

CHAPTER 9

The Berry Ratio: More than a Profit Level Indicator?

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§ 9.01 Introduction

The Berry Ratio was named after Dr. Charles Berry who developed the method as part of his expert testimony in the DuPont case in the late 1970s.¹ The Berry Ratio first appears in the U.S. Section 482 Transfer Pricing Regulations (“482 Regulations”) in 1994. In addition to the “big five” prescribed methods (Comparable Uncontrolled Price, Resale Price Method, Cost Plus Method, Comparable Profits Method and Profit Split Method), the 1994 Regulations include a sixth category of “unspecified methods.” Unspecified methods are to be used when the listed methods cannot be applied or are not the most reliable measure of an arm’s length result. The Berry Ratio is specifically mentioned in the 1994 Regulations as a financial ratio that may be used as a profit level indicator (“PLI”) when applying the Comparable Profits Method to a tested party.² Some additional U.S. guidance on the application of the Berry Ratio can be found in the Advance Pricing Agreements (“APA”) Study Guide issued by the Internal Revenue Service (“IRS”).³

¹ E.I. DuPont de Nemours & Co v United States (1979).

² Treas. Reg. § 1.482-5(b)(4)(ii), page 78.

³ Internal Revenue Service Advance Pricing Agreements (“APA”) Study Guide at pages 14-15.

The Berry Ratio was included in the OECD’s Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations (hereinafter, the “OECD Guidelines” or the “Guidelines”)⁴ in 2009.⁵ The Berry Ratio was included in the United Nations Practical Manual on Transfer Pricing for Developing Countries (“UN Manual”) in 2013.⁶ Both the OECD Guidelines and the UN Manual identify the Berry Ratio as a possible net profit indicator / PLI to be applied with the Transactional Net Margin Method (“TNMM”).

The Berry Ratio has been little used in practice in the United States and elsewhere, most likely due to its long-time status as an unspecified method. The method also has a reputation that is somewhat “shady”, having been called “one of the most misused ratios in the context of transfer pricing analysis.”⁷ However, the method may be undergoing a renaissance for at least three reasons. First, there is a growing trend for multinational enterprises (“MNEs”) to create centralized hubs for selected value-adding activities, in particular, distribution and procurement. These hubs are assigned low or limited functional and risk profiles, making them candidates for a Berry Ratio PLI used in conjunction with Comparable Profits Method (“CPM”) or its “European cousin” TNMM. Second, the growing internationalization of business services is creating new opportunities for using the Berry Ratio for services. Third, the fragmentation and geographic dispersion of value-adding activities along the global and regional value chains of multinational enterprises (“MNEs”) are creating “stuck in the middle” business units where the Berry Ratio could be a more reliable transfer pricing method than the traditional methods.

This chapter focuses on the mechanics of the Berry Ratio and its applicability and limitations, as outlined in the U.S. Section 482 Regulations, OECD Guidelines and UN Manual. Important court decisions that deal with the Berry Ratio are also discussed.

§ 9.02 Berry Ratio Mechanics

The U.S. Section 482 Regulations⁸ define the Berry Ratio as the ratio of gross profit to operating expenses. The example below illustrates the mechanics of Berry Ratio. If Net Sales are \$100 and Cost of Goods Sold (“COGS”) is \$30, then Gross Profit (“GP”) is \$70. If Operating Expenses (“OE”) (typically Selling, General and Administrative Expenses) are \$50, then Operating Profit (“OP”) is \$20. The Berry Ratio is GP/OE or $\$70/\$50 = 1.4$.

Net Sales	\$100
Cost of Goods Sold	\$30
Gross Profit	\$70
Operating Expenses	\$50
Operating Profit	\$20

⁴ *OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations 2017*, OECD Publishing, Paris. Available at <http://dx.doi.org/10.1787/tpg-2017-en> (accessed July 27, 2019).

⁵ 2017 OECD Guidelines ¶ 2.108.

⁶ UN Manual ¶ B.3.375.

⁷ Martin Przysuski and Srini Lalapet. 2005. *A Comprehensive Look at the Berry Ratio in Transfer Pricing*. Tax Notes International, November 21 at page 765.

⁸ Treas. Reg. § 1.482-5(b)(4)(ii)

Berry Ratio	1.4
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Since Gross Profit can be decomposed into Operating Profit plus OE, the mechanics of the formula are such that as long as the company has positive OP, the Berry Ratio must be greater than one. This is illustrated in the formula for the Berry Ratio below.

$$\text{BERRY RATIO} = \text{GP/OE} = (\text{OP} + \text{OE})/\text{OE} = \text{OP/OE} + 1.$$

Applying this formula to the numerical example above, the Berry Ratio can also be calculated as $\text{OP/OE} + 1 = \$20/\$50 + 1 = 1.4$. Either way, GP/OE or OP/OE + 1, reaches the same result. Thus, the Berry Ratio is directly and positively related to the ratio of OP/OE.

This point leads directly into the key insight that Dr. Charles Berry, the inventor of the method, saw behind this ratio. He recognized that for certain types of the firms and activities, the Berry Ratio was “just a variation of the cost plus method.”⁹ He argued that the “Berry Ratio uses the level of operating costs, in the case of a distributor, as a measure of the extent, or amount, of the services in fact provided.”¹⁰ The greater the extent of the services provided, the greater was the denominator OE. Dr. Berry argued that,

“For a distributor, who takes possession of a product in its final form and simply re-sells that product without change to retailers, gross profit is analogous to a firm’s total revenues, and the distributor’s operating expenses are analogous to a firm’s total costs.”¹¹

The Berry Ratio is thus a variant of the cost plus method, not for manufacturers but rather for distributors. To apply the arm’s length standard under the Section 482 Regulations, Dr. Berry argued that the appropriate thought experiment was to ask: What would the MNE have to pay an independent firm on the open market to provide the same distribution services as the controlled distributor? His answer was an arm’s length mark-up (calculated either gross or net) on the cost of those services where OE measured the extent of the services, i.e. the added value, provided by the distributor.

This thought experiment led Dr. Berry to several key insights into how the Berry Ratio should and should not be applied.¹² First, the denominator of the Berry Ratio must reflect the extent of the services or activities provided by the entity. Because the ratio is based on costs, it was critical therefore to ensure that OE did represent the extent of activities performed by the related party. First, a real concern was that the denominator only reflected value-adding activities performed by the entity, not any purchases from other parties.¹³ Using an advertising agency as an example, Dr.

⁹ Charles H. Berry, *Berry Ratios: Their Use and Misuse*, Journal of Global Transfer Pricing (April-May 1999) at page 18.

¹⁰ Charles H. Berry, *Berry Ratios: Their Use and Misuse*, Journal of Global Transfer Pricing (April-May 1999) at page 19.

¹¹ Charles H. Berry, *Berry Ratios: Their Use and Misuse*, Journal of Global Transfer Pricing (April-May 1999) at page 24.

¹² See also the review of the misuses of the Berry Ratio in Martin Przysuski and Srinil Lalapet. *A Comprehensive Look at the Berry Ratio in Transfer Pricing*. 2005. Tax Notes International, November 21 at pages 759-767.

¹³ In other words, the goods deemed to be treated as pass-through costs.

Berry argued that OE should not include the agency's purchases of media time (newspaper and TV advertisements) because those were services provided by the media, not by the advertising agency.¹⁴ Thus, any items that related to material purchases should be excluded from OE.¹⁵ A related issue was to ensure that the firms used for benchmarking also had any materials expenses removed from OE (to the extent it was possible to do this); otherwise the Berry Ratio calculation would not be reliable.

Second, items that might normally be included in OE but were not reflective of the extent of services provided should be removed from the calculations. In particular, interest expense and depreciation should be excluded, interest because it reflected the firm's debt/equity ratio and depreciation because it reflected timing of asset acquisition.¹⁶ Because interest and depreciation costs were primarily related to timing and method of financing, Dr. Berry argued these costs should be excluded, along with any extraneous income.¹⁷ He did offer one caveat, however, to this blanket rejection. If the activities of the uncontrolled comparable firms were reasonably similar to the controlled entity, the ratio of operating expenses to capital expenditures might also be expected to reflect a similar magnitude. In this case, the margins realized on operating expenses would already reflect the appropriate level of capital expenditure, including depreciation.¹⁸

Third, the Berry Ratio would not work well when the firm performed multiple services, unless they could be separately unbundled and priced. Complex distributors, for example, or firms that performed both manufacturing and distribution services, would not be good candidates for the Berry Ratio.¹⁹ Moreover, manufacturing activities were not good candidates for the Berry Ratio because of their capital intensity. Lastly, any firms with intangible assets would also complicate calculation of the value-adding activities and the appropriate margin or mark-up those activities should receive.

Dr. Berry's final conclusion was that, "The Berry ratio is a very simple concept; it is remarkable how murky its application can become."²⁰ For particular circumstances and done correctly, the Berry Ratio could offer a way to find an arm's length result for a particular class of related party transactions. Outside of these restricted places, the Berry Ratio was not going to be the most reliable measure of an arm's length result. We explore these issues in more detail below.

¹⁴ Charles H. Berry, *Berry Ratios: Their Use and Misuse*, Journal of Global Transfer Pricing (April-May 1999) at page 18.

¹⁵ For distribution entities, most of the COGS are pass through as they represent an arm's length value of labor and capital inputs to manufacture the goods that a distributor purchased for further resale.

¹⁶ Charles H. Berry, *Berry Ratios: Their Use and Misuse*, Journal of Global Transfer Pricing (April-May 1999) at page 19.

¹⁷ See Charles H. Berry, *Berry Ratios: Their Use and Misuse*, Journal of Global Transfer Pricing (April-May 1999), footnote 6 on page 24.

¹⁸ *Ibid.*

¹⁹ Charles H. Berry, *Berry Ratios: Their Use and Misuse*, Journal of Global Transfer Pricing (April-May 1999) at page 20.

²⁰ Charles H. Berry, *Berry ratios: Their Use and Misuse*, Journal of Global Transfer Pricing (April-May 1999) at page 22.

§ 9.03 Situations Appropriate for Application of Berry Ratio

[1] Overview

The OECD Guidelines stipulate that in order for a Berry Ratio to be an appropriate test for the remuneration of a controlled transaction, the following conditions must be met:

- The value of the functions performed in the controlled transaction (accounting for assets used and risks assumed) should be proportional to the operating expenses;
- The value of the functions performed in the controlled transaction should not be proportional to sales; and
- The taxpayer does not perform, in the controlled transactions, any other significant function (e.g. manufacturing functions) that should be remunerated using another method or financial indicator.²¹

The UN Manual reiterates the necessity of meeting these conditions.²²

[2] Limited-Risk Distributors

The IRS' APA Study Guide provides that PLIs based on income statement items often represent the activities when fixed assets are not contributing to profit generation, i.e. wholesale distribution and provision of services. The guide advises to apply the Berry Ratio in cases where the value-added function is captured in operating expenses, such as for distribution activities.²³²⁴ Similarly, the UN Manual states that the Berry Ratio may, when appropriate, be used for service of distribution activities.²⁵

As a rule of thumb, the Berry Ratio should be applied towards the limited-risk distribution ("LRD") activities if the following conditions are met for both the tested party and uncontrolled comparables:

- Absence of non-routine intangible property;
- Absence or low level of inventory;
- Absence of debtors related functions; and
- Entity does not take title of the goods purchased or takes a flash title only.

The LRD is an entity engaged in trading transactions that acts in its own name and in its own account, however the majority of risks are primarily born by the parent company. In addition, marketing, advertisement and other sales promotion activities are usually performed by a parent. The LRD takes a flash title for a limited period of time in the course of its buy-sell business

²¹ 2017 OECD Guidelines ¶ 2.107 at page 130.

²² 2017 UN Manual ¶ B.3.375 at page 197.

²³ APA Study Guide at page 14.

²⁴ The distributors are usually engaged in "buy-sell" activity without physical alteration of the goods that might include repackaging and assembly into kits.

²⁵ 2017 UN Manual ¶ B.3.3.7.3 at page 196.

operations and should be reimbursed for the operating expenses it occurs. It is typically the manufacturer of the goods that bears major types of risks related to the goods themselves.²⁶ This includes bad debt, inventory loss or obsolescence.

One should differentiate between trading “buy-sell” transactions and indenting transactions and commissionaire arrangements. The commissionaire is a business entity engaged in trading transactions in its own name but for the principal account. The commissionaire does not take title for the goods transferred. Under these arrangements, the goods are directly shipped from the manufacturer, while the commissionaire is reimbursed by commission for the sales performed. Consequently, the level of inventory may be the primary factor to differentiate between a LRD and a commissionaire. As the reimbursement of a commissionaire is linked towards the volume of profits, the Berry Ratio cannot be applied. This rule is re-iterated by the recent court case *Sumitomo Corporation India Pvt. Ltd. v. CIT* described further in the Chapter.²⁷

It should also be noted that in certain instances, a LRD may perform trading transactions bundled with commissionaire activities, which leads to a distortion of profits from distribution activities. Such commission income may relate to *bona fide* territorial rights granted by a related manufacturer to a related distributor. The auxiliary services performed by a distributor may or may not constitute an integral part of its commercial activities. Commission income may take form of the reimbursement of expenses incurred by a distributor for the local market development or may be derived from a client that a parent secured without the help of a local distributor. It is essential to unbundle trading and commissionaire activities and to test them separately.²⁸

Under the commissionaire arrangements, the Berry Ratio may only be used only as a sanity check to ensure that the tested party is not overcompensated for the operating expenses it incurs (unless it is contributing valuable, non-routine intangibles).²⁹

Current market conditions may result in spill-over effects and in development of “soft” intangibles by a local distribution entity. Segregation of routine and non-routine intangibles may be quite subjective and may be determined on a case-by-case basis. In the *State of New York vs. Hallmark Marketing Corporation* tax court case, the Hallmark distribution subsidiary was allegedly accused in developing its own non-routine intangibles. This included trained work force, expertise in selection of real estate, tradename protection service and unique distribution channels. The administrative law judge (“ALJ”), however, dismissed the claim of the non-routine IP ownership on the basis that it is a common business practice that the majority of distributors add value to their operations through skilled labor, knowledge of the market, local advertising functions and distribution network.

Application of the Berry Ratio in certain industries may be more conducive than in others. The examples below describe the validity of the Berry Ratio application in distribution transactions of

²⁶ Vatika Bhatnagar. 2017. *Appropriate Application of the Berry Ratio as a Profit Level Indicator*. International Transfer Pricing Journal, January/February at page 28.

²⁷ See *Sumitomo Corporation India Pvt Ltd v CIT* [ITA 83 of 2015] (2015).

²⁸ Henry J. Birnkrant, Pamela S. Ammermann. 2002. *Applying §482 to a Distributor's Commission Income in an APA*. Tax Management Transfer Pricing Report, Vol. 10, No. 18, January 23 at page 785.

²⁹ Vatika Bhatnagar. 2017. *Appropriate Application of the Berry Ratio as a Profit Level Indicator*. International Transfer Pricing Journal, January/February at page 29.

consumer electronics and commodity chemical products.³⁰

The consumer electronics industry is characterized by a high level of risk. This includes intense competition, including price competition; a short product life cycle with the continuous introduction of new products to the market; changes in economic conditions that impact consumer preferences and spending habits, as well as local country regulations. The supply chain of consumer electronics products usually involves production facilities in the Asia-Pacific region with distribution centers in major European and American markets. Assessing the risks involved from a third-party perspective, it is doubtful that the uncontrolled distributors would be willing to bear these types of risks. Independent distributors of consumer electronics perform limited functions consisting of acting as a liaison with the controlled manufacture and providing logistics services. In addition, their marketing and customer support services are also limited. These types of entities are of limited functional profile, do not possess non-routine intangibles and their operating expenses consist primarily of fixed overhead costs. As a result, under these conditions, CPM coupled with the Berry Ratio as a PLI may be the most appropriate method to test the adherence of the controlled entity's operations to the arm's length standard.

Similarly, the commodity chemicals industry is characterized by price volatility and uncertainty evolving around future trends. The distributors of chemical commodities usually have a limited functional profile, do not own non-routine intangibles and try to minimize the risks of their operations related to price fluctuations. For the very same reason, applying the Berry Ratio under such circumstances is advisable.

There is a caveat one should follow that relates to the applicability of the Berry Ratio across various industries: choosing comparables from different industries may distort the reliability of the results. The explanation stems from the fact the level and structure of operating expenses differs for certain industries and products, i.e. operating costs of a pharmaceutical distributor may not be comparable to the ones of a commodity distributor.³¹ These differences may also result from the intensity of functions performed, economies of scale, market share and other strategic considerations. Similarly, different geographic regions may yield material differences in the level of operating expenses. One of the advantages of the Berry Ratio's application towards the limited-risk distributors is lack of concern for the size of the comparable companies.³²

Another area where the Berry Ratio may be applicable is in trading houses and other high volume/low margin activities.³³ In low-margin/high-volume activities, even a small percentage of return on sales ("ROS") can generate enormous operating profits and be quite unrelated to the extent of the value-adding activities performed by a distributor. In this situation, the GP/OE ratio

³⁰ C.J. Eduard A. Sporken, Michael A. Midzio, Alexander Loh and Martin Wenke, *Possible Application of the Berry Ratio for the Distribution Function in the Consumer Electronics Industry in Europe*, International Transfer Pricing Journal, July/August 2010; Andrew Hickman, C.J. Eduard A. Sporken and Michael A. Midzio, *Possible Application of the Berry Ratio for the Distribution Function in the Chemical Industry*, International Transfer Pricing Journal, January/February 2010.

³¹ Vatika Bhatnagar. 2017. *Appropriate Application of the Berry Ratio as a Profit Level Indicator*. International Transfer Pricing Journal, January/February at page 26.

³² Vatika Bhatnagar. 2017. *Appropriate Application of the Berry Ratio as a Profit Level Indicator*. International Transfer Pricing Journal, January/February at page 30.

³³ Ron Dorward. 2016. *When Could the Berry Ratio Be Used in Transfer Pricing Analyses?* International Transfer Pricing Journal, July/August at pages 290-294.

might prove to be a better PLI than ROS. This should particularly be the situation where the value-adding activity performed by an affiliate is not tied to maximizing sales revenues so prices and/or volumes are determined elsewhere.

[3] Intermediary Transactions

High level of competition in international business incentivizes MNEs to centralize their activities along the value chain to benefit from economies of scale. These activities include manufacturing, research and development, procurement, etc. Typically MNEs establish procurement hubs as a liaison office. Whereas a procurement entity performs the function of a service provider Berry Ratio is a good fit. Robust functional analysis is necessary to support the evidence that the entity does not carry significant inventory levels or that its remuneration is based on the sales volume.

Another example of intermediary activity could be a distribution hub used by a parent company for distribution of products by controlled distributors. The functions performed by a distribution hub are usually limited to logistics and warehousing. Such entity is primarily engaged in receiving, storing and further transportation of goods; it usually does not perform marketing activities, nor does it add any value to the goods it distributes. Its risk profile is also lower than a wholesale distributor as the majority of risks are borne by a parent. Thus, the distribution hub becomes a risk-free provider of services to other controlled entities and simply facilitates physical flow of tangible goods between the parent entity and controlled distributors.³⁴ Attention should be paid to logistics and warehouse services that may be outsourced to third-parties and should be treated as pass-through costs. Tax practitioners should be aware that some local country's tax authorities, i.e. in Austria, Belgium, China, and Luxembourg, may be reluctant to exclude pass-through costs from the total cost base.³⁵

Fragmentation along the value chain suggests another opportunity for using the Berry Ratio. Where the MNE has segmented the value chain into multiple vertically integrated stages, there will be transfer pricing opportunities both upstream (transactions with related party suppliers) and downstream (transactions with related party buyers). In this situation, it may be impossible to use the traditional methods to value the activities of affiliates that are “stuck in the middle” of a vertically integrated value chain. For example, the Resale Price Method may not be usable because the first arm's length transaction may be several steps down in the value chain. The Cost Plus Method similarly may not be usable because the first arm's length transaction is several steps up in the value chain. In these situations, a careful attention to the activities performed by the “stuck in the middle” affiliate may enable the calculation of a GP/OE or OP/OE mark-up that reflects the open market costs of the extent of the activities performed by that entity.

The OECD Guidelines have recognized this case. The Guidelines stipulate that the application of the Berry Ratio can prove useful for intermediary activities, especially in reselling activities to controlled entities of the group. The Guidelines specify that:

³⁴ Ryan M. Finley. 2013. *Examining Cost Base Kinks in the Global Supply*, 22 Transfer Pricing Report (BNA Tax Mgmt), July 25 at page 393.

³⁵ Ryan M. Finley. 2013. *Examining Cost Base Kinks in the Global Supply*, 22 Transfer Pricing Report (BNA Tax Mgmt), July 25 at page 393.

“In such cases, the resale price method may not be applicable given the absence of uncontrolled sales, and a cost plus method that would provide for a mark-up on the cost of goods sold might not be applicable either where the cost of goods sold consists in controlled purchases. By contrast, operating expenses in the case of an intermediary may be reasonably independent from transfer pricing formulation, unless they are materially affected by controlled transaction costs such as head office charges, rental fees or royalties paid to an associated enterprise, so that, depending on the facts and circumstances of the case, a Berry Ratio may be an appropriate indicator, subject to the comments above.”³⁶

§ 9.04 Limitations to Berry Ratio

[1] Overview

The UN Manual provides the following key limitations to the use of Berry Ratio:

- Sensitivity to cost classification;
- Value of costs to maintain intangible property of the entity is excluded; and
- Decrease of reliability in increase of asset intensity of the tested party.³⁷

[2] Practical Considerations in Aligning Functions, Risks, and Assets

The basic premise of the Berry Ratio’s application is that the functional profile of the tested controlled entity, i.e. functions performed, risks assumed and assets owned, should be congruent with the functional profile of the uncontrolled comparable entities. In some instances, a controlled distributor may perform fewer functions as its parent is in charge of marketing research and campaign, as well as customer and technical support.³⁸ Therefore, it is important to ensure both functional and financial comparability: to align both the functions performed and the comparable cost base.³⁹

The IRS APA Study Guide suggests to use caution in the application of Berry Ratio when the level of operating expenses to sales are low, i.e. less than 10 percent – 15 percent, as in practicality this results in high values of Berry Ratio.⁴⁰ Therefore, it is worth examining the ratio of operating expenses to sales across comparable distributors/service providers to verify functional comparability. It should be noted that a number of factors, such as timing of the expenditures,

³⁶ 2017 OECD Guidelines ¶ 2.108.

³⁷ 2017 UN Manual ¶ B.3.3.7.5.

³⁸ David Broomhall. 2007. *SG&A and Distributor Profits in Transfer Pricing*. Tax Management Transfer Pricing Report, Vol. 16, No. 8, August 9 at page 288.

³⁹ Ryan M. Finley. 2013. *Examining Cost Base Kinks in the Global Supply*, 22 Transfer Pricing Report (BNA Tax Mgmt), July 25 at page 393.

⁴⁰ APA Study Guide at page 16.

business cycles and demand conditions, may impact operating expenses to sales ratio.⁴¹

[3] Berry Ratio and Manufacturing Activities

Dr. Charles Berry warned on the misuse of Berry Ratio in case when the uncontrolled entity is also engaged in providing manufacturing services in addition to distribution services.⁴²

“A return would therefore be expected for the manufacturing function as well as for the distribution activity, and that manufacturing return is not imbedded in the “cost of goods sold” as it is when those goods are purchased at arm's length from an independent manufacturer. This would not matter if operating expenses always bore the same relationship, within individual firms, to the cost of goods sold, in which case either cost measure would be a good measure of the other, or, for that matter, of total costs. But firms generally do differ with respect to the relative importance of various activities carried out within the firm.

Another reason lies in the flexibility of accounting convention. There is no hard and fast accounting principle that guides the allocation of costs between operating expense and manufacturing expense, and in most instances there is probably considerable latitude in the way in which “cost of goods sold” is defined without violating what could be termed generally accepted accounting practice. To be sure, all costs must be accounted for, but from an accounting standpoint there can be considerable latitude with respect to the allocation rules. However, as the allocation of costs is shifted toward the manufacturing category, the cost of goods sold will increase, gross profit will decrease, operating expenses will decrease, and the Berry Ratio will increase – and possibly quite dramatically – without any change in the firm's activities or profitability.”

The last reason why the Berry Ratio is not applicable towards manufacturing activities is that the manufacturing entities are more capital intensive compared to distributors, and, thus, capital intensity varies across them.

Separately, when applying the Berry Ratio, the ratio of capital intensity to operating expenses should be tested across the comparable distributors to confirm reliability of the method.⁴³

⁴¹ David Broomhall. 2007. SG&A and Distributor Profits in Transfer Pricing. Tax Management Transfer Pricing Report, Vol. 16, No. 8, August 9 at page 289.

⁴² See Charles H. Berry, *Berry Ratios: Their Use and Misuse*, Journal of Global Transfer Pricing (April-May 1999) at page 20.

⁴³ Vatika Bhatnagar. 2017. *Appropriate Application of the Berry Ratio as a Profit Level Indicator*. International Transfer Pricing Journal, January/February at page 27.

[4] Accounting Conventions

Under the U.S. regulations, the reliability of the Berry Ratio depends on comparability of tested party operating expenses to that of the uncontrolled comparables. Both the U.S. regulations Section 482 and IRS APA Study Guide define operating expenses as selling, general and administrative expenses (“SG&A”), excluding depreciation.⁴⁴ The U.S. 482 Regulations provide that

“operating expenses include all expenses not included in cost of goods sold except for interest expense, foreign income taxes..., domestic income taxes, and any other expenses not related to the operation of the relevant business activity. Operating expenses ordinarily include expenses associated with advertising, promotion, sales, marketing, warehousing and distribution, administration, and a reasonable allowance for depreciation and amortization.”⁴⁵

Nevertheless, the U.S. General Accepted Accounting Principles (“GAAP”) leaves a latitude to cost allocation between COGS or SG&A. For service providers, the cost of services are also often included in COGS rather than in operating expenses.⁴⁶ The major database used to benchmark North American companies *Research Insight's Compustat* automatically includes terminals and traffic, transportation and warehouse expenses into COGS for non-manufacturing companies unless the company specifically chooses to allocate the aforementioned costs to their SG&A.⁴⁷

Differences in accounting standards negatively impact the reliability of economic analysis. The example below provides evidence of a distortion of the results yielded by application of the Berry Ratio after reclassification of company's costs. For instance, if gross profit stands at EUR 12 million with operating expenses at EUR 8 million, the Berry ratio results in 1.5. Further, if part of these operating costs are reclassified into COGS and OE mark EUR 4 million instead, the Berry Ratio results in 2. This constitutes a significant increase from the initial results.⁴⁸

The OECD Guidelines acknowledge that the Berry Ratio is highly sensitive to classification of costs as operating expenses that may result in comparability issues. The Guidelines also address the issue of pass-through costs that may subsequently arise, however, they do not provide guidance on which costs should be allocated to operating expenses.⁴⁹ In Europe, the matter of cost allocation becomes even more complicated due to differences in the accounting and database cost classification practices across 28 European Union Member States. For instance, data on COGS in *Bureau van Dijk's Amadeus* database for Europe is quite scarce. Another challenge is that gross profit may be calculated either by subtracting COGS or Material Costs (“MC”). While MC relate

⁴⁴ APA Study Guide at page 12.

⁴⁵ Treas. Reg. § 1.482-5(d)(3)

⁴⁶ J. Harold McClure. 2001. The IRS APA Program's Approach to Commission Income. 10 Tax Management Transfer Pricing Report 275 at page 2084.

⁴⁷ Ryan M. Finley. 2013. *Examining Cost Base Kinks in the Global Supply*, 22 Transfer Pricing Report (BNA Tax Mgmt), July 25 at page 393.

⁴⁸ Vatika Bhatnagar. 2017. *Appropriate Application of the Berry Ratio as a Profit Level Indicator*. International Transfer Pricing Journal, January/February at page 27.

⁴⁹ 2017 OECD Guidelines ¶ 2.107.

only to purchases of materials used for manufacturing of a product or provision of services, COGS is a more comprehensive cost pool that incorporates all direct production costs, including overhead, labor costs, and the costs occurred to bring inventory to its current location and condition.⁵⁰ Such differences yield additional hurdles in aligning measurement of gross profit across EU companies.⁵¹

Convergence of accounting standards across the EU member states and introduction of the requirement to disclose detailed annual reports would be helpful both for national tax authorities and transfer pricing practitioners. In particular, this would facilitate calculation not only of the Berry Ratio but also various diagnostic ratios that include operating expenses. Prior studies show that some countries already employ accounting systems similar to International Finance Reporting Standards (“IFRS”).⁵² At the very least, the database providers may be more transparent with regards to their cost classification practices.⁵³

The UN Manual also addresses its concerns regarding the possibility of manipulating the expense categorization (OE vs. COGS) when the PLI is based on gross profit,⁵⁴ as this might cause additional comparability issues between the tested party and uncontrolled comparable entities. Both sets of guidelines recommend to exclude interest and extraneous income from calculations, while elimination of depreciation and amortization from the pool of operating expenses depends on the facts and circumstances surrounding the transaction.⁵⁵ Because the Berry Ratio is sensitive to classification of OE and COGS, proper implementation of the Berry Ratio requires careful review of financials and detailed benchmarking data with the income statement itemization for the uncontrolled comparable companies.⁵⁷

Another challenge relates to ownership of non-routine intangibles. For example, when choosing comparable LRDs it is essential to benchmark companies that do not own any valuable intangibles, such as trademarks, exclusive distribution rights, etc.⁵⁸ The identification of these non-routine intangibles may be burdensome, as, other than goodwill, intangibles are not easily indefinable on company’s financial statements.

⁵⁰ European Commission. 2014. Final Report: Study on Comparable Data used for Transfer Pricing in the EU, Specific contract no. 5 under FWC TAXUD/2014/CC/126 at page 160.

⁵¹ Ibid at page 116.

⁵² Ibid at page 188.

⁵³ Ryan M. Finley. 2013. *Examining Cost Base Kinks in the Global Supply*, 22 Transfer Pricing Report (BNA Tax Mgmt), July 25 at page 393.

⁵⁴ 2017 UN Manual ¶ B.3.376.

⁵⁵ 2017 OECD Guidelines ¶ 2.106.

⁵⁶ See Chapter 12 for discussions on the exclusion of amortization of intangibles from operating expenses.

⁵⁷ Ron Dorward. 2016. *When Could the Berry Ratio Be Used in Transfer Pricing Analysis*, International Transfer Pricing Journal, July/August at page 293.

⁵⁸ David Broomhall. 2007. *SG&A and Distributor Profits in Transfer Pricing*. Tax Management Transfer Pricing Report, Vol. 16, No. 8, August 9 at page 288.

§ 9.05 Country Practice

[1] U.S. Advance Pricing Agreements (APAs)

The choice of an appropriate PLI is frequently an important issue in APA negotiations, given the propensity to use CPM as the transfer pricing method of choice. Table 1 summarizes statistics regarding the application of the Berry Ratio since the inception of the IRS APA Program⁵⁹. This analysis illustrates an increase (starting from 2012) in the application of the Berry Ratio when the transfer of tangible property is benchmarked via CPM. The Berry Ratio is also frequently used as a PLI when services transactions are benchmarked by the CPM.

Table 1: Berry Ratio in U.S. APAs, 1991-2018

Years*	Total number of APAs executed**	Transactions where CPM was used for the transfer of tangible and intangible property	CPM with Berry Ratio as PLI (% of total transactions with CPM used as a TPM)
1991-1999	231	114	13 (11%)
2000	63	31	2 (6.5%)
2001	55	40	7 (17.5%)
2002	85	35	10 (29%)
2003	58	28	3 (11%)
2004	65	58	14 (24%)
2005	53	35	6 (17%)
2006	82	58	11 (19%)
2007	81	87	16 (18%)
2008	68	62	9 (15%)
2009	63	64	14 (22%)
2010	69	67	5 (7.5%)
2011	42	49	2 (4%)
2012	140	75%	15%

⁵⁹ 1991-2010 APA Statutory Reports and 2011– 2018 APMA Statutory Reports

2013	145	77%	8%
2014	101	78%	6%
2015	110	79%	25%
2016	98	89%	33%****
2017	116	85%	15%****
2018	107	86%	32%****

* Data available in percentage form only since 2012

** An APA may contain multiple transactions

*** Whereas APA statistics provided ≤ 3 , 2 was assumed as an average number

**** Berry Ratio falls into the Other PLIs category, where the Berry Ratio PLI is aggregated with return on assets and capital employed

A new use for the Berry Ratio appears in the latest edition of the IRS Transfer Pricing Examination Process (Publication 5300 (6-2018)) or “TPEP.”⁶⁰ Paragraph 9 of the TPEP recommends that IRS examiners compute 11 “key financial ratios” for multiple years and compare the taxpayer’s results with industry results; the comparison is to serve as a diagnostic tool to help the IRS determine whether or not the taxpayer has engaged in cross-border income shifting. The Berry Ratio is number 4 of the 11 listed ratios in TPEP Paragraph 10.

Outside of the United States, countries actively adopt the OECD Guidelines with the respective changes from the Base Erosion and Profit Shifting (“BEPS”) Project and incorporate application of the Berry Ratio into their local legislation. In addition, the Berry Ratio also appeared in a series of court cases within the last decade. We explore both below.

[2] The Berry Ratio Outside of the United States

Outside of the U.S., the Berry Ratio is gaining widespread acceptance as countries throughout the world actively align their local country legislation with the OECD Guidelines.

Despite the increase in popularity, transfer pricing professionals should be aware that certain governments do not accept the Berry Ratio as a valid PLI in their local transfer pricing regulations and others might use it reluctantly. For example, the UK tax authorities tend to prefer a sales-based rather than a cost-based approach; the French tax authorities favor a PLI based on net rather than gross profits; while the German tax authorities only consider the use of Berry Ratio in services transactions.⁶¹ The authors reviewed the acceptance of the Berry Ratio in 55 countries throughout the world based on the OECD overview of local country transfer pricing legislation (“OECD

⁶⁰ Internal Revenue Service 2018. *Transfer Pricing Examination Process*. Publication 5300 (6-2018). Available at <https://www.irs.gov/businesses/corporations/transfer-pricing-examination-process> (last visited Aug 26, 2019).

⁶¹ Andrew Hickman, C.J. Eduard A. Sporken and Michael A. Midzio, *Possible Application of the Berry Ratio for the Distribution Function in the Chemical Industry*, *International Transfer Pricing Journal* (January/February 2010) at pages 44-47.

Transfer Pricing Country Profiles”) as of the latest update of June 2019.⁶² The results are summarized in Table 2 below.

Table 2: Berry Ratio Practices by Country, 2019

Country	Follows OECD guidance / Broadly in line with the OECD Transfer Pricing Guidelines / OECD Guidelines used as an explanatory mechanism, incl. application of the Berry Ratio	Adopted the Berry Ratio in local transfer pricing legislation	Does not recognize the Berry Ratio
Australia		✓	
Austria		✓	
Belgium	✓		
Brazil			✓
Bulgaria	✓		
Canada	✓		
Chile	✓		
China		✓	
Colombia	✓		
Costa Rica	✓		
Croatia	✓		
Czech Republic	✓		
Denmark	✓		
Estonia	✓		
Finland	✓		
France	✓		
Georgia	✓		
Germany	✓		
Greece	✓		
Hungary	✓		
India		✓	
Indonesia	✓		
Ireland	✓		
Israel*		✓	
Italy*		✓	
Japan		✓	
Korea*		✓	
Latvia	✓		
Liechtenstein	✓		
Lithuania	✓		
Luxembourg	✓		
Malaysia		✓	
Malta	✓		
Mexico	✓		
Netherlands	✓		

⁶² OECD Transfer Pricing Country Profiles. Available at <https://www.oecd.org/ctp/transfer-pricing/transfer-pricing-country-profiles.htm> (last visited July 27, 2019).

New Zealand	✓		
Nigeria*		✓	
Norway	✓		
Panama	✓		
Peru*		✓	
Poland	✓		
Portugal	✓		
Russian Federation		✓	
Seychelles	✓		
Singapore		✓	
Slovak Republic*		✓	
Slovenia	✓		
South Africa	✓		
Spain	✓		
Sweden	✓		
Switzerland	✓		
Turkey	✓		
United Kingdom	✓		
United States		✓	
Uruguay	✓		

* Application of the Berry ratio in domestic legislation is through “Other method consistent with an arm’s length result”

The historical preferences of a local country tax authority should also be considered. For example, while Japanese, Indian, Korean and Singaporean tax authorities favorably accept the Berry Ratio, other countries may hesitate to accept the CPM/TNMM with the Berry Ratio as a PLI if the application of this method decreases the local country’s tax base. The facts and circumstances varies with each case. Industry professionals are seeing widespread application of the Berry Ratio in APAs both in inbound and outbound cases. However, if converted into operating margin, the Berry Ratio often results in an operating margin of less than one percent, whereas earnings of the typical distributor average three percent. For this reason, local country tax authorities might be unwilling to accept the Berry Ratio in the inbound case.⁶³

§ 9.06 Transfer Pricing Litigation Involving Berry Ratio

[1] Overview

The Berry Ratio is closely intertwined with the U.S. transfer pricing litigation. Developed in the tax court case *E.I. DuPont de Nemours & Co. v. United States* in 1973, the concept remained untouched for decades.⁶⁴ The Berry Ratio reappeared as a part of the transfer pricing controversy in the State of New York court case involving Hallmark Corporation.⁶⁵ Lastly, the most recent case relates to the decision of the U.S. Tax Court concerning retroactive revocation of the APA entered

⁶³ Molly Mosses. 2007. *Berry Remembered as Bringing Economics to Transfer Pricing with du Pont Testimony*. Transfer Pricing Rep (BNA Tax Mgmt), September 20 at pages 346-347.

⁶⁴ See *E.I. DuPont de Nemours & Co. v. United States* (1979).

⁶⁵ See *Hallmark Marketing Corp*, DTA No 819956 (NYS Div of Tax App Trib July 19, 2007).

between the IRS and Eaton Corporation. In this court case the Berry Ratio was applied to reselling activities between the U.S. Corporation and its foreign subsidiaries.⁶⁶

Internationally, the Berry Ratio is gradually instilled in the transfer pricing case law with a number of legal cases in India involving intercompany cross-border transactions of the Japanese *sogo shosha* general trading companies, including Mitsui & Co and Sumimoto Corporation.⁶⁷ While the majority of decisions issued by Indian tax courts upheld the use of Berry Ratio, it is worth noting that the application of the Berry Ratio is fact-driven and the scope of its application is limited. A brief summary of the aforementioned court cases is presented below.

[2] E.I. DuPont de Nemours & Co. v. United States⁶⁸

*E.I. DuPont de Nemours & Co. v. United States*⁶⁹ involved transfer pricing of export sales between the U.S. Parent and its Swiss subsidiary. In 1958, E. I. du Pont de Nemours and Company (“DuPont”), then the largest international chemical company, established a wholly owned subsidiary in Switzerland, DuPont International S.A. (“DISA”), to establish marketing presence in Europe and to act as a super-distributor for all foreign sales of DuPont’s products. DISA was set to be reimbursed by a margin of 20 percent on the price of the products purchased from the U.S. Parent for further resale to other DuPont subsidiaries in Europe. The IRS found DISA’s earnings for the tax years 1959 and 1960 to be excessive and issued a deficiency note. DuPont fulfilled the reassessment; however, they sued for recovery of this amount with the U.S. Court of Claims. Under these conditions, the IRS hired Dr. Charles Berry as an independent economic expert to testify whether the DISA’s selling prices to other DuPont affiliates were at arm’s length and to assess whether there had been a distortion of income from the U.S. to the Swiss subsidiary.

The major issue at question was whether DISA was reimbursed at the arm’s length level for the activities it performed. Subsequently, Dr. Charles Berry identified the following three types of operations performed by DISA – marketing, advertising and distribution – and compared the returns earned by DISA on these operations to returns earned by independent companies performing similar functions in Europe, i.e. independent marketing companies, independent advertising companies, and independent distributors. For the marketing business, Berry compared gross profit earned by DISA for reselling DuPont’s products divided by the operating expenses DISA incurred in the course of provision marketing services to gross profit divided by total expenses incurred by the comparable providers of marketing services in Europe. For the advertising segment, Berry examined the ratio of billed commission to operating expenses. He excluded costs related to advertising placement because it did not relate to the nature of the services provided by advertising agencies. For the distribution segment, Berry assessed the ratio of gross profit to operating expenses. Interest and extraneous income were excluded from the gross profit. In addition, interest expenses and depreciation were excluded from the pool of operating expenses. In all three instances, DISA’s earnings significantly exceeded profits realized by independent comparable companies. Subsequently, DuPont’s claim was not satisfied.

⁶⁶ See *Eaton Corp v Comm’r* (July 26, 2017)

⁶⁷ On the two Indian cases see also Vatika Bhatnagar. 2017. *Appropriate Application of the Berry Ratio as a Profit Level Indicator*. International Transfer Pricing Journal, January/February at pages 25-31.

⁶⁸ See Chapter 11 for additional details.

⁶⁹ See *E.I. DuPont de Nemours & Co v United States* (1979).

The *DuPont* case introduced economics into transfer pricing analysis, both from the regulatory and litigation standpoint.⁷⁰ The economic approach was further embodied into transfer pricing analysis by the documentation requirements under Section 6662.

[3] Hallmark Marketing Corp., DTA No. 819956⁷¹

The *Hallmark Marketing Corp.* case involved state transfer pricing controversy and the matter of combined reporting. The New York Division of Taxation contested the reasonableness of transfer pricing approach employed by Kansas-based Hallmark Cards Inc. (“HCI”) towards its New York-based marketing subsidiary Hallmark Marketing Corporation (“HMC”). HMC acted as the exclusive U.S. distributor of Hallmark products to independent distributors. Per intercompany agreement, HCI granted HMC a royalty-free license for the Hallmark trademark on the territory of the United States. The arm’s length nature of the relationship between HCI and HMC was supported by a transfer pricing report whereby the HMC was characterized as a routine distributor and its returns were tested via the Berry Ratio.

The State of New York argued that combined corporate reporting is required due to substantial volume of intercompany transactions between HMC and HCI. The statutory presumption of distortion arose from the fact that HCI’s revenues derived from intangibles were not included in New York State’s tax base.

The New York Division of Taxation also rebutted application of the Berry Ratio for the following reasons:

- HMC performed functions other than routine distribution, such as certain manufacturing activities and trademark protection functions;
- HMC developed its own soft intangibles, and hence cannot be tested via the Berry Ratio; and
- Independent comparable companies performed additional functions other than distribution.

The New York Tax Appeals Tribunal upheld that HCI and HMC operated at arm’s length whereas HMC acted primarily as a limited-risk distributor, i.e. it did not provide any additional services and did not possess non-routine intangibles.

[3] Eaton Corp. v. Commissioner⁷²

Eaton Corp. v. Commissioner involved the IRS decision to retroactively revoke the APA with the U.S. taxpayer. In 2004, the IRS and Eaton Corporation, a global manufacturer of electrical and hydraulic components, executed an APA covering tax years 2001-2005 for Eaton Electrical Division. The APA at issue included intercompany transactions related to the manufacturing of breaker products and other electrical components by Eaton’s foreign subsidiaries in Puerto Rico and the Dominican Republic, and further resale of these components in the U.S. In 2006, the parties renewed the APA for the tax years 2006-2010. In 2011, the IRS retrospectively cancelled the APA

⁷⁰ Molly Moses. 2007. *Berry Remembered as Bringing Economics to Transfer Pricing with du Pont Testimony*. BNA Tax Management Transfer Pricing Report. September 20 at pages 346-347.

⁷¹ See Hallmark Marketing Corp, DTA No 819956 (NYS Div of Tax App Trib July 19, 2007).

⁷² See *Eaton Corp v Comm’r* (July 26, 2017).

on the basis of the misrepresentation of facts by the taxpayer and imposed transfer pricing adjustments of \$369 million for the tax years 2005 and 2006, as well as an income tax adjustment of \$1.02 billion for the tax years 2007-2010.

The major issue at question involved book-tax differences in the reported segment that have not been covered in the taxpayer's APA annual report. The initial terms of the APA contained application of a combined CUP & CPM methodology. Eaton's U.S. reselling entity was engaged in sale of electrical components both to Eaton's U.S. assembly plants and U.S. unrelated parties, and therefore, the taxpayer proposed to use selling prices to uncontrolled entities to identify arm's length revenue for the distribution of products to Eaton's U.S. affiliated entities. Further, on the basis of CUP data, the taxpayer constructed an income statement for U.S. distribution activities and applied the CPM with the Berry Ratio as a PLI to test adherence to the arm's length range earned by the comparable independent distributors. The Berry Ratio was calculated as Eaton's U.S. subsidiary's gross profit from sales of breaker products divided by breaker product operating (SG&A) expenses. Under the terms of the APA, Eaton's U.S. distributor had to achieve a Berry Ratio between 1.20 and 1.27 during the initial APA, and a Berry Ratio between 1.20 and 1.27 for the renewed APA. The IRS audit of the taxpayer's APA annual report for the tax years 2005-2008 revealed that the actual intercompany prices derived from the distribution ledgers charged between Eaton's subsidiaries significantly deviated from those provided in the APA annual report. Based on further research conducted by the IRS economist, the APA at issue was retrospectively revoked for the misrepresentation of material facts by the taxpayer. The tax court held that cancellation of APAs was an abuse of discretion under the applicable revenue procedures. The court held that a distortion in accounting stemmed from a human error in the internal electronic order management system. Though incorrect data was used for transfer pricing calculations, the taxpayer further attempted to rectify the mistake.

The *Eaton* case contained the relevant Berry Ratio discussions, such as the intercompany allocation of SG&A expenses and the ownership of intangibles by the tested party.

[4] Mitsui & Co. India Pvt. Ltd v. CIT^{73 74}

The *Mitsui & Co. India Pvt. Ltd. v. CIT* involved international trade support activities performed for the benefit of Japanese multinational general trading company, referred to as *sogo shosha*. Mitsui & Co. Ltd. Japan established a subsidiary in India, Mitsui & Co. India Pvt. Ltd., to facilitate trading transactions entered into by the parent. As such, the Indian subsidiary provided business support indenting services for a wide range of products. These transactions were benchmarked by the application of the TNMM with the Berry Ratio as a PLI. Indian tax authorities contested the aforementioned transfer pricing approach and re-characterized indenting transactions into a trading activity.

The Indian tax court upheld the taxpayer's approach due to limited functional profile of the local Indian entity. Mitsui & Co. India did not bear any risk related to possession of goods, nor did it bear financial risk, or warranty risk, because all trading activity was performed by the Japanese

⁷³ See *Mitsui & Co India Pvt Ltd v CIT* (August 27, 2015).

⁷⁴ The Mitsui and Sumitomo cases are reviewed below. A third case similar to these two cases, which we do not review for space reasons, is *Mitsubishi Corporation India Pvt. Ltd. V. DCIT* (ITA o. 5042/Del/11; decision date October 21, 2014), by the Income Tax Appellate Tribunal, New Delhi, India.

parent. In addition, the commission-based transfer pricing approach proposed by Indian tax authorities was rejected due to the substantial difference in the nature of products and items traded. The premise was that commission fees significantly fluctuate with respect to high-value and commodity products.

[5] Sumitomo Corporation India Pvt. Ltd. v. CIT⁷⁵

The *Sumitomo Corporation India Pvt. Ltd. v. CIT* involved export and import activities of the Indian subsidiary of the *sogo shosha* Japanese parent. In 1997, Sumimoto Corporation, Japan established its subsidiary in India, Sumimoto Corporation (India) Pvt. Ltd (“SCI”) to facilitate export and import activities of its parent. SCI operated trading and indenting business segments that for transfer pricing purposes were jointly tested via the Berry Ratio due to their limited risk profile. Indian tax authorities contested application of the TNMM with the Berry Ratio as a PLI towards bundled segments based on the functional incomparability of the businesses.

The major issue at question was whether trading and indenting transactions should have been benchmarked separately. Indian tax court upheld the position of the Indian tax authorities and noted that profits derived by SCI from indenting business are linked to volumes of goods. Hence, the Berry Ratio cannot be applied towards indenting transactions.

§ 9.07 Conclusion

This chapter discussed the specifics of the Berry Ratio application. The Berry Ratio, developed by Dr. Charles Berry in the 1979 DuPont case, shows how microeconomics and industry analysis can be used to apply the arm’s length standard in transfer pricing disputes.⁷⁶

The Berry Ratio is particularly suitable for low-risk distribution and intermediary activities, as well as the provision of business services. Each specific situation depends on the facts and circumstances, as all transfer pricing cases do, but the following conditions provide a useful short summary of the issues that must be addressed in order to not misuse the Berry Ratio:

- The revenue generated by a tested party should be linked towards its operating expenses, and not the sales volumes;
- The tested party may not own any non-routine intangibles;
- The tested party may not perform any other additional functions, especially manufacturing;
- The functional profile of the tested party should be congruent to the functional profile of uncontrolled comparable entities;
- The categorization of the operating expenses and the cost of goods sold of the tested party should be comparable to that of the uncontrolled entities.

Our first version of this chapter was completed almost exactly 10 years after the date of Dr. Charles Berry’s death on September 2, 2007. Our second version coincided with the 50th anniversary of the publication of the 1968 Section 482 Regulations, of which Dr. Berry was the

⁷⁵ See *Mitsui & Co India Pvt Ltd v CIT* (August 27, 2015).

⁷⁶ Molly Moses. 2007. *Berry Remembered as Bringing Economics to Transfer Pricing with du Pont Testimony*. BNA Tax Management Transfer Pricing Report. September 20 at pages 346-347.

primary economic architect. Our third version of this chapter was completed in July 2019 in the middle of the heated debate among transfer pricing and international tax practitioners over the OECD/G20's three-pillar proposals for the digital economy⁷⁷ and their implications for the arm's length standard.⁷⁸

We continue to believe that all economists, and particularly those who are transfer pricing professionals, should celebrate the contributions of Charles Berry, a remarkable man who has been in many ways the father of the transfer pricing rules in the international tax transfer pricing regime.⁷⁹ A key lesson we take away from Dr. Berry's work, which we want to share with current transfer pricing practitioners, is that the Berry Ratio – applied in the right set of facts and circumstances and done properly – can be the most reliable (US) and most appropriate (OECD) measure of an arm's length result. The Berry Ratio is more than a simple, optional profit level indicator; the Berry Ratio can be the best method in the right set of facts and circumstances.

We leave for future research an assessment of the benefits and costs of using the Berry Ratio for transfer pricing of digital transactions.

⁷⁷ OECD. 2019. *Addressing the Tax Challenges of the Digitalization of the Economy—Public Consultation Document*, OECD/G20 BEPS Project (Paris, Feb 13–Mar 1, 2019).

⁷⁸ Lorraine Eden, Niraja Srinivasan and Srini Lalapet. 2019. Transfer Pricing Challenges in the Digital Economy: Hic Sunt Dracones? *Tax Management International Journal*, 48 (June 14).

⁷⁹ Lorraine Eden. 1998. *Taxing Multinationals: Transfer Pricing and Corporate Income Taxation in North America*. Toronto: University of Toronto Press.