

**EXPERT REPORT OF PROFESSOR REUVEN S. AVI-YONAH
ON THE ESTIMATED FEDERAL TAX LIABILITY OF
THE VANGUARD GROUP, INC.**

**SUBMITTED TO THE INTERNAL REVENUE SERVICE AND
THE SECURITIES AND EXCHANGE COMMISSION IN CONNECTION
WITH THE WHISTLEBLOWER SUBMISSIONS OF DAVID DANON**

SEPTEMBER 21, 2015

EXPERT REPORT OF PROF. REUVEN AVI-YONAH

I. Introduction

1. I am the Irwin I. Cohn Professor of Law and the Director of the International Tax Master of Law Program at the University of Michigan Law School. I have been asked by Thomas, Alexander & Forrester LLP to prepare this expert report concerning Mr. David Danon's whistleblower submission regarding The Vanguard Group, Inc. ("Vanguard").
2. Mr. Danon alleges that Vanguard does not charge its affiliated mutual funds for investment advisory services in direct contravention of Treas. Reg. 1.482-9, resulting in a substantial understatement of Vanguard's federal income tax liability. In addition, Mr. Danon alleges that Vanguard did not include in its income the approximate \$1.5 billion contingency reserve it charged to its affiliated funds, resulting in an additional understatement of federal income tax liability.
3. I have studied the law and practice of US taxation for over twenty-five years and have published over 150 books and articles on many topics in that field, including many articles and a BNA portfolio on transfer pricing. I have lectured, taught, and consulted with both taxpayers and governments regarding issues of taxation. Besides Michigan, I have taught tax law at Harvard, NYU and the University of Pennsylvania Law Schools. I have lectured on tax and international economic law topics at several other universities in Argentina, Australia, Austria, Brazil, Chile, China, Israel, Italy, Mexico, New Zealand, the UK and the US.
4. I have consulted with the US Treasury's Office of Tax Policy, China's State Tax Administration, the International Monetary Fund, the World Bank, the UN and the OECD on tax matters, and have testified numerous times before US Congressional committees on matters relating to US tax law, including testimony on transfer pricing abuse by US-based multinationals before the US Senate Committee on Finance.
5. In addition, I have practiced tax law for over twenty-five years, including full time practice at the firms of Ropes & Gray (Boston), Wachtell, Lipton, Rosen & Katz (NYC), and Milbank, Tweed, Hadley & McCloy (NYC), and part time practice at Cravath, Swaine & Moore (NYC), Cadwalader, Wickersham and Taft (NYC) and Steptoe & Johnson (Washington, DC). Further details are contained in the attached curriculum vitae.

II. Opinions. My opinions are as follows:

6. Mr. Danon's allegations are correct, and Vanguard has no legal justification for its transfer pricing practice of operating its U.S. mutual funds "at cost." If the IRS were to pursue the matter, it will prevail in court on the issue of whether Vanguard should have charged its affiliated funds an arm's length fee based on industry comparables for the investment management and advisory services Vanguard provided to the funds.

7. The IRS should be able to defend in court a determination that the arm's length fee charged by Vanguard to its affiliated funds for the tax years 2007-2014 should have been on average in the range of 0.71% to 0.82% of each fund's net asset value.¹
8. Assuming an arm's length fee equal to the industry average, asset-weighted expense ratio², Vanguard's estimated liability for past due Federal tax, including interest and penalties for the 2007-2014 period, is approximately \$34.6 billion. Tables 1 and 2 provide the assumptions and calculations for this estimate.
9. The IRS will prevail in court on the issue of whether Vanguard should have included in income the approximate \$1.5 billion contingency reserve shown on its books as a long-term receivable from its affiliated funds, as well as the interest income from lending the contingency reserve back to its affiliated funds.

III. Factual Background

10. Vanguard is a Pennsylvania corporation with its principal place of business in Malvern, Pennsylvania. Vanguard's primary business is providing investment management and other services to certain U.S. funds (the "Funds") that are treated as regulated investment companies ("RICs" or "mutual funds") under the Internal Revenue Code of 1986, as amended (the "Code").
11. Vanguard provides brokerage services to Fund investors through Vanguard Marketing Corporation, a wholly owned subsidiary of Vanguard, and a variety of other investment-related services (e.g., retirement account record keeping, trustee services) either directly or through other subsidiaries. Vanguard provides similar services in multiple non-US jurisdictions through Vanguard Investment Series plc, a wholly owned subsidiary incorporated in Ireland ("Vanguard Ireland") and other subsidiaries.
12. Vanguard has more than \$3 trillion assets under management ("AUM"), the vast majority of which are accounted for by the Funds. It is the largest mutual fund complex in the world. Michael Rawson, a Morningstar analyst, told the *Financial Times* in May 2015 that "[i]t is phenomenal that a single company could represent almost 20 percent of the US mutual fund industry. But they have done it through offering products that are

¹ The IRS likely would determine the appropriate arm's length fee on a fund-by-fund basis to account for pricing differences based on the value of services delivered by the investment manager. For example, actively managed mutual funds will have higher fees than passively managed funds (e.g., index funds). The estimates of overall tax liability in this report account for these pricing differentials by using an estimate of the average, asset-weighted arm's length fee for the industry.

² Morningstar, Mutual Fund Expense Ratio Trends, June 2014, available at http://corporate.morningstar.com/US/documents/researchpapers/Fee_Trend.pdf. The industry average reported by Morningstar is a conservative measure and *understates* the true market price because of what Morningstar calls the "Vanguard Factor", i.e., Vanguard constitutes such a large portion of the mutual fund market that its non-market based pricing skews the average fee lower. See Morningstar, *The Cost of Owning ETFs and Index Mutual Funds*, December 1, 2014, available <http://global.morningstar.com/us/documents/pr/Cost-Of-Owning-Index-ETF-MFS.pdf>.

- consistently lower cost than other funds.”³ Vanguard attracted \$215 billion of new investor money in the US alone in 2014.
13. Vanguard’s ability to charge lower costs than its competitors is attributable to its structure, which is unique in the mutual fund industry. Vanguard’s founder, Jack Bogle, believed that an inherent conflict of interest exists when a mutual fund is advised by an independent investment manager between maximizing the returns of fund investors and the profits of investment manager shareholders. Therefore, Mr. Bogle set up Vanguard in 1974 as a “mutual ownership” company in which the investment manager, Vanguard, is owned by the Funds in proportion to their net asset value (“NAV”). This structure reflected Mr. Bogle’s belief that a RIC manager would only serve the interests of RIC investors if it were owned by the RICs it manages, because otherwise it would have to serve the interests of its own separate shareholders.
 14. The mutual ownership structure required an exemption from the Securities and Exchange Commission (“SEC”) because transactions between the Funds and Vanguard would be transactions between affiliated parties. The Funds sought an SEC exemption to provide certain non-investment advisory services to affiliated funds “at cost” and to have the affiliated funds own the Vanguard. The SEC granted the exemptive order (the “SEC Exemptive Order”) in 1975 based on its view that the proposed terms were “reasonable” and that “no funds would be disadvantaged”.
 15. Since 1975, Vanguard has charged its domestic Funds only the “costs” of providing services, including investment management and advisory services. These costs include wages and other expenses but do not include profit or a return on capital.
 16. The SEC Exemptive Order was not conditioned on Vanguard providing its services to the Funds “at cost.” “At cost” pricing was proposed by Vanguard for a limited set of services that excluded investment management and advisory services. Charging the Funds an arm’s length price for the services provided by Vanguard to its affiliates would be fully consistent with the SEC Exemptive Order.
 17. Vanguard is the investment manager and advisor for all of its index funds and most of its actively managed mutual funds and exchange-traded funds.
 18. Vanguard’s ability to charge fund investors lower costs than other mutual fund complexes is based in large part on the fact that because of the “at cost” structure described above, Vanguard shows little or no net income on its Federal and state tax returns. This situation enables Vanguard to undercut the prices set by its competitors at the expense of the US Treasury, which in turn has enabled it to become the largest mutual fund manager (in terms of AUM) in the world.
 19. In testimony before the US Senate Finance Committee on September 16, 2014, Mr. Bogle stated that “Investors fare best with funds managed by not-for-profit organizations, because the management firm focuses exclusively on serving investor interests. No profit motive conflicts with the manager’s fiduciary responsibility. No profit margin interferes with investor returns. No outside corporate interest clashes with portfolio management choices. **Not-for-profit firms** place investor interests front and center. . . . Ultimately, a passive index fund managed by a not-for-profit investment management organization represents the combination most likely to satisfy investor aspirations.” Mr. Bogle added

³ Stephen Foley, Investment: Vanguard’s commanding position, *Financial Times*, May 27, 2015.

that Vanguard earned \$19 billion in profits in 2013 that were “rebated back” to its shareholders.⁴

20. The problem with Mr. Bogle’s statement is that Vanguard is not a “not for profit” corporation; it is a taxable Subchapter C corporation, and the \$19 billion of profits that it “rebated” to its shareholders (the Funds) and their investors should have been subject to 35% tax under Code section 11.
21. Vanguard could never legally operate as a tax-exempt, non-profit entity under the Internal Revenue Code because Vanguard’s investment management activities do not qualify as any of the exempt purposes under IRC § 501(c)(3).
22. Vanguard has established a contingency reserve (the “**Contingency Reserve**”) to cover unanticipated losses incurred by the Funds or by Vanguard. The Contingency Reserve is funded by contingency reserve fees that are charged to the Funds as part of the “at cost” management fee they owe Vanguard.
23. Contingency Reserve fees are deducted from the NAV of the Funds, thus reducing the amount of taxable distributions to Fund shareholders, as well as the value of Fund shares upon redemption.
24. Vanguard has unfettered rights with respect to the Contingency Reserve. The Vanguard Board of Directors has the authority to make disbursements from the Contingency Reserve, and Vanguard uses the Contingency Reserve to fund losses in Vanguard or its subsidiaries.
25. The Contingency Reserve is included as an asset—a long-term receivable—on Vanguard’s balance sheet for accounting purposes. The value of the Contingency Reserve as of 2012 was approximately \$1.5 billion.
26. It appears that Vanguard transfers any fees for the Contingency Reserve back to the Funds, and does not report these fees as income on its Federal income tax returns.

IV. ANALYSIS

A. The Transfer Pricing Issue.

27. Vanguard and its domestic subsidiaries are taxable corporations under Subchapter C of the Code. The Funds are RICs and therefore are not taxable at the Fund level if they meet the requirements of Subchapter M of the Code, including distributing 90% of their income to Fund investors annually.⁵
28. Vanguard is wholly-owned by its more than 150 U.S. mutual funds in proportion to their NAV. The Vanguard Board of Directors is identical to the Trustees of the Funds, and the

⁴ <http://www.c-span.org/video/?321517-1/hearing-retirement-savings-policy> (emphasis added).

⁵ Vanguard is not a “cooperative” as that term is defined in Code section 1381 because it is not a “corporation operating on a cooperative basis and allocating amounts to patrons on the basis of the business done with or for such patrons.” Treas. Reg. 1.1381-1(a). For cases explaining that a cooperative is an association of individuals who personally participate in its governance see, e.g., *Buckeye Countrymark v. Commissioner*, 103 TC 547 (1994); *Farm Bureau Services, Inc. v. United States*, 547 F.Supp. 1279 (W.D. Mich 1982); *Union Equity Cooperative Exchange v. Commissioner*, 58 TC 397 (1972); *Puget Sound Plywood, Inc. v. Commissioner*, 44 TC 305 (1965).

Board of Directors and Trustees manage Vanguard and the Funds with a common purpose.

29. “The purpose of section 482 is to ensure that taxpayers clearly reflect income attributable to controlled transactions and to prevent the avoidance of taxes with respect to such transactions. Section 482 places a controlled taxpayer on a tax parity with an uncontrolled taxpayer by determining the true taxable income of the controlled taxpayer.”⁶
30. “In determining the true taxable income of a controlled taxpayer, the standard to be applied in every case is that of a taxpayer dealing at arm's length with an uncontrolled taxpayer. A controlled transaction meets the arm's length standard if the results of the transaction are consistent with the results that would have been realized if uncontrolled taxpayers had engaged in the same transaction under the same circumstances (arm's length result).”⁷
31. Vanguard is a “controlled” taxpayer in relation to the Funds because the Funds own Vanguard (which in turn owns the other corporations in the Vanguard Group), the Vanguard Board of Directors is identical to the Trustees of the Funds and the Board of Directors and Trustees manage Vanguard and the Funds with a common purpose. “*Controlled* includes any kind of control, direct or indirect, whether legally enforceable or not, and however exercisable or exercised, including control resulting from the actions of two or more taxpayers acting in concert or with a common goal or purpose. It is the reality of the control that is decisive, not its form or the mode of its exercise. A presumption of control arises if income or deductions have been arbitrarily shifted.”⁸
32. Treas. Reg. 1.482-9 provides methods to determine taxable income in connection with a controlled services transaction (a transaction involving the provision of services between controlled taxpayers). Treas. Reg. 1.482-9(a) requires controlled taxpayers to charge an arm's length price for services provided to other controlled taxpayers. Under Treas. Reg. 1.482-9(b), controlled taxpayers must provide services at a profit unless they meet the requirements of the “services cost method”, which permits them to provide certain narrowly defined services “at cost” without a markup.⁹
33. Under Treas. Reg. 1.482-9(b)(2), in order for the services cost method to apply, **all** the requirements of that section must be met, including that the service is a “covered service” as defined in Treas. Reg. 1.482-9(b)(3), that it is not an “excluded activity” under Treas. Reg. 1.482-9(b)(4), and that it is not precluded from being a covered service under the business judgment rule of Treas. Reg. 1.482-9(b)(5).
34. Under Treas. Reg. 1.482-9(b)(3), a service is a “covered service” if it is either specified as such by the IRS, which has not been done for the type of services provided by Vanguard to the Funds, or if the median comparable markup on total services cost is less

⁶ Treas. Reg. 1.482-1(a)(1).

⁷ Treas. Reg. 1.482-1(b)(1).

⁸ Treas. Reg. 1.482-1(i)(4).

⁹ For years before 2009, Temp. Reg. 1.482-9T(b) governed the services cost method. Temp. Reg. 1.482-9T(b)(2) provided that “key competitive advantages” and “core capabilities” are excluded from the scope of the services cost method. As discussed below the investment advisory services provided by Vanguard to the Fund are both a “key competitive advantage” and a “core capability” and therefore the IRS will prevail in excluding them from the services cost method for the years 2007-2009.

than or equal to seven percent. As discussed below, the median comparable markup on the Vanguard's services to the Funds is higher than seven percent.

35. Under Treas. Reg. 1.482-9(b)(4)(viii), excluded activities include "financial transactions." The services provided by Vanguard to the Funds are financial transactions because they involve decisions about the financial investment activities of the Funds.¹⁰
36. Under Treas. Reg. 1.482-9(b)(5), "[a] service cannot constitute a covered service unless the taxpayer reasonably concludes in its business judgment that the service does not contribute significantly to key competitive advantages, core capabilities, or fundamental risks of success or failure in one or more trades or businesses of the controlled group, as defined in § 1.482-1(i)(6). In evaluating the reasonableness of the conclusion required by this paragraph (b)(5), consideration will be given to all the facts and circumstances." Vanguard's services to the Funds are its core business¹¹ and its own promotional materials emphasize that the "at cost" pricing of the services provided by Vanguard to the Funds is the "key competitive advantage" of the Funds in attracting and retaining investors. "Vanguard is unique in the mutual fund world for being a not-for-profit company, a fact that is critical to understanding its success. Mr. Bogle's conviction 40 years ago was that low fees, more than stockpicking prowess, would make the most difference to investment performance over time- a view now validated by the academic literature."¹²
37. The services provided by Vanguard to the Funds do not qualify for the "services cost method" of Treas. Reg. 1.482-9(b) because (a) they are not covered services, (b) they are excluded services, and (c) they are "core" services under Treas. Reg. 1.482-9(b)(5). Any one of these arguments should suffice to persuade a court that Vanguard is not eligible to price its services to the Funds "at cost", and to be eligible for the services cost method Vanguard must prove that none of these exclusions apply.
38. Because the services provided by Vanguard to the Funds are not eligible for the services cost method, the next task is to establish an appropriate arm's length price.

¹⁰ Credit analysis services provided by a company to an affiliate bank that uses the analysis "in the ordinary course of business in making decisions regarding extensions of credit to potential customers" are part of a "financial transaction." Treas. Reg. 1.482-9(b)(8), Ex 7. Similarly, Vanguard's investment advisory and other services provided to the Funds are part of a financial transaction because they support and are part of the Funds' purchase and sale of portfolio securities and the Funds' daily sale and redemption of their shares.

¹¹ Even services that may qualify for the services cost method for one company because ancillary to the company's core business may not qualify for the services cost method for another company if the services constitute a significant portion of the company's business. See Treas. Reg. 1.482-9(b)(8), Ex. 8 and 9 (Data verification services ancillary to a manufacturing company's business may be eligible for the services cost method but data verification services provided by a company for which these activities "constitute a significant portion of [the] company's] business" are not eligible for the services cost method because the company could not "reasonably conclude that these services do not contribute significantly to the controlled group's key competitive advantages, core capabilities, or fundamental risks of success or failure in the group's business.").

¹² Foley, *supra*. For the academic literature supporting the conclusion that investors move from higher to lower cost mutual fund complexes. See, e.g., John C. Coates & R. Glenn Hubbard, Competition in the Mutual Fund Industry: Evidence and Implications for Policy, Harvard John M. Olin Center for Law, Economics and Business Discussion Paper No. 592 (2007), and the literature surveyed therein.

39. Treas. Reg. 1.482 requires a taxpayer to use the “best method,” which is the method that provides the most reliable measure of an arm’s length result. If comparables are available, the best method typically is the “Comparable Uncontrolled Price” method because it reflects a market price. The Comparable Uncontrolled Price method uses observed prices in transactions between uncontrolled entities, i.e., market prices.
40. The Comparable Uncontrolled Price method is the best method to use to determine the arm’s length price for Vanguard’s services because comparable uncontrolled prices for investment management and advisory services are readily available and the most reliable measure of arm’s length transactions.
41. Comparable uncontrolled prices for Vanguard’s services are publicly available because mutual funds are required to report expense ratios. The expense ratio includes three major categories of mutual fund costs. The first and generally largest is the management fee paid to the fund’s investment adviser (i.e., Vanguard in this case). Second are distribution fees (“12b-1 fees”) spent on advertising, marketing, and distribution services or on commissions to sales representatives. Third are other administrative expenses resulting from the provision of record keeping and transaction services to fund investors.¹³
42. Mr. Bogle estimated in 2001 that of the aggregate expenses paid by fund investors to fund managers, about 60% is spent on operating the fund, while the other 40% represents the aggregate pre-tax profit earned by fund management companies.¹⁴
43. Morningstar reported that average expense ratios for all mutual funds were between 0.71% and 0.82% over the 2007 – 2014 period.¹⁵ See Table 1.
44. The average fees reported by Morningstar *understate* the true arm’s-length price because the average includes Vanguard’s non-market fees. Morningstar calls this the “Vanguard Factor”: The results of this analysis are also sensitive to whether Vanguard funds are included. *Because Vanguard prices its funds at cost, many of its index mutual funds are cheaper than ETFs from other providers.* Vanguard’s index funds have significant influence on the asset-weighted averages because they tend to be among the largest mutual funds in each category. However, Vanguard has a smaller share of the ETF market. Vanguard funds accounted for 80.0% of the assets in our index mutual fund sample and 32.3% of the assets in the ETF group.”¹⁶
45. The average fees charged by mutual fund managers managing and advising comparable mutual funds is the most reliable measure of the arm’s length price that Vanguard should charge its affiliated funds under Section 482. If Vanguard’s average expense ratios included a profit component, they would be similar to the average expense ratios of other mutual funds, or 0.71%-0.82% over the 2007-2014 period. By subtracting Vanguard’s reported expense ratio of 0.19%-0.21% for the same period, which does not include a

¹³ David Latzko, Mutual Fund Expenses: An Econometric Investigation, <http://www.personal.psu.edu/~dxl31/research/presentations/bsi.pdf>; Jill Fisch and Tess Wilkinson-Ryan, Why Do Retail Investors Make Costly Mistakes? An Experiment on Mutual Fund Choice, 162 U Penn L Rev 605, 611.

¹⁴ John Bogle, John Bogle on Investing: The First 50 Years, New York: Mcgraw-Hill, 2001, p.158.


¹⁵ Morningstar, Mutual Fund Expense Ratio Trends, June 2014, available at http://corporate.morningstar.com/US/documents/researchpapers/Fee_Trend.pdf.

¹⁶ Morningstar, The Cost of Owning ETFs and Index Mutual Funds, December 1, 2014, available <http://global.morningstar.com/us/documents/pr/Cost-Of-Owning-Index-ETF-MFS.pdf>.

- profit component, one can derive Vanguard's net profit for that period, which Table 1 indicates to be about \$70,643,880,000
46. Based on these numbers, the estimated tax with interest and penalties for the 2007-2014 period is approximately \$34.6 billion. *See* Table 2.
 47. In sum, the most reliable method for determining the arm's length price for the services Vanguard provides to its mutual funds is the comparable uncontrolled price method. There is a large set of data for these prices that should persuade a court that Vanguard should have charged its affiliated mutual funds on average a fee of 0.71% - 0.82% for the period 2007 -2014. *See* Table 1.
 48. In my opinion, based on the above comparables, the IRS should prevail in court if it asserts that Vanguard should have charged the Funds an average fee of 0.71% - 0.82% of NAV over the 2007 -2014 period. *See* Table 1.
 49. Assuming an average arm's length fee of 0.71% to 0.82% over the 2007 – 2014 period, Vanguard's estimated liability for past due Federal tax, including interest and penalties for the 2007-2014 period, is approximately \$34.6 billion. *See* Table 2.

B. The Contingency Reserve Issue.

50. The Contingency Reserve is under Vanguard's control, is funded by Fund service fees that reduce NAV, and is shown as a Vanguard asset on Vanguard's balance sheet.
51. "[A] taxpayer may not deliberately turn his back upon income and thus select the year for which he will report it."¹⁷ Income is received for tax purposes when "it is actually or constructively received" or "is due and payable to the taxpayer."¹⁸
52. The entire Contingency Reserve is under Vanguard's control, and therefore should be reported as Vanguard income. Transferring the funds in the Contingency Reserve to the Funds and showing them as a "long-term receivable" on Vanguard's books is a loan to shareholders, which should be subject to an interest charge under Code section 7872.
53. According to the complaint filed by Mr. Danon against Vanguard in New York, the amount of interest income under Code 7872 on the Contingency Reserve omitted by Vanguard from its federal tax returns for 2004-2012 is \$210 million.


Reuven S. Avi-Yonah
September 21, 2015

¹⁷ *Hamilton Nat'l Bank v. Commissioner*, 29 BTA 63, 67 (1933).

¹⁸ Rev. Proc. 2004-34, 2004-22 IRB 991, sec. 4.04.

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TABLE 1
ESTIMATED UNDERREPORTED INCOME OF THE VANGUARD GROUP, INC. 2007-2014

Tax Year	Vanguard's Estimated Assets Under Management	Average Industry Expense Ratio¹	Vanguard's Estimated Revenues²	Vanguard's Average Expense Ratio	Vanguard's Estimated Costs³	Vanguard's Estimated Underreported Income⁴
2007	\$ 1,100,000,000,000	0.82%	\$ 9,020,000,000	0.21%	\$ 2,310,000,000	\$ 6,710,000,000
2008	\$ 1,300,000,000,000	0.80%	\$ 10,400,000,000	0.20%	\$ 2,600,000,000	\$ 7,800,000,000
2009	\$ 964,000,000,000	0.80%	\$ 7,712,000,000	0.20%	\$ 1,928,000,000	\$ 5,784,000,000
2010	\$ 1,089,600,000,000	0.78%	\$ 8,498,880,000	0.20%	\$ 2,179,200,000	\$ 6,319,680,000
2011	\$ 1,362,000,000,000	0.75%	\$ 10,215,000,000	0.19%	\$ 2,587,800,000	\$ 7,627,200,000
2012	\$ 1,610,000,000,000	0.72%	\$ 11,592,000,000	0.19%	\$ 3,059,000,000	\$ 8,533,000,000
2013	\$ 2,200,000,000,000	0.71%	\$ 15,620,000,000	0.19%	\$ 4,180,000,000	\$ 11,440,000,000
2014	\$ 3,100,000,000,000	0.71%	\$ 22,010,000,000	0.18%	\$ 5,580,000,000	\$ 16,430,000,000
Total			\$ 95,067,880,000		\$ 24,424,000,000	\$ 70,643,880,000

Notes

¹ Source: Morningstar Mutual Fund Expense Ratio Trends, June 2014

² AUM x Industry Average Expense Ratio

³ AUM x Vanguard Average Expense Ratio

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TABLE 2
ESTIMATED FEDERAL TAX LIABILITY OF THE VANGUARD GROUP, INC. 2007-2014

<u>Tax Year</u>	<u>Vanguard's Estimated Underreported Income¹</u>	<u>Vanguard's Estimated Past Due Taxes²</u>	<u>40% Penalty</u>	<u>Interest³</u>	<u>Vanguard's Total Estimated Federal Tax Liability</u>
2007	\$ 6,710,000,000	\$ 2,348,500,000	\$ 939,400,000	\$ 164,395,000	\$ 3,287,900,000
2008	\$ 7,800,000,000	\$ 2,730,000,000	\$ 1,092,000,000	\$ 225,444,485	\$ 3,822,000,000
2009	\$ 5,784,000,000	\$ 2,024,400,000	\$ 809,760,000	\$ 184,254,246	\$ 2,834,160,000
2010	\$ 6,319,680,000	\$ 2,211,888,000	\$ 884,755,200	\$ 145,877,894	\$ 3,096,643,200
2011	\$ 7,627,200,000	\$ 2,669,520,000	\$ 1,067,808,000	\$ 216,173,293	\$ 3,737,328,000
2012	\$ 8,533,000,000	\$ 2,986,550,000	\$ 1,194,620,000	\$ 187,911,785	\$ 4,181,170,000
2013	\$ 11,440,000,000	\$ 4,004,000,000	\$ 1,601,600,000	\$ 229,710,777	\$ 5,605,600,000
2014	\$ 16,430,000,000	\$ 5,750,500,000	\$ 2,300,200,000	\$ 319,494,745	\$ 8,050,700,000
Total	\$ 70,643,880,000	\$ 24,725,358,000	\$ 9,890,143,200	\$ 1,673,262,226	\$ 34,615,501,200

Notes

¹ Estimated Revenues - Estimated Costs

² Assuming a 35% corporate tax rate

³ Interest calculated based on 26 § USC 6621 at 3% above the Federal short term rate