M&A: How data analytics and data visualisation enhances the financial due diligence process

A data-driven shift from the wordy due diligence report

The M&A life-cycle sets out a clear path from target screening and selection all the way through to post merger integration, value enhancement and eventual exits.

An integral step in the middle of this life-cycle is the due diligence phase. The due diligence (DD), gives prospective investors a view of 'what's under the hood' of the target business and aims to highlight areas that need to be considered further in the deal negotiation phase, specifically when drafting the sale and purchase agreement.

There are various kinds of DD's that must be carried out on any given deal, with the main types including financial, tax, legal, human resources, commercial and information technology. Despite obvious differences in nature, all DD's require professionals to sift through vast volumes of data, analyse it and then report back according to a very specific scope as set out by the prospective investor.

These reports tend to be lengthy and wordy, as professionals try to ensure all the scoped detail is covered and that all material movements in financial performance are understood and reported on.

Surely drafting due diligence findings can be done in a more succinct, insightful and visual manner whilst maintaining the level of detail required by an interested investor's scope of work?

Luckily, we are well into the 21st century and advances in technology and software allow us to respond to the question above with a resounding 'Yes'.

This article will explore the benefits of taking advantage of data analytics and data visualisation concepts throughout the financial due diligence phase.

So, what is under the hood? Data. And lots of it.

As noted above, the financial DD phase is effectively a detailed inspection of what's going on in the target company based on historical and forward-looking analysis. Any M&A professional will confirm that the moment you have been added to the virtual data room (VDR), there is an almost certain expectation that you're going to have to wade through mountains of data ranging from financial and non-financial, structured and unstructured, similar and disparate, and everything in between.

Data analytics and data science lend themselves perfectly to this mountain of data by using techniques to 'transform the data, analyse it, uncover insights and draw conclusions from it.'

What makes data analytics such a powerful tool during the financial DD?

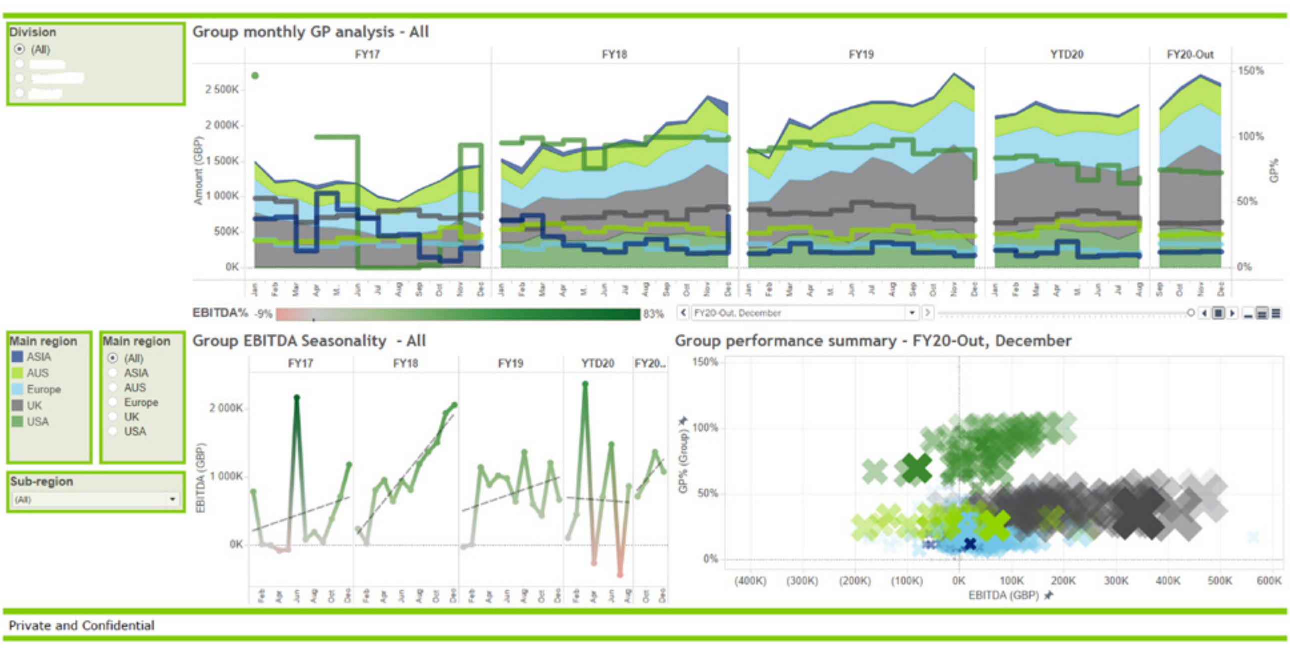
- Having a team of data specialists, with strong data transformation and data visualisation experience, working alongside the due diligence team is a powerful combination as the data specialists focus on packaging the detailed data in a form that enables the due diligence team to draw key insights and focus on key deal matters.
- A well-built data model creates **a single source of truth** and combines key data sources (both financial and non-financial) into one place. Once core data checks are completed, the due diligence team shouldn't have to sift through the VDR for different pieces of information required for analysis and can access it straight from the data model.
- Combining all data sources into one data model allows for **flexible and efficient analysis.** One can write formulas (or 'measures') that will apply across the relevant data sources, regardless of the filter applied.
- An example of this might be analysing data across different regions or divisions. Previously, when analysing divisional performance, you might have extracted the data for 'Division A', created an Excel data book, manually captured this data into data tables and then written Excel formulas as required, for example, an analysis of staff costs and staff cost per employee. A well-built data model, however, allows you to write algorithms that enable you to analyse all divisional analysis and, using a toggle function, you are able to assess the trend in staff costs across divisions and on a group basis.

A picture is worth a thousand words

Data visualisation in itself is a method of performing data analytics. Data visualisation aids the due diligence professional in writing up more succinct reports that focus on the key deal issues. A well-constructed visual or chart will highlight the key trend, thereby minimising the verbiage in a report. Data visualisation can be used optimally throughout the DD process as follows, inter alia:

- **To perform analysis and identify deal insights.** A well-constructed set of visualisation dashboards can highlight key trends that would have otherwise been difficult to do using traditional methods. This enables the due diligence team to raise focussed questions and gain deeper insights.
- **To explain complex accounting concepts.** Visualising an area can often lead to a breakthrough moment. For instance, using simple line and bar charts to explain the core concepts of IAS 29 (Financial Report in Hyperinflationary Economies) and its impact on EBITDA.

Group – Monthly performance



What's next?

Data science/analytics and data visualisation are evolving and their use cases in the M&A process is expanding on a daily basis. The use of coding languages such as Python and concepts like Natural Language Generation (NLG) are finding their way into the DD process and with it comes overall value creation.

When it comes to due diligence (DD) as part of an M&A undertaking, success or failure often depends on details.

The universal challenge, however, has always been in separating the relevant details from the data.

Deloitte takes advantage of advances in technology and software that allow it to harness the power of data analytics and data science for the benefit of its clients – transforming and analysing data more effectively to uncover insights and draw conclusions from it.

Should you have any questions on the above, or topics you'd like to see covered relating to analytics in the DD process, please contact:

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