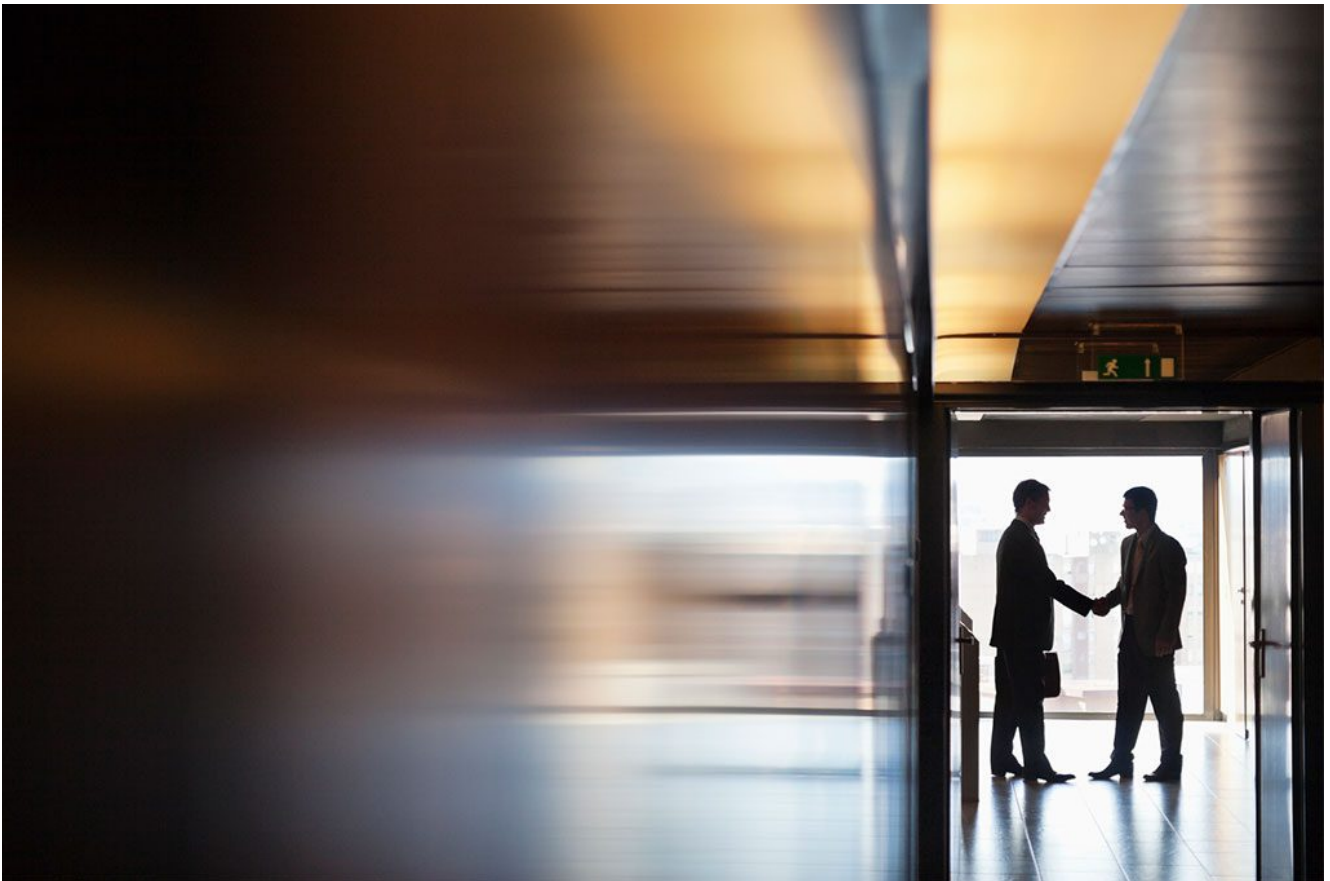


Calculating synergies from a merger

How does one know if a corporate merger will create value? More importantly, how much will the merger be worth? These are tricky questions to answer because the value of any synergies only appears over time. Even so, the authors suggest three ways of making a reasonable approximation.



September 7, 2012

[A technical note](#) by IESE's Miguel Cantillo and [Carles Vergara](#) suggests three methods for

estimating the value of any expected synergies resulting from the merger of two companies.

While none of these is perfect, all three shed light on the true nature of synergies and their impact on the value of companies involved in an integration process.

Market Analysis

The authors use the real-life example of Imperial Tobacco's acquisition of Altadis.

The first method uses the market value of the companies before and after the announcement of the merger.

When Imperial Tobacco bid for Altadis, offering 45 euros per share, its stock price was 38.89 euros, representing a 16 percent premium for Altadis shareholders.

Interestingly, a study of 3,700 mergers between 1973 and 1998 shows that to be the average appreciation of acquired companies.

However, as a result of the offer, Altadis' stock price rose even higher, appreciating nearly 23 percent.

An even bigger surprise is that Imperial Tobacco also saw its own stock price climb more than 8 percent following the announcement, despite the fact that the acquiring firm's stock price usually drops.

The first interpretation is that the merger was valued very positively by the market. In other words, if the offer went through, Imperial Tobacco would have paid less for Altadis than the market deemed it was worth. This might explain the rise of Imperial Tobacco's stock price.

When the announcement of a merger increases the value of one or both companies, it is because the market perceives synergies deriving from the integration.

We might say that "one plus one equals more than two." But how much more?

The answer can only be an estimate, which entails a certain margin of error.

To obtain an approximate value, we compare the value that the market places on the merger with the value prior to the announcement of the deal. The difference provides the estimated synergies.

This rather simple way of evaluating synergies generates useful information: It provides not

only an estimated value of the expected synergies, but also insight into how they are distributed among the shareholders of both companies, and whether or not the acquired company is actually worth the price being paid.

This is its main advantage: With minimal data and the simplest of operations, we can draw numerous conclusions.

Its main drawback is that it only works with the mergers of publicly traded companies, and it depends entirely on the perception, or subjective opinion, of the market, which is often mistaken.

Read: ["Time to Rethink Merger Policy?"](#)

Peer Companies and Similar Transactions

The second method estimates synergies based on past experiences of transactions between similar companies. The aim is to find a multiple that represents the "multiplier effect" that the merger has had on such companies.

Different ratios can be used to calculate this multiple: For the numerator, the most common practice is to use indicators of business value, e.g., enterprise value or market capitalization; for the denominator, it is common to use EBITDA or EBIT, or other variables such as sales, net income or book value.

Once this multiple is calculated for each company and transaction, the average is taken. This is what we use to estimate the value of the company in the event of a merger.

In the Imperial Tobacco/Altadis merger, the average multiple resulting from the analysis of similar transactions is 12.05, if we use a business value ratio (numerator) over EBITDA (denominator).

Knowing this average, and considering that the estimated EBITDA of Altadis for 2008 was 1.243 billion euros, we can deduce that its value, after subtracting debt, amounted to 12.276 billion euros. That works out to 47.95 euros per share.

By seeing the variation in Altadis' value following the merger announcement, we can conclude that the expected synergies total 2.319 billion euros — the result of multiplying the change in share price (47.95 minus 38.89) by the number of shares (256 million).

This gives us a lower, more conservative valuation of the synergies than with the previous

method.

Read: "[Shareholder Value Creation in European M&As](#)"

Discounted Synergistic Cash Flow

The third mechanism for estimating synergies uses the general discounted cash flow formula. This implies making a prior estimation of the growth rate of cash flows (g) and a discounted capital rate (k).

Because this requires having some understanding of financial mathematics, it is far more complex than the others.

In addition, this mechanism requires working with projections of the value of synergistic cash flows for various years into the future: all of the extra income attributable to the integration process (sales synergies) and, especially, the savings derived from the restructuring (cost synergies), which occur with greater frequency and certainty.

In the case of Altadis, both the buyer and the banks made their projections of synergistic cash flows for five years (2008-2012).

From there, using the appropriate calculations, the authors estimated synergies of 3.417 billion euros and 4.308 billion euros, respectively.

Read: "[The Dubious Logic of Global Mega Mergers](#)"

Which Method to Use?

Although these three different ways of calculating the expected synergies from a merger are not perfect, they at least provide a reasonable range.

In the case of the Imperial Tobacco/Altadis merger, that range was between 2.3 billion euros and 3.9 billion euros. This may seem an extremely wide spread.

For this reason, the authors recommend using all three methods when weighing up such a decision, bearing in mind that they are only approximations.

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