

Memo

To: Phil Taylor, David Blacktop and Kate Frankish, Bell Gully
Date: 25 March 2011
From: James Mellsop, Kevin Counsell and Will Taylor
Subject: CWH/WSI - Impact of Variable Cost Reductions

1. Introduction

In our 8 February 2011 report regarding the proposed CWH/WSI merger, we noted (on page 14) that any post-merger price increases would be mitigated by the expected variable cost reductions from the merger. The purpose of this memo is to provide an indication of the impact this would have on the expected allocative inefficiency detriment of the merger.

2. Impact of Variable Cost Reductions

In its *Mergers and Acquisitions Guidelines*, the Commission states (section 7.4):

In the context of an acquisition, the combined entity might be able to make efficiency gains that are not obtainable by other means, such that its incremental cost of production would decline. Such gains could have the effect of blunting the impact of a rise in prices post-acquisition, as any increase in the margin of price over incremental cost arising from a lessening of competition would, in effect, be added to a lower level of cost. An efficiency gain could turn a price increase that would otherwise be regarded as lessening competition into one that is not.

As set out in our 8 February 2011 report, CWH expects that the merger would result in the following variable cost reductions (excluding [], and net of wool grease revenue):¹

- From \$[] per kg to \$[] per kg in the North Island; and
- From \$[] per kg to \$[] per kg in the South Island.

For simplicity, suppose that 50% of these variable cost efficiencies are passed through to price. This equates to a \$[] per kg price drop in the North Island and \$[] per kg in the South Island. As

¹ Note that these figures assume no bleach cost savings.

noted by Hausman and Leonard (1999),² 50% is the lower bound for pass-through of cost savings.³ If the demand curve is not linear or the merged firm faces competition, then pass-through will be greater. Given that the merged firm will be competing with Chinese scours, theory would predict that pass-through will be greater than 50%, and therefore our approach is conservative.

One way to capture the welfare benefits of these price drops is to deduct these price effects from the assumed price increases in our allocative inefficiency analysis. For example, the originally assumed 5% price increase in the North Island resulted in price increasing from \$[] to \$[]. Subtracting \$[] gives a price of \$[], which is a 2.99% increase on the counterfactual price of \$[]. Note that we first apply the original percentage price increase and then apply the reduction in variable costs. This gives a slightly higher price increase (and so is conservative in favour of finding higher allocative inefficiencies) than first applying the reduced variable costs and then applying the original percentage price increase, although the difference is very small.

In terms of modifying our original analysis, rather than assuming price increases of 1%, 5% and 10%, we can assume the price increases set out in the Table 1 below.

Table 1
Net price increases

Original increase	North Island	South Island
1%	-1.01%	-2.90%
5%	2.99%	1.10%
10%	7.99%	6.10%

Note that for an assumed increase of 1%, the net price increase is actually negative. That is, the variable cost savings completely offset the price increase with a pass through of 50% and result in a price drop. The Commission recognises the plausibility of this type of outcome in its *Mergers and Acquisitions Guidelines* (section 7.4):

In more extreme cases, the efficiency gain might be sufficient to reduce price, in which case the acquisition could be regarded as having a pro-competitive effect overall. The lower price would

² Hausman, J and G Leonard (1999), "Efficiencies from the consumer viewpoint", *George Mason Law Review*, Vol 7:3, pp707-727.

³ 50% being the pass-through of a monopolist facing a linear demand curve.

serve to enhance the constraint upon the unilateral behaviour of other businesses in the market, and might undermine the propensity for coordinated conduct to be sustained.

Re-running our allocative inefficiency model with these assumed price increases, the results are set out in Table 2 (the equivalent of Table 3.2 of our 8 February 2011 report). The negative numbers are allocative efficiency losses (from a price increase), while positive numbers are allocative efficiency gains (when price decreases).

Table 2
National allocative inefficiency detriments (\$ per year)

Gross Price increase	Demand elasticity			
	-0.5	-1	-2	-3
1%	360,644	721,288	1,442,576	2,163,863
5%	-346,384	-692,767	-1,385,535	-2,078,302
10%	-1,288,569	-2,577,137	-5,154,274	-7,731,411

Our critical loss analysis was conducted using post-merger gross margins and thus it is still appropriate to rule out any price increases for elasticities of $[-1, -0.5]$. Therefore we simply set the detriment equal to 0 for these elasticities. The 5 year present value⁴ of the allocative detriment is set out in Table 3 with the corresponding figure from our original analysis in brackets.

Table 3
PV of allocative detriment

	-0.5	-1
Min	\$1.3m (-\$0.7m)	\$2.7m (-\$1.4m)
Max	-\$5.1m (-\$7.4m)	-\$10.2m (-\$14.8m)

⁴ $[-1, -0.5]$.