# The transfer pricing: The full-fledged manufacturer case study

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**Abstract:** The transfer pricing is now not only a topic for multinational companies, but also for every company cooperating in multi-companies networks**.** The activity of tax administrators in the tax audit focused on transfer prices is increasing, and this issue becomes an almost standard part of a regular tax audit focused on corporate income tax.

This paper deals with the issue of transfer pricing in a company evaluated as a full-fledge manufacturer, that is, a part of a multinational company. The concerned company is currently working to improve the quality of transfer pricing documentation. The purpose of this article is to demonstrate, in a brief case study, the basic procedure used to evaluate the differences between prices for independent companies and for associated companies. The evaluated transactions are compared with the data available from companies operating in the same industry. It was found that the profitability of the company is comparable to the expected profitability based on the calculated market profit range. According to the risk analysis, the main risks to the company resulting from the market environment and the poorly established transfer pricing policy.

**Keywords:** transaction prices, arm's-length principle, comparative analysis, related parties
**JEL Classification:** K34, H25

## 1 Introduction

The transfer prices literature delves into various topics related to transfer pricing. This includes studies on the economic effects of transfer pricing, such as its impact on tax revenues (Clausing, 2003), multinational firm behaviour (Apriyanti et al., 2023), and economic efficiency (Barker et al., 2017). Furthermore, the literature explores the legal and regulatory aspects of transfer pricing, including the role of tax authorities and international guidelines for transfer pricing practices. Furthermore, there are contributions that focus on transfer pricing strategies (Clempner & Poznyak, 2017), intercompany pricing methods, and transfer pricing adjustments. Topics like digitalisation in transfer pricing or management accounting (Poyda-Nosyk et al., 2023; Hemling et al., 2022) occur in last years. As transfer pricing continues to be a crucial issue for multinational corporations and tax authorities, researchers have recognised the importance of studying and understanding this area. Consequently, the number of published articles, research papers, and books on transfer pricing has increased, reflecting the growing interest and significance of this topic in both academia and practice. Although Czech companies' awareness of this issue has increased significantly since its implementation, precisely processed transfer pricing documentation is still not common, and the arm's-length principle compliance can sometimes be difficult to prove.

The OECD Transfer Pricing Guidelines "provide guidance on the application of the arm's length principle, which is the international consensus on the valuation of cross-border transactions between associated enterprises" (OECD, 2022). According to the OECD guide, companies (multinationals) can apply one of five basic methods for transfer pricing: "the comparable uncontrolled price method (CUP), the resale price method (RPM), the cost plus method (CPM), the net transaction margin method (TNMM) and the transaction profit split method (TPSM)" (OECD, 2022). The most important criterion when choosing the appropriate OECD transfer pricing valuation methods is its suitability for a specific case (based on the nature of the controlled transaction or company profile, and so on). The specific case contains many variables from which a complex picture needs to be assembled (Solilová & Nerudová, 2019).

Sometimes it is difficult to determine whether companies are related parties or associated parties at all. The exact definition of the term "related parties" is missing in the Czech accounting regulations. Act No. 563/1991 Coll. on Accounting, does not deal with this one or a similar term at all, only Decree no. 500/2002 Coll., for entrepreneurs refers in §39a and §39b to international accounting standards regulated by European Union law. In this context, the accounting entity is obliged to provide (to the financial statements) information about transactions carried out with a related parties that were not concluded under normal market conditions, including the volume of transactions, the nature of relations with a related party, and other information necessary for understanding the financial situation of the accounting entity. A related party transaction is a transfer of services, resources, or obligations between related parties, regardless of whether a price is charged. International Accounting Standard 24 - Related Party Disclosures requires disclosures about

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transactions and outstanding balances with an entity's related parties. The standard defines various classes of entities and people as related parties and sets out the disclosures required with respect to these parties, including the compensation of key management personnel (IAS 24).

## 2 Methods

The purpose of this article is to demonstrate, in a brief case study, the basic procedure used to evaluate the differences between prices for independent companies and for associated companies.

### A) Methods Used:

**Analysis of transactions:** The analysed transactions are possible to consider as a sale of own products. With respect to the characteristics of the sold products, the cost plus method (CPM) was chosen as a method for setting the appropriate transfer price.

**Comparative analysis:** This case study deals with two methods for determining the appropriate intercompany price. The first one used a comparable method for calculating the interquartile market range, and the second one is a method used in the case when a comparable transaction or company is not available.

This **interquartile market range** for comparable transactions is calculated based on the profit margins of 8 comparable companies (dataset from TP Catalyst) during the period 2018 – 2022. Basic descriptive statistics are used: minimum, maximum, median, spread, and interquartile range (IQR). The IQR represents the difference between the upper (Q3) and lower (Q1) quartiles and describes the middle 50% of the values when ordered from lowest to highest.

When a comparable transaction is missing, the CPM method allows one to calculate the interquartile range from the transactions that the given company deals with independent companies. Operating margin was used as a profit indicator. The only condition for this solution is a volume of transactions for related parties comparable to those with transactions with independent companies.

### B) The data sources:

- Financial statements of the ABC company from 2018 to 2022.
- Internal accounting data from the ABC company, that describe the nature and the amount of transactions between related parties and the ABC company.
- Internal accounting data from the ABC company, which describes the nature and amount of transactions between non related parties.
- Financial statements used for the comparative analysis (8 companies with identical or similar production and amount of transactions) describing the same period. The data set for comparative analysis comes from the TP Catalyst Database.
- Basic characteristics of eight compared companies.

## 3 Research results and discussion

The term 'transfer price' is used to determine the cost of charging another division, subsidiary, or holding company for the services rendered. Typically, transfer prices reflect the price on the market for that good or service. A very important term regarding the transfer pricing is related parties. The transfer pricing practice extends to both cross-border and domestic transactions. In case the customer and supplier are independent companies, the transaction price is determined strictly by market. But in the case of a parent company and its subsidiary, the construction of the price is not always clear. Sometimes, the service or product sold between parent company and subsidiary differs from one that is sold to an independent business partner. To justify such a difference in price, transfer pricing documentation is provided.

The ABC company is a subsidiary with parent company based in Europe. Some details are modified so that the analysed company would be difficult to identify. The five-year period from 2018 to 2022 is used for the analysis.

### 3.1 Full-Fledged Manufacturer

The ABC company operates in the field of gaming machine manufacturing. Although this industry may seem to be infrequent in terms of the number of operating companies and perhaps even controversial in certain aspects, its importance to the economy is not negligible. In our case, the Czech subsidiary of the German parent company is responsible for providing the space, goods, or material necessary for production, as well as all machinery and staff. This manufacturer assumes almost all the risks associated with selling the products and has rights to intangible assets. The analysed enterprise corresponds exactly to the full definition of the manufacturer, which was also confirmed by the functional and risk analyses performed. The risk and functional analyses are not included; they serve as a starting position for the presented case study only.

### 3.2 Appropriate intercompany price and comparative analysis

In this analysis, it is necessary to identify the transaction the company carries out with independent parties, with related parties, and obtain external data for comparison, i.e., transactions from comparable companies. According to the nature of the analysed transaction, the method for determining the transfer price is chosen. External data come from the TP Catalyst database. During the identification process of suitable companies for comparative analysis, it is necessary to take into account the comparability of economic circumstances and market conditions. Furthermore, no relevant external data from the database can be found. In such a chase the controlled transactions of the company with related parties shall be about equal to the volume of transactions with independent persons (part of the CPM). The case study also takes this possibility into account in the last year monitored.

**Comparative analysis**

The obtained sample consists of only eight relevant companies. The names of the companies in Table 1 have been replaced by capital letters that do not have relation to the original names of the companies. The companies analysed are from several European countries. Table 1 describes the profit margin development of these companies in the monitored period. Some of the companies show only moderate profit represented by low operating profit margin, while others show higher operating profit margin. A negative value of the operating profit margin is also presented in the analysed sample, but only exceptionally and in a short time. The evaluated period was chosen according to the OECD recommendation, which states that the latest available data should be considered. At the same time, a sufficiently long period was established, thus avoiding the distortion that stems from lower production and reported profits by companies in the gaming equipment industry due to the outbreak of the Covid 19 pandemic.

**Table 1** - Profit margins in companies used for comparative analysis.

| | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| A | 40,2 % | 36,73 % | 33,07 % | 25,62 % | 26,73 % |
| B | 15,50 % | 12,41 % | 11,70 % | 14,52 % | 23,28 % |
| C | 14,52 % | 12,45 % | 10,27 % | 15,98 % | 16,27 % |
| D | 27,57 % | 21,89 % | 16,90 % | 15,71 % | 13,98 % |
| E | 16,52 % | 15,07 % | 10,32 % | 15,73 % | 18,27 % |
| F | 18,2 % | - 0,3 % | 12,29 % | 12,87 % | 13,98 % |
| G | 21,74 % | 22,14 % | 18,56 % | 19,76 % | 22,05 % |
| H | 9,32 % | 7,19 % | 7,11 % | 11,03 % | 19,32 % |

Source: Data set from TP Catalyst database, own processing

Table 2 shows the calculated interquartile market range of companies for individual years and the final interquartile market range. The analysis is in accordance with the D-34 GFŘ, 2019. In addition, spread values are given, which are very low. This means that profit margins do not differ significantly within the entities analysed. Since 2019, the difference between the first and third quartiles is decreasing. This situation can be explained by the fact that the number of competitors in the market is increasing. The interquartile market range is in the interval 13.71% - 20.35 with a median value of 15.6%.

For the price of transactions carried out with related parties to be called the independent market price, its value must be within a given range. The calculated interquartile market range should be compared to the profitability that the company achieves by selling products to related parties. If this profitability of related parties transactions, and thus the interquartile market range is higher, it is necessary to make an adjustment so that the profit margin of the company fits into the interquartile market range.

**Table 2** The interquartile market range in the period 2018 - 2022 in %

| years analysed | 2018 | 2019 | 2020 | 2021 | 2022 | Average values |
|---|---|---|---|---|---|---|
| Minimum | 9,32 | -0,3 | 7,11 | 11,03 | 13,98 | 8,23 |
| 1st quartile | 15,255 | 11,16 | 10,31 | 14,11 | 17,77 | 13,71 |
| Median | 17,36 | 13,76 | 12,00 | 15,72 | 19,15 | 15,60 |
| Third quartile | 23,2 | 21,95 | 17,32 | 16,925 | 22,36 | 20,35 |
| Maximum | 40,2 | 36,73 | 33,07 | 25,62 | 26,73 | 32,47 |
| Spread | 0,0119 | 0,0109 | 0,0058 | 0,0018 | 0,0014 | |

Source: TP Catalyst database data source, own processing

**Appropriate intercompany price**

If company ABC sells products to distributors, whether associated with individuals or independent distributors, the price for such companies is generally set at the "List price" level for that market less a 35% gross margin for the distributor. Price negotiations between the distributor and another entity in the chain are then the responsibility of the given distributor. On the basis of operating revenues and costs, that is, the operational profit for the period monitored from 2018-2022, the profit margin related to the transactions taking place in the group is determined (see Table 3).

**Table 3** Profit margin construction – related parties in CZK

| | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| Operating income | 122 499 | 195 066 | 103 948 | 108 087 | 466 375 |
| Operating costs | 105 543 | 160 245 | 84 408 | 89 170 | 373 201 |
| **operating profit** | 16 956 | 34 821 | 19 539 | 18 917 | 93 174 |
| Profit margin | 13,84 % | 17,85 % | 18,80 % | 17,50 % | 19,98 % |

Source: ABC internal accounting records, s.r.o. (own processing)

During the test period (years 2018-2022), the profitability of the ABC company for transactions with related parties was calculated in the range of 13.48% - 19.98%. The interquartile market range of comparable companies was calculated to be 13.71% - 20.35%. This fact confirms that the prices with related parties correspond to market prices and are in accordance with the arm's length principle.

**Appropriate intercompany price when the comparable transaction or company is not available.**

The ABC company manufactures products for which there are only a few substitutes in the market. From this follows the fact that few companies can be compared with the analysed company ABC. One of the requirements of the financial administration is the same geographical location of the compared companies; therefore, it may happen that the analysed company cannot be compared with a sufficient number of other companies, or there will not be a sufficient number of companies to calculate the interquartile market range.

In this case, the cost plus method (CMP) proposes another solution, the interquartile range is calculated from the transactions that the given company makes with independent persons, i.e. from transactions outside the group. The only condition for this solution is a volume of transactions outside the group that is comparable with those within the group. This fact was achieved by ABC Company in 2022, the volume of transactions with connected persons exceeded CZK 55.9 million (corresponding to 53% of the total volume of transactions), and with independent persons in the amount of CZK 49.57 million (47% of the volume of transactions). When comparing transactions with related persons and transactions with independent persons, we see that the ratio of transactions carried out is comparable.

After identifying the transactions, it is necessary to proceed to the analysis of the profitability indicator of the selected controlled transactions with independent persons. In this case, we used the net operating margin as the profitability indicator. To determine the interquartile range for the margin of profit, all sales of products by a given company to independent persons are intended. In this case, the interval is 10.54% -13.68% (with minimum 5.32%, maximum 22.78% and median 12.93%).

According to this method, the company ABC would not comply with the arm's-length principle because the profitability is higher than the interquartile range of the profit margin. This calculation implies that the company sells its own products to related parties in the group more cheaply than to independent parties. This statement should be confirmed by analysing the margins.

Margin analysis compares margins on transactions with related persons with margins on transactions with independent persons. If the margins for independent transactions are higher than those made with related parties, it will be confirmed that Company ABC is selling its products cheaper to the group than outside the group. The margin with related persons is on average 18%, from about 9% to almost 40%, and the values are for the year 2022. The margins for countries in North and South America reach maximum values in the analysed sample, whereas the margins for countries in the South and East of Europe reach minimum values. The margins for transactions with the rest of Europe are around average.

ABC sells products outside its group at an average profit margin of 22% and within its group at an average profit margin of 18%. The ABC company sells its products to related parties at a lower price than to independent parties outside the group. However, this fact is caused by the policy of the ABC Company, when the ABC Company sells its products with different margins according to the geographical location of the states, i.e., it sells its products with different margins according to the requirements of a certain market. The increase in product sales to the group that occurred in 2022 may distort ABC's profitability.

It is important for company ABC that its profitability in the entire examined period corresponds to the calculated interquartile market range, and it can therefore be stated that the arm's-length principle is preserved. For the Company, it follows a recommendation to avoid increasing the volume of transactions within the group or to equalise the amount of the profit margin between related parties and independent parties.

## 4 Conclusions

The paper deals with a brief case study that demonstrates the basic procedure used to evaluate the differences between prices for independent companies and associated companies (related parties). The cost plus method (CPM) is applicable to the transactions of the full-fledged manufacturer. Due to the use of two methods to calculate the interquartile profit margin, it has been proven that not all methods can correctly determine it. The issue of transfer pricing has not only concerned multinational companies and cross-border transactions but is also increasingly encountered by small and medium-sized enterprises, which until now did not have to deal with it. The presented study can be used as a basic guide for such enterprises.

During the tax audit, the presentation of well-executed documentation on transfer prices means a certain assumption on the representatives of the tax office that the given company deals with the issue of transfer prices, and they are set in accordance with the arm's-length principle. This documentation can serve as a very valuable aid for explaining and defending the price setting strategy of the company. The lack of or poorly prepared transfer pricing documentation, on the other hand, exposes the company to several risks: increase in the tax base and increase in tax and its accessories is only one of many other (risk of supply chain interruption, loss of consumers or legislative risks). It also often happens that the subsidiary takes over the transfer pricing documentation from the parent company and implements it without tailoring it not only to the company parameters but also to the market and economic conditions in which it operates. Such inadequate documentation is more likely to be an obstacle in the smooth course of the tax audit than to serve as significant evidence. One of the most basic prerequisites for a well-developed transfer price documentation is the help of a qualified expert who, with the help of a database, will collect quality data and determine the most appropriate method to calculate the interquartile range and the transfer price that will correspond to market conditions.

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IAS 24 Related Party Disclosures

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