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Covid-19 Economic Analysis

Introduction

We have all been living through the impact of the COVID-19 pandemic and responding to the various effects and disruptions to daily life. The pandemic has forced large number of businesses and governments around the world to take unprecedented steps to mitigate the impact it has had. These steps have changed the way in which people work and live everywhere on Earth.

The impact of the pandemic on businesses has varied between countries, industries and even between individual enterprises. At the start of the pandemic, several companies experienced large declines in revenue, incurred unexpected costs associated with mandated closures and faced challenges with scaling down their operating costs in the short term. For example, many firms in the service sector experienced a large drop in revenues[1]. During this period, for many companies, there was a shift in business priorities to adapt to necessary operational changes and new ways of working. This period forced many traditional and small businesses to close[2] and in some instances, companies found new opportunities arising resulting in profitable outcomes. Further, the ways in which businesses cooperated with each other were affected: contracts were renegotiated and changed, and new forms of cooperation emerged. There was also a profound impact on existing supply chains, forcing them to reevaluate their business models and restructure or relocate some of their operations. Following the initial period of the pandemic , companies in certain market sectors (such as consumer products) experienced relatively rapid rebound, because of government benefits and increased disposable income, partially offsetting some of the losses. However, on an overall basis, there was a contraction in the global economy for 2020 and longer-term economic effects of COVID-19 pandemic in 2021 and beyond, are unclear at this point.

The arm's length principle *"(...) treats the members of an MNE group as if they were independent entities, [and therefore] attention is focused on the nature of the transactions between those members and on whether the conditions thereof differ from the conditions that would be obtained in comparable uncontrolled transactions."* (OECD Guidelines 1.6). For that reason, analysing and understanding the conditions agreed upon by unrelated entities lies at the heart of transfer pricing analysis. As the ways in which the unrelated parties conclude transactions change, the way in which related parties transact may change accordingly. Therefore, transfer pricing economic analyses needs to adapt to equip the taxpayers with the knowledge necessary to conclude intercompany transactions at arm's length.

Since the impact of the pandemic on the economic environment continues in 2021 and the recovery period will last even longer, it is quite probable that the adaptations needed for analysing transactions concluded in 2020 may prove useful in the years to come.

Challenges for economic analysis

In an ideal scenario, for testing the arm's-length nature of related party transactions, the expectation would be that the comparable companies would be from similar sectors or industries as the tested party and would also experience similar adverse effects from current economic conditions, which can affect their profitability. Unfortunately, many of the COVID-19 impacted companies are able to continue as a going concern and as such will no longer be included as comparable company in the database. This survivorship bias results in a reduced pool of comparable companies that managed to survive the economic crisis and an overall overstatement of the lower end of range of profitability of the comparable companies operating in the industries.

The scarcity of reliable comparable data means that transfer pricing practitioners often have to base their analysis on imperfect data. In a typical situation, we use historical data and derive conclusions that are applied to the fiscal year we are supporting (ex-post price) and future related party transactions (ex-ante price).

This is particularly visible in the case of the Transactional Net Margin Method (TNMM) analysis. The data that is used when applying this method comes from publicly available financial statements. Since creation, auditing and publishing financial statements requires time, the data from these financial statements becomes publicly available only 12 to 18 months after the end of the fiscal year.

While dealing with somewhat imperfect data is not uncommon, this pandemic has exacerbated the complexity or magnitude related to availability of reliable comparable data. The OECD, in its transfer pricing guidelines for COVID-19 issued in December 2020, has recognised the significant challenge associated with availability of adequate and reliable comparable companies because of the pandemic[4]. Hence, we cannot rely on a simple analysis of historical data to adjust for the impact faced by businesses due to COVID-19. Therefore, potential comparable companies and their selection criteria may need to be revisited or adjusted so that they reflect the current economic reality.

Additionally, even when the data is available the impact on profitability for companies could be varied, even within the same industry or market sector. Apart from differences in business strategies used by companies, a key contributing factor to this phenomenon is differences in cost structures among companies. Companies with a higher proportion of fixed costs typically experience larger swings in profitability than companies with a lower proportion of fixed costs. As a result, a set of comparable companies that fall within the same industry but have varying degrees of fixed costs may experience varying impact on profitability due to COVID.

So, what can we do?

There are some lessons that can be learned from previous recessions, in particular the global recession of 2009. As was the case then, a range of approaches, from relatively simple solutions such as including loss makers in the set of results to more complex methods such as using econometric techniques to forecast how the comparables might be affected by COVID-19, may be appropriate. It may also be necessary to consider different benchmarking approaches for different periods within the same financial year for the months prior to, during and potentially into recovery from COVID-19. The appropriateness of an approach will depend on the facts and circumstances but early consideration of economic support for transfer pricing arrangements should be undertaken to assess if transfer pricing adjustments are required and to provide robust evidence for documentation in due course.

OECD on economic analysis

On 18th December 2020 the OECD issued *"Guidance on the transfer pricing implications of the COVID-19 pandemic"* (the Guidance). The Guidance stresses the importance of ensuring appropriate delineation of transactions and preserving comparability between the controlled (tested) transaction and comparable data. In particular, the Guidance indicates that additional information needs to be taken into account when analysing 2020 in order to ensure that the analysis is based on sufficiently comparable data. The document indicates some of the key aspects of the economic activity in 2020 that may be analysed when performing comparability analysis[5]:

- sales volume fluctuation;
- changes in capacity utilisation;
- incurring incremental or exceptional costs (entity and group-wide); and
- receiving government assistance.

A number of data sources may be used in order to gather the information necessary for conducting this analysis:

- interim financial statements (quarterly SEC filings or earnings releases, etc.);
- macroeconomic information (e.g., country-specific GDP data, industry indicators from central banks, government agencies, industry or trade associations, inflation, interest rates, oil prices, etc.);
- comparison of internal budget vs. actual sales, costs and profitability; and
- effects on profitability or on third party behaviour observed in previous recessionary periods or in 2020.

As the analysis of this additional data is complex, statistical methods such as regression or variance analysis may be useful[6] in order to make sure that relevant explanatory variables are taken into account and their impact on the tested profit level indicator is reasonably estimated.

[1] https://www.bankofcanada.ca/2021/05/staff-analytical-note-2021-8/
[2] https://www.pnas.org/content/117/30/17656
[3] https://www.degaullefleurance.com/en/covid-19-transfer-pricing-in-the-midst-of-change-when-the-supply-chain-causes-a-chain-reaction/
[4] OECD – Guidance on the transfer pricing implications of the COVID-19 pandemic – Para 15
[5] OECD – Guidance on the transfer pricing implications of the COVID-19 pandemic – Para 11
[6] OECD – Guidance on the transfer pricing implications of the COVID-19 pandemic – Para 11

Econometric and non-econometric approaches

The economic analysis often relies on publicly available data on third party transactions. Even in normal times, contemporaneous access to such data is difficult. For that reason economic analysis tends to rely on historical data. For example, the data used for TNMM analysis is typically at least one year old when the analysis is performed.

When the economy is not in crisis mode, historical data may be reasonably expected to reflect the next year and, hence, allow for comparability analysis to be conducted with adequate accuracy.

The situation has changed due to the unprecedented economic conditions brought on because of COVID-19. With sales and profits of many enterprises falling in a rapid and unpredictable manner, it is difficult to conduct a reasonable analysis of profitability indicators based on data for a stable economy.

So, what can we do if we do not yet have the comparable data that reflects the current economic situation and we cannot simply rely on data from 2017-2019? There are several solutions that can be applied. As the OECD Guidance indicates, *"any form of publicly available information regarding the effect of COVID-19 on the business, industry and controlled transaction may be relevant in ascertaining the arm's length nature of an enterprise's transfer pricing policy implemented for FY 2020"*[7]. In order to make our analysis more precise we could use *"Statistical methods such as regression analysis or variance analysis that are used to predict the extent to which a certain variable will vary with reference to other variables under certain specific conditions (e.g. the response of corporate profits in certain industries to GDP movements)"* [8].

Econometric approaches

A regression analysis is a statistical tool intended to estimate the relationship between a dependent variable ('outcome variable') and one or more independent variables (also called 'predictors' or 'regressors'). Once a stable relationship has been identified between the independent and dependent variables, it is possible to predict the outcome of the dependent variable given a certain change in one or more independent variable.

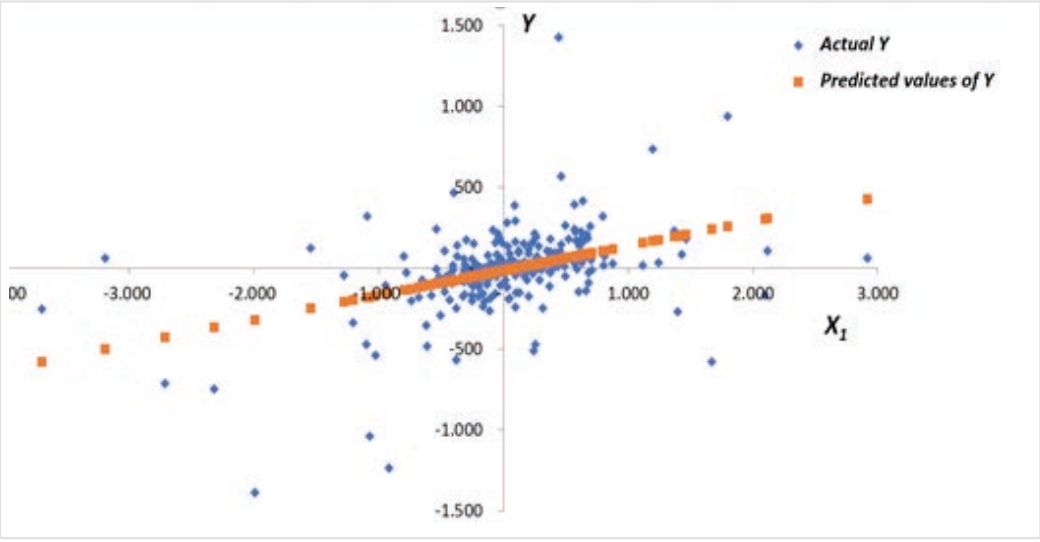
A regression function may have the following form:

$$°Y=c+°\beta_1 X_1+\beta_2 X_2+...+\beta_N X_N$$

Where:

- ***Y*** is the dependent variable (for which a prediction for 2020 is sought);
- X_1, X_2 ..., are the independent variables which help to predict the dependent variable *Y*;
- β_1, β_2 ..., are the coefficients of the independent variables, which indicate the direction and the size of the relationship between the latter and the dependent variable;
- ***c*** is the constant term (intercept)

This is represented by the following scatter plot chart. The scatter plot is typically used to visually identify relationships between pairs of data, for example, the relationship between sales growth (**on the X axis**) and firm profitability (**Y axis**). Based on the sample scatter plot below it can be that as **X** increases, **Y** tends to increase. In that case it can be inferred that the points follow a linear pattern and there is a high linear correlation. This coorelation helps us predict the value for **Y** based on the changes to **X**.



[7] OECD – Guidance on the transfer pricing implications of the COVID-19 pandemic – Para 11
[8] OECD – Guidance on the transfer pricing implications of the COVID-19 pandemic – Para 11

A robust econometric model that establishes a statistically and intuitively explainable relationship between corporate profit, macroeconomic and / or comparable specific parameters can provide quantitative insights to arrive at a conclusive benchmark range for COVID-19.

Since the beginning of the pandemic Deloitte transfer pricing teams have developed a number of regression models for various industries (including automotive, consumer goods, mining, oil & gas, professional services etc.) using various econometric techniques.

Some of the models may be applicable to whole industries (for example, predictive models created using macroeconomic indicators for the following transactions: a) manufacturing (APAC, Americas and Europe regions); and b) distribution (APAC, Americas and Europe regions)). In addition, models for service transactions such as Sales & Marketing, Contract R&D (Software Development) and General & Administrative Services (separately, for all transactions for APAC, Americas and Europe regions).

The regression techniques offer the unique possibility to control for all factors relevant for a given case and, therefore, allow us to achieve an approximation of arm's length terms and conditions in a limited data environment. The regression analysis can be used for purposes of predictive modelling and / or to adjust comparable sets for differences in the impact of COVID-19 as it relates to the controlled transacton.

To explain how a typical regression model an be applied we have outlined below an example involving a routine distributor, which we will call Company X. The tested party is compensated for its functions and risks with an arm's length operating margin that is tested using third-party wholesale distribution comparables. As is typical, these comparable companies span many different industries. The COVID-19 pandemic caused a material impact on Company X's sales, which declined by 50% in 2020.

The comparable companies experienced a decline in sales (although not to the same extent of the tested party), a few other comparable companies actually experienced as increase in revenue during the 2020 year. Overall, the comparable companies were not negatively impacted by the COVID-19 pandemic as the tested party and some have even benefited. As a result, the profit level indicators derived from the comparables might not not fully reflect the economic conditions for Company X in 2020.

To address this issue, we used a regression model, which allows us to rely on the statistical relationship between profitability (dependent variable) and the information of macroeconomic and firm level indicators (independent variables). In this case, we selected the 'change in OM' as the profitability indicator or dependent variable, while the independent variables used were 'change in GDP', 'change in sales', 'change in fixed costs', 'change in SG&A expenses' and some lagged variables. Overall, this adjustment produces a comparable set of results that better reflects the economic conditions of Company X, and thus the interquartile range derived from it is more reliable.

Non-econometric approaches: most important aspects

In cases where we cannot apply an econometric analysis (for example: the case is too small to apply sophisticated methods, tax authorities are not willing to accept the regression analysis, there is not enough time to apply the econometric approach), other methods can be applied.

The non-econometric approaches, unlike the regression analysis which is capable of controlling for numerous factors at the same time, tend to focus on a selected aspect of the analysed case.

One of the possible approaches is to focus on identifying, quantifying and isolating the pandemic impact on the financials of the tested party. This approach may allow us to "normalise" the results of the tested party and understand the magnitude of the impact that the coronavirus had on its business activity. Such normalised results and the isolated COVID-19 impact may subsequently be subject to separate analysis allowing us to better understand the pandemic shock and the reaction of the tested party to this situation and to more precisely test the arm's length nature of intercompany transactions.

Another type of non-econometric approach focuses on selecting and adjusting comparable data in order to increase the comparability of the final sample and the tested party situation. This may include, for example, using a measure of susceptibility to the COVID-19 pandemic (e.g., reduction in sales) as a comparability factor in the screening process and expanding the time span of the search in order to ensure an appropriate number of observations. Another solution may rely on adjusting for differences in the variable/fixed cost structure (operating leverage) in order to increase comparability. Well-known asset management theories can also be used to take into account the risk profile of the tested party and ensure that differences in the assumed risk levels between the tested party and the comparables are controlled for.

In addition, approaches that could help analyse and verify the *"overall reasonableness"* of the transfer pricing policies for 2020 (and their results) could be applied. One of the examples of such an approach could include analysing the way in which the overall profits of a MNE group are distributed amongst various entities belonging to that group taking into account their contributions to the overall results of the company, for example using a Value Chain Analysis ("VCA") or other relevant approaches.

There are multiple possible approaches for non-econometric adjustments that can be considered and a summary of the various approaches are outlined in the diagram in the section below.

Conclusion

COVID-19 has changed the way in which businesses operate, at least in the short to medium term. It is important therefore to assess the impact of COVID-19 on businesses, particularly on controlled transactions and value chain profitability.

The approaches discussed above can help taxpayers navigate the delicate balance of ensuring profitability (or minimiing losses), managing cash flows, along with determining the arm's length price for the related party transactions.

The approach to be selected and applied would depend on the facts of the case; however, needless to say that all changes would have to be explained to financial auditors and other stakeholders, and eventually to relevant tax authorities. Hence, it is suggested that taxpayers should consider these approaches both for pricing current transactions as well future transactions.

The diagram below presents a summary of the various non-econometric approaches that may be helpful when analysing controlled transactions in 2020.

Conventional data adjustments

Confirmatory approaches

Adjust tested party data

Carve out C-19 impact on tested parties' revenue and costs by isolating C-19 related costs.

- Prepare pro-forma tested party financials for comparison to 2019 benchmarks
- Exclude fixed/excess capacity and closure/restart costs not present in comparables' financials
- Limited-risk entities may separately charge out excluded costs but without a markup
- Excluded costs may be further allocated based on contract clauses and on historical investment decision' evidence

Adjust comparables' data

Adjust comparables for sales decline differences with tested party

Modify the search/screening criteria to capture historical financial data from periods of distress

Adjust comparables for cost structure (operating leverage) differences with tested party

Adjusting for fixed costs by analysing the comparable companies' costs (fixed vs variable)

Adjust comparables for risk difference with tested party

Perform risk-adjustments by comparing the systemic risk assumed by the tested party versus the comparables

Support reasonability

Evaluate compensation of low-risk entities as percentage of overall consolidated profit

- The value of routine activities may be estimated based on contribution or VCA analysis
- The profit to low-risk entities is evaluated vis-à-vis the profit/loss allocated to other/full-risk entities/principal(s)

Adjust transfer pricing per industry practices

Show that 2020 started with arm's length prices and adjust them as per industry practices

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