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This is a working draft of a Chapter of the Practical Manual on Transfer Pricing for Developing Countries and should not at this stage be regarded as necessarily reflecting finalised views of the UN Committee of Experts on International Cooperation in Tax Matters or its Subcommittee on Transfer Pricing - Practical Issues. Comments in writing are sought and should be sent to the Secretariat to the UN Tax Committee at taxffdoffice@un.org by 23 November 2010 at the latest.

While several members of the Subcommittee have contributed to this draft and appropriate attribution will be made in a later version, the Secretariat particularly notes the contribution of Monique van Herksen.

Chapter 5 - Transfer Pricing Methods (Transactional Profit Methods)

1. Introduction

This chapter discusses transactional profit methods, which analyse the profits arising from particular controlled transactions, in order to determine whether a transfer price is arm's length.

Although it is rare that enterprises use transactional profit methods to actually determine their prices, the profit resulting from a controlled transaction might be quite a good signal to establish whether a special condition affected this transaction and reduces it to a transaction that is not at arm's length. It should be acknowledged that where the complexities of real life business put practical difficulties in the way of the application of the traditional transaction methods addressed in the previous chapter, transactional profit methods may prove to be a good solution.

In practice, transactional profit methods and particularly the transactional net margin method are more commonly used by taxpayers for practical reasons. The transactional net margin method often provides a useful check on accuracy/ reasonableness of the traditional transaction methods or is used to supplement these methods. It is also easier to find comparables in applying the transactional net margin method.

This chapter provides an overview of the transactional net margin method and the profit split method.

2 Transactional Net Margin Method

2.1 Definition and Choice of Tested Party

The transactional net margin method ('TNMM') is a profit-based method that can be used to apply the arm's length principle. The TNMM can be applied on either the related party manufacturer or the related party distributor as the tested party for transfer pricing purposes.

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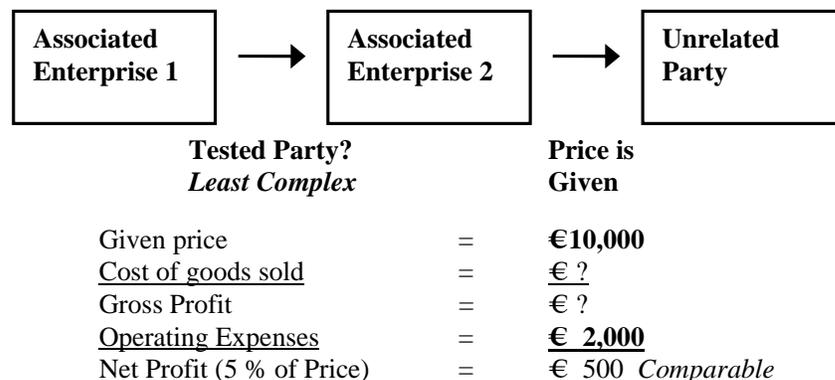
The TNMM ‘examines the net profit margin¹ relative to an appropriate base (e.g., costs, sales, assets) that a taxpayer realizes from a controlled transaction (or transactions that are appropriate to be aggregated). The profit margin indicators are discussed in paragraph 2.3 below.

The TNMM compares the net profit margin (relative to an appropriate base) that the tested party earns in the controlled transactions to the same net profit margins earned by the tested party in comparable uncontrolled transactions or alternatively, by independent comparable companies. As such, the TNMM is *a more indirect method* than the cost plus / resale price method that compares gross margins. It is also a much more indirect method than the CUP method that compares prices, because it uses net profit margins to determine (arm’s length) prices. One should bear in mind that many factors may affect net profit margins, but may have nothing to do with transfer pricing.

The TNMM is used to analyze transfer pricing issues involving tangible property, intangible property or services. When the TNMM is applied on controlled transactions involving tangible property, the tested party in the analysis can either be the related party manufacturer or the related party distributor. The choice of the tested party depends on the availability of comparable data. This usually implies that the TNMM is applied to the least complex of the related parties involved in the controlled transaction, because generally more comparable data will then be in existence and fewer adjustments will be required to account for differences in functions and risks between the controlled and uncontrolled transactions. In addition, the tested party should not own valuable intangible property. This, by the way, is also the reason why it is recommended to select the least complex entity for the application of the cost plus method or resale price method.

The application of the TNMM is consistent with the application of the cost plus method or the resale price method, but the TNMM concerns a comparison of net profit margins. Figure 1 and the rest of this section will further explain this.

Figure 1: Transactional Net Margin Method



¹ For example, return on total costs, return on assets, and operating profit to net sales ratio.

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Associated Enterprise 1, a car manufacturer in country 1, sells cars to Associated Enterprise 2 which resells the cars to the Independent Enterprise, a car dealer in country 2. The CUP method would compare the price charged in the controlled transaction between Associated Enterprise 1 and Associated Enterprise 2 with the price charged in comparable uncontrolled transactions. If the CUP method cannot be applied, the next methods to consider are the cost plus and the resale price methods.

The resale price method will be considered if Associated Enterprise 1 owns valuable intangible property. Under the resale price method, the sales company, the least complex of the two entities involved in the controlled transaction, will be the tested party under the analysis. This method would entail a search for distributors which perform functions and incur risks comparable to those of Associated Enterprise 2.

If, however, due to, for example, different reporting of certain costs between cost of goods sold and operating expenses between the tested party and the comparable distributors, the gross profit margins are materially affected for which no reliable adjustments can be made, because insufficient data about the comparables are available, it may be better to choose the TNMM. This type of accounting inconsistency will not affect the reliability of the TNMM, as this method examines net profit margins instead of gross profit margins. Similar to the resale price method, the application of the TNMM would entail a search for comparable distributors taking into account the comparability standard of this method.

An application of the TNMM focusing on the related party manufacturer as the tested party would be the situation in which Associated Enterprise 1 is a contract manufacturer. In such a case, the contract manufacturer will certainly be the least complex entity. The cost plus method would normally be considered if the CUP method cannot be applied. However, due to the accounting inconsistency mentioned above it may be appropriate to apply the TNMM using a financial ratio based on net profit margin that is appropriate for a manufacturer (e.g., return on total costs).

2.2 Mechanism of TNMM

How should one determine the transfer price based on the application of the TNMM? The mechanism of the TNMM is generally consistent with the mechanisms of the resale price and cost plus methods.

2.2.1 Related party distributor

In applying the resale price method to establish an arm's length transfer price, the market price of products resold by the related party distributor to unrelated customers (i.e. sales price) is known, while the arm's length gross profit margin is determined based on a benchmarking analysis. The transfer price or cost of goods sold of the related party distributor is the unknown variable.

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Assuming a resale price of €10,000 and a gross profit margin of 25 %, the transfer price amounts to €7,500:

Table 1: Mechanism of Resale Price Method

	<u>Initially</u>	<u>Benchmarking analysis</u>
Resale price	€10,000	€10,000
<u>Cost of goods sold</u>	<u>€ ?</u>	<u>€ 7,500</u>
Gross profit	€ ?	€ 2,500 (25 % of resale price)

The determination of an arm's length transfer price based on the TNMM is more or less similar. The main difference with a gross margin analysis is that operating expenses are considered in calculating back to a transfer price. In applying the TNMM on the tested party distributor, the resale price and the operating expenses of the related party distributor are known, while the arm's length net profit margin (i.e. net profit to sales ratio)² is found on the basis of a benchmarking analysis. The cost of goods sold and the gross profit are the unknown variables.

Assuming a resale price of €10,000, operating expenses of €2,000 and an arm's length net profit margin of 5 %, the transfer price amounts to €7,500 by working backwards using the available information:

Table 2: Mechanism of TNMM applied on Related Party Distributor

	<u>Initially</u>	<u>Benchmarking analysis</u>
Resale price	€10,000	€10,000
<u>Cost of goods sold</u>	<u>€ ?</u>	<u>€ 7,500</u>
Gross profit	€ ?	€ 2,500
<u>Operating expenses</u>	<u>€ 2,000</u>	<u>€ 2,000</u>
Operating profit	€ ?	€ 500 (5 % of resale price)

2.2.2 Related party manufacturer

In applying the cost plus method to establish an arm's length transfer price, the cost of goods sold of the related party manufacturer is known. The arm's length gross profit mark-up is based on a benchmarking analysis. The transfer price or sales revenue of the related party manufacturer is the unknown variable.

² Net profit equals operating profit before interest and taxes.

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Assuming cost of goods sold of €5,000 and a gross profit mark-up of 50 %, the transfer price amounts to €7,500:

Table 3: Mechanism of Cost Plus Method

	<u>Initially</u>	<u>Benchmarking analysis</u>
Sales price	€ ?	€7,500
<u>cost of goods sold</u>	<u>€ 5,000</u>	<u>€5,000</u>
Gross profit	€ ?	€2,500 (50 % of cost of goods sold)

In applying the TNMM on the tested party manufacturer instead of the cost plus method, the cost of goods sold and the operating expenses of the related party manufacturer are known. A benchmarking analysis will determine the arm's length net profit of the related party manufacturer using net profit to total cost ratio as the financial ratio. The sales price and the gross profit are the unknown variables.

Assuming cost of goods sold of €5,000, operating expenses of €1,000 and an arm's length net profit to total cost ratio of 25 %, the transfer price amounts to €7,500 by working backwards using the available information:

Table 4: Mechanism of TNMM applied on Related Party Manufacturer

	<u>Initially</u>	<u>Benchmarking analysis</u>
Resale price	€ ?	€ 7,500
<u>cost of goods sold</u>	<u>€ 5,000</u>	<u>€ 5,000</u>
Gross profit	€ ?	€ 2,500
<u>Operating expenses</u>	<u>€ 1,000</u>	<u>€ 1,000</u>
Operating profit	€ ?	€ 1,500 (25 % of total cost)

2.3 Arm's Length Net Profit Margin

2.3.1 Definition of Net Profit Margin

In comparison with the resale price and cost plus methods several profit level indicators are allowed under the TNMM, which are all based on net profit. More specifically, the profit level indicator considered is the net profit margin relative to an appropriate base (e.g., costs, sales and assets). With the help of "profit level indicators", the net profitability of the controlled transaction is compared to the net profitability of the uncontrolled transactions.

Net profit basically equals the operating profit before interest and taxes of a company. "Operating profit" is a better term than "net profit", because net profit is also used to represent the profit of a company after interest and taxes have been subtracted.

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Furthermore, the term “operating profit” indicates better that only profits resulting from operating activities are relevant for transfer pricing purposes.

A profit level indicator (“PLI”) is a measure of a company’s profitability that is used to compare comparables with the tested party. A profit level indicator may express profitability in relation to (i) sales, (ii) costs or expenses, or (iii) assets.

Table 5: Overview of various profit level indicators:

Profit Level Indicators (PLIs)	
(1) return on assets (ROA)	operating profit divided by the operating assets (normally, only tangible assets)
(2) return on capital employed (ROCE)	operating profit divided by capital employed which usually computes as the total assets minus cash and investments
(3) operating margin (OM)	operating profit divided by sales
(4) gross margin (GM)	gross profit divided by sales
(5) Berry Ratio	gross profit divided by operating expenses
(6) return on total cost (ROTC)	operating profit divided by total costs
(7) return on cost of goods sold	gross profit divided by cost of goods sold

Although all the above PLIs are possible, the three PLIs of (i) operating margin, (ii) Berry Ratio and (iii) return on capital employed (ROCE) are most used in practice.

The two PLIs of the ROA and ROCE divide operating profit by a balance sheet figure. The figure is based on tangible assets actively employed in the business. Such tangible assets consist of all assets, minus intangible assets such as goodwill, minus investments (e.g., in subsidiaries), minus cash and cash equivalents beyond the amount needed for working capital.

This type of PLI may be most reliable if the tangible operating assets have a high correlation to profitability. For example, a manufacturer’s operating assets such as property, plant, and equipment could have more impact on profitability than a distributor’s operating assets, since often the primary value added by a distributor is based on services it provides, which are often less dependent on operating assets.

The difference between the ROA and the ROCE is that the ROA focuses on the assets used, while the ROCE focuses on the amount of debt and equity capital that is invested in the company.

Other PLIs listed above consist of ratios between income statement items. PLIs based on income statement items are often used when fixed assets do not play a central role in generating operating profits. This is often the case for wholesale distributors and service providers.

Operating margin has often been used when functions of the tested party are not close to those of the comparables, since differences in function have less effect on operating profit than on gross profit.

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Conceptually, the Berry Ratio represents a return on a company's value added functions on the assumption that the company's value added functions are captured in its operating expenses.

In general, gross margin has not been favoured as a PLI because the categorization of expenses as operating expenses or cost of goods sold may be subject to manipulation.

The choice of PLI depends on the facts and circumstances of a particular case. Thus, it may be useful to consider multiple PLIs. If the results tend to converge, that may provide additional assurance that the result is reliable. If there is a broad divergence between the different PLIs, it may be useful to examine important functional or structural differences between the tested party and the comparables.

The Berry Ratio is one of the profitability measures used to test the appropriate profit level indicator (PLI) for the distributors and service providers. The Berry Ratio assumes that there is a relationship between the level of operating expenses and the level of gross profits earned by distributors and service providers on the assumption that their value-added functions are captured in the operating expenses. Consequently, it is appropriate to use the Berry Ratio if the selling or marketing entity is a distributor and is entitled to a return on its operating expenses alone or if it is a service provider entitled to a return on its costs of provision of its services alone, because such assumption is more reliable for the distributors and service providers than manufacturers.

In certain countries, the Berry Ratio is often used in the cases of distribution of tangible property. The Berry Ratio is deemed particularly useful for intermediary activities where a taxpayer purchases goods from a related party and on-sells them to another related party. In such cases, the resale price method or the cost plus method is not appropriately applicable with the absence of pertinent comparables.

2.3.2 Transactional comparison versus functional comparison

The arm's length (range of) net profit margins can be determined by way of :

- transactional comparison: the net profit margin that the tested party enjoys in a comparable uncontrolled transaction, which initially has been rejected as an internal CUP; and
- functional comparison: the net profit margins enjoyed by independent companies performing functions and incurring risks comparable to those of the tested party.

Much more detailed information will exist with respect to the controlled and uncontrolled transactions if transactional comparison is possible, because the related parties involved have participated in these transactions. The degree of comparability can then be analysed more carefully than functional comparison in which only public information is available (e.g., business descriptions in database, annual reports, and internet data). This may imply that the comparability standard of transactional comparison will be higher than that of functional comparison in practice.

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However, functional comparison will be more often used in practice. Let us assume that a related party distributor is the tested party in the example presented in Table 6. The TNMM is applied and the profit level indicator is the operating profit margin. A benchmarking analysis was performed, which identified four comparable independent distributors considering the comparability standard of the TNMM. The arm's length range of operating profit margin earned by these comparable distributors falls between 2 % and 6 %. Because the operating profit margin earned by the related party distributor falls within this range (e.g. 4 %), its transfer price is considered arm's length.

Table 6: Functional Comparison Example

	Comparable A	Comparable B	Comparable C	Comparable D	Tested Party
Revenue	100,000	120,000	125,000	130,000	122,000
COGS	80,000	92,400	95,000	89,700	92,720
Gross Profit	20,000	27,600	30,000	40,300	29,280
Operating Expenses	18,000	24,000	25,000	32,500	24,400
Operating Profit	2,000	3,600	5,000	7,800	4,880
Operating Profit Margin	2 %	3 %	4 %	6 %	4 %

2.4 Comparability standard

Product comparability is important in applying the CUP method, as differences in products will result in different prices. The cost plus method and the resale price method focus on functional comparability, because differences in functions that are reflected in differences in operating expenses may lead to a broad range of gross margins. However, the TNMM is less dependent on product comparability and functional comparability as the traditional transaction methods, because net margins are less influenced by differences in products and functions. The TNMM focuses on broad product and functional comparability.

However, the comparability standard to be applied to the TNMM requires a high degree of similarity in several factors between the tested party and the independent enterprises that may adversely affect net margins. Net margins may be affected by factors that have no effect or a less significant effect on gross margins or prices due to the variation of operating expenses between companies. These factors may be unrelated to transfer pricing.

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Specific factors affecting net margins include, but are not limited to:

- threat of new entrants in the industry;
- competitive position;
- management efficiency;
- individual strategies;
- threat of substitute products;
- varying cost structures (e.g., the age of plant and equipment);
- differences in the cost of capital (e.g., self financing versus borrowing); and
- the degree of business experience (e.g., start-up phase or mature business).

If there are material differences between the tested party and the independent enterprises that affect the net margins, appropriate adjustments should be made to account for such differences.

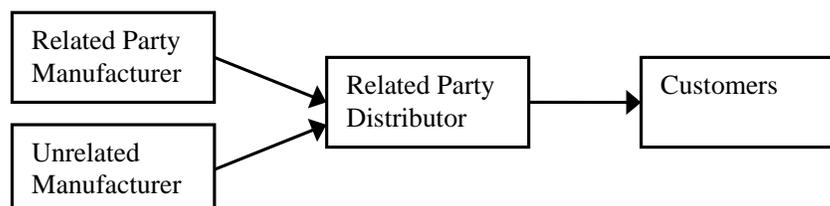
2.5 Other Guidance for Application

The TNMM should not be applied on the aggregate activities of a complex enterprise engaged in various and different transactions. It should analyse only the profits of the associated enterprise that are attributable to particular controlled transactions. The TNMM should thus not be applied on a company-wide basis if the company is involved in a number of different controlled transactions which are not properly evaluated on an aggregate basis. The TNMM should be applied on transactions of independent enterprises, which are comparable to the controlled transactions being examined. Furthermore, profits attributable to the relevant transactions of independent enterprises should not be affected by controlled transactions.

Figure 2 below presents an example to illustrate that the TNMM should be applied only to particular transactions and not to a company as a whole. Related Party Distributor purchases products from both Related Party Manufacturer and Unrelated Manufacturer and resells these products to customers. The tax authorities in the country of Related Party Distributor applies the TNMM to determine whether the transfer prices of Related Party Distributor is arm's length. A benchmarking study performed by the tax authorities show that comparable distributor earn an operating profit margin between 2 % to 6 %. The tax authorities apply the TNMM to the P&L of Related Party Distributor as a whole. As the operating profit margin earned by Related Party Distributor is 1 % based on aggregate transactions and therefore does not fall within the arm's length range, the tax authorities determine that the transfer price is not at arm's length. If the TNMM was applied only to the controlled transactions, however, the conclusions would have been very different. The operating profit margin earned by Related Party Distributor on the controlled transactions is 5 %, which falls within the arm's length range. Thus, the transfer price is arm's length in case the TNMM is applied only to the relevant controlled transactions. It appears from the P&L that the uncontrolled transactions themselves generated operating losses, which resulted in lower consolidated results for the company as a whole. The TNMM should thus be applied on specific transactions and not on the aggregate transactions of a complex enterprise.

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Figure 2: Specific Transactions versus Company as a Whole



	Controlled Transactions	Uncontrolled Transactions	Aggregate Transactions
Sales	€100,000	€100,000	€200,000
Cost of Goods Sold	€ 80,000	€ 90,000	€170,000
Gross Profits	€ 20,000	€ 10,000	€ 30,000
Operating Expenses	€ 15,000	€ 13,000	€ 28,000
Operating Profit	€ 5,000	€ (3,000)	€ 2,000

Measurement consistency is important. Net margins should be calculated uniformly between the tested party and the independent enterprises.

An analysis considering multiple year data is better able to take into account the effects on profits of product life cycles and short-term economic conditions. However, as discussed [elsewhere in this Manual] different countries take different views about when multiple year data should be analysed, and indeed whether that is allowed under a country's domestic law.

Use of an arm's length range should also be considered, to reduce the effects of differences between the controlled and uncontrolled entities. However, the use of a range may not sufficiently take into account circumstances where the profits of a taxpayer is affected by a factor unique to that taxpayer.

2.6 Strengths and Weaknesses

The strengths of the TNMM include:

- net margins are less affected by transactional differences (than price) and functional differences (than gross margins). Product and functional comparability are thus less critical in applying the TNMM;
- less complex functional analysis needed, as TNMM is applied on one of the related parties involved;
- it is applicable to both sides of the controlled transaction (i.e. either the related party manufacturer or distributor); and

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- the results resemble the results of a modified resale price / cost plus method of analysis.

The weaknesses of the TNMM include:

- net margins are affected by factors that do not have an effect, or have a less significant effect on, price or gross margins due to the potential of variation of operating expenses. These factors affect net profits and hence the results of the TNMM, but may have nothing to do with the company's transfer pricing. It is important to consider these (non-pricing) factors in the comparability analysis;
- no access to information on uncontrolled transactions at the time of the controlled transactions;
- information challenges, which include the unavailability of information on profits attributable to uncontrolled transactions;
- measurement challenges: it will be hard to determine sales revenue, operating expenses and assets relating only to the relevant controlled transactions in order to calculate the selected profit level indicator. For example, if a related party distributor purchases products from both a related party and an unrelated enterprise for resale, it may be impossible to determine sales revenue, operating expenses and assets attributable to only the controlled transactions to reliably perform a net margin method of analysis. Furthermore, in case the companies are engaged in different activities, it will also be very difficult to allocate sales revenue, operating expenses and assets between the relevant business activity and other activities of the tested party or the comparables. This measurement problem is an important practical problem;
- it is a one-sided analysis as the TNMM is applied on one of the related parties involved. The arm's length net margin found may thus result in an extreme result for the other related parties involved in the controlled transaction (e.g., operating losses). This weakness also applies to the cost plus / resale price method, but may be more important under the TNMM, because net margins are affected by factors that may have nothing to do with transfer pricing. A check of the results of all related parties involved is therefore appropriate;
- problems with working back to a transfer prices based on net margins; and
- it provides the tested party with guaranteed net profits if the benchmarking analysis results in a range of positive net margins; and
- in several countries there is a hesitancy to provide for the use of TNMM. As such the use of TNMM on one side of the associated enterprise transaction may result in unrelieved double taxation when it is not accepted by the other authorities.

2.7 When to use the TNMM?

When faced with a transfer pricing issue one should always start with considering the CUP method. If this method cannot be applied, the cost plus method, the resale price method, and the transactional profit methods under which the TNMM falls, are to be considered.

Because net margins are affected by factors unrelated to transfer pricing that have a less significant (or no) effect on the price or gross margins, one may be curious when it will be proper to use the TNMM. The (common) situation where there is insufficient

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information on the uncontrolled transactions on a gross profit level, justifies the use of the TNMM.

The TNMM is typically applied on the least complex related party, which is usually the one performing routine manufacturing, distribution or other functions.

Three situations involving data limitations on uncontrolled transactions where it may be appropriate to use the TNMM are the following:

- where the data on gross margins are less reliable due to accounting differences (i.e. differences in the treatment of certain costs as cost of goods sold or operating expenses) between the tested party and the comparable companies for which no adjustments can be made as it is impossible to identify the specific costs for which adjustments are needed. In such a case, it may be more appropriate to analyse net margins, a more consistent measured profit level indicator than gross margins in case of accounting differences.

Consider the example in Table 7 below, where the related party distributor earns a gross profit margin of 20%, while the comparable distributor earns a gross profit margin of 30%. Based on the resale price method, one could conclude that the transfer price of the related party distributor is not arm's length. However, this may be incorrect if due to accounting inconsistency the related party differ with the comparable distributor in allocating costs between cost of goods sold and operating expenses.

For example, it may be the case that the related party distributor treats warranty costs as cost of goods sold, while the comparable distributor treats such costs as operating expenses. If the warranty costs of the comparable distributor can be identified precisely, then appropriate adjustments on the gross profit level can be made. In practice, however, such detailed information about independent enterprises cannot be obtained from publicly available information. It may then be more appropriate to perform a net margin method of analysis where such accounting inconsistency has been removed. The result of applying the TNMM is that the net profit margin of the related party distributor of 10 % is similar to that of the comparable distributor. The transfer price is therefore considered to be arm's length based on the TNMM;

Table 7: Accounting Differences: Resale Price Method versus TNMM

	Related Party Distributor	Comparable
Distributor		
Selling price	100	100
<u>Cost of goods sold</u>	<u>80</u>	<u>70</u>
Gross Profit	20	30
<u>Operating expenses</u>	<u>10</u>	<u>20</u>
Operating profit	10	10

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- where the available comparables differ significantly with respect to products and functions in order to reliably apply the cost plus or resale price method, it may be more appropriate to apply the TNMM, because net margins are less affected by such differences. For example, in performing a benchmarking analysis for the purposes of the resale price or cost plus method, it appears that exact product and functional comparables cannot be found. In fact, the comparables differ substantially regarding product and functional comparability. In such a case, the TNMM might be more appropriate using the same comparables than the resale price or cost plus method; and
- where the data is simply not available to perform a gross margin method of analysis. For example, the gross profits of comparable companies are not published and only their operating profits are known. The cost of goods sold by companies may also not be available, therefore only a net margin method of analysis can be applied using return on total costs as the profit level indicator.

Besides the three situations mentioned above, the TNMM is also used in practice by tax authorities to identify companies for an audit by analysing the net profit margins of companies. Furthermore, the TNMM is often applied to check and to confirm the results of traditional transaction methods. For example, the resale price method is used in combination with the TNMM to determine an arm's length compensation for a distribution company.

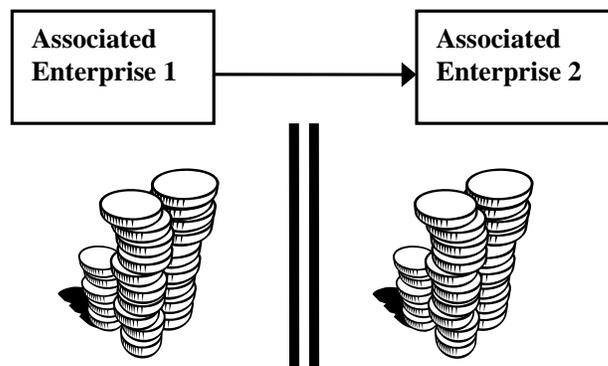
3 Profit Split Method

The profit split method is typically applied when both sides of the controlled transaction own significant intangible properties. The profit is to be divided such as is expected in a joint venture relationship.

3.1 Definition

The profit split method seeks to eliminate the effect on profits of special conditions made or imposed in a controlled transaction (or in controlled transactions that are appropriate to aggregate) by determining the division of profits that independent enterprises would have expected to realise from engaging in the transaction or transactions. Figure 3 illustrates this.

Figure 3: Profit Split Method



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The combined profits to be divided between the associated enterprises from the controlled transactions should be determined first and foremost. Subsequently, these profits are divided between the associated enterprises based on the relative value of each enterprise's contribution, which should reflect the functions performed, risks incurred and assets used by each enterprise in the controlled transactions. External market data (e.g., profit split percentages among independent enterprises performing comparable functions) should be used to value each enterprise's contribution, if possible, so that the division of combined profits between the associated enterprises is in accordance with that between independent enterprises performing functions comparable to the functions performed by the associated enterprises.

The profit split method is applicable to transfer pricing issues involving tangible property, intangible property and services.

3.2 Methods to allocate or Split the Profits

There are generally considered to be two specific methods to allocate the profits between the associated enterprises: contribution analysis and residual analysis.

3.2.1 Contribution Analysis

Under the contribution analysis, the combined profits from the controlled transactions are allocated between the associated enterprises on the basis of the relative value of functions performed by the associated enterprises engaged in the controlled transactions. External market data that reflect how independent enterprises allocate the profits in similar circumstances should complement the analysis to the extent possible.

If the relative value of the contributions can be calculated directly, then determining the actual value of the contribution of each enterprise may not be required. The combined profits from the controlled transactions should normally be determined on the basis of operating profits. However, in some cases it might be proper to divide gross profits first and subsequently subtract the expenses attributable to each enterprise.

3.2.2 Comparable profit split

In some countries, another version of the profit split method is used. Alternatively, one can split the profit by comparing the allocation of operating profits between the associated enterprises to the allocation of operating profits between independent enterprises participating in similar activities under similar circumstances (comparable profit split method).

The major difference with the contribution analysis is that the comparable profit split method depends on the availability of external market data to measure directly the relative value of contributions, while the contribution analysis can still be applied if such a direct measurement is not possible.

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The contribution analysis and the comparable profit split method are difficult to apply in practice and therefore not often used, because reliable external market data necessary to split the combined profits between the associated enterprises are often not available.

3.2.3 Residual analysis

Under the residual analysis, the combined profits from the controlled transactions are allocated between the associated enterprises based on a two-step approach:

- *step 1*: allocation of sufficient profit to each enterprise to provide a basic compensation for routine contributions. This basic compensation does not include a return for possible valuable intangible assets owned by the associated enterprises. The basic compensation is determined based on the returns earned by comparable independent enterprises in comparable transactions. In practice, the traditional transaction methods can be used to determine a normal profit in step 1 of the residual analysis; and
- *step 2*: allocation of residual profit (i.e. profit remaining after step 1) between the associated enterprises based on the facts and circumstances. If the residual profit is attributable to intangible property, then the allocation of this profit should be based on the relative value of each enterprise's contributions of intangible property.

The residual analysis is typically applied in cases where both sides of the controlled transaction own valuable intangible properties. For example, company X manufactures components using a valuable intangible property and sells the components to a related company Y which uses the components to manufacture final products also using valuable intangible property and which sells the final products to customers. The first step of a residual analysis would allocate a basic return to company X for its manufacturing function and a basic return to company Y for its manufacturing and distribution functions. The residual profit remaining after this step is attributable to the intangible properties owned by the two companies. The allocation of the residual profit should be based on the relative value of each company's contributions of intangible property. The OECD Guidelines do not refer to specific allocation keys to be used in this respect. Step 2 may not depend on external market data.

The following approaches are described to determine the relative value of each company's contributions of intangible property:

- external market benchmarks reflecting the fair market value of the intangible property;
- the capitalized cost of developing the intangibles and all related improvements and updates, less an appropriate amount of amortization based on the useful life of each intangible. A disadvantage of this method is that cost may not reflect the market value of the intangible property; and
- the amount of actual intangible development expenditures in recent years if these expenditures have been constant over time and the useful life of the intangible property of all parties involved is roughly similar.

The accounting considerations mentioned under the comparable profit split method also apply under the residual profit split method.

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The residual profit split method is more used in practice than the contribution approach. Two benefits of the residual approach include the following. Firstly, the residual approach breaks up complicated transfer pricing problems in two useful steps. It therefore takes into account complex cases in which good comparables cannot be found to evaluate completely the functions of all the parties involved. The first step determines a basic return for routine functions, while the second step allocates the residual profit attributable to intangible properties between the parties involved. Secondly, a possible difference of opinion with the tax authorities is reduced by using the residual approach instead of the contribution approach, because the amount of profit to be split under the residual approach is lower.

3.3 Strengths and Weaknesses

The strengths of the profit split method include:

- because it does not depend directly on identifying closely comparable transactions, it can be used in cases where the traditional methods prove inappropriate; and
- due to the two-sided approach (i.e. all parties to the controlled transaction are being analyzed), it is less probable that the analysis will lead to an extreme result for one of the associated enterprises involved.³ Furthermore, a two-sided analysis might be used to carry out a split of the profits arising from economies of scale.

The weaknesses of the profit split method include:

- the relation between the controlled transaction and the external market data used in valuing the contribution of each associated enterprise is relatively weak. This may lead to a more subjective division of profits;
- it depends on access to data from foreign affiliates. However, associated enterprises and tax administrations may have difficulty obtaining information from foreign affiliates;
- third parties in general do not use the profit split method to establish transfer prices (maybe only in joint ventures); and
- several measurement problems exist in applying the profit split method. It will be difficult to calculate combined revenue and costs for all the associated enterprises taking part in the controlled transactions due to, for example, differences in accounting practices. It will also be hard to allocate costs and operating expenses between the controlled transactions and other activities of the associated enterprises.

3.4 When to use the profit split methods?

The profit split method might be used in cases involving highly interrelated transactions that cannot be analysed on a separate basis. This means that the profit split method can be applied in cases where the associated enterprises engages in several transactions that are interdependent in such a way that they cannot be evaluated on a separate basis using a traditional transaction method. The transactions are thus so interrelated that it is impossible to identify comparable transactions. In this respect, the profit split method is applicable in complex industries, such as, for example, the global financial services business. *The Taxation of Global Trading of Financial Instruments*, an OECD

³ It is recommended to perform a profit split analysis (i.e. not applying the profit split *method*, but just perform a profit split *analysis*) in applying any other transfer pricing method as a reasonableness test.

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discussion draft released in 1998, presents cases in which the profit split method can be applied to such trading, for example.

The (residual) profit split method is typically used in complex cases where both sides to the controlled transaction own valuable intangible properties (e.g., patents, trademarks, and tradenames). If only one of the associated enterprises own valuable intangible property, the other associated enterprise would have been the tested party in the analysis using the cost plus, resale price or transactional net margin methods. However, if both sides own valuable intangible properties for which it is impossible to find comparables, then the profit split method might be the most reliable method.

In this respect, the OECD Guidelines present a practical example⁴ whereby company A designs and manufactures an electronic component, and transfers the components to a related company B which uses the components to manufacture an electronics product. Both company A and company B use innovative technological design to manufacture the components and electronics product, respectively. Company C, a related company, distributes the electronics products. Assuming that the transfer price between company B and company C is arm's length based on the resale price method, the residual profit split method is applied to determine the arm's length transfer price between company A and company B knowing that both companies own valuable intangible property.

In step 1 of the residual analysis, a basic return for the manufacturing function is determined for company A and company B. In this respect, a benchmarking analysis is performed to search for comparable independent manufacturers which do not own the valuable intangible property. The residual profit, which is the combined profits of company A and Company B deducting these companies' basic return for manufacturing function, is then divided between company A and company B, assuming that relative R&D expenses is a reliable key to measure the relative value of each company's contributions of intangible property. Subsequently, the net profits of company A and company B are calculated in order to work back to a transfer price.

The use of the profit split method will be limited in most countries because it is relatively difficult to apply in comparison with the other methods. The profit split method involves the determination of the factors that bring about the combined profit, setting a relative weight to each factor, and calculating the allocation of profits between the associated enterprises. The contribution analysis is difficult to apply, because external market data that reflect how independent enterprises would allocate the profits in similar circumstances is usually not available. The first step of the residual analysis often involves the use of a traditional transaction method or the TNMM to calculate a basic return. The second step is thus an additional step in determining an arm's length price. It is expected that the profit split method will be more used in APAs to deal with complex cases.

⁴ Annex of examples to illustrate the Transfer Pricing Guidelines, February 1998.