

Advanced BI Subjects

The Neglected Adjustment – Rate of Gross Profit

Business Interruption (“BI”) policies are said to be highly flexible in the way they specify how claims are to be calculated. But, sometimes the flexibility is greatly overstated and it is even claimed that the Adjustments Clause authorises virtually any variation that results in a more equitable claim. I must caution however, that the Adjustments Clause is quite specific and only applies to the Standard Turnover (or Revenue or Rent) and to the Rate of Gross Profit (and Rate of Wages in a Dual Wages item).

This article is about adjustments to the Rate of Gross Profit. The Gross Profit item is usually the fundamental item of a BI policy and most claims include an assessment of the loss of Gross Profit due to a reduction in turnover.

The conventional or classic Gross Profit item specifies the calculation as:

“The insurance under this Item is limited to the loss of Gross Profit due to

- (a) reduction in turnover and*
- (b) increase in cost of working*

and the amount payable as indemnity under this Item shall be:

- (a) In respect of reduction in Turnover, the sum produced by applying the Rate of Gross Profit to the amount by which the Turnover during the Indemnity Period shall, in consequence of the Damage, fall short of the Standard Turnover.”*

I have written many articles about the reduction in turnover and how the historical Standard Turnover must be adjusted for trends, variations and other circumstances so that the loss is measured against the turnover that would have been achieved but for the damage. The BI policy insures future (but for the damage) profit rather than historical profit. I have also cautioned about the indiscriminate or mechanical use of “trend adjustments” in this context.

Just as the historical Standard Turnover is subject to the Adjustments Clause so too, the definition of Rate of Gross Profit is incomplete without having regard to the Adjustments Clause.

The Rate of Gross Profit is defined as:

“The Rate of Gross Profit earned on the turnover during the financial year immediately before the date of the Damage.”

This is incomplete without the Adjustments Clause which I abbreviate as follows:

“... adjusted for trends, variations and other circumstances so that the figures shall represent as nearly as may be reasonably practicable the results (i.e. Rate of Gross Profit) which but for the damage would have been obtained during the relative period after the damage.”

Just as the pre-damage historical Standard Turnover must be adjusted for trends, variations and other circumstances, so too, the pre-damage Rate of Gross Profit must be adjusted if it would have changed, but for the damage, from the Rate calculated from the accounts of the financial year immediately before the damage. Unfortunately it is a little more complicated than simply adding a trend allowance and I suspect this is the reason why it is usually ignored in the calculation of claims.

The need for adjustments can be appreciated if one understands what the Rate of Gross Profit represents and why the claim is calculated by multiplying the Rate of Gross Profit by the reduction in turnover.

Gross Profit in a BI claim is sales less the directly variable cost of those sales. This is not, of course its formal definition. The table shows an example.

Sales	\$12,000,000	100%
Material Costs	8,280,000	69.0%
Freight	120,000	1.0%
Packaging	180,000	1.5%
Gross Profit	<u>\$3,420,000</u>	28.5%

In this example the directly variable costs are the materials, (or costs of goods sold if it were a trader), freight and packaging. The Gross Profit is \$3.42 million and the Rate of Gross Profit to sales is 28.5%. For every sales dollar 69 cents pays for the material costs, 1 cent pays for freight and 1.5 cents pays for packaging. The balance of 28.5 cents per dollar is the Gross Profit.

If your client lost \$5 million of sales the claim in respect of reduction in turnover as specified in Clause (a) of the Gross Profit item would be \$1,425,000, calculated as follows:

Claim in Respect of Reduction in Turnover			
Reduction in Turnover	X	Rate of Gross Profit	= Loss of Gross Profit
\$5,000,000		28.5%	\$1,425,000

This correctly indemnifies the insured if it actually did save 69 cents of material costs for every dollar of lost sales plus 2.5 cents for freight and packaging.

Reduction in Turnover			\$5,000,000
Less Savings			
Material Costs	69.0%		\$3,450,000
Freight	1.0%		\$50,000
Packaging	1.5%		\$75,000
			<u>\$3,575,000</u>
Loss of Gross Profit			<u>\$1,425,000</u>

But if I have calculated the Rate of Gross Profit from the financial year immediately prior to the damage (say, year ended 31 March 2008) it would be an historical rate and the cost ratios of the business might have changed between that financial year and the period of loss, (say, 8 months from a fire on 1 January 2009).

In considering the possibility of cost changes I am not primarily concerned with freight or packaging. For example, if the cost of freight had increased by 20% (from 1% of sales to 1.2%) the Rate of Gross Profit would have dropped from 28.5% to 28.3%.

Sales	\$12,000,000	100%
Material Costs	8,280,000	69.0%
Freight	144,000	1.2%
Packaging	<u>180,000</u>	1.5%
Gross Profit	<u>\$3,396,000</u>	28.3%

.... which doesn't produce a huge reduction in the claim (-\$10,000).

Claim in Respect of Reduction in Turnover			
Reduction in Turnover	X	Rate of Gross Profit	= Loss of Gross Profit
\$5,000,000		28.3%	\$1,415,000

But if the cost of materials had increased by 20% there would be a substantial reduction in the Rate of Gross Profit and in the claim. Because I am writing for brokers who will surely identify better with an increase in their client's claim I will illustrate a cost reduction of 20% in materials (from 69% of sales to 55.2%). With this new cost structure, if the insured were to lose \$5 million of sales it would only save 55.2% of \$5 million in material costs plus 2.7% in freight and packaging.

Reduction in Turnover			\$5,000,000
Less Savings			
Material Costs	55.2%		\$2,760,000
Freight	1.2%		\$60,000
Packaging	1.5%		\$75,000
			<u>\$2,895,000</u>
Loss of Gross Profit			<u>\$2,105,000</u>

The loss of Gross Profit would be almost 50% greater. To produce a fair and correct indemnity in the BI claim this new, improved cost structure must be reflected in the Rate of Gross Profit that is applied to the reduction in turnover. The Rate is therefore adjusted for the variation, which is authorised by the Adjustments Clause quoted above.

	Historical Rate		Adjusted Rate	
Sales	\$12,000,000	100%	\$12,000,000	100%
Material Costs	8,280,000	69.0%	6,624,000	55.2%
Freight	120,000	1.0%	144,000	1.2%
Packaging	180,000	1.5%	180,000	1.5%
Gross Profit	<u>\$3,420,000</u>	28.5%	<u>\$5,052,000</u>	42.1%

The Rate based on financial accounts from the 31 March 2008 year was 28.5% but the Rate that would have been achieved from January 2009, but for the fire, is 42.1%.

The claim in respect of reduction in turnover using the adjusted Rate of Gross Profit (42.1%) would correctly indemnify the insured for its \$2.105 million loss:

Claim in Respect of Reduction in Turnover				
Reduction in Turnover	X	Rate of Gross Profit	=	Loss of Gross Profit
\$5,000,000		42.1%		\$2,105,000

This increase of approximately 50% in your client's claim illustrates the critical importance of identifying changes in the cost ratios of the uninsured (variable) expenses, particularly the material cost (which is called "cost of goods sold" in the accounts of a trading business).

In conclusion I would add three comments to help you to understand the cost structure of your clients' businesses.

1 If a client's material costs increase by, say, 15% and it puts its prices up also by 15% the ratio between them remains the same and no adjustment is needed to the Rate of Gross Profit. But if that client's material costs go up by \$15 per unit and it adds \$15 per unit to its price the ratio will change and the Rate of Gross Profit should be reduced.

2 If you client maintains a consistent pricing policy by marking up its purchases by the same percentage, say 40%, (i.e. sales price equals cost plus 40%) the Rate of Gross Profit will not change. (This slightly over-simplifies it. Changes in freight and packaging in my examples could still affect the Rate but as I have illustrated, any such adjustments would probably be very small.)

3 What adjustments to the Rate of Gross Profit should be made if your client has, since the last financial year, achieved major cost reductions in wages, advertising, or vehicle leases? Answer – none! These costs don't even feature in the calculations of Rate of Gross Profit that I have shown, above because they are not variable with turnover and they are therefore not uninsured expenses. How then, can any change in them have an impact on the rate? These cost reductions will increase the Net Profit but they do not affect the Gross Profit or the Rate of Gross Profit.

Brett Fawcett
April 2009