Schneider-SET Forensic Accountant

BI Insights Sharing 1 – How to calculate Gross Profit in Insurance in China?

Business Interruption (BI) insurance, is commonly known as Profit Loss insurance in China. The former refers to the cause of loss, while the latter refers to the coverage. In short, this insurance covers the profit losses caused by business interruption. An important prerequisite is that the business interruption is triggered by property damage resulting from the insured perils (that is, Business Interruption insurance is an additional insurance based on Property insurance). The profit here actually refers to Gross Profit. However, in the Chinese Profit & Loss Statement (P&L), Gross Profit is usually not shown directly and only Operating Profit, Total Profit, and Net Profit can be seen.

In this article, we will explain the Gross Profit in financial accounting and in insurance separately, their differences and then how to calculate the Gross Profit in insurance on basis of the Chinese P&L.

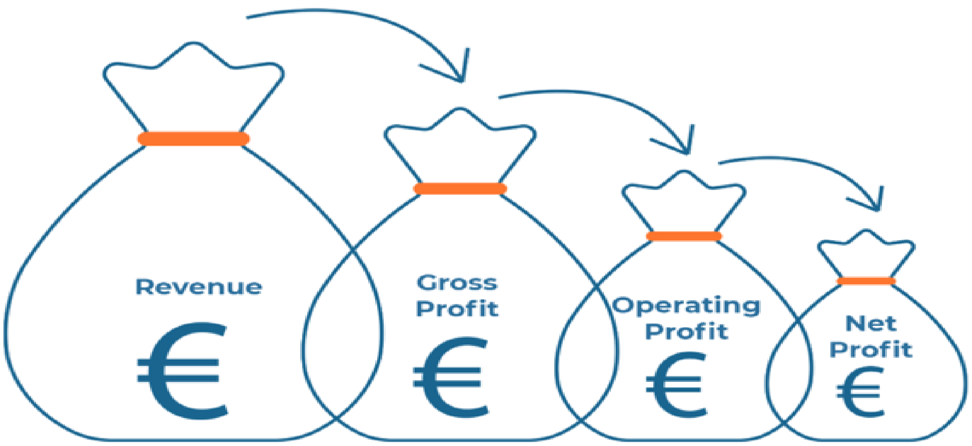
Question 1: What is Gross Profit in financial accounting?

In a Chinese P&L, the relationship between various profits can be simply expressed as follows:

Operating profit = Operating Income - Operating Cost - Taxes & Surcharges - Period Expenses + Other Gains

Total Profit = Operating Profit + Non-operating Income - Non-operating Expenses

Net Profit = Total Profit - Income Tax



Since Business Interruption insurance protects the insured's daily operating activities, we focus mainly on Operating Profit.

Gross Profit is not specifically defined in Chinese Accounting Standards. Chinese financial accounting usually calculates Gross Profit using the following formula:

Gross Profit in financial accounting = Operating Income - Operating Cost

If we calculate Gross Profit basing on Operating Profit:

Gross Profit in financial accounting = Operating Profit + Period Expenses + Tax & Surcharges – Other Gains

Here is a simplified example for illustration.

Chinese P&L		
Item		Amount
Operating Income		100
Operating Cost		-60
Tax & Surcharges		-1
Selling Expenses	Period Expenses	-5
General & Admin Expenses		-8
R&D Expenses		-4
Finance Expenses - Net		-1
Government Subsidies, Tax Refund	Other Gains	0
Gain On Investment		0
Impairment Loss Of Assets ("-")		0
Gain On Disposal Of Assets		3
Operating Profit		24
Gross Profit in financial accounting		**40**

<u>Question 2: What is Gross Profit in insurance?</u>

In Chinese BI insurance policy standard clause, there are special provisions for the calculation of Gross Profit as follows:

Gross Profit in insurance = Operating Profit + Agreed Standing Charges

Standing Charges in insurance refer to the costs or expenses which are incurred to maintain normal business activities and do not decrease in proportion to the decrease of the insured's Operating Income. We can also simply call them fixed costs. Conversely, the costs or expenses which decrease in proportion to the decrease of the insured's Operating Income are variable costs.

The determination of the coverage scope of BI insurance is based on the principle of indemnity. The original intention of BI insurance is to protect the insured's Operating Income. However, the variable costs will not be incurred after the business is interrupted and hence cannot be part of indemnity.

Most policy details do not specify the Agreed Standing Charges. Therefore, it is usually assumed that the insured insures all Standing Charges and will adjust the loss by applying the average (or co-insurance) clause if underinsurance is identified based on all Standing Charges.

Besides the Additions Method in standard clauses, some policies also add a special clause to apply Deduction Method. The result will be the same as Additions Method assuming all fixed costs are considered as part of insured Standing Charges.

Gross Profit in insurance = Operating Income - Variable Costs

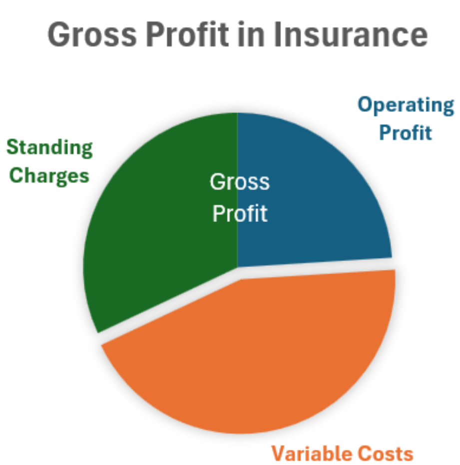
<u>Question 3: What's the difference between Gross Profit in insurance and Gross Profit in financial accounting?</u>

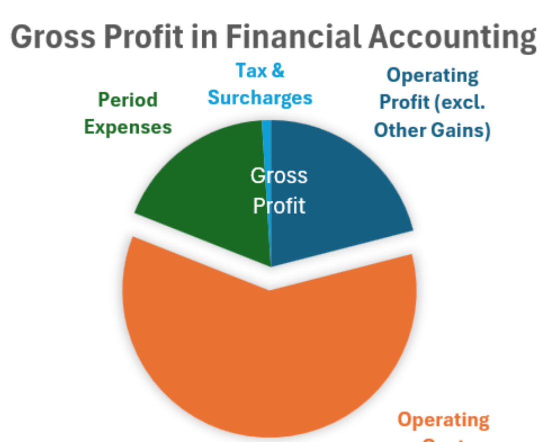
Putting the Additions Method formulas of 2 Gross Profits together.

Gross Profit in insurance = Operating Profit <u>+ Standing Charges</u>

Gross Profit in financial accounting = Operating Profit <u>+ Period Expenses + Tax & Surcharges – Other Gains</u>

By comparison, the key difference between Gross Profit in insurance and Gross Profit in financial accounting is that the former adds Standing Charges to Operating Profit whilst the latter adds Period Expenses and Taxes & Surcharges and deducts Other Gains.





In calculating the Operating Profit in Chinese P&L, two major categories are deducted, **Operating Costs** and **Period Expenses**. The former are related directly to production and can be directly or indirectly allocated to products, including mainly Raw Materials, Direct Labor Cost and Manufacturing Costs; the latter are not directly production related, including Selling Expenses, General & Admin Expenses, R&D Expenses and Financial Expenses.

Most **Operating Costs** are variable costs, however there are a few fixed cost items, such as Direct Labor Cost, machine depreciation & indirect labor in Manufacturing Costs, etc. Some manufacturing costs, such as water, electricity, gas and maintenance, are partially fixed and partially variable.

Most **Period Expenses** are fixed costs, however there are also a few variable cost items such as commissions and finished goods freight included within Selling Expenses.

Chinese BI policies do not specifically explain how to treat **Taxes & Surcharges** deducted and **Other Gains** added in the calculation of Operating Profit. Based on the principle of indemnity, our opinion is as follows:

- **Taxes & Surcharges** include consumption tax, city construction tax, education surcharges but exclude VAT and income tax. These usually vary with income and can hence be treated as variable costs. Under the Deductions Method for determining Gross Profit, these costs are deducted from Operating Income.
- **Other Gains** include Government Subsidies, Tax Refund, Gain On Investment, Impairment Loss Of Assets (“-”), Gain On Disposal Of Assets, etc. These gains are usually not generated from the daily operating activities insured by the insured. Hence, under the Additions Method an adjustment needs to be made for these items.

The above is only a general situation. Each customer has different components and accounting methods in the above categories which need to be treated particularly.

In view of the above, Gross Profit in insurance is not equal to Gross Profit in financial accounting and needs to be carefully analyzed and calculated. Moreover, it also needs to be analyzed in combination with the Insured's intension and declaration of Sum Insured in the insurance placement.

<u>Question 4: How to calculate Gross Profit in insurance based on Chinese P&L?</u>

Based on Chinese P&L, the Gross Profit in insurance can be calculated by two methods, referred to as the Deduction Method or the Additions Method.

Deduction Method:

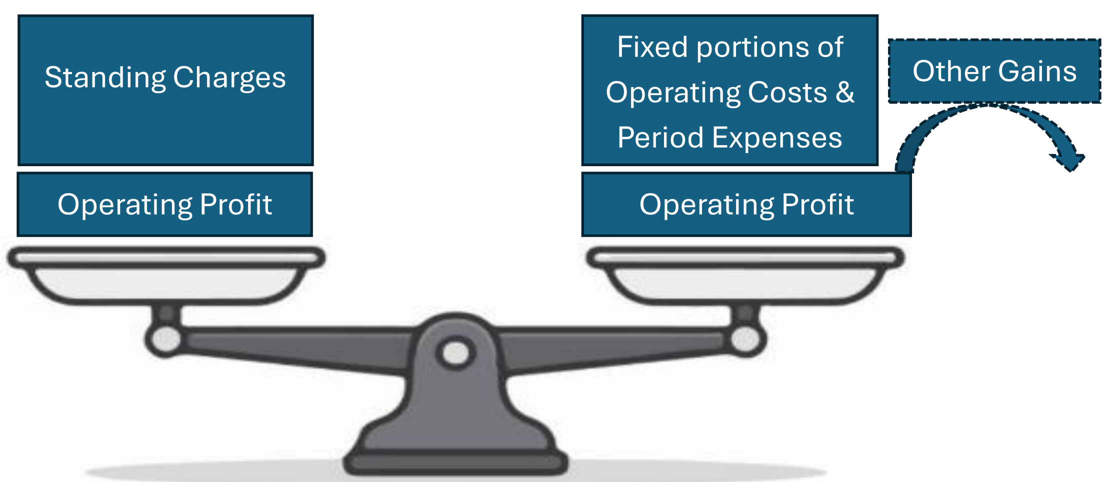
Gross Profit in insurance = Operating Income - Variable Costs

= Operating Income - Variable portions in Operating Costs & Selling Expenses – Tax & Surcharges

Additions Method:

Gross Profit in insurance = Operating Profit + Standing Charges (Fixed Costs)

= Operating Profit + Fixed portions in Operating Costs & Period Expenses – Other Gains



The calculation result of both methods should be the same, assuming all fixed costs are considered as part of insured Standing Charges.

Below are the illustration of calculation of Gross Profit in insurance applying the two methods basing on the previous example.

Chinese P&L		**Deduction Method**		**Additions Method**	
Item	Amount	Variable/uninsurable	Amount	Fixed/insurable	Amount
Operating Income	100		100		
Operating Cost	-60	70%	-42	30%	18
Tax & Surcharges	-1	100%	-1		
Selling Expenses	-5	20%	-1	80%	4
General & Admin Expenses	-8			100%	8
R&D Expenses	-4			100%	4
Finance Expenses - Net	-1			100%	1
Government Subsidies, Tax Refund	0			-100%	0
Gain On Investment	0			-100%	0
Impairment Loss Of Assets ("-")	0			-100%	0
Gain On Disposal Of Assets	3			-100%	-3
Operating Profit	24			100%	24
Gross Profit in insurance			**56**		**56**

Note： the variable costs need to be ascertained by analyzing the specific accounts under the Operating Costs and Selling Expenses and are not fixed rates. The above rates are just for illustration of the calculation logic of Gross Profit in insurance.

Closing remarks

The calculation of Gross Profit in BI insurance involves the analysis and processing of complex financial reports and underlying data, which requires professional accounting knowledge and rich experience in handling BI claims.

Schneider-SET Forensic Accountants can provide an expert service in this regard. Please feel free to contact us at any time for business consultations.

Best Regards,

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