.

We have assumed an effective tax rate of 20% based on the 5 year data. This is arguably too low as we know Yule Catto benefits from tax concessions but these will probably not last in perpetuity.

Additionally we do not have marginal tax rate data which we would ideally use when calculating the tax shield. In this valuation we have used the effective rate

We have also assessed working capital as 1.2% of sales. This is the maximum of the past 5 years as calculated on the basis used in the spreadsheet. This is also the latest position and is in line with the comment in the Financial Review on page 12 of the 2010 Annual Report, "Control of working capital is a core focus of the business management." This is relevant only for the inflationary adjustment in the sustainable cash flow.

WACC tab

WACC has been calculated under various scenarios.

Other considerations:

1. Adjust WACC for plant operating leases.
2. Calculate WACC assuming a less conservative capital structure, i.e. one with more debt. The current capital structure is probably an over-reaction to the Global Financial Crisis and ideally a valuation should probably be made assuming a more normal capital structure. See Variations at the bottom of the WACC tab.

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3. Calculate WACC assuming no tax concessions as this is likely to be the position in the future. See Variations at the bottom of the WACC tab.

Valuation tab

Assuming no real growth and inflation of 2%, we derive a valuation of £3.39 per share. This compares to the 2010 year end range of £1.88 to £3.16, i.e. beyond the top of the range of recent prices. Note that this is based on the year end capital structure.

If we adjust for the pension deficit, the value drops to £2.94 per share. Arguably this is the better approach if the cash flows we have calculated in the SCF do not include measures to eliminate the pension deficit. Ideally we should only deduct the entire pension deficit if all the cash flows associated with the pension deficit have been excluded from SCF.

We have also undertaken some sensitivity analysis assuming some real growth. However, this approach is probably not too valid and it would be preferable to assume real growth for a limited period only.

Perhaps more intriguing is the effect of capital structure changes. Higher taxes have very little impact with the reduction in SCF being offset by the lower WACC.

Slightly less conservative gearing (70% equity) produces a 13.0% uplift to a share price of £3.83, although the effect is lower if we also use a higher tax rate.

Also, the effect of higher gearing (50% equity) produces no further benefit, in this instance because the advantage of a greater proportion of debt is offset by the increased margin.

Summary

Even if we adjust for the pension deficit, the DCF valuation suggests that Yule Catto's shares were undervalued at the year end, particularly if we take into account the conservative capital structure.

We might consider revising the valuation to assume a low tax rate (of 20% say) for 5 to 10 years, using 27% thereafter. There doesn't appear to be any reason to assume additional growth as the market seems to be pricing in low or negative growth already with our calculated share price already in excess of the market price. Perhaps inflation of 2% is too high; yet inflation of 1% produces a share price of £2.74 – still suggestive of under valuation. However, there comes a point when you begin to lose sight of what you are trying to achieve. We are already making very significant assumptions about Yule Catto's future which are almost certainly incorrect. Whilst this does not mean that we should not take as much care as possible to be as accurate as possible, we should recognise that excessive refinement is probably worthless.

Arguably DCF valuations confirm multiple valuations. For example, depending on the faith you place in your forecast of SCF, you can establish what growth assumptions are suggested by multiple valuations. Your analysis will suggest that the multiple valuation is *cheap* or *expensive* and this will influence your negotiation in a deal situation.

Answer 2

Note this answer is more detailed than expected of the student, but is published for its valuable contribution to the subject.

DCF Valuation – see page 7 in the Morgan Stanley report

You should have immediately recognised that the valuations were going to be significantly different because Morgan Stanley are valuing Yule Catto including the Polymer Latex acquisition whereas we are not.

They have also used forecast data for 2011 to 2014. We could have done this if we had sufficient information and <u>should</u> have done if we expected a period of growth or anything else which was unlikely to persist into the future.

Nevertheless, it is worth pointing out that Morgan Stanley has assumed a terminal value growth rate of 2%, broadly in line with inflation. Realistically the highest growth rate one should ever use in a valuation is inflation plus real growth in GDP. Even this is probably excessive. Anything above this level means that the company you are valuing will become larger and larger as a percentage of the economies in which it operates, generally an unlikely scenario.

Oddly, Morgan Stanley has also tried to calculate EV as at the beginning of 2011, yet they have deducted a debt estimate as at the end of 2011 to arrive at an equity value. This is a little inconsistent.

Other comments:

1. Pension adjustment. Morgan Stanley has reduced their SCF estimate by £2m. Presumably this is designed to eliminate the pension deficit, although the methodology is not clear.
2. Tax rate. Morgan Stanley has assumed that the low rate which Yule Catto enjoys at present (largely from its Far East operations) will not persist into the future. The 27% is probably a blended marginal rate.
3. The working capital adjustment of 10 in the sustainable cash flow is odd. One would not expect to see this as there is no movement from year-to-year in the sustainable cash flow. Probably an error in the methodology.
4. TV £1,431m? Assuming the sustainable cash flows are as at the end of 2014, then Morgan Stanley have estimated the SCF as £84m (=138-10-44). Not sure what the £1,516m (Operating FcF) is supposed to be?

   Then, Terminal Value = $\frac{\text{SCF}\times(1+g)}{\text{WACC-g}} = \frac{£84\text{m}\times(1+2\%)}{8\%-2\%} = £1{,}428\text{m}$

   which is close to Morgan Stanley's figure of £1,431m. In fact, on page 8 of Morgan Stanley's report, it is clear that the FcF figure has been rounded down from £84.2m. Using this gives a TV of £1,431m.
5. NPV of £1,273m? As you can see from the Morgan Stanley tab in the spreadsheet, the NPV of £1,273m (£1,275m per the spreadsheet) does not use the TV figure, but instead

uses £1,516m. Moreover, the NPV calculation assumes this occurs at the end of 2015 rather than as at the end of 2014 which you would expect if using a TV.

6. Cost of equity. Morgan Stanley calculates this as 9.2%, but you would expect 9.3% from the data. Perhaps β is rounded?
7. Morgan Stanley refer to a second risk free rate of 5% in addition to the 6% used in the cost of equity calculation. It is not clear what this is used for.

Answer 3

Refer to the Ratios tab in the accompanying exercise answer spreadsheet. We have calculated the ratios before and after the effect of the pension deficit. (The pension deficit should be included (to some extent) if it is not included in the underlying cash flows, although it is difficult to apply this logic to the EV/Sales multiple.)

EV/sales

Using the underlying performance data, our value is 0.57x.

This is low generally and low for the sector, although several other companies also have values below 1.

Note that even if we adjust EV to include the pension deficit liability, the value is still only 0.67x.

EV/EBITDA

Using the underlying performance data, our value is 5.30x. If EV includes the pension deficit, the value increases to 6.25x. Again these are low generally and are at the bottom end of the range.

P/E ratio

Using the underlying performance data, our value is 7.99x, a very low value generally and easily the lowest in the sector. At this level we would expect to be looking at a recovery stock with very low earnings or a stock which was very much out of favour with the market. The second appears the most likely. Even using the highest price in December and January, the P/E only peaks at 12.55x which, whilst no longer the lowest, is still relatively low compared to the sector.

Conclusion

The implication of each of these measures is that Yule Catto is under-valued at the year-end share price. Morgan Stanley's Overweight (Buy) recommendation is probably justified.