Use of Berry Ratio in Transfer Pricing Analysis: Asia Perspective

The author provides an Asia perspective on the use of the Berry ratio as a profit level indicator for transfer pricing analysis.

1. Introduction

The Berry ratio is a profit level indicator (PLI) that has existed since the 1970s after its first use in the case of E.I. DuPont de Nemours and Co. v. United States. Later it was included in the US Transfer Pricing Regulations, OECD Guidelines and UN TP Manual. Additionally, many countries have included the Berry ratio in their domestic transfer pricing regulations. However, it is a very sensitive ratio and has application in limited circumstances.

This article will (i) provide the history and evolution of the Berry ratio, (ii) discuss the formulae of the Berry ratio, its sensitivity and how another ratio can be derived using the Berry ratio, (iii) analyse international guidance on the use and application of the Berry ratio and (iv) evaluate the adoption of the Berry ratio in selected Asian countries (including guidance on the use of this ratio as per domestic legislation of these Asian countries).

2. Evolution of the Berry Ratio

The concept of the Berry ratio was first coined in the case of E.I. DuPont de Nemours and Co. v. United States. It got its name from the inventor of this ratio, Dr Charles Berry. Dr Berry was a professor of economics at Princeton University, appointed as an independent economic expert by the US Internal Revenue Service (IRS) and Justice Department to evaluate the economic circumstances underlying a dispute between the IRS and the E.I. DuPont de Nemours Co. (hereinafter DuPont).

The key question in the DuPont case concerned the appropriate profitability level for a related-party distributor. Dr Berry utilized the ratio of “gross profit/operating expenses” as a profit level indicator (PLI), to compare the profitability of the tested distributor with the profitability of the comparable third-party distributors. Dr Berry’s key insight was that the related-party distributor’s ratio of gross profit to operating expenses was compared to the ratio of billed commissions that can be considered analogous to the gross profit (excluding interest costs and depreciation). This ratio of gross profit to operating expenses later became known as Berry ratio, named after Dr Charles Berry.

In 1994, the Berry ratio appeared in section 482 of the US Transfer Pricing Regulations (482 Regulations). In 2010, the Berry ratio was included in the OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations (OECD Guidelines). In 2013 it was included in the United Nations Practical Manual on Transfer Pricing for Developing Countries (UN TP Manual). Under both the OECD Guidelines and UN Manual, the Berry ratio is identified as one of the profit level indicators (PLIs) under the transactional net margin method (TNMM).

Apart from being included in international guidelines, appropriateness and use of the Berry ratio is also discussed in several tax rulings, such as Eaton Corp. v. Commissioner, Korea v. Semiconductor Distributor and dozens of Indian court rulings (discussed later in this article). Additionally, many countries (mainly focusing on Asian countries), such as Indonesia, Japan, Singapore, etc. have...
included the Berry ratio as PLI in their transfer pricing regulations.

3. Formulae of the Berry Ratio and Ratios Derived Using It

The Berry ratio is defined as the ratio of gross profit to operating expenses:

\[
\text{Berry ratio} = \frac{\text{GP}}{\text{OE}}
\]

where:

\[
\text{GP} = \text{gross profit, Interest and extraneous income are generally excluded from the gross profit determination}
\]

\[
\text{OE} = \text{operating expenses. There are two important aspects in determining OE for computing Berry ratio:}
\]

1. OE should only reflect value-adding activities performed by the entity. Thus, any purchases from other parties to which the service provider does not add value should be excluded from computation of OE.

2. Items that might normally be included in OE but were not reflective of the extent of services provided should be removed from the computation of OE. In particular, depreciation and interest expenses are typically excluded from OE, as they are not reflective of the services provided. Interest expenses reflect the firm’s debt/equity ratio, and depreciation reflects the timing of asset acquisition.

Based on the above definition of Berry ratio, it can be understood that the denominator (i.e. operating expenses or OE) under the Berry ratio is nothing but value added expenses (VAE). Thus, another important ratio, i.e. operating profit (OP) to value added expenses (VAE) \([\text{OP}/\text{VAE}]\) can be derived from the Berry ratio. The OP/VAE ratio can be derived by deducting 1 from the Berry ratio, as demonstrated below:

\[
\text{Berry ratio} = \frac{\text{GP}}{\text{OE}}
\]

where:

\[
\text{GP} = \text{gross profit}
\]

\[
\text{OE} = \text{operating expenses (i.e. only value added expenses are considered)}
\]

Derivation of OP/VAE from Berry ratio

\[
\text{Berry ratio} - 1 = \frac{\text{GP}}{\text{OE}} - 1 = \left(\frac{\text{GP} - \text{VAE}}{\text{VAE}}\right) = \frac{\text{OP}}{\text{VAE}}
\]

This derivation of OP/VAE from the Berry ratio finds support in the Indian tax court ruling of DHL Logistics Private Limited v. Deputy Commissioner of Income Tax.8


4.1. Guidance by OECD and United Nations

Under the OECD Guidelines, the Berry ratio is identified as one of the PLIs under the TNMM. The guidelines provide criteria for the use of the Berry ratio as a PLI. These criteria are as follows:

1. the value of the functions performed in the controlled transaction (taking account of assets used and risks assumed) is proportional to the operating expenses;

2. the value of the functions performed in the controlled transaction (taking account of assets used and risks assumed) is not materially affected by the value of the products distributed, i.e. it is not proportional to sales; and

3. the taxpayer does not perform, in the controlled transactions, any other significant function (e.g. manufacturing function) that should be remunerated using another method or financial indicator.9

The first criterion is relevant, as the denominator is operating expenses in the Berry ratio. Thus, the value created in the controlled transaction must be reflected only in the operating expenses. Accordingly, the Berry ratio would not be an appropriate PLI:

1. when there are significant non-routine intangibles involved in controlled transactions, as the contribution of intangibles is not reflected merely in the operating expenses;

2. in the case of an integrated distributor that performs different functions such as assembling or customizing, because the ratio will not be able to reflect the pure return on operating expenses;

3. in the case of a full-fledged distributor performing an inventory management function and bearing related risk; and

4. in the case of a manufacturer because the manufacturer’s cost base typically comprises not only operating expenses but also the cost of goods sold.

The second criterion excludes those cases where sales or revenues reflect the value created. The third criterion can be interpreted as a requirement to ensure that a mix of different activities does not influence the quality of a transfer pricing analysis using the Berry ratio.

Accordingly, a situation where the Berry ratio can prove useful is for intermediary activities. It has been observed in practice that the Berry ratio is used as a PLI for limited-risk distributors and service providers. The Berry ratio assumes a relationship between the level of operating expenses and the level of gross profits earned by distributors and service providers in situations where their value-added functions can be considered to be reflected in the operating expenses.

Apart from the OECD Guidelines, the Berry ratio is also included in UN TP Manual. The guidance on using the Berry ratio provided in the UN TP Manual is similar to the OECD Guidelines. Footnote 41 to paragraph 4.5.6.3 of the UN TP Manual provides as follows:

For the Berry Ratio to be the most appropriate transfer pricing method to determine the remuneration of a controlled transaction (for instance for the distribution of products) the following elements have to be present: (i) the value of the functions performed, taking into account assets used and risks assumed, should be proportional to the operating expenses; (ii) the value of the functions performed, taking into account assets used and risks assumed, is not materially affected by the value of the products distributed; in other words it is not proportionate to sales; and (iii) the tested party does not perform other significant


9. Para. 2.107 OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations (OECD 2022), Primary Sources IBFD.
functions in the transaction under examination that should be remunerated using another method or profit level indicator...

4.2. Asia perspective

Since the first use of the Berry ratio in the case of DuPont, this ratio has been adopted by several tax jurisdictions either by incorporating it in transfer pricing regulations or recognized by the courts as one of the PLIs. This section evaluates the use of the Berry ratio by selected Asian countries. These regulations and court rulings provide the perspective of Asian countries on the use and application of the Berry ratio.

4.2.1. Singapore

In 2015 Inland Revenue Authority of Singapore (IRAS) introduced Berry ratio as one of the PLIs. In August 2021, the IRAS issued Revised Transfer Pricing Guidelines (Sixth Edition), which laid down certain conditions for using the Berry ratio. As per the revised guidelines, the Berry ratio may be used when all of the following circumstances in a particular transaction are present:

- the taxpayer acts as intermediary purchasing goods from related parties and on-selling them to other related parties;
- the taxpayer does not perform any value-added functions other than distribution relating to the products distributed. An example of such value-added functions is manufacturing;
- the value of the functions performed by the taxpayer is not affected by the value of products distributed, e.g. accounting and billing functions;
- there is a direct link between operating expenses and gross profits; and
- the taxpayer does not employ any intangibles in the particular transaction.

Further, as per the guidelines where the taxpayer’s costs of goods sold are a key driver of its profitability and it has the ability to influence those costs (for example, through freight planning, scheduling and logistics functions or through modifying, altering or bringing the goods to the market), the Berry ratio becomes unreliable as a financial indicator.

4.2.2. Japan

From 1 April 2013, the Berry ratio is included in the Japanese transfer pricing legislation by incorporation into the Ordinance for Enforcement of the Act on Special Measures Concerning Taxation, articles 39-12 and 39-112. Under these rules, application of the Berry ratio is permitted if:

- the Japanese entity is operating either as a limited-risk distributor or as a service provider; and
- the most appropriate method selected to evaluate the intercompany transaction is the transactional net margin method.

4.2.3. Malaysia

The Malaysian Transfer Pricing Guidelines 2017 recognize the Berry ratio as a PLI that can be used. However, as per the Malaysian Transfer Pricing Guidelines 2017, the Berry ratio is only useful in testing intermediary activities where a taxpayer purchases goods from an associated person and on-sells them to other associated persons.

4.2.4. Indonesia

The Directorate General of Taxation issued Regulation PER-22/PI/2013 (PER-22) of 30 May 2013 on tax audit procedures with regard to taxpayers with special relationships. The Berry ratio is one of the several types of PLIs recognized in the Regulation. However, there are no specific guidelines for using and applying the Berry ratio.

4.2.5. Hong Kong

The Inland Revenue Department in the Department Interpretation and Practice Notes 59 (DIPN 59) has identified the Berry ratio as one of the PLIs under the TNMM. As per paragraph 48 of DIPN 59, to evaluate whether the Berry ratio is an appropriate profit indicator, it is necessary to consider that:

- the value of the functions performed in the controlled transaction (taking account of assets used and risks assumed) is proportional to the operating expenses;
- the value of the functions performed in the controlled transaction (taking account of assets used and risks assumed) is not materially affected by the value of the products distributed (i.e. it is not proportional to sales); and
- the person does not perform, in the controlled transactions, any other significant function (e.g. manufacturing function) that should be remunerated using another method or profit indicator.

4.2.6. South Korea

As per the amendment of the International Tax Coordination Law’s Presidential Decree effective from 4 February 2009, the Berry ratio became one of the PLIs under the TNMM. Further, Supreme Court case 2021Du42481, of 14 October 2021, also addresses using the Berry ratio for transfer pricing purposes. More specifically, the issue in this case was whether the Berry ratio is the best method and PLI under the International Taxation Coordination Law with

regard to sales support services and the resale and distribution of parts.

During FY 2013, the taxpayer, a Korean subsidiary of a multinational enterprise, performed sales support services, installation and warranty services, and resale and distribution of parts to Korean semiconductor companies on behalf of its foreign related party, a Hong Kong company. The taxpayer selected the Berry ratio under the TNMM as the best method for sales support services and the resale of parts. The tax authorities argued that the best methods should be the CUP method for sales support services and the TNMM using return on total costs. The Korean courts determined that sales support services may be viewed as intermediary activities but that the taxpayer was engaged in significant activities other than sales support services, such as installation and warranty services and resale of parts. This implies that the classification of costs as operating expenses in the taxpayer’s segmented profit-and-loss (P&L) statements may not be accurate and that the taxpayer has used the CUP method for FYs 2010/12. With regard to resale of parts, the Korean courts also determined that (i) the resale of parts constitutes of purchasing followed by sales and should not be viewed as merely intermediary activities, (ii) the classification of costs as operating expenses in the taxpayer’s segmented P&Ls may not be accurate, and (iii) even if the Berry ratio is adopted, a Berry ratio of 1.27 excluding the value of parts from the cost base would not have been appropriate.15

4.2.7. India

Berry ratio is not formally included in the Indian Transfer Pricing Regulations. However, its use and application have been a subject matter of litigation in India, with around 34 tax court rulings on this topic. The important rulings that guide the use and application of the Berry ratio are discussed in the paragraphs below.

**Sumitomo Corporation India Pvt Ltd**

In this case, the Delhi High Court espoused principles on the application of the Berry ratio as PLI under the TNMM for benchmarking commission income on indenting transactions with the associated enterprise. The important principles emerging from the ruling are as follows:

- the Berry ratio can be used only in very limited circumstances and where operating expenses represent all functions performed and risks undertaken;
- the Berry ratio is effectively applied only in cases of stripped-down distributors; that is, distributors that have no financial exposure and risk in respect of the goods distributed by them;
- Rule 10B(1)(e) of the Indian Income-tax Rules does not restrict the use of the Berry ratio; it holds that there would be no difficulty in using the Berry ratio as PLI in cases where operating expenses are considered as a “relevant base” under the TNMM; and
- the Berry ratio was not an appropriate PLI in cases where the taxpayer used substantial intangibles for its business. Further, the court relied on *E.I. DuPont de Nemours Co.*, OECD Guidelines and Japan Transfer Pricing Regulations for acceptance of Berry ratio as PLI.

**Mitsubishi Corporation India Pvt Ltd**

In this case, the Tax Tribunal upheld the use of the Berry ratio for the taxpayer, a trader having low inventory levels, no intangible assets and a low-value addition function. The fundamental principles emerging from this ruling are as follows:

- Berry ratio as a PLI under the TNMM is not prohibited in Indian Transfer Pricing Regulations. Further, it is also allowed as per the OECD Guidelines;
- the underlying assumption for applicability of the Berry ratio is that the return to the tested party should be commensurate with their operating expenses and the value of goods dealt in was irrelevant for this purpose; while this proposition so laid down was in the case of a limited-risk distributor without any value addition to the goods or significant risks associated with inventories, is equally useful in a case in which the business entity was engaged in trading, with zero or low inventory levels particularly as it does not involve any unique intangibles or value addition to the goods traded; and
- where the tested party is a trader which neither assumes any major inventory risk nor commits any significant assets for the same and particularly does not value-add to the product nor involves use of unique intangibles, the Berry ratio should also be equally relevant for the trader as in the case of a limited-risk distributor.

**Vaibhav Global Limited**

In this case, the Tax Tribunal rejected the use of the Berry ratio in the case of a full-fledged manufacturer. The important principles emerging from this ruling are as follows:

- the applicability of the Berry ratio as appropriate PLI depends on functions, assets and risk analysis and on the profile of the tested party; and
- the Berry ratio is effectively applicable only in the case of stripped-down distributors which had no financial exposure and risk in respect of goods so distributed by them. Accordingly, the Tax Tribunal held that the Berry ratio was not applicable in the present case where the taxpayer was a manufacturer performing all entrepreneurial functions.

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15. Id.
16. IN: High Court Delhi, 22 July 2016, *Sumitomo Corporation India Pvt Ltd* [TS-493-HC-2016(DEL)-TP].
5. Conclusion

The Berry ratio is accepted as PLI internationally as well as in the Asian market, as it has been discussed in various international guidance, domestic transfer pricing regulations and court rulings of several countries. Preferably, its use should be reserved for cases involving limited-risk distributors or service providers that employ no intangible assets. Further, for the Berry ratio to be applied, there must be a direct link between value-added functions and operating expenses.