

Mill Risk Assessment

Fisher International says using cash costs, technical age and size ranking, combined with signal detection theory, make it possible to identify which mills and machines are sending out distress signals, giving buyers and sellers of market pulp a better chance to plan for the future.

By David Pineault

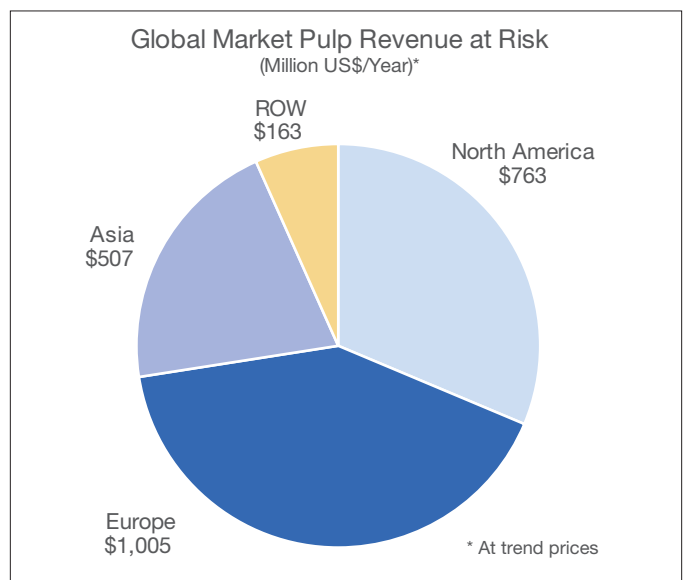
I recently had the pleasure of hearing an excellent presentation by economist Todd Buchholz at International Pulp Week in Montreal. While he had many points of interest and even succeeded to make economics funny (no easy task), two things in particular stuck with me. The first was that we live in a “hypercompetitive” economy due to a collapsing of the supply chain, globalization and a synchronous expansion the likes of which we’ve never seen. The second tenet, a natural corollary to the first, was an ominous question that drew a hush from the crowd. The question was “why do I need you?” And it got me thinking not only about the value I provide each day, but the value proposition of buyers and sellers in the market pulp industry.

Overview

The market pulp sector has been in hypercompetitive mode for many years now. This is due to, amongst other things, the rise in importance of low-cost suppliers from Latin America and Asia and enormous efficiency gains from technological innovation throughout the industry.

In addition, competitive positions are constantly changing due to factors such as relative fiber costs, exchange rates and energy costs. These forces continually re-balance the competitive equation both inter-regionally and intra-regionally. They also create significant uncertainty for pulp and paper producers, their investors and their customers as it is difficult to predict who will be competitive even 12 months hence.

Industry participants throughout the supply chain have an appreciation of the competitiveness issue. Market pulp suppliers must assess the health of their



customers and market pulp buyers must evaluate the well-being of their suppliers. In the age of hyper-competition, making a mistake on either front is simply too costly. A rigorous analytical tool that provides user-friendly desk-top analysis of mill competitiveness and mill risk—both current and future—might be just what the doctor ordered.

Mill Risk

Each paper machine and mill has a unique set of hurdles specific to its sector and location when trying to maintain

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competitiveness. These challenges can include, for example, OCC prices, local labor rates, the price of fuel oil number 6 and exchange rates amongst others. But, for purposes of this article, we’ll take a look at the mill and machine risk of non-integrated printing/writing

paper, tissue and specialty paper machines throughout the world.

When preparing capacity forecasts, analysts need to make an important distinction between how much more capacity will *actually* close and how much more capacity *could* close. The latter figure is always larger than the first and the difference between the two is one major component of the demand/supply balance, prices and price expectations. As analysts, we could improve upon our projections of what will actually close by having a rules-based methodology of which mills could close (i.e. which mills are at greatest risk for closure).

Houston, We Have A Problem

Any analysis of mill competitiveness or viability must start with an understanding of the market prospects and economic environment in which the mill operates. Socio-political, environmental, corporate fit, grade mix and fiber availability, for instance, are additional considerations.

Most analysts agree that paper and board demand in North America and Europe is expected to grow only slowly if at all over the foreseeable future. The outlook for several printing/writing grades and newsprint is particularly dire. The relentless migration of information delivery technology to electronics combined with unfavorable demographic developments bodes ill for the future of many paper products—especially those grades that use market pulp. Many older, smaller machines serving these markets have already closed and there will be more closures as supply adjusts to market demand and the competitive situation evolves. And, even though demand in emerging markets is growing by 8% - 10% per year, small, old paper machines in those regions will not be able to compete with the large, fast machines currently being installed.

Producers in North America have responded by closing uneconomic capacity. This has not been an orderly process by any means. Nevertheless, U.S. producers, for example, have succeeded in removing 2 million tonnes of uncoated freesheet capacity since 2002. In addition, a considerable amount of North American newsprint capacity has been retired or converted to groundwood specialties

during this time. The consolidation wave has begun to cross the Atlantic Ocean where nearly 2.2 million tonnes of printing/writing capacity closure has either taken place or has been announced.

So, the question now becomes which mills are at the greatest risk to close in the future? Using cash costs, technical age, and size ranking combined with signal detection theory, we can identify which mills and machines are sending out distress signals indicating that they are at risk to close. Depending on where we set our threshold, we will get some “hits,” some “misses,” and some “false alarms.” It all comes down to this balancing act.

Mill Risk Analysis

While it’s all well and good to track capacity changes, the *ex post* nature of these developments does little to help the industry plan and prepare their sales and marketing efforts. What if there were a way to analyze the likelihood that a mill or machine will close before that event actually took place? What if one could forecast how exchange rates, energy prices, fiber prices and just plain time will affect the viability of each mill, machine and pulp line?

These capabilities would allow suppliers to forecast sales more accurately, select mills with which to build long-term relationships, make proposals with long-term benefits to stronger mills, target the right prospects and put production and services closer to viable customers. Paper producers using

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Competitiveness Index - 2006-03-25

Total	Region	Country	CI Rating	Cost	Rank
8.9					
7.2	North Ai	United States			
9.6	North Ai	United States			
6.2	North Ai	United States	8.6	\$845	
4.4	North Ai	United States			
3.6	North Ai	United States			
7.9	North Ai	United States			
6.0	North Ai	United States			
9.2	North Ai	United States			
4.4	North Ai	United States			
8.4	North Ai	United States			
8.9	North Ai	Canada			
2.6	North Ai	United States			
1.2	North Ai	United States			
4.5	North Ai	United States			
9.0	North Ai	Canada			
4.6	North Ai	United States			
9.1	North Ai	Canada			
8.6	North Ai	Canada			
4.8	North Ai	United States			
4.9	North Ai	United States			

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mill risk analysis could target specific competitors with the right strategy, make better capital decisions, make better divestitures and acquisitions and change product mix earlier.

So how much capacity is at risk over the next five years and how much market pulp demand will be affected? Let's look at 100% non-integrated paper machines in the printing/writing, tissue and specialty paper sectors in the major producing regions.

In the current economic environment, there are about 300 paper machines accounting for nearly 5.7 million tonnes of these grades currently at risk of closure over the next five years. This represents nearly 4.1 million tonnes of chemical paper grade market pulp demand per year accounting for \$2.4 billion in annual revenue at trend prices.

As a general rule, the mills/machines with cash costs in the high third or fourth quartile are at greatest risk for closure. Their size and technical age in comparison to their peer group also plays a role. For example, Fisher International has identified 24 non-integrated coated paper machines in Europe that are at risk for closure over the next five years. These machines have an average cash cost of \$890/tonne, an average size of under 50,000 tonnes/year and an average technical age of 29 years.

At the global level, the breakdown of at-risk machines in the printing/writing sector is pretty evenly split between coated paper (55 machines, average size of 38,000 tonnes/year) and uncoated freesheet (138 machines, average size of 15,000 tonnes/year) at 2.1 million tonnes each, representing a combined 3.0 million tonnes of chemical paper grade market pulp consumption per year. The tissue sector is next with about 1 million tonnes of production (74 machines) at risk representing 735,000 tonnes of annual market pulp consumption.

On a regional level, Europe is expected to lead the charge in terms of mill/machine closure of the next five years with nearly 2.4 million tonnes of non-integrated paper capacity (94 machines) at risk to retire, representing 1.7 million tonnes of annual market pulp consumption or \$1 billion in annual revenue at trend prices. North America is next on the list with 1.6 million tonnes of non-integrated paper capacity at risk (89 machines) representing 1.2 million tonnes of annual market pulp usage or about \$765 million of business at trend prices. At "just" 1.1 million tonnes of non-integrated paper production at risk (86 machines), Asia

comes in third but, given the rapid demand growth in the region, it may be somewhat surprising that about 800,000 tonnes of annual market pulp consumption is at risk in the region representing \$510 million in business.

Not all at-risk machines will actually close, of course. In any given period, there are more machines at risk than will actually close. In fact, each time a machine shuts it can

actually lessen the pressure on others to close. So, we can identify the assets that have the greatest risk, but we may not be able to predict the exact order or timing of their closure.

The potential for \$2.4 billion worth of market pulp business to evaporate over the next five years does not mean the global market

pulp business will shrink by \$2.4 billion by 2012. On the contrary, it will most likely be \$2.4 billion larger than it is today due to organic growth and the likelihood that newer, larger machines will offset the potential loss from the exit of less efficient production. Moreover, any risk assessment is contingent on the economic scenario which will assuredly change over time making risky mills top performers and competitive machines relatively riskier. The challenge, then, becomes to identify which at-risk mills are in your portfolio and what economic and operational variables reveal your customers'/suppliers' vulnerabilities.

The analysis should also focus on the inter- and intra-regional dynamics of investment and closure in order to plan sales, marketing, logistics and deployment of product. For instance, absent a rather large round of de-integration in North America, the majority of the 1.2 million tonnes of market pulp consumption that is at risk will probably not be replaced in North America but in China, India, the Middle East or some other emerging market.

Parting Shot

In deciding whether or not your company can benefit from this and similar types of analyses, remember the words of my grandfather. He said to remember the "6 P's" of success: prior planning prevents pretty poor performance. Strategic, fact-based planning combined with effective execution is a strong arrow to have in one's quiver as the industry attempts to navigate the hypercompetitive economy. ■

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