

April 11, 2014

**TO:** OECD Secretariat ([TransferPricing@oecd.org](mailto:TransferPricing@oecd.org))

**FROM:** Ednaldo Silva, Ph.D. ([esilva@royaltystat.com](mailto:esilva@royaltystat.com))

**Re: Transfer Pricing Comparability Data and Developing Countries**

I appreciate the opportunity to comment on the Paper on Transfer Pricing Comparability Data and Developing Countries published by the OECD on March 11, 2014 (hereafter “Paper on Developing Countries” or “The Paper”).

As the Managing Director of RoyaltyStat for over 14 years, I have designed and developed RoyaltyStat’s offering to be the world’s premier online database of publicly disclosed royalty rates. RoyaltyStat was the first online database to include the source of its license agreements, and the annual reports of publicly traded companies to determine arm’s length considerations for transfer pricing analysis and intangible asset valuation. RoyaltyStat also offers economic consulting and training.

The Paper on Developing Countries provides an overview of four approaches addressing the lack of local comparables in developing countries. Below, I provide comments on approaches 1, 2 and 3.<sup>1</sup> The views and opinions expressed in this document are mine and do not reflect the policy of RoyaltyStat.

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<sup>1</sup> I expect approach 4 regarding Advance Pricing Agreements (“APA”) and Mutual Agreement Proceedings (MAP) to be embraced by taxpayers and tax administrations everywhere, because they are administrative approaches that can prevent costly and time-consuming transfer pricing examinations and litigation. See OECD Guidelines, ¶¶ 4.142 to 1.146. However, I do not comment on approach 4 in this document.

### **Approach 1: Expanding access to data sources for comparables**

Paragraph 9 of The Paper lists three problems regarding the availability and the quality of data for assessing comparability in developing countries: (a) the limited number of “sizeable” independent companies, (b) the absence of a requirement for the public registration of statutory accounts, and (c) the difficulties in accessing statutory accounts where there is a public registry.<sup>2</sup> As a result, the OECD claims that databases provide limited financial information on companies residing in developing countries.

The small number of comparables is a general problem and not particular to developing countries. This problem stems from restrictive disclosure rules about company financials. Therefore, I agree with the OECD initiatives regarding the filing of statutory accounts and making them available to the public.<sup>3</sup> However, requiring companies to file statutory accounts is not enough. It is important that such filings follow a homogeneous accounting standard, such as the International Financial Reporting Standards (IFRS). Until such disclosures become effective, publicly traded company financials should be used as comparables, because data from privately held companies are not usually verifiable in annual reports submitted to public registries.<sup>4</sup> The filing of statutory accounts would solve the problem of data availability, and the filing of such data under homogeneous accounting standards, including accounting footnotes, would increase data reliability.<sup>5</sup>

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<sup>2</sup> Paragraph 15 defines “sizeable independent companies” as “companies that are not subsidiaries of other companies and do not engage in transactions with other companies under common ownership.”

<sup>3</sup> See ¶ 16 of The Paper.

<sup>4</sup> I have reviewed annual filings from privately held companies available in company registries of many countries in Europe, including France, Germany, Italy, the Netherlands, Norway, Poland, and the United Kingdom (“UK”). Except for certain filings in the UK’s Companies House, the filings in the countries reviewed do not provide sufficient information to determine comparability of functions performed, or verification of accounting items, such as revenue and operating profits. For example, only certain filings in the UK Companies House provide accounting footnotes. See <http://www.companieshouse.gov.uk/>.

<sup>5</sup> The practice of certain European tax authorities to rely on privately held company financials is Panglossian, because those financials are replete with impeachable problems. The problems include the use of unconsolidated (confounded with the absence of vertical integration) financials, heterogeneous accounting standards, absence of accounting footnotes, limited business descriptions, and lack of recourse to verify the elements composing revenue and operating profits. Moreover, the large number of potential privately held comparables is deceptive because

In addition to the three problems outlined by the Paper, a fourth problem is important for the OECD to consider. As long as the arm's length standard is based on comparables, defined in terms of multiple qualitative factors, the lack of comparable companies will exist in every country, including the developed OECD countries. In this regard, part of the pain of finding local comparables is self-inflicted, derived from excessive legal zeal devoid of economic principles. In economic theory, the markup requires less qualitative determination than prescribed in the OECD multivariate comparability factors (see the OECD Guidelines ¶¶ 1.38 to 1.63). *E.g.*, let the revenue of a given company be  $R_i = p q_i$  (market prices times the quantity sold by the selected company), and let every company in the industry use comparable technology.<sup>6</sup> It follows that the equation of maximum profits for the selected company can be written:

$$(1) p = C - (p / n E),$$

indicating that price depends on marginal cost ( $C$ ), the number of companies in the industry ( $n$ ), and the elasticity of demand ( $E$ ). Collecting  $p$  on the left side of (1), a markup price equation is obtained:<sup>7</sup>

$$(2) p = \mu C,$$

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when necessary search restrictions are introduced (such as minimum company size in terms of revenue, number of employees or total assets; or the existence of operating profits in three or more consecutive years), the number of companies available for comparability analysis is substantially reduced. Therefore, the use of privately held comparables is also a false hope for developing countries, and I hope the OECD does not pursue this unreliable alternative. In my opinion, privately held "comparables" cannot withstand audit scrutiny or tax controversy. See Exhibit 7 establishing that the U.S. APA program primarily uses comparables from publicly traded companies from Standard & Poor's Capital IQ Compustat database.

<sup>6</sup> Technology is defined by the input/output coefficients.

<sup>7</sup> This markup price equation (1) can be derived by taking the total derivative of  $R_i = p q_i$  with respect to the quantity sold ( $q$ ). Equation (1) is known from the 1838 original book by the French economist, Augustin Cournot, *Mathematical Principles of the Theory of Wealth* (New York, Macmillan, 1927). See also George Stigler, "Perfect Competition, Historically Contemplated," *Journal of Political Economy*, Vol. LXV (February 1957), footnote 19.

$$(3) \mu = (n E / (1 + n E)),$$

indicating that the markup ( $\mu$ ) depends on two factors -- the number of companies in the industry and the elasticity of demand.<sup>8</sup> Other theories of the markup independent of  $E$  can be supported in economic theory.<sup>9</sup>

My point is not to propose a stylized determination of the markup (generalizing the use of safe harbors), or to suggest that the determination of  $E$  is an easy matter, but rather to indicate that the model of comparability analysis that the OECD wishes to extend to developing countries, inherited uncritically from the U.S. (1968 and 1994) transfer pricing regulations, is convoluted. It overburdens tax administrations and taxpayers over the selection of comparables by insisting on using multiple qualitative factors whose influence on the profit markup is asserted without a coherent theory or empirical evidence. Therefore, the problem of extending the arm's length principles under the current comparability axioms is not simply lack of local comparables, but also that the OECD's attitude towards comparability analysis lacks scientific merit.<sup>10</sup>

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<sup>8</sup> The markup in Eq. (3) depends only on the number of companies in the industry when  $E \approx 1$ . If the number of companies in the industry is large, indicating low barriers to entry (competition), the markup is low; when the number of companies is small, indicating high barriers to entry (oligopoly), the markup is high. Therefore, two levels of the markup can be contemplated, one for competitive industries, and another for oligopolistic industries, vitiating the need to select comparables when only a small number of potential comparables is available.

<sup>9</sup> E.g., Michael Kalecki developed a markup price theory without reference to  $E$ . The post Cournot economic literature posits that the markup is primarily determined by economic concentration, which is related to the number of companies in the industry ( $n$ ), measured, for example, by the Herfindahl–Hirschman Index of market concentration. See Michael Kalecki, "Costs and Prices" (1943) in his *Selected Essays on the Dynamics of the Capitalist Economy* (Cambridge University Press, 1971), and the seminal books by Joe Bain, *Barriers to New Competition* (Harvard University Press, 1956) and Paolo Sylos-Labini, *Oligopoly and Technical Progress* (Harvard University Press, 1962), followed *inter alia* in a more recent collection of articles edited by Leonard Weiss, *Concentration and Price* (MIT Press, 1989). Regarding the Herfindahl–Hirschman Index, which is used in competition analysis of the effect of market concentration on prices and profits, see <http://www.justice.gov/atr/public/guidelines/hhi.html>.

<sup>10</sup> The economic literature showing that company size (a proxy for economic concentration) determines profits is long-standing, without making reference to functions performed, assets employed, or contractual terms. E.g., see William Crum, *Corporate Size and Earning Power* (Harvard University Press, 1939), Norman Collins and Lee

Exhibits 1 through 5 show the number of potentially comparable companies engaged in distribution of durable and non-durable goods, and in business and professional services worldwide and in selected countries.<sup>11</sup> These exhibits reveal that comparability data on publicly traded companies are almost nonexistent in certain large developing countries, such as Brazil, Mexico and Russia, and are scarce even for certain developed OECD countries, such as Australia, Canada, France, Germany and the UK.

Exhibit 6 shows the number of license agreements by industry and by type of intangibles. Contradicting the prevailing idea that comparables for transactions involving intangibles are difficult to find, the number of potential comparables for the licensing of intangibles worldwide is 11,159, much higher than the number of potential comparables for companies engaged in distribution and services. In comparison to this large number of license agreements, the number of publicly traded companies engaged worldwide in distribution of durable and non-durable goods is 871, companies providing business services is 1,446, and companies offering professional services is 276. See Exhibit 1.<sup>12</sup>

### **Approach 2: More effective use of data sources for comparables**

I agree with The Paper's affirmation that "inappropriately specified search criteria may return overly broad results that incorporate inappropriate comparables, so that the transfer pricing range that is ultimately arrived at is either unworkably broad or incorrectly placed." In my experience

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Preston, *Concentration and Price-Cost Margins in Manufacturing Industries* (University of California Press, 1970), *etc.*

<sup>11</sup> This search was performed in [www.royaltystat.com](http://www.royaltystat.com) on April 10, 2014, using RoyaltyStat/Compustat database of global company financials. Compustat is the primary database of company financials used by the IRS. See the Annual APA Statutory Reports, available online at: <http://www.irs.gov/Businesses/Corporations/Annual-APA-Statutory-Reports>. See also the IRS Audit Road Map of February 2014, page 6, available online at: <http://www.irs.gov/pub/irs-utl/FinalTrfPrcRoadMap.pdf>. Exhibit 7 has a table summarizing the database usage in the APAs executed in the United States. Compustat is also branded as Capital IQ.

<sup>12</sup> RoyaltyStat's database contains over 16,000 license agreements, but for this search I restricted the royalty base to net sales, and excluded agreements between related parties. RoyaltyStat's databases are updated daily; thus, searches performed on later dates are likely to produce additional license agreements.

as a data provider and transfer pricing expert, the misspecification of search criteria resulting in a large number of results is common among practitioners and reduces comparability analysis to *quasi* industry statistics.

However, overly restrictive search criteria are also harmful. In practice, it is important that practitioners recognize the relevant factors of comparability and learn how to relax them without compromising the reliability of the results. Moreover, the example provided by New Zealand, which relaxes territorial restrictions and uses comparables from its leading trading partners, including Australia, the UK, and the United States, is feasible and, in my understanding, is also the practice adopted by the tax authorities in several countries, including Austria, Canada, Belgium, Mexico, the Netherlands and South Africa.<sup>13</sup> The obsession with using local comparables is not productive, and a more effective use of publicly available data sources for comparables would be to relax certain criteria and perform adjustments, *e.g.*, to company size and location savings.<sup>14</sup>

### **Approach 3: Reducing reliance on direct comparables**

The Paper states that the use of the profit split method, “value chain analysis,” and safe harbors are options to identify arm’s length prices without reliance on “direct comparables.”<sup>15</sup> There is a contradiction in the suggestion to use the profit split method when “direct comparables” are not available.<sup>16</sup> The contradiction is that, unlike the TNMM which requires the selection of comparables in the country of the “tested party,” the profit split requires the selection of

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<sup>13</sup> See ¶ 20 of The Paper.

<sup>14</sup> Location advantages can be measured by unit labor cost (“ULC”) differentials between the country of the tested party, and the countries (leading trade partners) from which the comparables are derived. Data regarding ULC from several countries are tracked by multiple international organizations, including the OECD.

See <http://stats.oecd.org/Index.aspx?QueryName=426&QueryType=View&Lang=en>.

<sup>15</sup> The concept of “value chain analysis” offered in ¶ 25 of the Paper is vague: “value chain analysis would involve analyzing the value added by business functions within a multinational enterprise group to allocate the value added to members of the group.” It is not useful to adopt another fuzzy concept, such as “value chain analysis,” and introduce more nebulae in the OECD transfer pricing glossary. As described, “value chain analysis” smells of profit split without comparables.

<sup>16</sup> See ¶ 25 of The Paper. Direct comparables are not defined in The Paper or in the OECD Guidelines.

comparables in multiple countries in which “routine” (manufacturing, contract R&D, distribution) functions are performed. Thus, if “direct comparables” were not available in a single country of the tested party, they would not be available in multiple countries in which “value chain” (value added?) activities are recorded.

### **Conclusion**

I am not alarmed by the absence of publicly traded companies to find local comparables in developing countries. There are many practical solutions used in OECD countries that can be extended to developing countries, particularly if the OECD relaxes its untestable comparability factors.<sup>17</sup> The practical solutions include the use of nearest neighbor comparables as accepted by sensible tax administrators; and the use of safe harbors.<sup>18</sup> Regarding the transfer of intangibles, there is a large number of license agreements to determine arm’s length royalty rates, and it is time the OECD recognizes this fact.<sup>19</sup>

I shall conclude with a personal note. When I started as an IRS industry economist in November 1988, transfer pricing audit screening and arm’s length gross profit determination (using the then-prevailing resale price and the cost plus methods) were based on Robert Morris Associates’ *Annual Statement Studies*.<sup>20</sup> I introduced company-based comparables influenced by the corporate profits research of Dennis Mueller, who used the Standard & Poor’s Compustat

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<sup>17</sup> The great Joan Robinson (post-Keynes economics doyenne of Cambridge University) would have dismissed the OECD comparability factors as metaphysical, incapable of being tested with empirical evidence. However, she would add that those who are convinced against their will are of the same opinion still.

<sup>18</sup> Recently, RoyaltyStat introduced the profit markup per industry, year, and country, including many developing countries. The user can test the relationship between the UNIDO-based markup and the number of companies (establishments) in the industry, and determine if an adjustment for market concentration is warranted.

<sup>19</sup> As an aside, “difficult to value intangibles” are intangibles for which revenue and operating profits are difficult to forecast in a reliable manner. This issue has little to do with finding comparable royalty rates.

<sup>20</sup> Robert Morris Associates (“RMA”) has been rebranded as Risk Management Associates. To my knowledge, RMA’s *Annual Statement Studies* is the only U.S. source of comparative data that comes directly from financial statements of the small and medium-size business customers of RMA’s member bank lending institutions. See <http://www.rmahq.org/tools-publications/publications/annual-statement-studies>. In addition to RMA, IRS international examiners (auditors) and economists also used MANA *Survey of Sales Commissions* for drop-ship distributors that did not hold inventory.

database in his empirical analysis.<sup>21</sup> Under my insistence, the IRS first subscribed to Compustat in the APA program, creating a legacy of using publicly traded company comparables to determine arm's length profits.<sup>22</sup>

My point is that the now-common lore about lack of comparables is exaggerated and appears to be expounded by opinion makers who are not experts in company databases. The OECD's concept of comparability is overly stringent, stemming from arcane U.S. rules rather than innovating with simpler economic guidance. I welcome the initiative of addressing comparability issues in developing countries, and I hope the proposed solutions simplify the process and do not create additional complexity.

Yours sincerely,



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<sup>21</sup> Dennis Mueller, *Profits in the Long Run* (Cambridge University Press, 1986). See also Dennis Mueller (ed.), *The Dynamics of Company Profits* (Cambridge University Press, 1990). The central thesis of Mueller and his co-researchers is that excess company profits persist when there are barriers to entry; otherwise, excess profits dissipate with time.

<sup>22</sup> As stated before, the selection of comparables without considering company annual reports is indefensible under audit scrutiny. Likewise, selecting comparable royalty rates without considering the source license agreements is indefensible in tax controversy.

**Exhibit 1**  
**Median Operating Profit Margin or Markup per Primary Function**  
**Worldwide, FYE 2010-2012**

<b>Primary Function</b>	<b>Count</b>	<b>OPM</b>	<b>OPK</b>
Distributor of Durable Goods (SIC Code 50)	538	4.0%	
Distributor of Non-Durable Goods (SIC Code 51)	333	3.1%	
Business Services (SIC Code 73)	1446		13.8%
Professional Services (SIC Code 87)	276		10.3%

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OPM = Operating Profit Margin on Net Sales  
OPK = Operating Profit Markup on Total Costs

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**Exhibit 2**  
**Median Operating Profit Margin per Primary Function**  
**Distributors of Durable Goods (SIC Code 50)**  
**Selected Countries, FYE 2010-2012**

<b>Region</b>	<b>Count</b>	<b>Median OPM</b>
Australia	11	4.8%
Brazil	1	
Canada	14	4.7%
China	30	12.0%
France	10	5.0%
Germany	7	2.2%
India	18	2.6%
Japan	126	2.3%
Mexico	0	
Russia	0	
South Africa	16	5.2%
United Kingdom	15	5.5%
United States	63	4.6%

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OPM = Operating Profit Margin on Net Sales

**Exhibit 3**  
**Median Operating Profit Margin per Primary Function**  
**Distributors of Non-Durable Goods (SIC Code 51)**  
**Selected Countries, FYE 2010-2012**

<b>Country</b>	<b>Count</b>	<b>Median OPM</b>
Australia	3	3.6%
Brazil	4	3.0%
Canada	9	4.2%
China	16	2.5%
France	7	5.3%
Germany	4	1.2%
India	17	2.9%
Japan	78	1.6%
Mexico	1	
Russia	0	
South Africa	2	5.7%
United Kingdom	7	2.4%
United States	47	3.2%

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OPM = Operating Profit Margin on Net Sales

**Exhibit 4**  
**Median Operating Profit Markup per Primary Function**  
**Business Service Providers (SIC Code 73)**  
**Selected Countries, FYE 2010-2012**

<b>Region</b>	<b>Count</b>	<b>Median OPK</b>
Australia	53	21.7%
Brazil	5	33.1%
Canada	22	12.9%
China	102	23.0%
France	74	13.0%
Germany	55	21.5%
India	118	17.6%
Japan	218	6.4%
Mexico	0	
Russia	2	9.1%
South Africa	14	9.9%
United Kingdom	116	13.2%
United States	267	14.0%

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OPK = Operating Profit Markup on Total Costs

**Exhibit 5**  
**Median Operating Profit Markup per Primary Function**  
**Professional Service Providers (SIC Code 87)**  
**Selected Countries, FYE 2010-2012**

Region	Count	Median OPK
All	276	10.3%
Australia	18	14.4%
Brazil	1	
Canada	6	11.9%
China	22	14.8%
France	11	9.3%
Germany	9	15.1%
India	15	13.6%
Japan	43	4.8%
Mexico	0	
Russia	0	
South Africa	2	10.1%
United Kingdom	30	7.1%
United States	39	8.7%

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OPK = Operating Profit Markup on Total Costs

**Exhibit 6**  
**Median Royalty Rate per Industry and Intangible Type**

Intangibles per Industry	Count (Only)	Median Royalty Rate (Only)	Count (Including)	Median Royalty Rate (Including)
<b>All Industries</b>				
Patent	1268	4.5%	4914	5.0%
Know-how	319	5.0%	3998	5.0%
Trademark	638	5.0%	4175	6.0%
<b>Chemicals</b>				
Patent	61	4.0%	256	5.0%
Know-how	20	5.0%	213	5.0%
Trademark	8	8.5%	97	6.0%
<b>Computer Hardware</b>				
Patent	27	3.0%	119	4.0%
Know-how	8	7.5%	104	5.0%
Trademark	5	5.0%	79	5.0%
<b>Computer Software</b>				
Patent	13	5.0%	261	10.0%
Know-how	4	10.0%	252	7.0%
Trademark	3	3.0%	262	10.0%
Software	240	15.0%	824	12.5%
<b>Electronics</b>				
Patent	58	4.0%	197	5.0%
Know-how	19	4.0%	160	5.0%
Trademark	53	2.0%	144	5.0%
<b>Food &amp; Non-Alcoholic Beverages</b>				
Patent	10	4.5%	65	5.0%
Know-how	8	5.0%	76	5.0%
Trademark	54	3.6%	234	5.0%

Intangibles per Industry	Count (Only)	Median Royalty Rate (Only)	Count (Including)	Median Royalty Rate (Including)
<b>Industrial Equipment</b>				
Patent	47	5.0%	240	5.0%
Know-how	12	5.0%	182	5.0%
Trademark	7	3.0%	83	6.0%
<b>Medical Devices</b>				
Patent	276	5.0%	893	5.0%
Know-how	35	4.0%	616	5.0%
Trademark	14	3.0%	167	6.0%
<b>Pharmaceutical &amp; Biotech</b>				
Patent	554	4.0%	2424	5.0%
Know-how	82	5.0%	1863	5.0%
Trademark	31	3.5%	390	8.0%
<b>Semiconductors</b>				
Patent	72	4.0%	192	4.0%
Know-how	18	5.0%	125	5.0%
Trademark	5	5.0%	30	5.0%

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“Only” means that one intangible property right (*e.g.*, patent rights) is granted or transferred in exchange for a royalty rate.

“Including” means that more than one intangible property rights (*e.g.*, patent and know-how) are granted or transferred in exchange for a royalty rate.

Additional licensing considerations may apply, including upfront fees (*e.g.*, reimbursement for cumulative prior R&D and/or advertising expenses) and milestone payments. It is important to review the license agreement because it memorializes the specific contractual terms that are relevant for comparability analysis.

### Exhibit 7

#### Databases for Comparables Used in the U.S.: Annual APA Statutory Reports

For the majority of the APAs executed in 2012 and 2013, the data source for comparables was Standard & Poor's ("S&P") Compustat database.

Source: <http://www.irs.gov/pub/irs-drop/a-13-17.pdf>; and  
<http://www.irs.gov/pub/irs-drop/a-14-14.pdf>

Previous APA Statutory Reports provided the database usage per number of APAs completed in a particular year as shown in the table below.

Year	Compustat Global*	Compact Disclosure and Worldscope	Mergent	No Comparables Used	Moody's	Amadeus	Osiris
2011	57	21	15	12	5	4	≤ 3
2010	79	28	15	37	5	5	≤ 3
2009	64	24	9	13	4	≤ 3	≤ 3
2008	101	40	14			≤ 3	
2007	101	40	14			≤ 3	
2006	83	32	7		≤ 3	5	
2005	46	29	≤ 3		8	≤ 3	
2004	79	44	≤ 3		7		
2003	44	18			5		
2002	81	50	2		12		
2001	40	13			2		
2000	32	9			4		

\* Compustat Global consists of Compustat North America (Canada and United States) and Global Vantage, comprised of European and Asia-Pacific publicly traded companies. Compustat is also branded as S&P Capital IQ.

Source: <http://www.irs.gov/Businesses/Corporations/Annual-APA-Statutory-Reports>