



Paper, Pulp and Logs

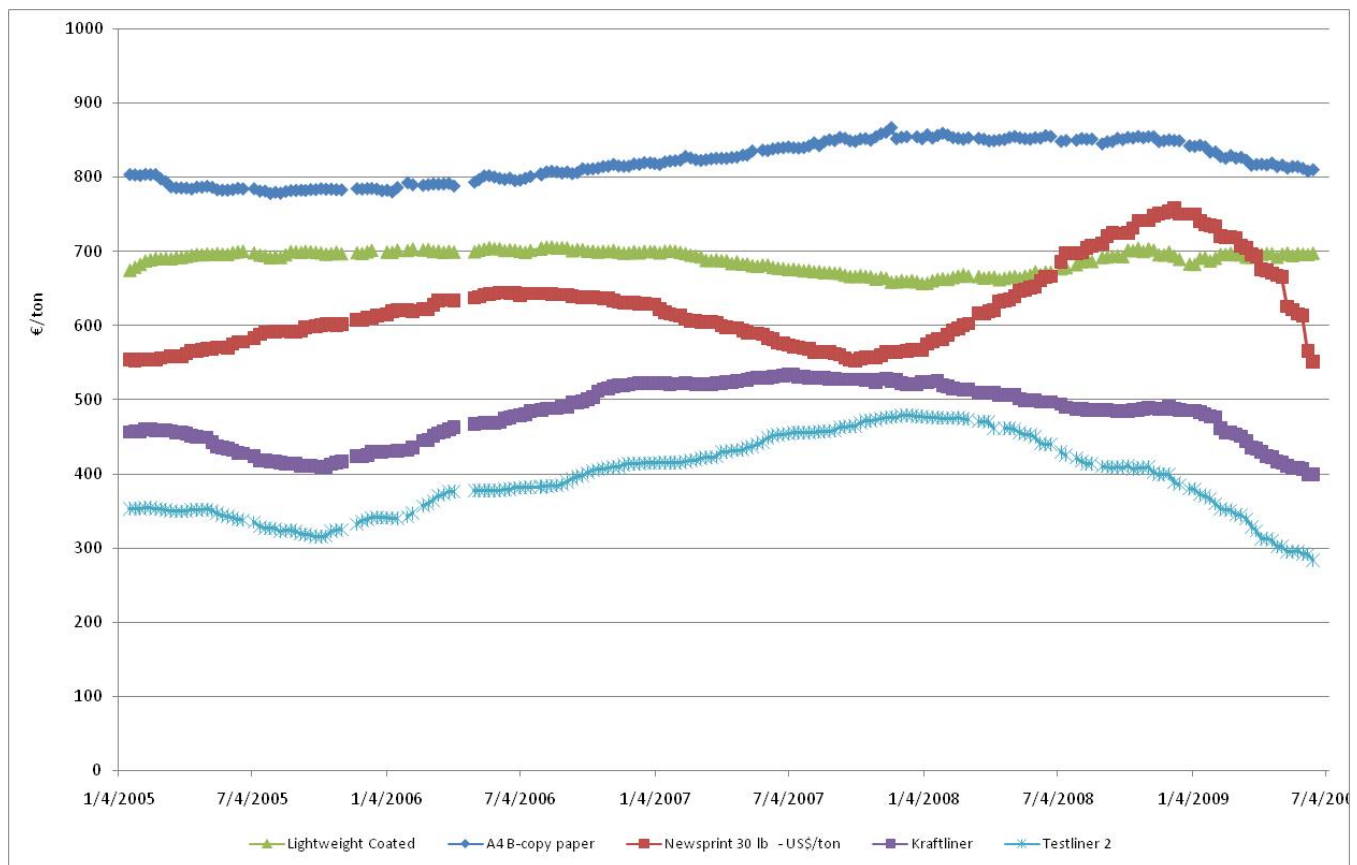
Paper Prices Don't Matter

Paper (and paperboard prices) don't matter too much to timber growers. There is no global "paper price". Paper is used in a variety of products whose markets are not strongly correlated with each other (Table 1). It is not common for all paper markets to boom or crash at once (Figure 1).

Table 1. Correlation Coefficients for Paper Grade Prices

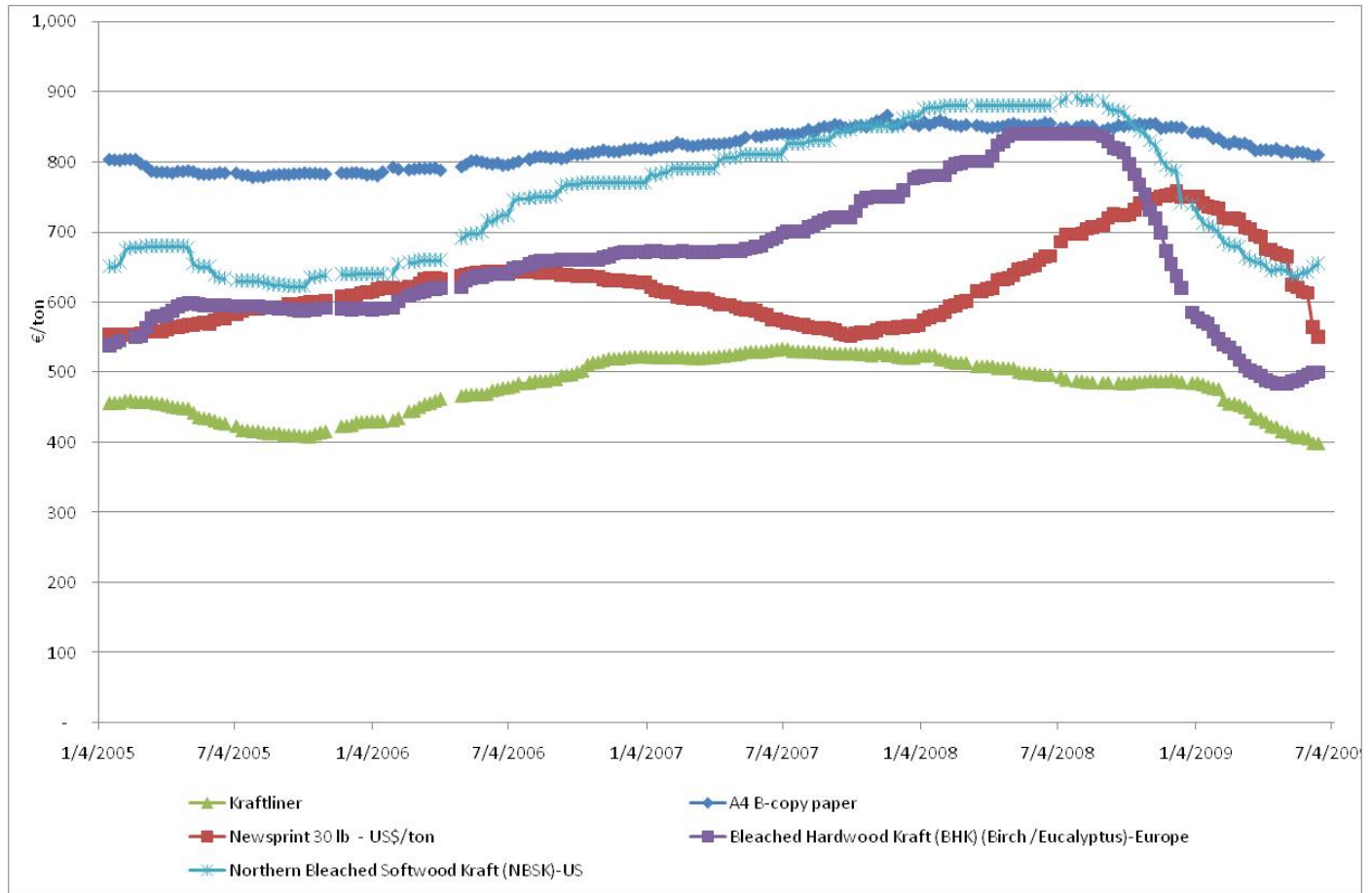
	Lightweight Coated	A4 B-copy paper	Newsprint 30 lb -	Kraftliner	Testliner 2
Lightweight Coated	1.0000	(0.6995)	0.3464	(0.5457)	(0.7402)
A4 B-copy paper		1.0000	0.2655	0.7325	0.7993
Newsprint 30 lb - US\$/ton			1.0000	(0.0749)	(0.1366)
Kraftliner				1.0000	0.9317
Testliner 2					1.0000

Figure 1. Paper Prices (€/metric tonne)



Sources: Paper Age, FOEX

Figure 2. Paper and Pulp Prices



Sources: Paper Age, FOEX

Pulp Prices Don't Matter

While there is no global paper price, there are benchmark pulp prices. Figure 2 compares two of the kraft pulp prices to some of the paper prices from Figure 1. The kraft pulps are poorly correlated with newsprint, because newsprint is made from groundwood pulp, not kraft pulp. Copy paper prices are strongly correlated with kraft pulp prices, but kraftliner (linerboard) is even more strongly correlated, though more volatile.

But for the timberland owner, pulpwood (and chip) prices are not strongly correlated with pulp prices (Table 2 and Figure 3). This is in part because pulp mills generally run 24 hours a day, 7 days a week, so demand is fairly constant. Pulpwood prices move

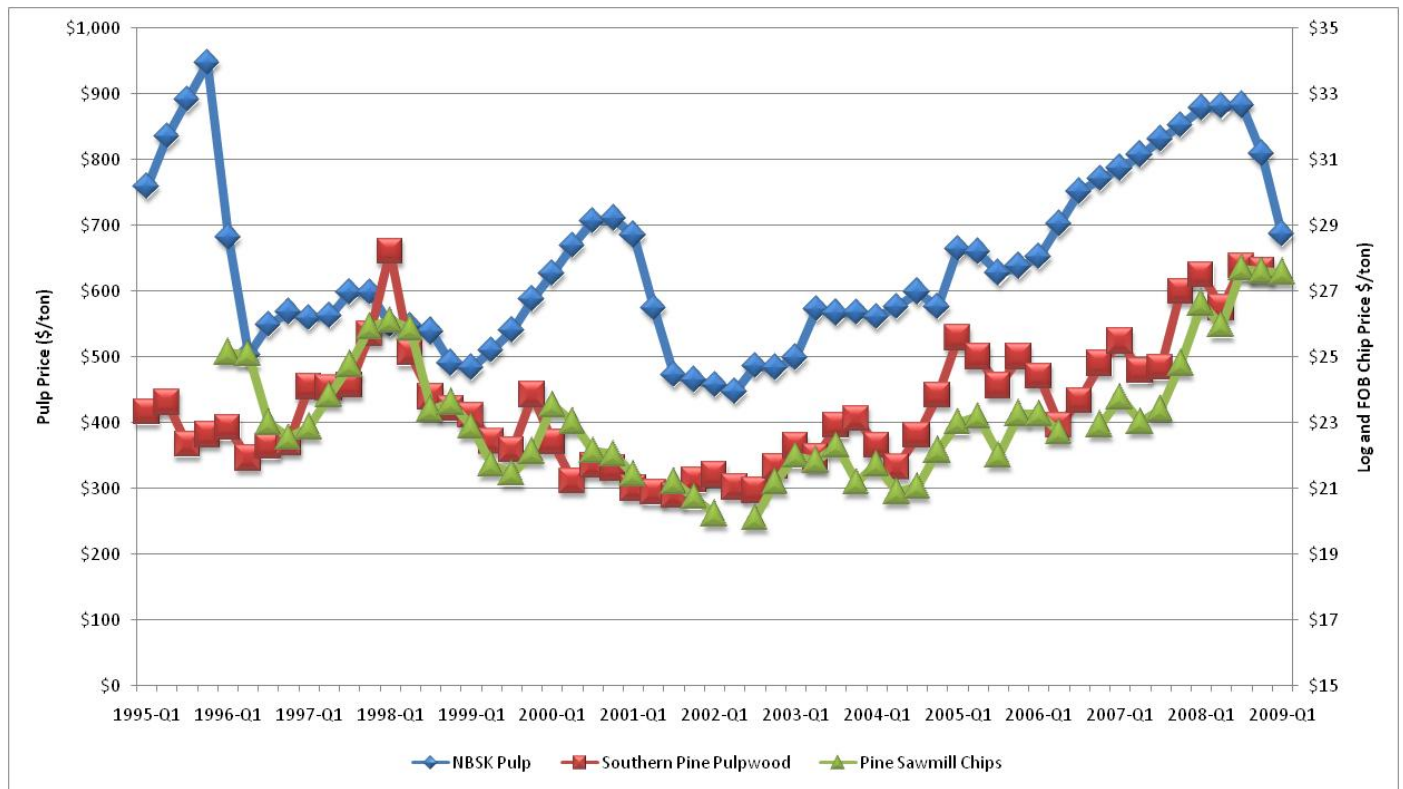
up and down as its supply is affected by such factors as weather (including hurricanes) and diesel and gasoline prices.

Table 2. Correlation Coefficients for Pulp, Pulpwood and Pulp Chips

	NBSK Pulp	Southern Pine Pulpwood	Pine Sawmill Chips
NBSK Pulp	1.0000	0.5051	0.5544
Southern Pine Pulpwood		1.0000	0.8075
Pine Sawmill Chips			1.0000

It should be noted that this analysis is using the data we have available, and there are likely better combinations of paper, pulp and pulpwood price series available.

Figure 3. Pulp and Wood Fiber Prices



Sources: Paper Age, FOEX, Timber Mart-South

Lumber and Chips

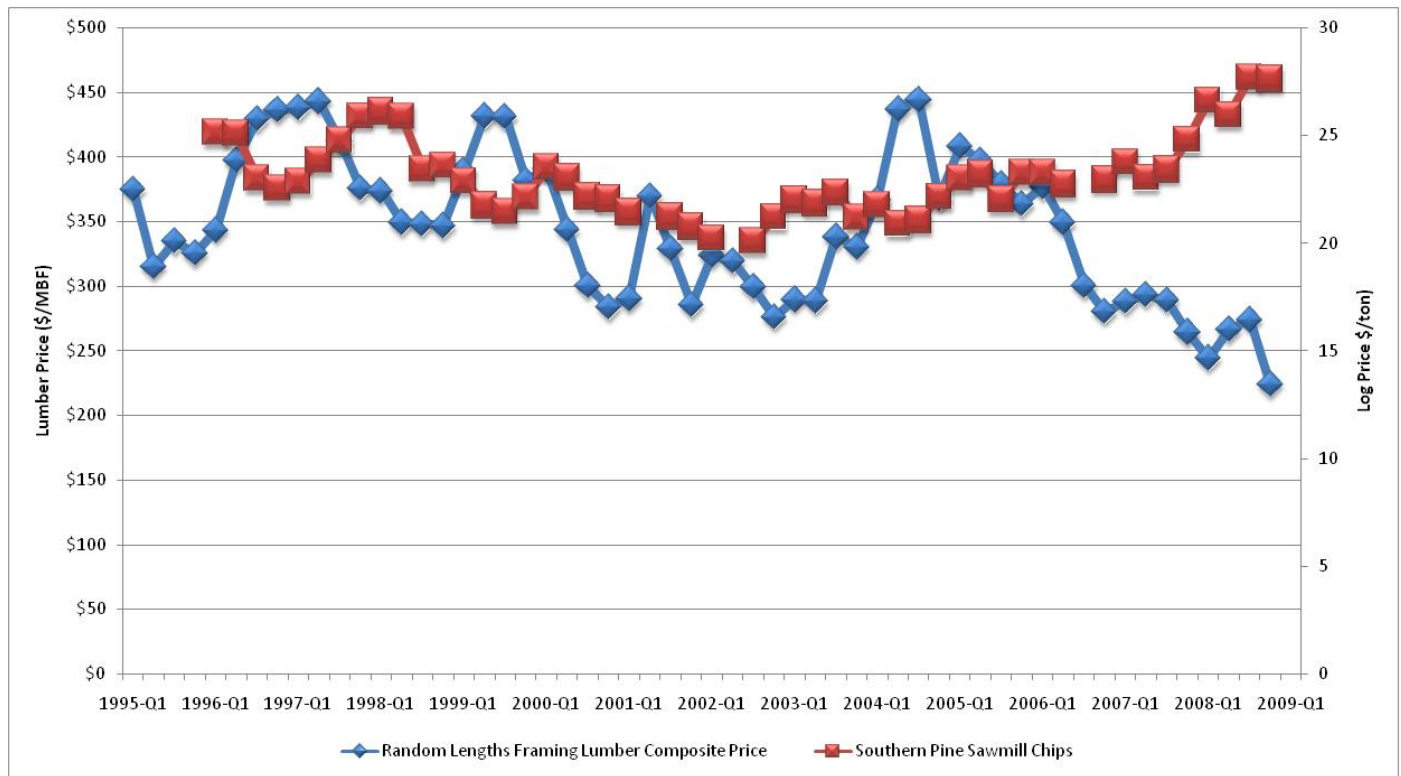
In the previous issue we stated that sawmills may continue sawing logs when lumber prices are poor, if chips prices are high enough to cover appropriate costs. Figure 4 shows sawmill chip prices have been rising since early 2007. This would have been caused by steadily demand from pulp mills and a declining supply of chips as sawmills curtailed production in the face of declining lumber prices. But those rising chip prices may have contributed to some sawmills continuing to operate over the past 3 years as lumber prices fell.

There is more to operating a sawmill than simply making money from making lumber profitably. A large sawmill might employ 50-100 people, a many of whom are highly skilled and very important to the profitability of the mill. Sawmills try to avoid extended closures that may cause those highly skilled people to move away in search of employment. In addition, some sawmills are the only source of high-wage jobs in remote locations. The threatened long-term closure of a big mill will often cause county and state or provincial governments to seek ways to keep such mills open. In summary, sawmills often run when lumber prices alone suggest they should close, even if they run in the red for a short period.

Table 3. Correlation Coefficients for Lumber, Sawlog and Sawmill Chip Prices

	Random Lengths Framing Lumber Composite	Southern Pine Sawmill Chips	Southern Pine Sawlogs
Random Lengths Framing Lumber Composite	1.0000	-0.2167	0.1114
Southern Pine Sawmill Chips		1.0000	0.1155
Southern Pine Sawlogs			1.0000

Figure 4. Lumber and Chip Prices



Source: *Random Lengths, Timber Mart-South*

Summary

Our analysis shows that pulpwood prices are not strongly correlated with pulp and paper prices. Specifically, we have shown that southern pine pulpwood and sawmill chip prices are poorly correlated with northern bleached softwood kraft pulp prices.

We have also shown that southern pine sawmill chips are poorly or negatively correlated with softwood lumber prices. There is some cause and effect here: when lumber price fall and chip production falls, chip prices go up. But note that both lumber and chip prices generally declined between 1998 and 2002. So there is more to the situation than lumber prices and the volume of chips produced. It is possible that lumber production can outpace demand (moving lumber prices down) and simultaneously produce more chips than demanded (moving chip prices down).

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