

Business Interruption and Energy Risks

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Topics of Discussion

- Business Interruption Reminders
- Common Forms of Insurance
Policy Coverage for BI
- Tablets of Stone and Crystal Balls
- Features of Energy Industries
 - Petroleum Refining
 - Petrochemicals
 - Fuel Gas
 - Electrical Power Supply
- Loss Mitigation

Business Interruption Reminders

- Damage to, or loss of, Earning capacity with production outage and consequent financial Loss (Gross Profit)
 - ◆ Net Profit
 - ◆ Standing Charges (Fixed Costs which continue during operational outage)

Examples of Standing Charges: Wages, Rent, Some proportion of Electrical Power, depreciation allowances

- Loss Mitigation
Increase in Cost of Working

Reminders (continued)

- **Basics:**

Turnover = Fixed Costs plus Variable costs plus net Profit

- **Coverage:** Financial Loss directly resulting from physical loss or damage at the Insured premises which necessitates interruption of the business as described

- **Insured must have a Physical Damage Policy in force**

- Other “add-ons” available
e.g. Suppliers/Customers extensions

- **Definitions**

DEFINITIONS

Gross Profit:

“Difference” form:

Turnover less Variable Costs

“Addition” form:

Net Profit plus Standing Charges

Indemnity Period:

Period of interruption depending on UK or USA Forms of coverage

UK vs USA Forms

Both are “Difference” Forms

- **UK or “Turnover” Form:**

Interruption Period:

When the business
returns to normal

Reference is made to shortfall in “Turnover” to which the
rate of Gross Profit is applied = Loss of Gross Profit

- **USA or “Gross Earnings” Form:**

Interruption Period = Restoration Period

When Repairs are
completed

Reference to reduction in Gross Earnings less costs which
do not necessarily continue (= Actual Loss Sustained)

Summary: The Chain

- The Assured must suffer the loss to the **Business insured**
- The loss must be at the **premises insured**
- There must be an **occurrence** causing a **Physical loss or damage** which must happen in the **Policy Period**
- The BI loss must **flow directly from the damage**

Extra Expense

- Alternative to pure loss of Gross Profit or Actual Loss sustained indemnity
- “UK” cover is for Increase in Cost of Working to mitigate GP/ALS loss (Limit of spend : \$1 to save \$1 = “economic” limit)
- Additional expense to maintain business can also be covered.

The calculation of Loss

- Set the “Standard” business result
- Measure the actual result
- Loss is the difference

- Add Mitigation ICW and other extra expense
- Check savings in Standing charges if any
- Check Policy Limits and Deductibles

Setting the Standard: The Crystal Ball

- **Old methods look back in time and may be adjusted**

Results for year(s) prior adjusted for prices and trends and even maintenance/improvement expenditure

- **Newer Methods look forward in time**

Linear Programme Optimisation as run by many Refineries in advance of production can be used to forecast a standard and a loss potential. Can also be used to estimate losses by adapting the model. Result should be compared with actual pricing.

A claim statement

Item	Projected	Actual	Difference
Gross Earnings	\$ 25,000,000	\$15,000,000	\$10,000,000
Variables	(\$ 5,500,000)	(\$ 3,300,000)	(\$ 2,200,000)
Result	\$19,500,000	\$11,700,000	\$ 7,800,000
	(78%)		
Add:-			
Extra Expense			\$ 2,500,000
CLAIM			\$10,300,000

UK basis would be: Loss of Gross Profit = Turnover reduction x Rate of Gross Profit
 = (25,000,000-15,000,000) x 19,500,000/25,000,000
 = 10,000,000 x 0.78

10/11/2003 \$ 7,800,000 (plus i.c.w. of \$ 2,500,000) = \$ 10,300,000

Pricing Purchases and Sales

- Raw materials purchase

 - Commodities (hedging/futures)

 - Contracts (fixed and/or spot)

 - Suppliers Location (Dedicated or Free)

 - Own supply

- Products

 - Commodities (futures)

 - Contracts (fixed and/or spot)

Petroleum Refining

Gross Profit = Margin

Turnover/Gross Earnings = Sales Value of production

Variables = Purchases/Raw Materials =

Crude Oil:

- Commodity Market Worldwide (150 plus types)
(political and other factors apply: hedging activity normal)
- Process restrictions from equipment installed (linear programmes can optimise purchase)

Products:

- Specification driven
- Price dictated by Contract or Spot market
- Partly seasonal: production usually continuous
- Worldwide transportation possible

Petrochemicals

- **Variables = Purchases/Raw Materials = Feedstocks**

Prices can be set by

- ◆ Contract
- ◆ Spot market availability
- ◆ Inter-company transfer

Turnover = Sales Value of production

- **Products**

Categories:

- ◆ Specification and “performance”
- ◆ Bulk or multi-product (batch) runs
- ◆ Pricing subject to similar restrictions as feedstocks

Fuel Gas

- Commodity Markets now established
- Commercial

Refineries make their own and adjust input/output

Other Commercial firms hedge

- Domestic

Suppliers may have other types of business

Electrical Power

■ Feedstocks

- ◆ Fuel Oil
- ◆ Fuel Gas
- ◆ Coal
- ◆ Nuclear

Pricing seasonal

Product

Contract and seasonal (spot) Commodity Markets
Refineries often generate their own Power and trade surplus on spot markets

Loss Mitigation

- First Requirement in responding to a claim situation
- Requires practical assessment of alternatives and costing
- Requires contact between Assured and Insurers
- Enables estimation of loss reserves and heads of claim
- Relevant to need for BI cover