LMS

Working Capital Adjustments

Tutorial

January 2017

1.0 General

Pease note the following guidance and instruction is to be used as an accompaniment to the 'Working Capital' Excel file.

Please feel free to get in touch at contact@lentransolutions.com if you would like additional guidance or to discuss the methodologies represented here and in the Excel file.

2.0 Tutorial guidance

2.1 Aim and audience

The aim of this tutorial is to illustrate two different methods for calculating working capital adjustments. These methods allow the user to calculate accurate adjustments whether the working capital periods (debtor or creditor) are less than or in excess of the timing resolution of a financial model (e.g. monthly, quarterly, annual).

2.2 Tutorial conventions

Sheet references are displayed as '***Sheet***' while section headings and line references are displayed as '*Item*'.

3.0 Theory

3.1 Trade debtors and creditors

To model accurately cashflow to a business we must understand the role of debtors and creditors, where present, and their respective payment periods.

Essentially, a debtor is an entity which has received a service or product from a business and who is yet to make payment for the receipt of that service of product. Therefore the 'debtor period' refers to the duration between (in most cases) receipt of invoice for product and services and then payment of this invoice.

Applying the same logic to creditors (who represent services or products received but yet to be paid for) and using the simple logic that an economic efficient decision for debtors or creditors is to settle their outstanding commitments as late as possible, we can calculate accurately the value difference between the recorded invoice value on the Income Statement and the timing of cash.

This value can then be used as a 'Working Capital Adjustment' to accurately portray the true cash position on a Cashflow Waterfall or Cashflow Statement.

3.2 Why is it important to get this right?

Ultimately, it is important to make a reasonable and accurate assessment of the Working Capital Adjustment as it allows assessment of whether cash in any given

period will be sufficient for the business to operate, service liabilities and maintain or replace assets.

4.0 Modelling Solutions

There are two methods presented in the accompanying Excel workbook[1] – namely:

- Days method
- Alternative method

In most cases the 'Days' method is preferable, as it represents a simpler structure to install and interrogate. However, the 'Days' method is not appropriate for all eventualities, hence the 'Alternative' method.

4.1 Days method

- When to use:

  If debtor and/or creditor periods in days are less than the days in your models timing resolution. For example, if your models timing resolution is quarterly (i.e. each calculation column represents a quarter) then the debtor and creditor invoice conventions should be less than approximately 90 days.

- Method employed:

  Simply, it uses the number of invoice days to see what proportion of the current period cashflow will be recognised in that period. It also acknowledges any cashflow from a previous period as due for receipt / payment.

  Looking at *row 18* of ***Calcs_Days****,* the formula construct is essentially:

  (21/31) * Revenue in Period + Revenue from Previous Periods

  The first part represents that (based on the tutorial assumption of 10 debtor days) the 21st of the month will be the last day at which an invoice can still be delivered for services and the revenue still received within that month.

  This method therefore assumes constant / equal cashflows across whole period – or in the context of the example, equal value of services sold in each day of the month.

  Having calculated this in the context of a debtor account it is then possible to easily calculate the working capital adjustment. See *cell I21* of ***Calcs_Days*** – here the value shows that in this period there will be $333k less cash income then income booked

[1] Please note in both cases shown in worksheets ***Calcs_Days*** and ***Calcs_Alt*** respectively, only a debtor account is shown intentionally as a modelling challenge.

Essentially, a near identical calculation structure can be applied to creditor account. The only real change will be to the 'working capital adjustment for cashflow' row. If you are not confident in making this adjustment yourself please feel free to get in touch at contact@lentransolutions.com.

(invoiced) in that period. This is because approximately 1/3 was invoiced in the last 10 days of the month and therefore will not be recognised until the next month.

4.2 Alternative method

- When to use:

  If debtor and/or creditor period is greater than the model's periodic timing resolution. This is most likely to happen in models with a monthly timing resolution.

- Method employed:

  This method translates the 'days' which are in excess of the timing resolution into a month format. In the tutorial this is approximately 1.40 months. Or, in other words, from delivery of services invoice it takes the debtor 1.40 months to make payment for the service.

  The model then looks back to isolate the:

  1. Month of invoice timing – see *row 12* of ***Calcs_Alt***
  2. Month previous to the above – see *row 13* of ***Calcs_Alt***

  The model then calculates proportions of revenue to be received either side of the back-looked month boundaries and applies this to the value in those periods.

  These two calculations are then aggregated and used to populate the 'received' line (*row 23*) of the debtor account. The working capital adjustment is then calculated in the exact same fashion as in the Days method.

4.3 Some considerations

- How do you integrate historical information into the Days method?
- Should total Revenue = Received and what question does this raise about end of modelled period working capital assessment?
- Where does the working capital adjustment get presented in the cashflow?

  For answers to these questions and any other queries you have on this general subject area please get in touch with us at contact@lentransolutions.com.