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# HOW EXCHANGE RATES SHAPE THE PULP AND PAPER INDUSTRY

## INTRODUCTION

Of all the things that affect participants in the pulp and paper industry, currency exchange rates is one of the stronger forces, but one over which the industry has no control. And because exchange rate cycles usually are quite long – typically 5 to 10 years – we don't think of them as often as more volatile factors, say paper prices, inventories, and operating rates. But exchange rates have had a deep impact on the shape of today's pulp and paper industry and they continue to influence the nature of long range investments and even the short-term decisions that are made every day.

Many factors influence when and where pulp and paper mills are built, and one of them is exchange rates. Particularly when the mill's product is intended for export, exchange rates are a critical determinant for investing in new capacity. In this commentary, we will be looking at the correlation between:

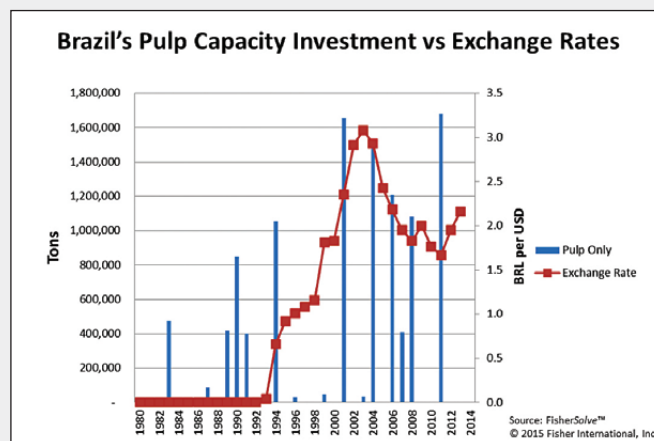
- exchange rates and investment in pulp capacity;
- exchange rates and investment in paper capacity;
- exchange rates' affect on profitability;
- exchange rates as a major source of industry risk.

Using FisherSolve™ data and analytics, we tracked capacity against exchange rates in a variety of markets.

Just look at the graphs that follow. Each shows the exchange rate of a different country against the US dollar from 1980 through 2014, and compares it to the amount of capacity built in that country in the same years. Exchange rates are plotted in local currency to the US dollar, so the higher the exchange rate line the weaker the currency is against the US dollar. (We chose to compare all currencies to the US dollar because much of the industry's trade is transacted in US dollars.)

## Exchange Rates and Pulp Capacity

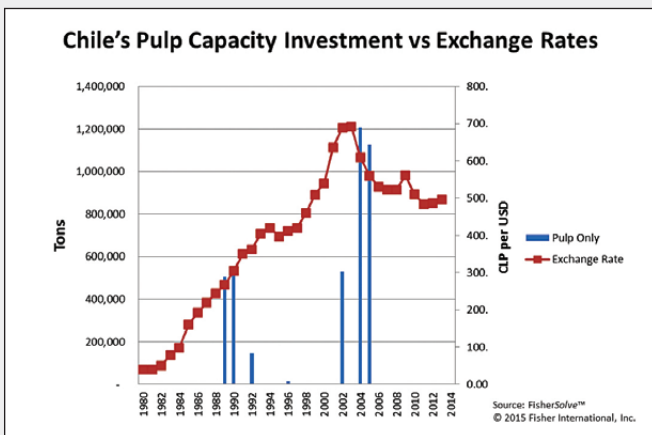
Pulp is a globally-traded commodity, so it should be no surprise that exchange rates might heavily influence the construction of new capacity in countries with competitive export platforms, i.e., weak currencies. The charts that follow demonstrate this logic.



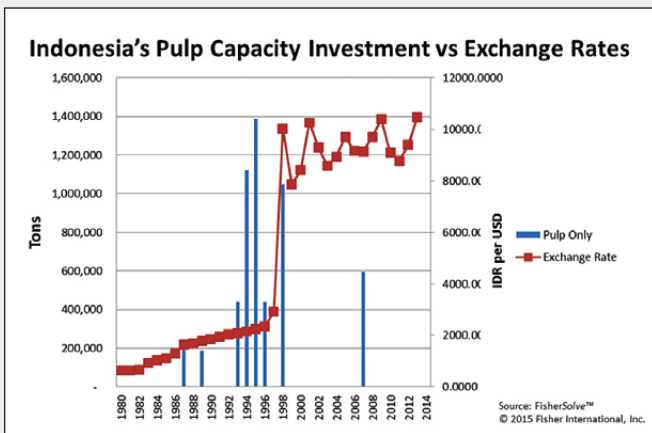
**Figure 1.** Investment in Brazil peaked in 2002 when currency was weakest against USD

Notice how closely related the two factors are. **Figure 1** shows Brazil's pulp production plotted against its USD exchange rate. You can see a peak of investment occurred in 2002, when the Brazilian currency was weakest against the US dollar. (Prior to 1994, the Brazilian currency's value was fixed by the government at artificially low rates, which proved to be unsustainable. As it was difficult to measure the true value of the currency during that period, the graph shows the currency value as 0.)

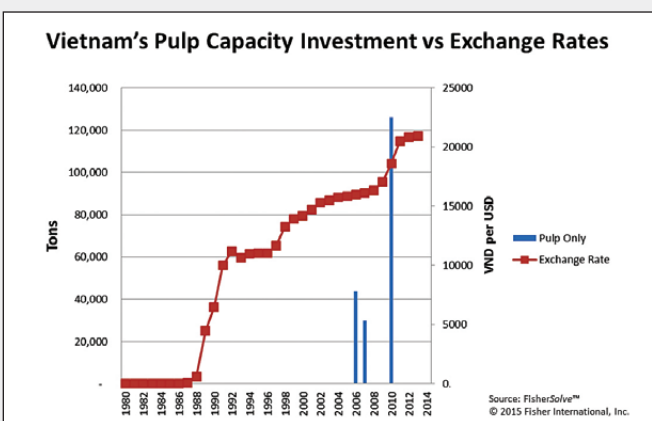
**Figure 2** shows the same comparison for Chile's pulp capacity. Again, the bulk of capacity was built during and right after a period of a weak Chilean peso. **Figure 3** shows that Indonesia's market pulp investments occurred when its currency was rising against the US dollar. The industry got a windfall bonus when the Asian crisis hit about a year later, weakening the Indonesian Rupiah and making the pulp industry's exports especially competitive. And **Figure 4** shows a similar case even more recently in Vietnam, where a weakening currency coincides with investment in pulp capacity.



**Figure 2.** Increase in Chile's capacity during and after period of weak CLP against USD



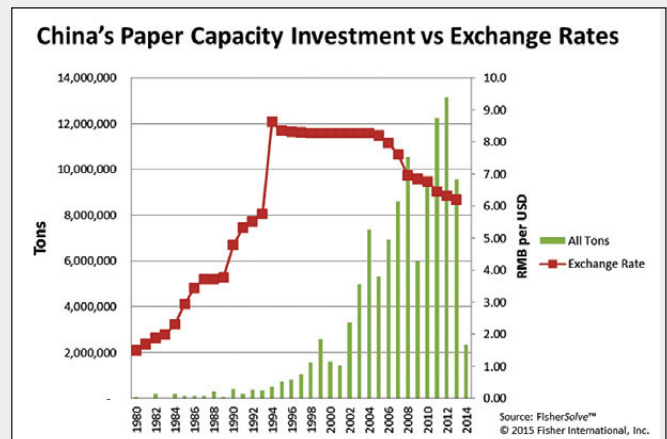
**Figure 3.** Indonesia's market pulp investments occurred when IDR was rising against USD. It experienced a windfall bonus when the Asian crisis hit about a year later, weakening IDR and making pulp exports especially competitive



**Figure 4.** Weakening currency coincides with investment in pulp capacity in Vietnam

### Exchange Rates and Paper Capacity

Paper production tends to serve domestic markets and is, therefore, less export-oriented. Nevertheless, every country has a choice of importing paper or making it locally. Large markets that can support world-scale production units and have weak currencies



**Figure 5.** China responded with massive investment during a relatively weak period against USD

will feel pressure to build paper capacity locally and avoid the cost of importing paper.

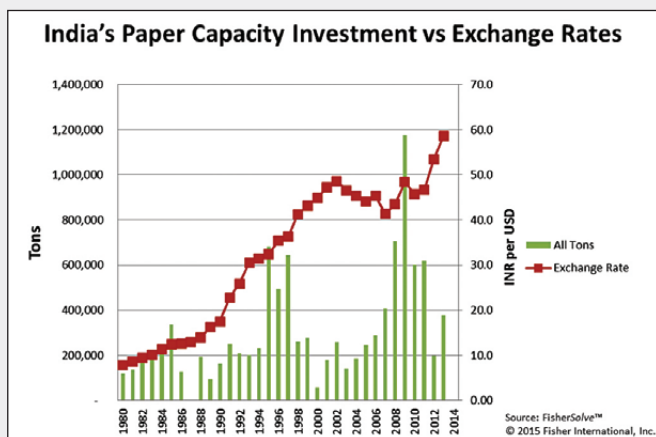
The next set of graphs compare exchange rate trends to the investment in all types of capacity, including market pulp, printing and writing, newsprint, packaging, specialties, and tissue. These graphs focus on the two countries with the largest and fastest growth rates for investment in pulp and paper, China and India. The domestic markets of both countries are large enough to support world-scale production units and both have currencies that are relatively weak in historical terms.

**Figure 5** shows how the huge increase in China's capacity started and continues through a period of relative weakness against the US dollar. The Chinese government's success in managing its currency makes the importation of paper relatively unattractive and increases incentives to make paper domestically. China's entrepreneurs have responded with massive investment, mainly in paper production, especially in packaging, and printing and writing grades.

The impact of exchange rates in this case seems especially stark: China has invested heavily in an industry that, on average, does not return its cost of capital and for which there is already overcapacity globally. Were China's currency not as weak as it is, would China be building the paper capacity it is or would it prefer imports to satisfy more of its paper demand?

**Figure 6** shows that, like China, the growth of India's paper production corresponds to the weakening of its currency, suggesting that the country is also investing in import substitution. In India's case as in China's, investment is particularly heavy in packaging, and printing and writing.

While clearly there are other drivers for investment decisions besides exchange rates – domestic market conditions, global supply-demand balance considerations, global economic growth rates, and other factors are all important – it seems clear that exchange rates can heavily influence decisions on where and when people invest in new capacity with consequences that can ripple through the industry worldwide and over time.



**Figure 6.** The growth of India's paper production corresponds to the weakening of its currency

### How Exchange Rates Affect Profitability

Exchange rates have a less apparent impact on the fortunes of paper mills serving their domestic markets. Nevertheless, the effect is important.

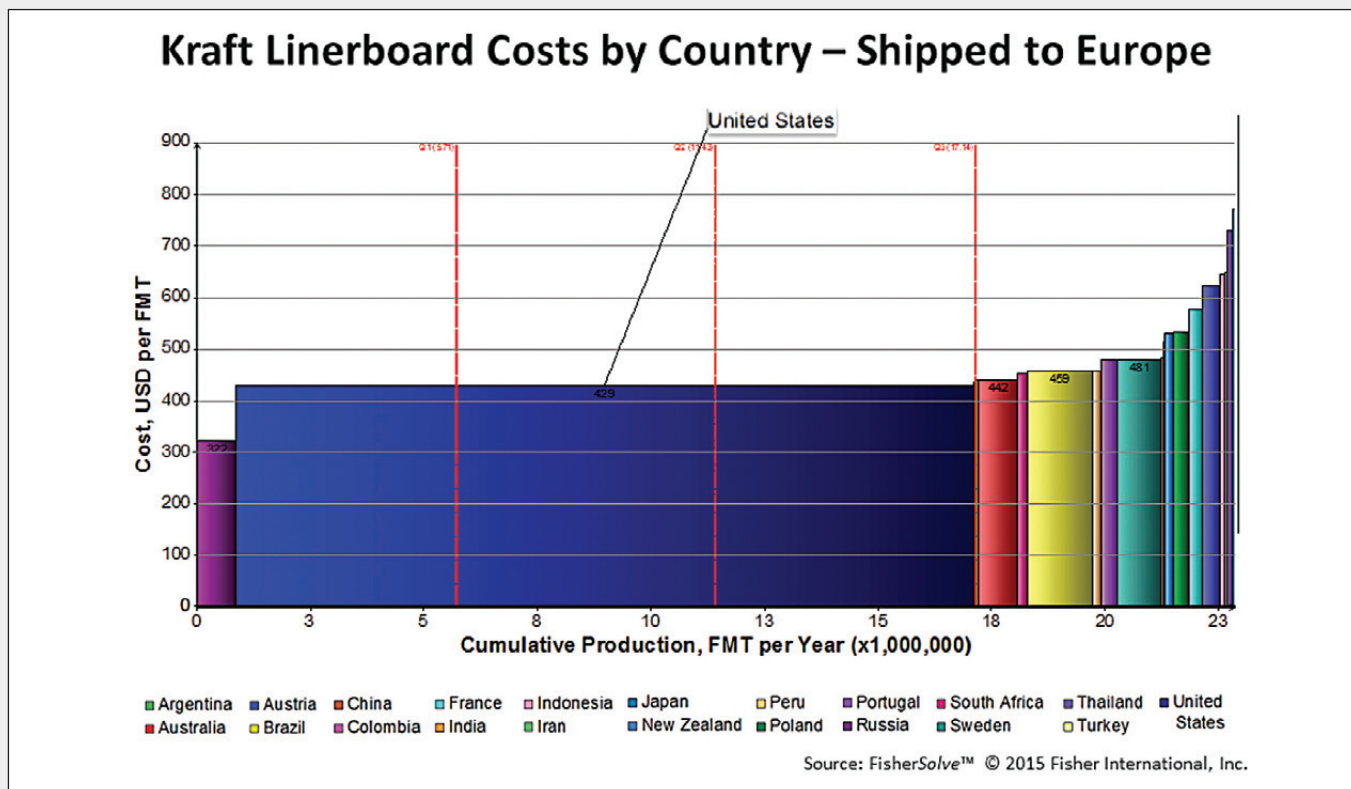
On the one hand, exchange rates would appear not to be so important. After all, the cost of exporting paper includes ocean shipping, port charges, and trade tariffs that are not incurred by domestic producers. These costs are significant compared to the cost of producing the paper, which means that a mill intending to export has to have especially low production costs to make up for the fact that its local competitors can deliver without those

costs. In an industry like paper where margins typically are thin, a penalty such as the cost of exporting would seem to make international trade unlikely.

However, there is another way to see the impact of international trade. Where exports are feasible, they can allow producers to keep their production lines full. And high operating rates are one of the drivers of healthy pricing in any market.

As Fisher's partner, STE of Finland, demonstrates with its market models, operating rates can be a critical factor determining the relative power of paper producers and their customers and, therefore, of the prices and margins available to the paper producer. Even relatively small amounts of trade can make the difference between operating rates that support healthy margins and those that do not. An operating rate of a specific percent in one particular important grade, for example, under many circumstances will lead to price increases, whereas a few percentage points lower can lead to price decreases. A change in net exports of just a few percent, therefore, can swing operating rates enough to make the difference between better and worse margins. And since paper industry margins typically are thin and profit depends on the leverage of large numbers of tons, even a small increase in price can have a dramatic impact on a company's margin.

**Figure 7** shows that North America kraft linerboard producers have costs that are low enough to allow them to export to most



**Figure 7.** Cost curve: feasibility of exporting kraft linerboard to Europe

areas in the world, for example, Europe, where produce businesses use large amounts of corrugated packaging but produce less virgin linerboard than recycled. Even relatively small numbers of tons exported to those markets can have a material impact on the operating rates of the North American containerboard industry and, therefore, on profitability.

### A Major Source of Industry Risk

Where mills are built and when and where profit is made are in part determined by an invisible hand, exchange rates. The amount of capital required for participation in the pulp and paper industry already makes the stakes for investors high. The uncontrollable nature of exchange rate fluctuations increases the industry's risk compared to many other industries. The unpredictable nature of exchange rate fluctuations makes planning in the paper industry particularly difficult. Together, they may explain some of the industry's historical difficulty, on average, in earning its cost of capital.

A weakening exchange rate can make investments look attractive, and yet the hand that gives can also take away: exchange rates cycles can take back some of their advantages as they did recently in Brazil when the country's currency appreciated.

The uncontrollable and unpredictable nature of exchange rates together with the fact that they can have significant influence on investing highlights the risky nature of participation in the pulp and paper industry. As allocation of capital is perhaps the most important aspect in the management of capital-intensive pulp and paper organization, addressing exchange rate risk has to be one of the principle concerns of planners in every paper company, even those without multinational operations.

### About FisherSolve

FisherSolve is a unique business intelligence platform built by Fisher International for the pulp and paper industry. It supports a wide range of decision making with rich data, powerful analytics, and expert consulting. The data in FisherSolve describes the production, assets, processes, projects, costs, competitiveness, environmental flows, and more of every mill and machine in the world making at least 50 TPD. Tools include powerful analytics and flexible reporting via tables, graphs, cost curves, maps, and more. Support comes from Fisher's global industry consulting team who help you develop, communicate, and execute your strategy across the decision-making chain. [www.fisheri.com](http://www.fisheri.com) ■

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