



What if you could see into the future?

Are you working on the right things?

Applying the Theory of Constraints to the Value Proposition of the Company

Posted on LinkedIn July 21 2015

David M. Lehmann Ph.D. and Lia A. DiBello Ph.D.

You don't need to predict the future. Just choose a future -- a good future, a useful future -- and make the kind of predictionthat the future you predicted will be brought about. Better to make a good future than predict a bad one. Isaac Asimov

When choosing the future of your company, Asimov had good advice, but no method for plotting the path. In our business, we are often confronted by a client who badly wants a better future, but may need help with deciding what that is. Counter-intuitively, the answer is offered up by *applying the theory of constraints to the value proposition of the business.*

What does this mean?

Fundamentally, the existence of any business is rationalized by providing value, something that someone wants to pay for. A business itself is a system of activities and roles that executes on that promise. Businesses fail due to two kinds of constraints. The first is a constraint to the whole business, when the value proposition of the business does not align with the market of the future, such as making horse drawn carriages in a world of cars. You always want to avoid this kind of constraint.

A second constraint can be simply an operational reality or even a feature of superior operation.. For example, when making complex equipment for aviation, an organization that makes engines needs to produce engineering designs, perform manufacturing and then rigorously and exhaustively test its products for performance and reliability. Any bottleneck in this system is an internal constraint. What is undesirable in this situation is for the constraint to be at the wrong point in the system. In general, the constraint should be at the point where it costs the most to add the next increment of capacity, in this case the equipment testing.

Success is a function of two things. First, identifying the company's best opportunity in the market. Second, aligning the internal constraints in order to seize that opportunity. i.e., maximize the return on invested capital. *The best way to understand your company's situation in this context is by thinking about the internal constraints and the market opportunity at the same time. This is what most modeling approaches fail to do.*

More often than not our clients are not aware of the constraints they need to overcome or, even more important, the upside potential of their companies if they do address their issues.

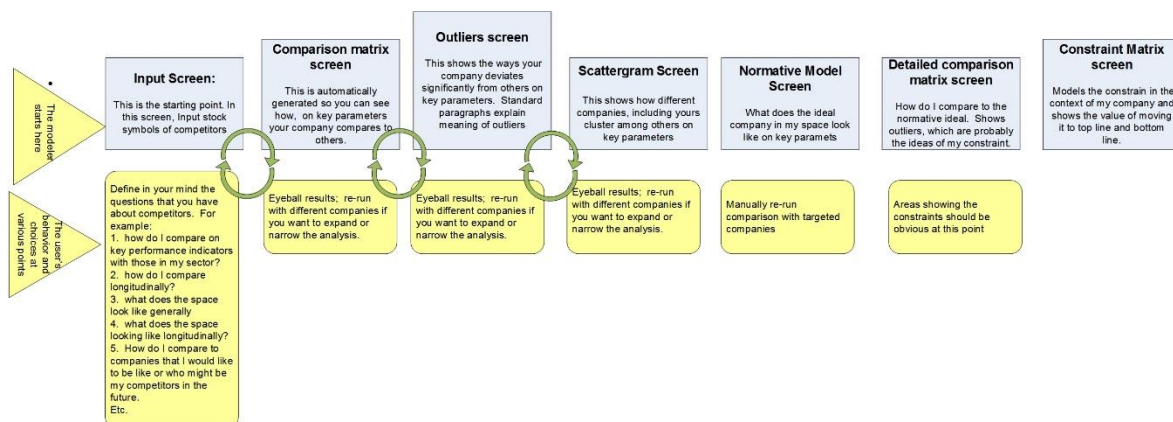
WTRI has developed a software tool for plotting the path to a good future by examining these two kinds of constraints at the same time, and their relationship to each other.

We developed this tool for our own use. However, its predictive power and general utility seems worth sharing. More often than not our clients are not aware of the constraints they need to overcome or, even more important, the upside potential of their companies if they do address their issues. Further, without this market facing context, decision makers often have the wrong idea of what to work on.

The Dynamic Strategic Modeling Optimizer (DSMO); how does it work?

DSMO does with software what an intuitive expert in business does without software. In other words, there are people, such Warren Buffet and others who seem to have a magical ability to know what a company is “really” worth and what it would take to maximize their return on investment. They know which companies are diamonds in the rough. They also know what the diamond cutter should do to reveal the brilliance. These experts accomplish this by assuming the role of an economist standing at the edge of the opportunity space with the view to the sweet spot in the marketplace. DSMO helps with this process by looking at the same indicators that experts do, but automates the complex and time-consuming analysis involved.

The flow chart below shows in the steps in the software. Important to note, DSMO needs to be connected to a financial database, such as Yahoo Finance, or Google Finance. It uses the publicly available data in those systems as its starting point and performs the in depth analysis through a series of iterative steps. In other words, it does in 15 minutes what can take an economist with good intuitions several hours to do manually.



Broadly speaking, DSMO first determines who the likely competitors are. It chooses same size companies in the same sector selling similar products. It creates a scatter gram of these companies, usually plotting them along two axes of interest, such as stock price and market capitalization, but this can vary depending on the type of company or industry. More important, this gives a picture of how the client is located compared to its peers in the marketplace. It can also show the results of poor management. For example, in the chart below, we see several similar firms. Five years later, they are widely divergent; the market conditions have been the same for all them. The highest performing firm shows us what is possible for this type of firm in this market. Everyone who has fallen below that has not managed internal constraints and not maximized the value of the firm. In other words, their management likely worked on the wrong things.



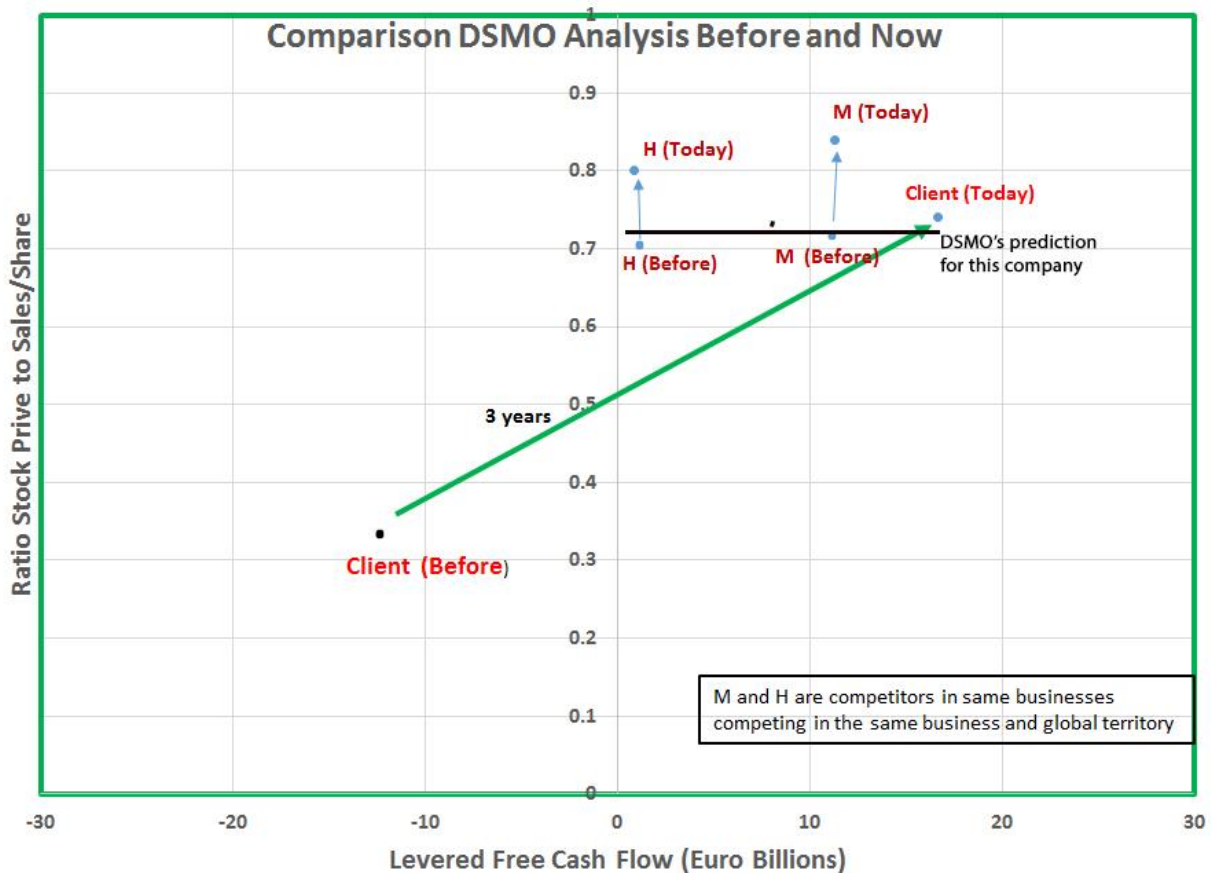
DSMO uses the data from the highest performing competitors and calculates a "normative model" from key financial indicators (for example, profits per employee). DSMO generally focusses on 5 to 8 indicators, depending on the sector. Comparing these derived measures of "goodness" to the same indicators in a company's financial reports will lead us to the internal constraint that is the barrier to their success.

A client example

A few years ago, we worked with a very large financial services company in Europe. After four years of trying to recover from a severe downturn in the market, they were running out of ideas.

As shown in the chart below, DSMO found they were performing very poorly compared to their two major peers. A detailed comparison of our client with the "ideal" indicator-profile created by DSMO led us to identify their key constraint. Like their peers, they were penetrating emerging markets with acquisitions and innovative products, but had a poor track record of realizing bottom line benefits from those ventures. We worked with the client to increase their ability realize the return on their investments in acquisitions and choose new products that were a better fit with their strategy and core capabilities. *This is not at all what they had been working on before. Further, the potential that DSMO predicted seemed to them to be impossible to achieve, especially in only a few years.*

The chart below shows the outcome. Within three years, the company's stock had nearly doubled and their performance was comparable to their high performing peers.



DSMO requires some business skill to use, but greatly speeds up the process of finding what is really holding a company back by narrowing the search and putting the whole firm in the context of the economic trends affecting its future. Sadly, it is also good at predicting what will happen to companies who don't work on the real issues.

Want to learn more? [contact info@wtri.com](mailto:info@wtri.com)