

## How to Determine Tax-Deductible, Debt-Related Costs for a Subsidiary

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Reprinted from *Tax Notes Int'l*, May 16, 2011, p. 589

# SPECIAL REPORTS

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## How to Determine Tax-Deductible, Debt-Related Costs For a Subsidiary

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A first draft of this article was presented at the Interdisciplinary Conference on Fundamentals of International Transfer Pricing in Law and Economics at the Max Planck Institute for Intellectual Property, Competition and Tax Law in Munich on December 10 and 11, 2010. This article will also be included in a forthcoming compilation of papers from that conference (Kai Konrad and Wolfgang Schön (eds.), *International Transfer Pricing in Law and Economics*, 2011).

The author is very grateful to the sponsors and organizers of the conference for the invitation to prepare, present, and publish this article. The author has also benefited from the technical assistance of Emily White and the comments and criticisms of Robert Conrad, William Morgan, Scott Newlon, David Rosenbloom, and Michael Devereux.

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This article describes how tax-deductible, debt-related costs are determined for a subsidiary<sup>1</sup> corporation of a multinational firm. In general terms, a subsidiary's tax-deductible, debt-related costs depend on two broad factors: the amount of debt the subsidiary incurs in financing its business and the rates of its interest expense, guarantee fees, and other debt-related costs (for example, the cost of standby letters of credit required to support the issuance of commercial paper) that are recognized for tax purposes. The second of these two factors — the guarantee fee paid by a subsidiary to its parent company — was the subject of the Canadian Tax Court's opinion in *General Electric Capital*

*Canada, Inc. v. The Queen* (2009 TCC 563) and the subsequent opinion by the Canadian Federal Court of Appeal sustaining the Canadian Tax Court's opinion (2010 FCA 344).<sup>2</sup> Because both Canadian courts interpreted specific language in the OECD guidelines pertaining to arm's-length fees for related-party loan guarantees and, by implication, interest rates on related-party loans, the opinion should be of broad interest.

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<sup>2</sup>In my view, the incremental benefit principle endorsed by the Canadian courts is correct both from an economic perspective and from a public policy perspective. First, economics is a behavioral science. Economic analyses generally assume that in arm's-length dealings, the prices are such that both the buyer and the seller expect to obtain an incremental gain, or at least not suffer an incremental loss, by comparison with all available alternatives. Like all generalizations about human behavior, there will be conspicuous exceptions, but such generalizations may nonetheless be useful. For example, suppose the price paid in a comparable uncontrolled transaction could otherwise be applied to a transaction between related parties. However, the comparable uncontrolled

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<sup>1</sup>Broadly, a subsidiary is incorporated separately from its parent company, which owns a controlling interest in the shares of its subsidiary. By contrast, a branch is not separately incorporated and thus is part of the same legal entity as its head office. A subsidiary can enter into contracts in its own name, but a branch cannot.

(Footnote continued on next page.)

A company's interest rate on amounts borrowed from *unrelated* creditors depends on the company's creditworthiness. Standard & Poor's, Moody's, or other rating agencies typically rate debt that is held by the general public in the United States. All other things (for example, seniority, maturity, or currency of denomination of the debt) being equal, companies with any given credit rating will typically incur similar interest rates. Similarly, companies with higher credit ratings will generally incur lower interest rates than companies with lower ratings.

Section I of this article describes in general terms how a company's consolidated financial results can be used to predict with surprising accuracy the credit rating that the rating agencies have assigned to the company. The analysis in Section I is pertinent not only to understanding why some public companies have higher credit ratings and thus pay lower interest rates than other public companies, but also how transfer pricing experts estimate the credit rating for a subsidiary and thus the interest rates or the guarantee fees it would pay if it were dealing with its parent company at arm's length. As I will explain, the Canadian Tax Court relied on this analysis to assess the incremental benefit to General Electric Capital Canada Inc. (GECCAN) of a written guarantee, which set an upper limit on the arm's-length price. The findings of the credit rating analysis are also critical to my ultimate conclusion that as a matter of tax policy (but not current tax law), a company's credit rating should be viewed as an intangible asset jointly owned by all affiliates of a multinational group, not as the property of the parent company.

Section II of this article reviews the Canadian Tax Court opinion *GE Capital Canada* and the subsequent opinion by the Canadian Federal Court of Appeal. I will explain why Justice Hogan of the Canadian Tax Court ultimately concluded that:

- GECCAN would have had a B+/BB- credit rating on a stand-alone basis — that is, if GECCAN were not a subsidiary of its U.S. parent company, GE Capital Corp. (GECUS);
- absent any written guarantees of its debt, but taking account of its ownership by GECUS, GECCAN's credit rating would have been "notched up" from B+/BB- to BB+/BBB- to reflect creditors' expectation that GECUS would take steps to prevent GECCAN from defaulting on its debt (sometimes referred to as the "implicit guarantee");

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transaction required the buyer to pay within 60 days of the sales date, whereas the controlled transaction required immediate payment. Making an imputed interest adjustment for the 60-day difference in payment terms is reasonable based on the assumption that in arm's-length dealings a buyer might not have agreed to make immediate payment unless the seller agreed to a reduction in the sales price.

- because GECUS provided explicit written guarantees to GECCAN's creditors, GECCAN's debt enjoyed the AAA credit rating that the rating agencies assigned to GECUS's own debt;
- the benefit to GECCAN of GECUS's explicit guarantee was equal to the 1.83 percentage point differential between the average interest rates on BB+/BBB- rated debt and AAA rated debt, respectively; and
- the arm's-length guarantee fee was less than GECCAN's 1.83 percentage point interest rate saving because in arm's-length dealings, GECCAN would have expected to keep some of the 1.83 percentage point benefit for itself. Because the guarantee fee actually charged by GECUS, 1 percent per annum, was notably less than GECCAN's 1.83 percentage point benefit, the Canadian Tax Court accepted that the arm's-length charge was no less than the 1 percentage point guarantee fee actually charged.

The major issue in the Crown's appeal of the Tax Court's opinion was its claim that even if GECUS had provided no written guarantee, GECCAN would have been considered a "core" subsidiary that GECUS would not allow to default, so GECCAN's debt would have had an AAA rating. The incremental benefit to GECCAN of GECUS's explicit guarantee was zero, not 1.83 percentage points, so no payment would have been made at arm's-length for the explicit guarantee. In replying to the Crown's claim, GECCAN counter-claimed that the Tax Court should not have given any weight to the implicit guarantee resulting from GECCAN's affiliation with GECUS. That is, the economic benefit of GECUS's written guarantee to GECCAN should have been based on its stand-alone credit rating of B+/BB-, not on the notched-up credit rating of BB+/BBB- based on GECCAN's affiliation with GECUS. The Federal Court of Appeals rejected both the Crown's claim and GECCAN's counterclaim and affirmed the Tax Court opinion.

In my view, the opinions of the Canadian courts seem to be carefully considered and well reasoned. Their acceptance of the incremental benefit analysis urged by the Crown and opposed by the taxpayer will likely be widely cited in future transfer pricing cases in Canada and other countries. The incremental benefit analysis may ultimately be relevant not just to inter-company loan guarantees and interest rates but other transfer pricing issues. The economic sophistication of the courts' opinions clearly differs from the simpler understanding of the arm's-length method in some other transfer pricing cases, such as the U.S. Court of Appeals for the Second Circuit opinion in *U.S. Steel*.<sup>3</sup>

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<sup>3</sup>*United States Steel Corp. v. Commissioner*, 617 F.2d 942 (2d Cir. 1980), *rev'g* 36 T.C.M. 1152 (1977).

While that greater sophistication is in my view a virtue, others may be troubled by the greater complexity and uncertainty that are the byproducts of the increased complexity.

The focus of Section III of this article is the broader tax policy implications of using the arm's-length standard to determine guarantee fees and interest rates payable to related parties.<sup>4</sup> Two comparisons are instructive. First, under the OECD's current guidelines for bilateral tax treaties, the arm's-length method of determining intercompany interest rates and guarantee fees for the domestic *subsidiary* of a foreign corporation stand in sharp contrast to the method of determining the comparable rates for the domestic *branch* of a foreign corporation. Under the approach recommended by the OECD, the interest expense of a branch that is considered to be a permanent establishment would reflect the underlying interest rate paid by the company of which the branch is part, and the profit attributable to a PE would not be reduced by any guarantee fee. While the legal basis for treating a domestic branch of a foreign company differently from a domestic subsidiary is obvious, the economic basis for the different rates of interest expense and guarantee fees is not apparent to me.

Second, a company's credit rating can be viewed as a valuable intangible asset, and the tax treatment of a credit rating can be compared to the tax treatment of patents, trademarks, and most other intangibles. This comparison leads me to question the economic basis (but not the legal basis) for attributing income to the parent company because of its superior credit rating. From a broader tax policy perspective, it makes more sense to me to treat the parent company's credit rating as a collective asset that should be available at no charge to the affiliates of a multinational group, rather than as intangible property that is owned by just the parent company. That is, since the credit rating reflects the consolidated financial results of the entire multinational group, not the separate financial results of the parent company, its subsidiaries should not have to pay the parent company to enjoy the benefit of the collectively created asset. Consequently, the interest rate on intercompany loans should reflect the parent company's credit rating, and there should be no charge to the subsidiaries for intercompany guarantees. That is, the OECD's treatment of PEs should be extended to subsidiaries. This result appears to require changes in countries' tax laws and their bilateral tax treaties and, as demonstrated by the result in *GE Capital Canada*, cannot be achieved by tax authorities under existing tax law.

<sup>4</sup>In making this assessment, I assume that the Canadian Tax Court opinion in *GE Capital Canada* was correct in concluding that the 1 percent guarantee fee charged by GECUS was an arm's-length price.

## I. Analysis of Companies' Credit Ratings

This section provides a general explanation of how a company's credit rating can be predicted with surprising accuracy by applying a formula based on results reported in its consolidated financial statements. An understanding of the determinants of a company's credit rating is helpful in understanding not only the results in *GE Capital Canada*, but also why from a tax policy perspective, a credit rating should be viewed as jointly owned by all affiliates in a multinational group, not just the parent company.

In the United States, the two largest rating agencies are Standard & Poor's and Moody's. While those agencies have different labels for their rating categories, they employ similar alphanumeric schemes. Table 1 shows the rating categories from highest to lowest (that is, most creditworthy to least creditworthy).

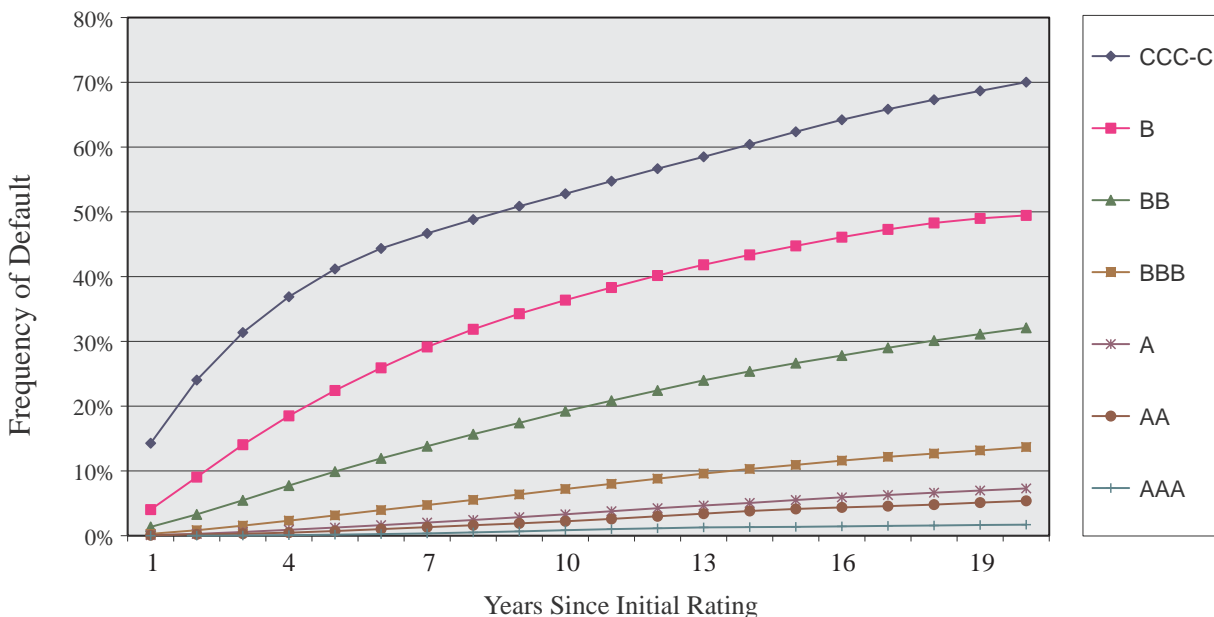
The basic purpose of a credit rating is to indicate the risk that a borrower will default on its contractual obligation to pay interest and repay principal. A creditor's expected default loss depends on two elements: the probability that a default will occur, and the magnitude of the creditor's loss if a default occurs. One method of estimating the probability that a default will occur is the average frequency with which debt with the same credit rating has defaulted in previous years. Figure 1 shows Moody's estimates of the average frequency of default over the period 1920-2009 for debt with various *initial* ratings<sup>5</sup> and holding periods.<sup>6</sup> Clearly, the lower the borrower's initial credit rating and the longer the investor's holding period, the greater was the average frequency of default.

When a borrower defaults on its debt obligations, a creditor will typically lose a substantial portion, but not all, of the principal and interest amounts due from the creditor. According to Moody's, creditors' ultimate recovery rates<sup>7</sup> for senior unsecured debt for bonds that defaulted between 1987 and 2009 was 44.6 percent on average, so the average default loss rate was 55.4 percent.

<sup>5</sup>That is, while no one can predict with any certainty the specific companies that will eventually default and those that will not, actual defaults are typically preceded by successive downgrades in a company's credit rating. Standard & Poor's and Moody's both publish data showing the frequency of upgrades and downgrades in companies' ratings, not just the frequency of defaults.

<sup>6</sup>For example, for debtors with an initial Moody's credit rating of B, 4 percent defaulted within the first year, 9 percent defaulted within the first two years, and so forth.

<sup>7</sup>The ultimate recovery rate reflects the value creditors realize at the resolution of a default event. For example, when a borrower files for bankruptcy, its creditors' ultimate recovery is the present value of the cash or securities that the creditors actually receive when the borrower exits from bankruptcy, typically one to two years following the initial default date.

**Figure 1. Average Cumulative Default Frequencies, 1920-2009**

Source: Moody's Investors Service, *Corporate Default and Recovery Rates, 1920-2009*, February 2010, Exhibit 33.

To compensate for the higher risk of default losses, bond prices adjust so that bonds with lower credit ratings and thus higher projected default losses have lower market prices and thus higher stated yields to maturity.<sup>8</sup> Figure 2 shows the stated yields to maturity as of December 31, 2009, for fixed rate debt with various credit ratings and maturities. Stated yields make no adjustment for possible default losses. They are, rather, the internal rate of return on the investor's cash flow assuming the bond does not default. One can also calculate an expected rate of return by reducing the stated yield by the expected default loss, which is the expected loss in the event of default multiplied by the probability of default. When a default could occur in any year the bond remains outstanding, the projected cash flow for each year can be reduced to reflect:

- the diminishing probability that the bond will not have defaulted in any prior year; and
- the expected loss of a default in the year at issue.

To illustrate, the appendix to this article shows how I calculated the adjustment for default losses to the stated yield to maturity as of December 31, 2009, for a 10-year, B-rated bond.

To demonstrate the impact of default losses on projected yields to maturity, I calculated in Table 2 the

expected yield for bonds with 10 years to maturity as of December 31, 2009, assuming that:

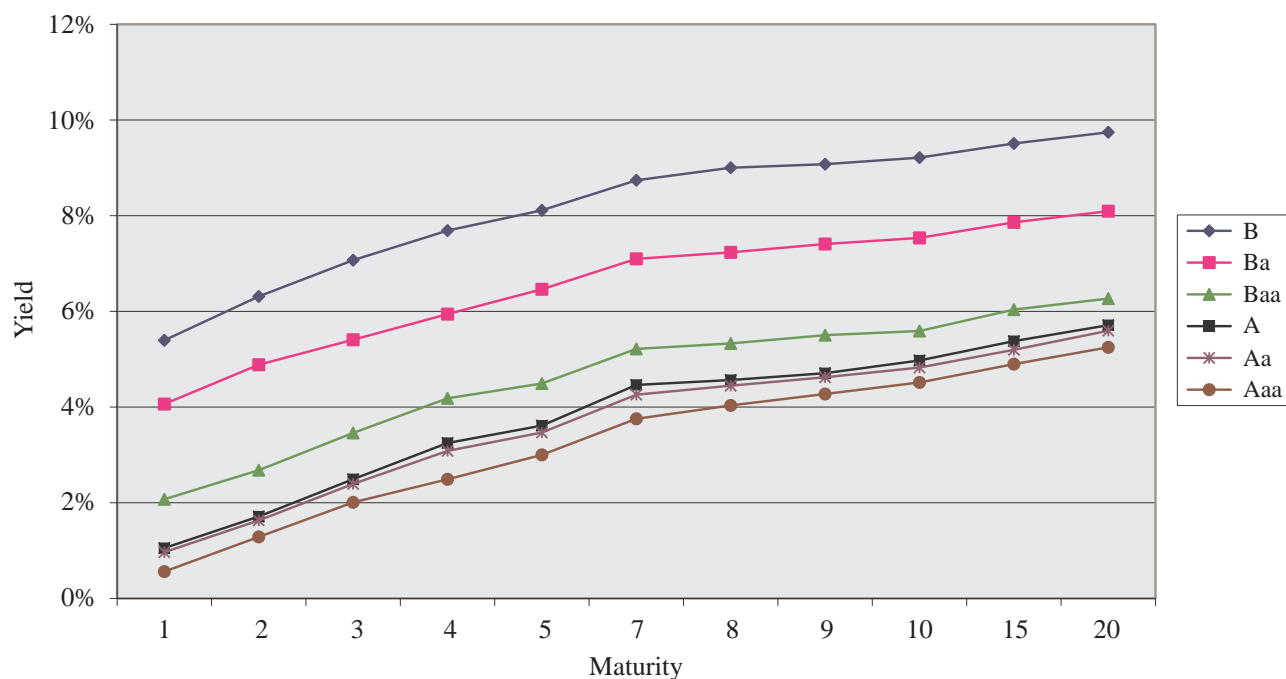
- the projected default rate would vary with the bond's initial rating based on the historical default frequencies shown in Figure 1; and
- if a bond defaulted, the creditor recovered 44.6 percent of the principal and interest amounts due.

For example, for 10-year fixed rate bonds with an initial rating of AAA, the (small) projected default losses would reduce the yield to maturity from the stated yield of 4.51 percent (which assumes no default losses) to an adjusted yield of 4.47 percent. By contrast, for 10-year fixed rate bonds with an initial rating of B, the (larger) expected default losses would reduce the yield from the stated yield of 9.21 percent to an adjusted rate of 6.45 percent. Note that the default-adjusted yield also varies inversely with a bond's initial credit rating, which implies that stated yields to maturity provide not only for expected default losses, but also a premium to compensate investors who are willing to hold bonds with lower credit ratings for default risk.

Standard & Poor's and Moody's websites describe in general terms the procedures and criteria those agencies apply in determining a company's credit rating. Despite what is obviously a time-consuming and carefully considered rating process, the credit rating for a company ultimately published by Standard & Poor's is often not only the same as the comparable rating of

<sup>8</sup>I use the term "stated yield" to mean a creditor's internal rate of return on cash flow assuming the borrower makes full and timely payments of interest and principal.

**Figure 2. Yields for Fixed Rate Debt as of December 31, 2009**



Source: Bloomberg financial database.

Moody's, but also the same as the credit rating predicted by a mathematical formula based on statistical analyses of public companies' credit ratings and their consolidated financial results. Indeed, both Standard & Poor's and Moody's offer Internet-based models that estimate (for a fee) a company's credit rating based on its latest financial data. For example, Standard & Poor's web-based service, CreditModel, appears to rely on the following data derived from a company's consolidated financial statements:

- total assets (million \$);
- total equity (million \$);
- total sales (million \$);
- total debt/capital (percent);
- funds from operations/total debt (percent);
- free operating cash flow/total debt (percent);
- operating income/sales (percent);
- return on capital (percent);
- earnings before interest, taxes, depreciation, and amortization interest coverage (times); and
- earnings before interest and tax interest coverage (times).

Standard & Poor's website describes its credit rating model as follows:

CreditModel employs advanced proximal support vector modeling, guided by expert judgment. Models are rigorously validated and reviewed by Standard & Poor's senior credit analysts. *A very high correlation between CreditModel scores and Standard & Poor's credit rating has been demonstrated.* [Emphasis added.]

Although the mathematical formulas and statistical methods embedded in S&P's CreditModel or other credit rating models may be very sophisticated, a high correlation between companies' actual credit ratings and predictions of those ratings based on the companies' recent financial data can also be obtained using a linear formula derived using a simple statistical method. To demonstrate that credit ratings can be predicted using simple methods, I downloaded from Standard & Poor's Compustat database the S&P credit ratings for 317 manufacturing companies as of December 31, 2009, and financial data for those companies' 2009 fiscal years.<sup>9</sup> The simple correlation between the numerical code that the Compustat database assigns to a company's S&P credit rating, which is shown in the

<sup>9</sup>By the 2009 fiscal year, I mean the company's fiscal year ending closest to December 31, 2009.

**Table 1. Credit-Rating Categories for Standard & Poor's and Moody's**

Compustat Number Code	S&P Rating	Moody's Rating
2	AAA	Aaa
4	AA+	Aa1
5	AA	Aa2
6	AA-	Aa3
7	A+	A1
8	A	A22
9	A-	A3
10	BBB+	Baa1
11	BBB	Baa2
12	BBB-	Baa3
13	BB+	Ba1
14	BB	Ba2
15	BB-	Ba3
16	B+	B1
17	B	B2
18	B-	B3
19	CCC+	Caa1
20	CCC	Caa2
21	CCC-	Caa3
23	CC	Ca-C
27	D	Default

Source: Standard & Poor's, Compustat (North America) database, and Moody's Investors Service, *Ratings Symbols and Definitions*, January 2011, p. 4.

first column of Table 1, and the logarithm to the base 10 of the company's total assets<sup>10</sup> was minus 67 percent<sup>11</sup> — see the scatter diagram that is Figure 3. Using linear regression analysis, a widely used method explained in most introductory statistics textbooks, the

<sup>10</sup>Because a company's total assets are stated in millions of dollars, the logarithm (to the base 10) of \$100 million in total assets is 2, \$1 billion in total assets is 3, \$10 billion in total assets is 4, and so forth.

<sup>11</sup>The correlation is negative because a low numerical value in the first column of Table 1 indicates a high credit rating (for example, AAA = 2, AA+ = 4, AA = 5, and so forth).

correlation between a company's actual S&P credit rating and the credit rating predicted by the linear regression equation based on just three factors — the logarithm to the base 10 of the company's consolidated total assets, the company's consolidated operating income expressed as a percentage of its consolidated total assets, and the company's consolidated debt-capital ratio — increases to 81 percent.<sup>12</sup>

See the scatter diagram that is Figure 4. That is to say, the considerable complexity of the statistical models used by Standard & Poor's, Moody's, and other sophisticated experts may obscure the key point that a company's credit rating is determined mainly by its size and secondarily by its profitability and its capital structure.

The paramount importance of a company's size in determining its credit rating may be surprising to some, but is familiar to anyone who has undertaken a statistical analysis of companies' actual credit ratings. The reason why large companies have lower default risks and higher credit ratings, all other things being equal, is due mainly, I would assume, to the ability of diversification to reduce risk. Larger companies tend to have greater diversity not only in the number of products and services they sell, but also in the number of geographic markets in which they operate. Because a large company's cash flow is more stable than the cash flow of a small company, a large company is less likely to default on its debt. Since large companies are less likely to default, they have higher credit ratings.

## II. Canadian Court Opinions

### A. Canadian Tax Court Opinion

The General Electric Co. (GE) was and is a very large, publicly owned U.S. company operating diversified industrial and financial service businesses in many countries. According to the statement of agreed facts in the Canadian Tax Court opinion [2],<sup>13</sup> GE's financial services group was organized under a wholly owned GE subsidiary, General Electric Capital Services Inc. (GE Capital), of which GECUS was the principal U.S. operating subsidiary. While GECUS's financial business originally related to financing customers' purchases of capital equipment manufactured by GE, by the mid-1990s GECUS's financial businesses were more diversified and generally unrelated to GE products.

<sup>12</sup>The linear regression equation that I estimated based on data for 317 manufacturing companies as of 2009 was:  

$$\text{S\&P} = 24.4 - 3.4 \log(A) - 16.9 \text{ROA} + 4.0 \text{D}/(\text{D}+\text{E})$$

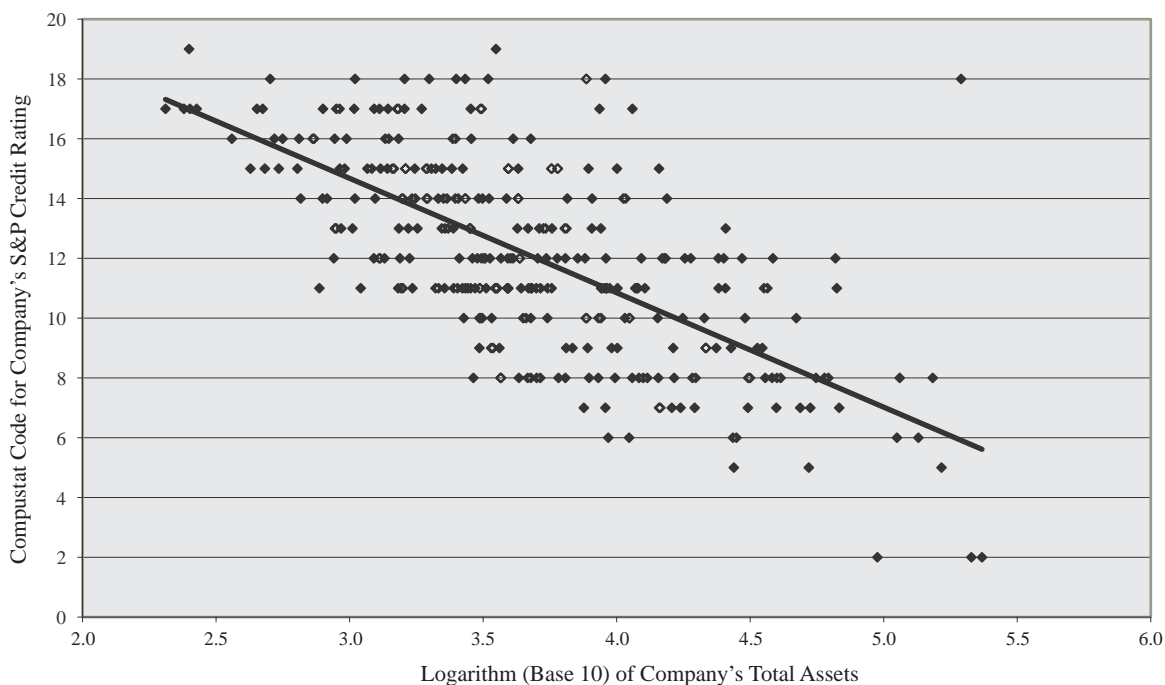
$$R = 67.5\%$$

$$(-18.3) \quad (-11.7) \quad (8.5)$$

where the number in parenthesis is the *t*-statistic of the regression coefficient.

<sup>13</sup>A number in brackets refers to the paragraph number in the Canadian Tax Court opinion.

**Figure 3. S&P Credit Rating vs. Logarithm of Total Assets  
For U.S. Manufacturing Companies, 2009**



Source: Author's analysis of 317 manufacturers' financial data and credit ratings derived from Standard & Poor's, Compustat (North America) database.

To fund its financial investments, GECUS issued its own debt and had its own credit rating, AAA from Standard & Poor's and Aaa from Moody's, which are the highest ratings possible.<sup>14</sup> GECUS's AAA rating, which was based on its consolidated financial results [255], was a key element of GE Capital's overall competitive strategy for leasing and other forms of equipment financing [290]. Unlike the large banks with which GE Capital competed, GECUS issued commercial paper and long-term debt, but was not regulated as a bank and so did not have a bank's access to retail deposits or to wholesale interbank deposits. Because GECUS was not eligible to receive deposits guaranteed by a government, the AAA credit rating of its commercial paper and longer-term debt was critical to its competitive strategy.

GECCAN, GECUS's wholly owned subsidiary, carried on in Canada several of the financial businesses that GECUS conducted in the United States. During

<sup>14</sup>The credit ratings referred to in this study are those of the borrower, which generally correspond to the rating assigned to its senior unsecured debt. To qualify for the AAA rating, S&P required GE to execute a keep-well agreement under which GE committed to maintain GECUS's consolidated debt-equity rate at no more than 8 to 1 [266].

the five years at issue in the Canadian Tax Court proceeding (1996-2000), GECCAN's total assets represented 2 to 2.3 percent of GECUS's consolidated assets and 3 to 4.4 percent of GECUS's consolidated revenues.

To fund its Canadian investments, GECCAN issued both commercial paper and longer-term unsecured debentures. GECUS's treasury department managed the issuances of debt by all its subsidiaries, including GECCAN. The objective of GECUS's treasury department was to fund GECUS's consolidated business activities at the lowest possible cost while adhering to the risk management guidelines established by its senior management [86].

GECCAN itself did not have a credit rating from any U.S. or Canadian rating agency. Rather, all of GECCAN's outstanding debt was guaranteed by GECUS, so GECCAN's debt had the same AAA credit rating as GECUS's own debt. In the absence of GECUS's guarantee, GECCAN would have been unable to execute its business plan because the Canadian commercial paper market was geared to the highest investment-grade borrowers [305].

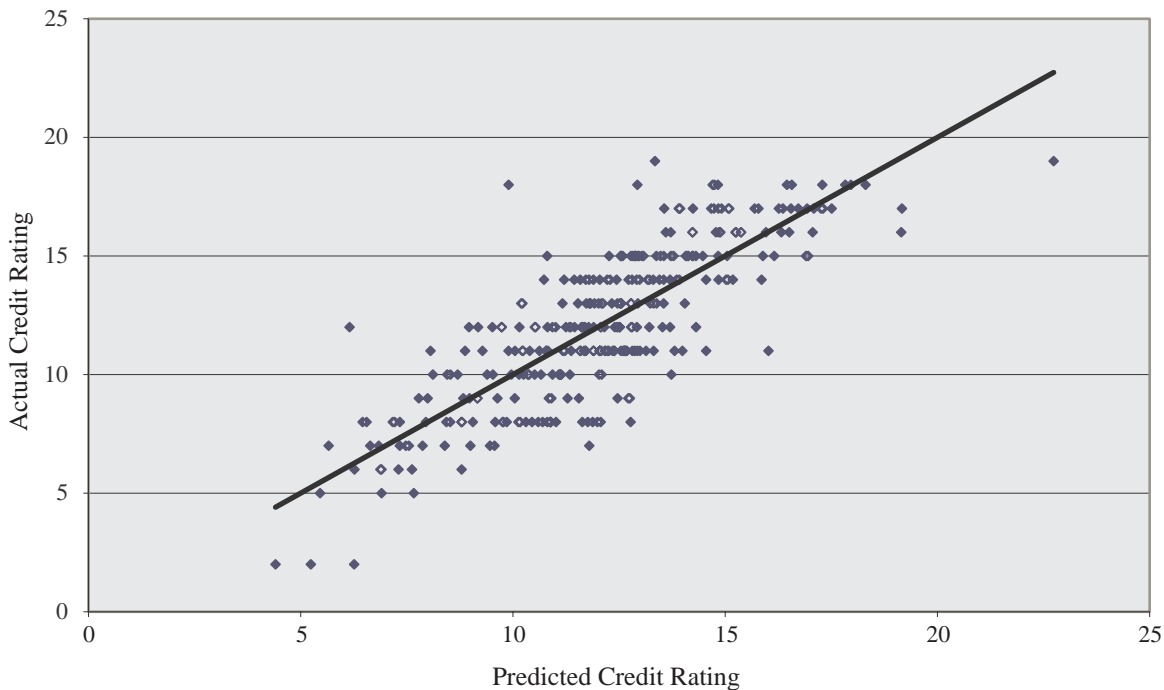
Under a corporate reorganization in 1988, GECUS succeeded GE Canada as GECCAN's parent company. GECUS guaranteed GECCAN's debt, but did not charge a fee for doing so until 1995, when a guarantee

**Table 2. Stated vs. Adjusted Yields for Fixed-Rate 10-Year Senior Unsecured Debt as of Dec. 31, 2009**

Initial Credit Rating	Stated Yield	Maturity	Default Recovery Rate	Default-Adjusted Yield	Impact of Default Loss
AAA	4.51%	10	44.6%	4.47%	0.04%
AA	4.83%	10	44.6%	4.70%	0.12%
A	4.97%	10	44.6%	4.79%	0.19%
BBB	5.59%	10	44.6%	5.17%	0.42%
BB	7.54%	10	44.6%	6.30%	1.24%
B	9.21%	10	44.6%	6.45%	2.76%

Sources: “Stated Yield” per Figure 2. “Default Recovery Rate” per Moody’s Investors Service, *Corporate Default and Recovery Rates, 1920-2009*, February 2010, Exhibit 9. “Default-Adjusted Yield” and “Impact of Default Loss” derived using method and assumptions described in the Appendix.

**Figure 4. Actual vs. Three-Factor Predicted Credit Rating For U.S. Manufacturing Companies in 2009**



Source: Author’s analysis of 317 manufacturers’ financial data and credit ratings derived from Standard & Poor’s, Compustat (North America) database.

fee equal to 1 percent per annum of the average principal amount of GECCAN’s guaranteed debt was instituted. Over the next five years, 1996-2000, the guarantee fees based on a 1 percent annual rate represented 33 to 40 percent of GECCAN’s pretax and pre-guarantee-fee profits [79].

In its examination of GECCAN’s tax returns for 1996-2000, the Canada Revenue Agency disallowed GECCAN’s deduction for guarantee fees paid to GECCUS. Under the OECD guidelines, a guarantee fee is treated as a service. Paragraph 7.13 of the OECD guidelines stated:

an associated enterprise [for example, GECCAN] should not be considered to receive an intra-group service when it obtains incidental benefits attributable solely to being a part of a larger concern, and not to any specific activity being performed. For example, no service would be received where an associated enterprise by reason of affiliation alone has a credit rating higher than it would if it were unaffiliated, but an intra-group service would usually exist where the higher credit rating was due to a guarantee by another group member, or where the enterprise benefited from the group's reputation deriving from global marketing and public relations campaigns. In this respect, passive association should be distinguished from active promotion of the MNE group's attributes that positively enhances the profit-making potential of particular members of each group. Each case must be determined according to its own facts and circumstances.

In a nutshell, the CRA disallowed GECCAN's deduction of the guarantee fee on the argument that absent an explicit guarantee, GECUS would never allow GECCAN to default on its debt because a default would cause creditors to lose confidence in GECUS's own creditworthiness. Given this implicit guarantee, the incremental benefit to GECCAN of an explicit guarantee was *de minimis*.

By contrast, GECCAN's primary position was that under the arm's-length standard, GECUS's implicit guarantee should be disregarded. Alternatively, if the benefit of GECCAN's affiliation with GECUS should be taken into account, GECCAN would still not have qualified for the AAA credit rating unless GECUS provided an explicit guarantee of its debt. The incremental benefit to GECCAN of GECUS's explicit guarantee was greater than the 1 percent fee that was charged, so no transfer pricing adjustment should be made. The Canadian Tax Court opinion of Justice Hogan ultimately rejected GECCAN's primary position, but accepted GECCAN's alternative position.

In reaching the ultimate conclusion that GECUS's 1 percent guarantee fee did indeed represent arm's-length consideration, Justice Hogan accepted that as a separate legal entity, GECUS was not required to give its subsidiary, GECCAN, access to GECUS's credit facility [297].

GE Financial Corp., which was a second wholly owned subsidiary of GECUS, was a regulated insurance company. GE Financial's debt was *not* guaranteed by GECUS and was rated A+ (compared with the AAA rating of GECCAN's guaranteed debt). Since GE Financial's assets were 10 times greater than GECCAN's assets and represented 21 percent of GECUS's consolidated assets, Justice Hogan concluded that GECUS would be even less inclined to allow GE Financial to default than to allow GECCAN to default [277]. The fact that GE Financial's unguaranteed debt was rated A+, not AAA, undermined the CRA's claim

that GECUS's explicit guarantee conveyed no incremental benefit over an implicit guarantee.

Justice Hogan considered and ultimately *rejected* GECCAN's expert testimony that an arm's-length charge would be based on the premiums that insurance companies charge to municipalities and other bond issuers to guarantee their payment of interest and principal to the bondholders. According to GECCAN's insurance-method expert (Mark Fidelman):

- An insurer would not take into account the benefit of an implicit guarantee from a subsidiary's parent company.
- From the insurance company's perspective, the total guarantee fee would have two components: the cost of the expected loss and the return on the insurer's risk capital (that is, a risk premium).
- A 1 percent guarantee fee would *not* have provided an insurance company with an adequate risk-adjusted rate of return and was thus less than an arm's-length amount [29-35].

In explaining why he did not rely on the insurance-based evidence:

- Justice Hogan noted that guarantee insurance has been used as a credit enhancement arrangement only for municipal bonds and asset-backed securities, but not for corporate bonds or commercial paper. Justice Hogan speculated that this was because insurers price the risk higher than the benefit received by corporate issuers that have parent corporations able to provide credit enhancements.
- According to Justice Hogan, a third-party insurer would be unable to control the timing, terms, and payment of GECCAN's debt offering. Consequently, a third-party insurer, unlike GECUS, would have no direct control over GECCAN's default risk [254].
- Justice Hogan also noted that the insurance analysis made no adjustment for the possibility that to protect its own credit rating, GECUS might provide financial assistance to GECCAN even though GECUS was not legally obligated to do so. Justice Hogan agreed that a third-party insurer would not place any weight on an implicit guarantee, but concluded that the insurance analysis was less reliable because it made no adjustment for this difference.

Rather than relying on the insurance-based analysis, Justice Hogan focused on the interest cost savings that GECCAN achieved as a result of the higher credit rating, AAA, given to debt that was explicitly guaranteed by GECUS. In summary:

- Justice Hogan accepted expert testimony that on a stand-alone basis — that is, taking no account of

the affiliation of GECCAN with GECUS — GECCAN would have had an S&P credit rating between B+ and BB-.<sup>15</sup>

- Justice Hogan further concluded that an unrelated lender to GECCAN would assume that GECUS might come to GECCAN's rescue if GECCAN would otherwise default on its debt. That is, in the hypothetical arm's-length negotiation, the debtor is not GECCAN as a stand-alone company, but GECCAN as a subsidiary of a AAA-rated parent company dealing with an unrelated creditor [255].
- Based on the expert testimony, Justice Hogan concluded that GECCAN's affiliation with GECUS would have had the effect of increasing GECCAN's credit rating by three notches<sup>16</sup> from B+/BB- to BB+/BBB-.
- Justice Hogan concluded that the benefit to GECCAN of having GECUS's explicit guarantee was equal to the average interest cost savings, 1.83 percentage points, resulting from the difference between GECCAN's BB+/BBB- rating with only the implicit guarantee and its AAA rating with an explicit guarantee.

Finally, Justice Hogan concluded that in arm's-length negotiations, GECCAN would have been able to retain for itself some portion of the 1.83 percentage point benefit, so the arm's-length charge would be something less than the full interest cost differential. Because GECUS's 1 percentage point guarantee fee was well below the 1.83 percentage point benefit, Justice Hogan accepted the 1 percentage point fee actually charged as an arm's-length result.

## B. Canadian Federal Court of Appeals Opinion

In December 2010 the Canadian Federal Court of Appeals rejected the Crown's appeal and sustained the Tax Court opinion. The main points that interest me are the ways in which the Court of Appeals either modified or reinforced the reasons given in the Tax Court's opinion. In particular:

- The Court of Appeals fully considered and ultimately confirmed the Tax Court's conclusion that the arm's-length price should reflect the incremental benefit to GECCAN of GECUS's explicit guarantee over the implicit guarantee. That is:

<sup>15</sup>That GECCAN's stand-alone credit rating was substantially lower than GECUS' rating is not surprising given that GECCAN's total assets were 2 to 2.3 percent of GECUS's consolidated assets and that its debt-equity ratio was 12 to 1 versus the consolidated company ratio of 8 to 1.

<sup>16</sup>That is, the difference between a B+ rating and a BB-rating is one notch, between a B+ rating and a BB rating is two notches, and so forth.

- The objective is to ascertain the price that would have been paid in the same circumstances if the parties had been dealing at arm's length [54].
- The implicit support of a parent company is a factor that an unrelated creditor would have taken into account in pricing the guarantee:

The suggestion that implicit support should be ignored would require the court to turn a blind eye on a relevant fact and deprive the transfer pricing provisions of their intended effect [56].

The Court of Appeals found that this conclusion was supported by paragraph 1.6 of the OECD's transfer pricing guidelines, which provides that the concept of independent parties is used to adjust profits "by reference to the conditions that would have been obtained between independent enterprises in comparable transactions in comparable circumstances" [57].

- The Court of Appeals agreed with the Crown that the Tax Court erred in focusing on the effect of removing the written guarantee, but concluded that the Tax Court had other compelling reasons for reaching its conclusion [67-74].
- The Crown also faulted the Tax Court opinion for its failure to perform a reasonableness test. The test proposed by the Crown sought to demonstrate that a 2 percent guarantee fee would be unreasonable because it represented an excessive portion (that is, 60 percent) of GECCAN's profit before deducting the guarantee fee. The Court of Appeals could not see how this claim assisted the Crown given that the guarantee fee actually charged was 1 percent.

## C. Analysis

Both the Tax Court and the Court of Appeals opinions seem to be carefully considered and well reasoned. Based on my own experience as a transfer pricing expert, it appears to me that the Crown's basic claim — that GECCAN did not require an explicit, written guarantee to achieve an AAA rating — was inherently unsustainable. As I will explain more fully below, because an incorporated subsidiary is a separate legal entity, written contracts with its parent generally provide the starting point for applying the arm's-length standard to allocate income between those two related parties. The argument that a written contract has no material economic consequences is difficult to sustain in general and was not sustained in this case.

The Canadian courts nonetheless accepted of the Crown's argument that GECUS's affiliation with GECCAN and the implicit support for its debt was a

circumstance to be taken into account in assessing the amount of an arm's-length guarantee fee. The Tax Court said:

This brings us to the next step, which concerns the proper description of the analysis of the parties to the hypothetical transaction. Dr. Becker [the Crown's economic expert] suggests the hypothetical guarantor should have characteristics similar to GECUS, namely, it should be a AAA-rated multinational [parent] of a AAA-rated multinational [subsidiary]. Similarly, the hypothetical debtor should be a subsidiary of a AAA-rated multinational corporation. The hypothetical parent of the debtor should be a corporation conducting an international unregulated financial services business that borrows large amounts of money in the international commercial paper markets [250].<sup>17</sup>

By contrast, the taxpayer's position, which the Canadian courts rejected, was that GECCAN should be viewed as a separate, stand-alone company, not as a subsidiary of a parent company that might rescue it from insolvency. The general principle of setting a transfer price based on the *incremental* benefit, rather than the total benefit, to the subsidiary — which principle led the Tax Court's rejection of the insurance premium analysis — was strongly contested by GECCAN. The Canadian courts' endorsement of an incremental benefit analysis will likely be cited in many future cases, both in Canada and around the world. The incremental benefit analysis may be relevant not just to guarantee fees and interest rates, but to other transfer pricing issues as well.

One other aspect of the Canadian courts' opinions should be noted. In other decided transfer pricing cases, judges have often relied on simpler understandings of what the arm's-length standard requires. For example, in *U.S. Steel*, the U.S. Tax Court concluded that the ocean transportation rates charged by U.S. Steel's Bahamian shipping subsidiary to unrelated customers for transporting Venezuelan iron ore could *not* be applied to determine the rate for comparable transportation provided to the U.S. parent company because of substantial differences in the volumes transported.<sup>18</sup> However, the U.S. Second Circuit overruled the Tax Court and said:

In sum, the record shows that over four years' time half a dozen large corporations chose to use

<sup>17</sup>I have corrected the text of the Tax Court opinion by transposing the bracketed terms ("parent" and "subsidiary") in the second sentence of the quotation.

<sup>18</sup>Over the four years at issue (1957-1960), volumes transported for U.S. Steel, the parent company, accounted for approximately 94 percent of total volumes delivered to all customers (related and unrelated) at the U.S. Steel destinations (that is, Baltimore, Philadelphia, Morrisville, Pa., and Mobile, Ala.).

the services of Navios [U.S. Steel's shipping affiliate] despite the fact that they were not compelled to do so. In such circumstances, we think the taxpayer has met its burden of showing that the fees it paid (which were identical to those paid by the independents) were arm's length prices [32].

The U.S. Second Circuit ultimately concluded:

Although certain factors make the operations undertaken by Navios for [U.S.] Steel unique at one point, for example, Navios' ore-carriers were the largest of their kind in the world the approach taken by the Tax Court would lead to a highly undesirable uncertainty if accepted. In very few industries are transactions truly comparable in the strict sense used by Judge Quealy [the Tax Court judge]. To say that Pittsburgh Steel was buying a service from Navios with one set of expectations about duration and risk, and [U.S.] Steel another may be to recognize economic reality; but it is also to engraft a crippling degree of economic sophistication onto a broadly drawn statute, which if "comparable" is taken to mean identical, as Judge Quealy would read it would allow the taxpayer no safe harbor from the Commissioner's virtually unrestricted discretion to reallocate [43, footnotes omitted].

It appears to me that if the Canadian Court of Appeals had applied the same reasoning as the U.S. Second Circuit applied in *U.S. Steel*, it would have overruled the Canadian Tax Court's opinion and accepted GECCAN's insurance-based evidence of arm's-length guarantee fees. That is, the outcome of transfer pricing litigation depends on the judge's economic sophistication.

As noted above, I believe the greater sophistication of the Canadian courts in *GE Capital Canada* is a virtue. Others may conclude, as the U.S. Second Circuit in *U.S. Steel* did, that greater sophistication results not only in greater complexity of transfer pricing analyses, but also greater uncertainty in the ultimate outcomes of transfer pricing disputes.

### III. Implications for Tax Policy

My focus now shifts to the broader tax policy implications of using the arm's-length standard to determine guarantee fees and interest rates payable to related parties. In this section, I assume that the Canadian Tax Court opinion in *GE Capital Canada* was correct in concluding that the 1 percent guarantee fee charged by GECUS was an arm's-length result. The issue to be considered below is whether that arm's-length result is best as a matter of tax policy.

Two comparisons are considered. First, under the OECD's current guidelines for bilateral tax treaties, the arm's-length method of determining intercompany interest rates and guarantee fees for the domestic *subsidiary* of a foreign corporation is compared with the method of determining the comparable rates for the

domestic *branch* of a foreign corporation. Second, a company's credit rating can be viewed as a valuable intangible asset and its tax treatment compared with that of patents, trademarks, and most other intangibles. My ultimate conclusion is that from a tax policy perspective, the treatment of a company's credit rating under the single-entity, branch method makes more sense than the treatment of its credit rating under the separate-entity, arm's-length method.

### A. Interest Expense and Guarantee Fees for a PE

In considering the tax policy implications of applying the arm's-length standard to intercompany interest expense and guarantee fees, I think it is useful first to compare how arm's-length rates for a corporate subsidiary of a multinational group are calculated with how such rates are determined for an unincorporated branch (which the OECD refers to as a PE) under the OECD's Report on the Attribution of Profits to Permanent Establishments of July 17, 2008. Under the "working hypothesis" of the 2008 OECD report:

the profits to be attributed to a PE are the profits that the PE would have earned at arm's length if it were a legally distinct and separate enterprise performing the same or similar functions under the same or similar conditions and dealing wholly independently with the enterprise of which it is a PE [I-12].<sup>19</sup>

But while the 2008 OECD report endorsed the general principle of calculating the profit attributable to a PE as if it were a separate legal entity, the report created a clear exception for interest rates and guarantee fees payable by a PE:

There are a number of aspects to the recognition (or not) of dealings between a PE and the rest of the enterprise of which it is a part. First, a PE is not the same as a subsidiary, and is *not in fact legally or economically separate from the rest of the enterprise* of which it is a part. It follows that:

- *Save in exceptional circumstances, all parts of the enterprise have the same creditworthiness. This means that dealings between a PE and the rest of the enterprise of which it is a part should be priced on the basis that both share the same creditworthiness; and*
- *There is no scope for the rest of the enterprise to guarantee the PE's creditworthiness, or for the PE to guarantee the creditworthiness of the rest of the enterprise [I-36]. [Emphasis added.]*

In short, if GECUS had organized GECCAN as its unincorporated Canadian branch, rather than as a separately incorporated Canadian subsidiary, GECUS could not have disclaimed responsibility for GECCAN's

debt and, thus, would not be entitled to collect a guarantee fee for assuming that responsibility.

### B. Credit Rating as an Intangible Asset

Viewing GECUS as a separate entity, its AAA credit rating was clearly a valuable intangible asset in terms of its impact on the allocation of profit between GECUS and its affiliates. As noted above, the 1 percent guarantee fee that GECUS actually charged GECCAN represented 33 to 40 percent of GECCAN's pretax and pre-guarantee-fee profit. Broadly speaking, that 33 to 40 percent share of the payer's total profit compares favorably with the often cited rule of thumb that royalties paid by licensees for rights to use patents, knowhow, and other manufacturing intangibles are typically 25 to 33 percent of their licensees' pre-royalty profits.<sup>20</sup>

However, a credit rating differs in significant ways from most other intangibles:

- Unlike most other intangibles, a high credit rating is neither the product of a formal intangible development program (such as a research and development activity) nor the byproduct of other specific activities undertaken by specific members of the consolidated group (for example, manufacturing knowhow developed by a company's factories). Rather, as was shown in Section I, a credit rating reflects the *consolidated* financial results of the affiliated group, not the separate-entity results of the parent company.
- A high credit rating is a manifestation of the consolidated companies' goodwill or going concern value. That is, unlike patents, trademarks, or copyrights, a credit rating is not a separate item of property that is owned and can be sold or transferred apart from the other assets of the company.<sup>21</sup>
- Although a parent company does not own its credit rating, it is nonetheless legally entitled under a separate-entity analysis to capture for itself the economic benefit of its high credit rating either by lending money to its subsidiaries at interest rates that are higher than its own borrowing cost or by guaranteeing the third-party debts of its subsidiaries. As Justice Hogan noted, GECUS was not required to give its subsidiaries access to its own credit facility. Rather, GECUS could provide an explicit guarantee when it was advantageous from a consolidated company perspective to do so (for example, to GECCAN) or disclaim any

<sup>20</sup>See *Bausch & Lomb, Inc. v. Commissioner*, 92 T.C. 525, 608 (1989); and *Ciba-Geigy Corp. v. Commissioner*, 85 T.C. 172, 299 (1985).

<sup>21</sup>IRC section 936(h)(3)(B) provides a definition of intangible property that excludes goodwill and going concern value.

<sup>19</sup>For brevity, the reference in brackets is to paragraph 12 of Part I of the 2008 OECD report.

guarantee when a guarantee would have been collectively disadvantageous (for example, to GE Financial Corp.). GECUS's right to provide or disclaim explicit guarantees is the byproduct of its legal ownership and control (direct and indirect) of the stocks of its subsidiary companies, not its legal ownership of its credit rating per se.

- The discretion that a parent company has in capitalizing a subsidiary with debt rather than equity gives it discretion in how much debt-related expense to allocate to the subsidiary. For example, GECCAN had a 12-1 debt-equity ratio, compared with GECUS's consolidated 8-1 debt-equity ratio. Although it would not have been advantageous from a consolidated company perspective to do so, GECUS could have chosen a debt-equity ratio for GECCAN that was less than 8 to 1; indeed, GECCAN could have been capitalized entirely with equity. GECCAN's actual 12-1 debt-equity ratio resulted in a high intercompany guarantee fee not only by reducing the separate-company credit rating imputed to GECCAN, but also by increasing the amount of third-party debt to which the intercompany guarantee fee applied.

In many cases, the parent company of a multinational corporation is the oldest or the largest legal entity in the group. But the ownership structure can often be manipulated if substantial tax savings will be realized. To illustrate, suppose two companies, Alpha Corp. and Beta Ltd., were selling similar products in the United States and Europe, respectively, reporting identical financial results and both enjoying a B credit rating. After friendly negotiations, the two companies agree to merge their businesses, with the erstwhile shareholders of Beta Ltd. exchanging their shares for newly issued shares of Alpha Corp. Because the new consolidated company is twice the size of its predecessor companies and has diversified its risk, the credit rating of the parent company, Alpha Corp, is increased to BBB, which reduces its cost of debt and improves its earnings per share.

Current interest rates for debt with the pertinent credit ratings are shown in Table 3.

Credit Rating	Interest Rate
BBB	6.0%
BB	7.2%
B	8.0%

When Alpha Corp, the parent company, rolls over its own debt, it realizes the full benefit of the 2 percent interest cost saving (that is, the pre-merger rate of 8 percent minus the post-merger rate of 6 percent).

When the outstanding debt of its European subsidiary, Beta Ltd., is rolled over, Alpha Corp. guarantees Beta's debt to secure that same economic benefit:

- If no written guarantee had been provided, Beta's status as Alpha's subsidiary together with its own stand-alone financial data would result in Beta's qualifying for a "notched up" credit rating of BB (as opposed to its pre-merger stand-alone credit rating of B).
- The incremental benefit to Beta Ltd. of Alpha's written guarantee is 1.2 percent per annum, which is the difference between the 7.2 percent interest rate Beta Ltd. would otherwise pay and the 6 percent rate it obtains with Alpha's written guarantee.
- Based on the method applied by the Tax Court in *GE Capital Canada*, the arm's-length guarantee fee would be something less than the 1.2 percent per annum interest-rate benefit to Beta Ltd., say 0.9 percent per annum.

In summary, the merger of the two companies is assumed to result in an increase in the parent company's credit rating from B to BBB, a consequent reduction in the parent's interest cost of 2 percent per annum, and a commensurate increase in the parent company's net income from its own operations. The affiliated group's cost of Beta's debt is also reduced by 2 percent per annum. Beta's reported cost of debt (including the arm's-length guarantee fee) is reduced by 1.1 percent per annum — that is, the 2 percent consolidated-company interest cost saving minus the 0.9 percent arm's-length guarantee fee paid by Beta Ltd. to Alpha Corp.

Compare this result with the result that would occur if the merger had been completed by having Alpha's shareholders exchange their shares for newly issued shares in Beta Ltd., not vice versa. Under this second alternative, Alpha Corp. would pay a 0.9 percent guarantee fee to Beta Ltd. regarding Alpha Corp's own debt, rather than receiving a 0.9 percent guarantee fee regarding Beta's own debt.

A third alternative might be to form a new parent company, Gamma Holding Co., in a tax haven and have the erstwhile shareholders in both Alpha Corp. and Beta Ltd. exchange their respective shares for Gamma Holding's newly created shares. Since the legal organization resulting from the merger can be manipulated, tax considerations, not on economic substance, may determine the post-merger allocation of reported profit among the affiliated companies. From a tax policy perspective, this result makes no sense to me.

### C. Conclusion

Allowing a parent corporation to charge a guarantee fee to its subsidiary corporation, but not to its unincorporated branch, is perfectly logical from a legal perspective, but not from a broader tax policy perspective. According to the July 2010 OECD transfer pricing

guidelines, a major reason for the arm's-length standard is the goal of tax neutrality:

There are several reasons why OECD member countries and other countries have adopted the arm's length principle. A major reason is that the *arm's length principle provides broad parity of tax treatment for members of MNE groups and independent enterprises*. Because the arm's length principle puts associated and independent enterprises on a more equal footing for tax purposes, it avoids the creation of tax advantages or disadvantages that would otherwise distort the relative competitive positions of either type of entity. In so removing these tax considerations from economic decisions, the arm's length principle promotes the growth of international trade and investment [1.8]. [Emphasis added.]

As explained in Section II, in *GE Capital Canada* the Canadian Tax Court concluded that:

- GECUS's AAA credit rating reflected its *consolidated* financial results, not GECUS's own separate-entity results.
- GECUS's own treasury department managed the issuances of debt by all its subsidiaries, including GECCAN, and sought to fund GECUS's *consolidated* business activities at the lowest possible cost.
- In the absence of GECUS's guarantee, GECCAN would have been unable to execute its business plan because the Canadian commercial paper market was geared to the highest-investment-grade borrowers (for example, GECUS).

Because GECCAN used GECUS's AAA credit rating to obtain the lowest possible interest rates, GECCAN enjoyed a competitive advantage over Canadian competitors with lower credit ratings and higher borrowing costs. From a legal perspective, GE Capital's superior credit rating was attributed to the U.S. parent company. From an economic perspective, GE Capital's superior credit rating was the result of the affiliated companies' consolidated financial results and should be attributed for purposes of allocating income by the affiliated companies collectively, not by their parent company viewed as a separate entity. Reducing GECCAN's taxable income by a guarantee fee could reasonably be viewed as creating a tax advantage and amplifying its inherent competitive advantage that GE Capital, viewed as an integrated company, enjoyed over its Canadian competitors.

From a tax-neutrality perspective, the better alternative in my view is the unincorporated branch result — that is, calculating intercompany interest rates based on the credit rating of the parent company and denying any tax deduction for guarantee fees. While it was not legally required to do so, GECUS chose not only to

directly control GECCAN's debt issuances, but also to guarantee their repayment. Since GECCAN's debt had the same guarantees as those of an unincorporated Canadian branch, why as a matter of tax policy should GECUS be entitled to a guarantee fee from its Canadian subsidiary, but not from a Canadian branch? But as noted above, treating a subsidiary as if it were a branch would require fundamental changes in countries' tax laws and their bilateral tax treaties and cannot generally be achieved by tax authorities under existing law.

## Appendix

Table A-1 illustrates how the yields on debt adjusted for expected default losses shown in Table 3 were calculated. In summary:

- Lines 1-5 show the key assumptions underlying the calculations.
- Line 6 shows the number of years since the debt was issued.
- Lines 7-11 project the various debt-related amounts assuming no default occurs.
- Line 12 shows the probability that debt will default during any given year, which equals the increment in the cumulative default rate shown on Line 13. Line 13 shows the cumulative probability of default based on Moody's historical data.
- Line 14 equals 100 percent minus Line 13.
- Lines 15-18 show the principal and interest amounts pertaining to debt that did not default in the current year or in any prior year.
- Line 19 shows the principal amount of debt that is expected to default in a year, and Line 20 shows the interest due on that principal amount.
- Line 21 shows the maximum possible loss on debt that defaults in a year, which equals 100 percent of the principal amount plus the interest payable on that principal amount.
- Line 22 shows the portion of Line 21 that the creditor expects to recover (based on the recovery rate shown on Line 5).
- Line 23 shows the expected cash flow that before maturity equals the interest received on debt that is not in default at the end of that year (Line 16) plus the recovery from debt that defaulted in that year (Line 22). In the year the debt matures, the cash flow also includes the principal amount of debt that did not default in any prior year (Line 15).
- Line 24 shows the expected yield, which equals the internal rate of return on the cash flow shown on Line 23.

Table A-1. Calculation of Actual Yield Adjusted for Projected Default Rate

	B										
	0	1	2	3	4	5	6	7	8	9	10
1 Initial Credit Rating											
2 Stated Interest Rate	9.21%										
3 Stated Maturity	10										
4 Initial Investment	\$100.00										
5 Default Recovery Rate	44.6%										
6 Year	0										
7 Stated Principal		\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00
8 Stated Interest		\$9.21	\$9.21	\$9.21	\$9.21	\$9.21	\$9.21	\$9.21	\$9.21	\$9.21	\$9.21
9 Stated Repayment		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
10 Stated Net Cash Flow	-\$100.00	\$9.21	\$9.21	\$9.21	\$9.21	\$9.21	\$9.21	\$9.21	\$9.21	\$9.21	\$109.21
11 Stated Yield	9.21%										
12 Incremental Default Rate		4.03%	5.02%	5.00%	4.45%	3.92%	3.50%	3.23%	2.73%	2.40%	2.10%
13 Cumulative Default		4.03%	9.05%	14.05%	18.50%	22.42%	25.92%	29.14%	31.87%	34.27%	36.37%
14 Cumulative Non-Default		95.97%	90.95%	85.95%	81.50%	77.58%	74.08%	70.86%	68.13%	65.73%	63.63%
15 Non-Defaulted Principal		\$95.97	\$90.95	\$85.95	\$81.50	\$77.58	\$74.08	\$70.86	\$68.13	\$65.73	\$63.63
16 Interest on Non-Defaulted		\$8.84	\$8.38	\$7.92	\$7.51	\$7.15	\$6.83	\$6.53	\$6.28	\$6.06	\$5.86
17 Repayment of Non-Defaulted		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
18 Cash Flow on Non-Defaulted Debt		\$8.84	\$8.38	\$7.92	\$7.51	\$7.15	\$6.83	\$6.53	\$6.28	\$6.06	\$69.49
19 Newly Defaulted Principal		\$4.03	\$5.02	\$5.00	\$4.45	\$3.92	\$3.50	\$3.23	\$2.73	\$2.40	\$2.10
20 Interest on Newly Defaulted Principal		\$0.37	\$0.46	\$0.46	\$0.41	\$0.36	\$0.32	\$0.30	\$0.25	\$0.22	\$0.19
21 Maximum Loss on Newly Defaulted		\$4.40	\$5.48	\$5.46	\$4.86	\$4.28	\$3.82	\$3.52	\$2.98	\$2.62	\$2.29
22 Recovery on Newly Defaulted Debt		\$1.96	\$2.44	\$2.44	\$2.17	\$1.91	\$1.70	\$1.57	\$1.33	\$1.17	\$1.02
23 Actual Net Cash Flow	-\$100.00	\$10.80	\$10.82	\$10.36	\$9.68	\$9.06	\$8.53	\$8.10	\$7.61	\$7.23	\$70.51
24 Actual Yield	6.45%										