

University of Pennsylvania Carey Law School

Penn Carey Law: Legal Scholarship Repository

All Faculty Scholarship

Faculty Works

2009

Taxation and the Competitiveness of Sovereign Wealth Funds: Do Taxes Encourage Sovereign Wealth Funds to Invest in the United States?

Michael S. Knoll

University of Pennsylvania Carey Law School

Follow this and additional works at: https://scholarship.law.upenn.edu/faculty_scholarship



Part of the [Banking and Finance Law Commons](#), [Corporate Finance Commons](#), [International Economics Commons](#), [Law and Economics Commons](#), [Law and Politics Commons](#), [Taxation Commons](#), [Taxation-Federal Commons](#), [Taxation-Transnational Commons](#), and the [Tax Law Commons](#)

Repository Citation

Knoll, Michael S., "Taxation and the Competitiveness of Sovereign Wealth Funds: Do Taxes Encourage Sovereign Wealth Funds to Invest in the United States?" (2009). *All Faculty Scholarship*. 237.
https://scholarship.law.upenn.edu/faculty_scholarship/237

This Article is brought to you for free and open access by the Faculty Works at Penn Carey Law: Legal Scholarship Repository. It has been accepted for inclusion in All Faculty Scholarship by an authorized administrator of Penn Carey Law: Legal Scholarship Repository. For more information, please contact PennlawIR@law.upenn.edu.

TAXATION AND THE COMPETITIVENESS OF SOVEREIGN WEALTH FUNDS: DO TAXES ENCOURAGE SOVEREIGN WEALTH FUNDS TO INVEST IN THE UNITED STATES?

MICHAEL S. KNOLL*

ABSTRACT

Sovereign wealth funds (“SWFs”) control large amounts of capital and have made, and are continuing to make, high-profile investments in the United States, especially in the financial services sector. Those investments in particular, and SWFs in general, are highly controversial. There is much discussion of the costs and benefits to the United States of investments by SWFs, and there is an intense and ongoing debate over what should be the United States’ policy toward SWFs. In the course of that debate, some critics have called on the U.S. government to abandon its long-held position of neutrality toward foreign investment and to use the income tax to discourage investments by SWFs. Surprisingly, in light of such calls, there is little understanding of how the tax system affects the competition among SWFs, private foreign investors, and U.S. investors to acquire and hold U.S. assets. Accordingly, in this Article, I develop a model for how taxes influence the ownership of assets, and I then apply that model to

* Theodore K. Warner Professor, University of Pennsylvania Law School; Professor of Real Estate, Wharton School; Co-director, Center for Tax Law and Policy, University of Pennsylvania. I thank Wei Cui, Mihir Desai, Dhammika Dharmapala, Victor Fleischer, Robert McDonald, Richard Sansing, and Reed Shuldiner for comments and suggestions. I also thank Ann Davidson, Alvin Dong, and Benjamin Meltzer for assistance with the research. I have benefited from presentations made at Wharton and at the UNC Tax Symposium. I have not received any funding for this project from outside of the University of Pennsylvania. Copyright 2009 by Michael S. Knoll. All rights reserved.

investments in U.S. equities, U.S. debt, and U.S. real estate. Where feasible, I estimate the tax-induced advantage or disadvantage SWFs have relative to private foreign investors and U.S. investors for each asset class under current law. I also discuss how the international tax system could be reformed so that it does not distort ownership patterns. The basic idea is to divide the right to tax into two pieces. First, the source country has the right to tax an investment on the condition that the tax it imposes does not vary depending on who makes the investment or where the investor making the investment resides. Second, the home country has the right to tax the investor on the conditions that the home country taxes the investor at the same rate on income from all sources and that the home country allows a deduction, but not a credit, for any taxes paid to the source country.

I. INTRODUCTION

Sovereign wealth funds ("SWFs") have been making headlines. In 2008, SWFs made major investments in Morgan Stanley, Citigroup, Blackstone, Carlyle, and Merrill Lynch, most of which sought large infusions of cash in the wake of the credit crunch.¹ SWFs have also made substantial investments outside of financial services,² but those investments have generally not been as large or as visible.³

Investments by SWFs are highly controversial. Press reports talk of the United States selling off its assets and mortgaging its future.⁴ Less colorfully, critics argue that foreign governments are expanding their

1. STAFF OF J. COMM. ON TAXATION, 110TH CONG., ECONOMIC AND U.S. INCOME TAX ISSUES RAISED BY SOVEREIGN WEALTH FUND INVESTMENT IN THE UNITED STATES 27–29 (2008); Victor Fleischer, *A Theory of Taxing Sovereign Wealth*, 84 N.Y.U. L. REV. 440, 441–42 (2009).

2. WILLIAM MIRACKY ET AL., MONITOR GROUP, ASSESSING THE RISKS: THE BEHAVIOR OF SOVEREIGN WEALTH FUNDS IN THE GLOBAL ECONOMY 4 (2008), available at http://www.monitor.com/Portals/0/MonitorContent/documents/Monitor_SWF_report_final.pdf. See also Bob Davis, *Sovereign-Wealth Funds Seek Control*, WALL ST. J., June 6, 2008, at C2 (noting that SWFs "generally buy controlling interests in the companies they target").

3. A chorus of commentators have called for greater transparency with respect to the investments made by SWFs. E.g., EDWIN M. TRUMAN, PETERSON INST. FOR INT'L ECON., A BLUEPRINT FOR SOVEREIGN WEALTH FUND BEST PRACTICES 10–12 (2008), available at <http://www.petersoninstitute.org/publications/pb/pb08-3.pdf>; Paul Rose, *Sovereigns as Shareholders*, 87 N.C. L. REV. 83, 140–45 (2008); Evan Bayh, *Time for Sovereign Wealth Rules*, WALL ST. J., Feb. 13, 2008, at A26; Kara Scannell, *Cox Cites Concerns over Sovereign Funds*, WALL ST. J., Oct. 25, 2007, at A8. See also Ronald J. Gilson & Curtis J. Milhaupt, *Sovereign Wealth Funds and Corporate Governance: A Minimalist Response to the New Mercantilism*, 60 STAN. L. REV. 1345, 1362–68 (2008) (advocating the suspension of an SWF's right to vote its shares owned in a U.S. corporation).

4. See, e.g., David R. Francis, *Will Sovereign Wealth Funds Rule the World?*, CHRISTIAN SCI. MONITOR, Nov. 26, 2007, at 16.

influence over U.S. economic and foreign policy.⁵ Commentators and policymakers are concerned that foreign governments might use their SWFs to advance their own national interests to the detriment of those of the United States. Among the potential actions most frequently mentioned are transfers of technology and explicit or implicit threats to divest if the United States pursues policies at odds with the investor's interests.⁶ There is another side. Proponents emphasize the economic benefits of reducing the cost of capital by attracting foreign capital.⁷ Still other commentators point to various social and economic benefits from the greater economic integration that comes when foreign investors, including foreign governments, invest in the United States.⁸

A central issue in the controversy is whether existing tax law encourages, discourages, or is neutral with respect to investments from SWFs. Thus, for example, Victor Fleischer claims that existing U.S. tax law encourages SWFs, relative to foreign private investors, to purchase U.S. equities.⁹ That argument has been picked up by the press.¹⁰ Critics claim that the U.S. tax system is encouraging SWFs to make large investments in the United States while disadvantaging U.S. investors and private foreign investors.¹¹ Not everyone agrees. The Joint Committee on Taxation, in its report on SWFs, argues that in practice there is little difference in the tax treatment of SWFs and private foreign investors.¹² Mihir Desai and Dhammika Dharmapala go further. They argue that existing U.S. tax law is effectively neutral between SWFs and private foreign investors—even when that law taxes the latter, but not the former.¹³

5. See, e.g., Fleischer, *supra* note 1, at 485–87; Lawrence Summers, *Funds that Shake Capitalist Logic*, FIN. TIMES, July 29, 2007, http://www.ft.com/cms/s/2/bb8f50b8-3dcc-11dc-8f6a-0000779fd2ac.dwp_uuid=95e85a0c-68fd-11db-b4c2-0000779e2340.print=yes.html#.

6. For a survey of the negative externalities that might come from investments by SWFs, see Fleischer, *supra* note 1, at 485–94.

7. See STAFF OF J. COMM. ON TAXATION, *supra* note 1, at 34.

8. E.g., Ruth Mason, *Efficient Management of the Wealth of Nations*, 120 TAX NOTES 1321, 1321–22 (2008); Katharina Pistor, *Global Network Finance: Organizational Hedging in Times of Uncertainty* (Columbia Law Sch. Ctr. for Law & Econ. Studies, Working Paper No. 339, 2008). For a survey, see Fleischer, *supra* note 1, at 480–85.

9. Fleischer, *supra* note 1, at 443, 445, 448–49.

10. E.g., Christopher S. Rugaber, *Professor Who Highlighted Tax Breaks for Hedge Funds Sets Sights on Sovereign Wealth Funds*, ASSOCIATED PRESS, Mar. 6, 2008; Nicholas Rummell, *Time to Tax Sovereign Wealth Funds, Says Academic*, FIN. WK. Mar. 5, 2008, <http://www.financialweek.com/apps/pbcs.dll/article?AID=/20080305/REG/363089433/-1/NEWS01>.

11. E.g., Fleischer, *supra* note 1, at 443.

12. See STAFF OF J. COMM. ON TAXATION, *supra* note 1, at 37–62.

13. See generally Mihir A. Desai & Dhammika Dharmapala, *Taxing the Bandit Kings*, 118 YALE L.J. POCKET PART 98 (2008).

There is, therefore, much disagreement over whether U.S. tax law advantages or disadvantages SWFs relative to other investors. There is also great interest in that question. Accordingly, in this Article, I offer an answer to that question.

The rest of this Article is as follows: Part II provides a brief description of SWFs, and Part III provides a brief introduction into U.S. taxation of inbound foreign investment, including investment by SWFs. Part IV describes the theory of taxes and ownership. In that part, I first develop a general model for thinking about whether a tax system encourages investment by one group of investors relative to another group.¹⁴ I then use that model to develop a simple analytical tool for expressing the amount by which taxation increases or decreases the value that an investor places on a given asset relative to the value placed on that same asset by another investor. In Parts V and VI, I apply the theory and tools developed in Part IV to a range of investments in the United States. In those parts, I determine for various classes of U.S. assets whether taxation provides SWFs with a tax-induced advantage or disadvantage relative to private U.S. investors and private foreign investors. In Part VII, I describe an international tax system that will not distort ownership while providing each country with broad latitude to set its own tax policies. Part VIII concludes.

II. SOVEREIGN WEALTH FUNDS

SWFs are actively managed, state-owned, and state-controlled investment funds.¹⁵ Although state-owned, SWFs are often set up as legally

14. This Article is part of a larger project on taxes and competitiveness. The first paper in that series is Michael S. Knoll, *Taxes and Competitiveness* (Univ. of Penn., Inst. for Law & Econ., Research Paper No. 06-28, 2006), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=953074. Other papers in that series include: Michael S. Knoll, *The Corporate Income Tax and the Competitiveness of U.S. Industries*, 63 TAX L. REV. (forthcoming 2009) [hereinafter Knoll, *Corporate Income Tax*]; Michael S. Knoll, *The UBIT: Leveling an Uneven Playing Field or Tilting a Level One?*, 76 FORDHAM L. REV. 857 (2007) [hereinafter Knoll, *UBIT*]; Michael S. Knoll, *Business Taxes and International Competitiveness* (Univ. of Penn., Inst. for Law & Econ., Research Paper No. 08-12, 2008), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1138374 [hereinafter Knoll, *Business Taxes and International Competitiveness*]; Michael S. Knoll, *International Competitiveness, Tax Incentives, and a New Argument for Tax Sparing: Preventing Double Taxation by Crediting Implicit Taxes* (Univ. of Penn., Inst. for Law & Econ., Research Paper No. 08-21, 2008), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1259927; Michael S. Knoll, *Reconsidering International Tax Neutrality* (Univ. of Penn., Inst. for Law & Econ., Research Paper No. 09-16, 2009), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1407198 [hereinafter Knoll, *Reconsidering International Tax Neutrality*].

15. STAFF OF J. COMM. ON TAXATION, *supra* note 1, at 21–22. These funds are owned, at most, only indirectly by the citizens.

independent entities with boards of directors and managers who are not government officials.¹⁶ The managers of the fund decide what investments to make and exercise whatever control rights the fund has in the companies in which it invests.¹⁷

The first SWF, the Kuwait Investment Office, was created in 1953.¹⁸ As of 2008, the largest SWFs come from Abu Dhabi, Norway, Saudi Arabia, Singapore, Kuwait, and China.¹⁹ The largest, the Abu Dhabi fund, holds \$875 billion in assets,²⁰ and all such funds combined hold nearly \$3 trillion in assets.²¹ Not all SWFs, however, are foreign. The Alaska Permanent Fund Corporation, established in 1976, is an SWF.²² It is owned by the state of Alaska and has \$38 billion in assets.²³

In the next few years, SWFs are expected to grow rapidly. According to the Joint Committee on Taxation, estimates for the assets that SWFs will hold in five years range from \$5 trillion to \$10 trillion.²⁴ Over the next ten years, the estimates reach as high as \$13 trillion.²⁵

To put these numbers in perspective, SWFs hold more assets than hedge funds and private equity funds together.²⁶ SWFs, however, as a class are much smaller than pension funds, mutual funds, and insurance companies. Pension funds, mutual funds, and insurance companies each have assets under management that are six to nine times larger than the total assets of SWFs.²⁷ In terms of global financial assets (bonds, equities, and bank assets), SWFs own less than 2 percent of total global financial

16. See Gilson & Milhaupt, *supra* note 3, at 1362.

17. In contrast with some other amalgamations of capital, such as many state-directed pension funds, SWFs do not pass investment and management decisions through the fund to the beneficial owners, with each citizen-owner having the right to decide how its proportionate interest will be invested. See TRUMAN, *supra* note 3, at 3.

18. *Asset-Backed Insecurity*, ECONOMIST, Jan. 19, 2008, at 78, 80.

19. STAFF OF J. COMM. ON TAXATION, *supra* note 1, at 26 tbl.2; *Asset-Backed Insecurity*, *supra* note 18, at 78 tbl.

20. *Asset-Backed Insecurity*, *supra* note 18, at 79. See also STAFF OF J. COMM. ON TAXATION, *supra* note 1, at 26 tbl.2 (suggesting the Abu Dhabi fund holds \$650–\$700 billion in assets). All of these estimates were made before the 2008 financial crisis drove asset prices down sharply.

21. *Asset-Backed Insecurity*, *supra* note 18, at 78. See also STAFF OF J. COMM. ON TAXATION, *supra* note 1, at 23 (citing estimates ranging from \$2 trillion to \$3.7 trillion).

22. STAFF OF J. COMM. ON TAXATION, *supra* note 1, at 26 tbl.2. Throughout this Article, when I mention SWFs, unless I clearly state that I am including U.S. SWFs, I am referring to foreign SWFs only.

23. *Asset-Backed Insecurity*, *supra* note 18, at 79.

24. STAFF OF J. COMM. ON TAXATION, *supra* note 1, at 24–25.

25. *Id.* at 25.

26. See *id.* at 24 fig.12 (citing 2006 data).

27. See *id.*

assets (\$190 trillion).²⁸

As they have grown in size, the nature of the investments made by SWFs has changed.²⁹ For many years, SWFs would invest almost exclusively in debt instruments, especially Treasury securities and other government obligations.³⁰ Seeking higher returns, SWFs began making portfolio investments in publicly traded equities and limited partnership investments in private equity.³¹ More recently, SWFs have started to make direct investments in U.S. equities and real estate. It is these last investments that have generated the most controversy.³²

Much of the concern with SWFs is that even if they are legally independent from the governments that own them, they are not practically independent.³³ When pressed, the managers of such funds are likely to act as their home country government wants them to act. And governments might have goals that private investors generally would not have.³⁴ For example, SWFs might seek to gain access to sensitive technologies in order to gain a military edge, transfer commercial trade secrets in order to develop competing domestic industries, or sell large amounts of securities—even at a loss—in order to destabilize markets.³⁵

Although there is little evidence of any harmful behavior by SWFs as of yet,³⁶ SWFs raise important questions about national economic and security policy and foreign affairs. These issues are being taken seriously inside of the U.S. government and out. There is also a tax dimension to the controversy. SWFs, private foreign investors, and U.S. investors all compete to own U.S. assets. Because they are subject to different tax regimes and are taxed at different rates, it is not clear whether the tax system, taken as a whole, advantages or disadvantages SWFs relative to other owners. It is that question that I address below. However, before

28. *Id.* at 23 (citing 2006 data).

29. For a detailed and thoughtful history of U.S. taxation of foreign sovereigns in general and SWFs in particular, see Matthew A. Melone, *Should the United States Tax Sovereign Wealth Funds?*, 26 B.U. INT'L L.J. 143 (2008).

30. Fleischer, *supra* note 1, at 454.

31. *Id.* at 454–55.

32. *See, e.g., id.* at 2–5.

33. Gilson & Milhaupt, *supra* note 3, at 1362 (“Could anyone genuinely believe that the investment managers of China Investment Corporation or Singapore’s Temasek would hang up the phone if a senior government (or in China’s case, Party) official called to offer advice on the fund’s handling of a particular investment to advance the country’s, rather than the portfolio company’s, interests?”).

34. *Id.* at 1361–62.

35. *See* Summers, *supra* note 5. For a survey, see Fleischer, *supra* note 1, at 485–87.

36. Gilson & Milhaupt, *supra* note 3, at 1362.

tackling that question, I first provide a brief overview of U.S. international taxation.

III. THE TAXATION OF U.S. INTERNATIONAL INVESTMENT

It is common to divide the taxation of international investment into the taxation of inbound and outbound transactions. From the U.S. perspective, outbound taxation deals with the tax treatment of U.S. investors investing abroad. From that same perspective, inbound taxation deals with the tax treatment of foreign investors investing in the United States.

In the jargon of international taxation, the country where the investment occurs is called the host or source country. The country in which the investor resides is called the residence or home country. The taxation of foreign investment into the United States involves the U.S. taxation of inbound investment and home country taxation of outbound investment. The taxation of U.S. overseas investment involves source country taxation of inbound investment and U.S. outbound taxation. Below, I first describe the taxation of inbound investment into the United States, and then I describe the taxation of outbound investment from the United States.³⁷

A. THE TAXATION OF INBOUND INVESTMENT INTO THE UNITED STATES

Under longstanding principles of international taxation, the source country has the first right to tax income arising within its borders.³⁸ The home country also has the right to tax the foreign-source income of its residents, but only after the source country has taxed that income.³⁹ Accordingly, in this section, I first describe U.S. taxation of inbound investment, and I then describe home country taxation of that investment.

1. U.S. Taxation of Inbound Investment

The United States, like most other countries, asserts the right to tax the

37. Readers who are familiar with international taxation and thus inclined to skip this material might want to skim this part. In this part, I introduce various stylistic simplifications of how different categories of assets are taxed. I then use those simplifications throughout the Article when I evaluate how taxation affects the competitiveness of various groups of investors with respect to various categories of assets.

38. See STAFF OF J. COMM. ON TAXATION, 102D CONG., FACTORS AFFECTING THE INTERNATIONAL COMPETITIVENESS OF THE UNITED STATES 143–44 (Comm. Print 1991); 1 JOEL D. KUNTZ & ROBERT J. PERONI, U.S. INTERNATIONAL TAXATION ¶ A1.02[1] (1991).

39. See STAFF OF J. COMM. ON TAXATION, *supra* note 38, at 143–44; KUNTZ & PERONI, *supra* note 38, ¶ A1.02[1].

income that arises within its borders.⁴⁰ The United States taxes foreign persons under two different tax regimes. Passive income, which is known as fixed or determinable annual or periodical (“FDAP”) income, is taxed at a flat rate of 30 percent generally with no allowance for deductions.⁴¹ In contrast, active income, the profit from operating a business in the United States, which is known as income effectively connected with a U.S. trade or business (“effectively connected income”), is taxed at standard tax rates with allowance for the full slate of deductions.⁴²

Throughout this Article, I generally consider three classes of assets: debt obligations, equities, and real estate.⁴³ For each class of assets, I next briefly describe how the United States would tax such an investment if it were held by a U.S. investor,⁴⁴ by a private foreign investor, and by an SWF.⁴⁵

Debt Obligations. Interest received by U.S. taxpayers is ordinary income⁴⁶ and is subject to tax at graduated rates, which run as high as 35 percent currently.⁴⁷ Foreign investors hold large amounts of U.S. debt obligations—some of those obligations are government issued, and some are privately issued. In contrast with the tax treatment of U.S. holders, most debt obligations held by foreign investors—both SWFs and private foreign investors—fully escape taxation by the United States.⁴⁸

Equities. The tax treatment of investments in equities is more complicated than that of debt. With few exceptions,⁴⁹ a U.S. investor is

40. The source rules, which assign income to a particular jurisdiction, are contained in I.R.C. §§ 861, 862, 863, 865 (2006).

41. I.R.C. §§ 871(a), 881 (2006).

42. *Id.* §§ 871(b), 882(a), 884.

43. Some of the recent investments by SWFs in financial services firms have been in the form of complex financial hybrid securities. For descriptions of these transactions and securities, see STAFF OF J. COMM. ON TAXATION, *supra* note 1, at 63–70. In the discussion below, I ignore the advantages or disadvantages SWFs would have relative to other investors from using such securities.

44. I do not generally consider tax-exempt investors other than SWFs. The approach described below could be extended to include tax-exempt investors.

45. The descriptions below are stylized and incomplete in that they avoid many details. Yet, such descriptions capture what I believe are the essential elements of the tax treatment of each asset category for each investor group. The analysis, which is based on those stylized descriptions, is intended to provide a good first approximation of the consequences of taxation on ownership.

46. I.R.C. § 61(a)(4).

47. *Id.* § 1. The tax treatment is similar if the holder is a U.S. corporation. *Id.* § 11.

48. *Id.* §§ 871(h), 881(c). The major exception is for debt held by a 10 percent shareholder. *See id.* § 871(h)(3) (explaining that exempt portfolio interest excludes interest received by a 10 percent shareholder).

49. The most significant exceptions are for investments through tax-advantaged saving vehicles, especially qualified accounts, such as individual retirement accounts. *See, e.g.*, I.R.C. §§ 401, 408 (West 2009). There are other exceptions, such as for securities dealers, who are taxed at ordinary

taxed at capital gains rates on any gain from the sale of stock.⁵⁰ If the stock has been held for more than a year, then the gain (or loss) is a long-term capital gain (or loss).⁵¹ Currently, the tax rate on long-term capital gains is capped at 15 percent.⁵² For many years, dividends were taxed at ordinary income tax rates.⁵³ In 2003, the tax rate on qualified dividends was reduced to the same rate as long-term capital gains.⁵⁴

The tax treatment of foreign investors in equities differs from that of domestic investors. The United States does not tax foreign investors on capital gains. Such gains are deemed to be sourced where the holder resides and therefore escape U.S. taxation.⁵⁵ Dividends, however, are a different story. Dividends are subject to U.S. foreign withholding tax.⁵⁶ Such tax arises on gross, not net, income. That difference rarely matters with dividends because the gross dividend is almost always treated as net income. The dividend withholding tax is a flat 30 percent,⁵⁷ although that rate is often reduced by tax treaties.⁵⁸

Moreover, many foreign investors avoid paying dividend withholding taxes by holding stock indirectly rather than directly.⁵⁹ For example, a foreign investor who wants to hold a diversified portfolio of stock, such as the S&P 500, can hold shares directly, invest in an index fund or mutual fund, or purchase a derivative such as a total return swap on the S&P 500. Because the investor receives dividends with the first two investments, but not with the third, the derivative enables the investor to avoid the withholding tax on dividends.⁶⁰ I often refer to investments in equities

income tax rates on a mark-to-market basis. I.R.C. § 475 (2006).

50. I.R.C. §§ 1(h), 1001, 1221 (2006).

51. *Id.* § 1222(3)–(4).

52. *Id.* § 1(h)(1).

53. *See id.* § 61(a)(7) (including dividends in gross income).

54. Jobs and Growth Tax Relief Reconciliation Act of 2003, Pub. L. No. 108–27, § 302, 117 Stat. 752, 760 (codified as amended at I.R.C. § 1(h)(11)). The definition of qualified dividends includes dividends paid by qualified foreign corporations, which covers corporations from countries with a comprehensive tax treaty with the United States. I.R.C. § 1(h)(11)(c).

55. I.R.C. § 865(a).

56. *See id.* § 871(a)(1)(A).

57. *Id.* §§ 871(a), 881(a)(1).

58. When reduced by treaty, the withholding tax rate is often 15 percent. *See* WALTER H. DIAMOND & WALTER SZYKITKA, *FOREIGN TAX & TRADE BRIEFS*, at N. Am-22 to -25 (2007) (providing a table of withholding tax rates under U.S. treaties).

59. *See* STAFF OF J. COMM. ON TAXATION, 110TH CONG., *PRESENT LAW AND ANALYSIS RELATING TO THE TAX TREATMENT OF DERIVATIVES* 20–22 (2008).

60. *Id.* In conversations, Dhammika Dharmapala has raised the question of whether it would be possible for a country to tax derivative payments made in lieu of or as substitutes for dividend payments. I think this would be difficult at best. It would require withholding taxes be assessed on the foreign payments of multinational banks and other intermediaries on transactions with no U.S.

through derivatives as portfolio investments and to investments in the stocks themselves as strategic investments. The rationale for that terminology is that tax considerations provide a reason for many foreign investors to hold U.S. equities through derivatives. Hence, if such an investor holds the stock directly, there must be a strategic reason to do so.

The taxation of SWFs differs somewhat from the taxation of other foreign investors in the United States. Section 892, first enacted in 1917, exempts foreign sovereigns from taxation on most forms of noncommercial income earned in the United States, and that provision has been interpreted to apply to SWFs.⁶¹ Accordingly, § 892, as interpreted by Treasury regulations, exempts SWFs from tax on most of their investments in securities. That exemption, however, does not cover controlling investments.⁶² However, when the United States taxes SWFs, it taxes them at corporate rates. Thus, SWFs pay tax at 35 percent on their income from controlling interests in U.S. securities. That is generally higher than the rate paid by private foreign investors.

Real Estate. Foreign investors, including SWFs, have long invested in U.S. real estate. In 2008, SWFs made large investments in U.S. real estate, including taking substantial interests in two marquee properties in New York City—the Chrysler Building and the General Motors Building.⁶³

The taxation of U.S. real estate is very complex.⁶⁴ To simplify greatly, the income earned from operating and renting real estate is ordinary and is taxed at full marginal rates.⁶⁵ The owner's basis, which includes cash plus debt, is depreciated over time and offsets that income.⁶⁶ Real estate is depreciated pro rata over 27.5 or 39 years, depending on whether the property is residential or nonresidential.⁶⁷ Those depreciation deductions

connection other than that the underlying asset is a U.S. stock or a portfolio of stocks. Also, because the total dividend on a portfolio of stocks is largely known in advance, it would require a willingness and an ability to tax substitutes for such dividend flows.

61. See I.R.C. § 892(a)(1). For a short history of I.R.C. § 892, see STAFF OF J. COMM. ON TAXATION, *supra* note 1, at 41–49; Fleischer, *supra* note 1, at 465–67; Melone, *supra* note 29, at 203–17.

62. I.R.C. § 892(a)(2).

63. Daniel Pimlott, *Abu Dhabi Fund Takes Control of Chrysler Building*, FIN. TIMES, July 9, 2008, http://www.ft.com/cms/s/0/1e115a0a-4de5-11dd-820e-000077b07658.html?nclick_check=1; Daniel Pimlott & Justin Baer, *Macklowe Sells GM Building*, FIN. TIMES, May 25, 2008, <http://www.ft.com/cms/s/0/ea894a2e-2a82-11dd-b40b-000077b07658.html>.

64. For a detailed survey of the taxation of U.S. real estate, see James Edward Maule, *Taxation of Real Estate Transactions—An Overview*, 590-2d Tax Mgmt. Portfolio (BNA) (2005).

65. I.R.C. § 61(a)(3).

66. *Id.* §§ 167(c), 1011, 1016.

67. *Id.* § 168(c).

will often produce net losses from owning and operating the real estate for many years. For owners not actively engaged in the real estate business, those net losses are suspended until the owner has future income or sells the underlying property.⁶⁸ If, however, the owner is actively engaged in the real estate business, those losses can be used to offset income from other sources.⁶⁹ Such losses are ordinary and offset other ordinary income at tax rates of up to 35 percent.⁷⁰

Upon sale, the owner has a capital gain (loss) of the difference between the sale price and the owner's adjusted basis. If the property has been held for more than one year, the gain is long-term capital gain, and it is generally subject to tax at a top rate of 15 percent.⁷¹ To the extent of prior depreciation deductions, however, the owner will be taxed at 25 percent on such gains.⁷²

Because of generous depreciation deductions, many owners of real estate are able to avoid paying any tax from operations. The only taxable income they have from real estate comes upon sale. Thus, for the rest of this Article, I will treat investments in real estate as if they generate neither cash flow nor taxable income during operations, so that all of the profit is taxed at the 15 percent long-term capital gains rates upon sale.

There is a special tax regime for foreign investors in U.S. real estate, called the Foreign Investment in Real Property Tax Act ("FIRPTA").⁷³ FIRPTA was enacted in 1980 in response to widespread concern over foreign, especially Japanese, investment in U.S. real estate.⁷⁴ In enacting FIRPTA, Congress sought to eliminate a perceived advantage that foreign investors enjoyed over U.S. investors when investing in U.S. real estate.⁷⁵

68. The passive activity loss ("PAL") rules are contained in I.R.C. § 469 and accompanying regulations.

69. I.R.C. § 469(c)(7).

70. The PAL rules contained in § 469 prevent many real estate investors from taking losses on rental real estate before they sell their interests. However, investors that meet the requirement of "material participation" can pass losses through to themselves where they can offset other sources of income. *Id.* § 469.

71. See *supra* notes 51–52 and accompanying text.

72. I.R.C. §§ 1(h), 1250.

73. *Id.* § 897.

74. See Richard L. Kaplan, *Creeping Xenophobia and the Taxation of Foreign-Owned Real Estate*, 71 GEO. L.J. 1091, 1092–95 (1983).

75. The Senate Report accompanying FIRPTA reads as follows:

The committee believes that it is essential to establish equity of tax treatment in U.S. real property between foreign and domestic investors. The committee does not intend by the provisions of this bill to impose a penalty on foreign investors or to discourage foreign investors from investing in the United States. However, the committee believes that the United States should not continue to provide an inducement through the tax laws for foreign investment in U.S. real property which affords the foreign investor a number of mechanisms

Before the enactment of FIRPTA, foreign investors in U.S. real estate were able to avoid the U.S. capital gains tax upon sale by holding their U.S. real estate interests indirectly through a corporation. Instead of selling the real estate, which would generate taxable income in the United States, they would sell their interest in the corporation, thereby avoiding U.S. taxation because the capital gains had a foreign source. FIRPTA was enacted in order to ensure that foreign investors in U.S. real estate were taxed on their gains upon sale.⁷⁶ FIRPTA operates by treating such a sale as a sale of the underlying real estate⁷⁷ and thereby generates U.S. tax on the sale on the same terms as U.S. persons.⁷⁸

The application of FIRPTA to SWFs is complicated. To simplify greatly, first, foreign investors, including SWFs, but not limited to SWFs, can sell noncontrolling interests in domestically controlled real estate investment trusts ("REITs") without triggering FIRPTA.⁷⁹ Second, SWFs can, but other foreign investors cannot, sell noncontrolling interests in corporations that own U.S. real estate without triggering FIRPTA.⁸⁰ Third, neither SWFs nor other foreign investors can sell direct interests in U.S. real estate or controlling interests in corporations with significant U.S. real estate holdings without triggering FIRPTA.⁸¹

2. Foreign Taxation of Investment Inbound into the United States

The United States' tax laws are not the only tax laws that affect inbound investment into the United States. The country from which the investment comes also has the right to tax the income from such an

to minimize or eliminate his tax on income from the property while at the same time effectively exempting him from U.S. tax on the gain realized on disposition of the property. S. REP. NO. 96-504, at 6 (1979).

76. See I.R.C. § 897(c)(1)(A)(ii).

77. The Code defines an interest in a U.S. real property holding corporation ("USRPHC") as an interest in a domestic corporation in which the value of the corporation's U.S. real property is at least 50 percent of the sum of the value of its worldwide property and other trade or business assets. See *id.* § 897(c)(2).

78. See *id.* § 897(a) (treating sales of a USRPHC as effectively connected with a U.S. trade or business).

79. See *id.* § 897(h)(2), (4) (excluding from the definition of USRPHC sales of stock in certain entities, including REITs, in which less than 50 percent of the outstanding stock is held by foreigners).

80. Section 892 generally exempts SWFs from taxation on their gains from sale of real estate so long as the foreign government does not control the USRPHC. However, a foreign investor's gain from the disposition of a USRPHC is generally taxable without regard to whether the investor has a controlling interest. See STAFF OF J. COMM. ON TAXATION, *supra* note 1, at 52.

81. See Brett R. Dick, *U.S. Income Taxation of Foreign Governments, International Organizations and Their Employees*, 913-3d Tax Mgmt. Portfolio (BNA) § II(D)(1)(b)(2) (2005).

investment.⁸² Although the home country has the right and sometimes the power to tax its residents' foreign-source income, some countries nonetheless refrain from doing so.⁸³ A country that exempts the foreign-source income of its residents has a territorial (also called a source or exemption) tax system.⁸⁴ Thus, private foreign investors from countries with territorial tax systems, whether de jure or de facto,⁸⁵ are taxed as above.

Because SWFs are government owned and controlled, any tax they pay at home, they pay to the governments that own them. Accordingly, it makes little sense to talk about how SWFs are taxed in their home countries. Any such taxes are merely transfers from one pocket controlled by the government to another pocket. Thus, such investment funds are effectively taxed on the territorial system.⁸⁶ The only tax they pay, if any, is located in the countries where they invest. Private foreign investors, however, are another story. Some private foreign investors are taxed only at the source, whereas others are taxed both at the source and at home.

A country that taxes its domestic residents on their worldwide income has a worldwide (also called a residence or credit) tax system.⁸⁷ The term credit refers to the foreign tax credit, which is available to offset or to mitigate double taxation. As the foreign tax credit usually operates, the investor reports foreign-source income on its home country tax return. The investor is then assessed a tentative tax liability by applying the investor's home country tax rate to the investor's foreign-source income. The investor also receives a foreign tax credit for taxes paid to the source country on that income. If the foreign tax credit is less than the investor's tentative tax liability, the credit reduces the liability by the full amount of the tax paid,

82. See STAFF OF J. COMM. ON TAXATION, *supra* note 38, at 143–44; KUNTZ & PERONI, *supra* note 38, ¶ A1.02[1].

83. See OFFICE OF TAX POLICY, U.S. DEP'T OF THE TREASURY, APPROACHES TO IMPROVE THE COMPETITIVENESS OF THE U.S. BUSINESS TAX SYSTEM FOR THE 21ST CENTURY 14 tbl.1.5 (2007), available at http://www.ustreas.gov/press/releases/reports/hp749_approachesstudy.pdf (listing Organisation for Economic Co-operation and Development countries with territorial and worldwide tax systems).

84. *Id.* at 12–13.

85. Although many countries have laws that tax the portfolio income of their residents on a worldwide basis, some scholars believe that large amounts of portfolio income are never taxed at home. See Michael J. Graetz & Itai Grinberg, *Taxing International Portfolio Income*, 56 TAX L. REV. 537, 569–70, 578–79 (2003).

86. In fact, many SWFs are taxed by their country of residence. For a survey of the taxation of SWFs at home and a thoughtful analysis of how that practice impacts how SWFs should be taxed by source countries, see Wei Cui, *Is Section 892 the Right Place to Look for a Response to Sovereign Wealth Funds?*, 123 TAX NOTES 1237 (2009).

87. OFFICE OF TAX POLICY, U.S. DEP'T OF THE TREASURY, *supra* note 83, at 12–13.

and the investor pays the remaining tax liability. In that case, source country taxation does not increase the investor's total tax liability, but merely substitutes foreign taxes for domestic taxes.⁸⁸ From the perspective of the investor, foreign-source income is taxed at the investor's domestic tax rate.⁸⁹

The situation is more complex if the tax paid in the source country exceeds the investor's tentative tax liability to the country of residence on that income. One possibility, which the investor will generally prefer, is that the country of residence provides the investor with a credit for the full amount of tax paid. If the tax paid to the source country always generates a tax benefit, then the source country provides an unlimited foreign tax credit. In that case, the investor always pays tax at the rate set by the country of residence, regardless of the country where the income is earned. A second possibility is that the country of residence limits the investor's foreign tax credit to the tentative tax liability, with any excess foreign tax credits lost. In that case, the investor pays tax on income earned in the source country at the greater of the home or source country tax rates. Some countries, such as the United States, take an intermediate position, where the foreign tax credit can sometimes be used to offset income beyond the tentative tax liability and other times cannot.⁹⁰ Obviously, when the source country tax rate exceeds the residence country tax rate, the impact that taxation will have on ownership will depend on the benefit, if any, generated by the excess tax credits. Throughout this Article, I will generally assume (for countries other than the United States) that if the home country taxes foreign-source income, it taxes that income at the same rate and on the same terms as domestic-source income and provides a foreign tax credit for the full amount of tax paid. That is not always so, but it does keep the discussion manageable.⁹¹

B. THE TAXATION OF OUTBOUND INVESTMENT FROM THE UNITED STATES

In this section, I briefly describe the taxation of overseas investment by U.S. residents. As with the discussion of inbound investment into the

88. Again, I continue to ignore timing considerations.

89. Of course, the investor is taxed at home only if the country of residence taxes the worldwide income of its residents and that tax is enforced. The latter is not to be taken for granted. See Graetz & Grinberg, *supra* note 85, at 578–79; Joseph Guttentag & Reuven Avi-Yonah, *Closing the International Tax Gap*, in BRIDGING THE TAX GAP 99 (Max B. Sawicky ed., 2006).

90. See OFFICE OF TAX POLICY, U.S. DEP'T OF THE TREASURY, *supra* note 83, at 55.

91. The analysis is more complicated if the country of residence taxes domestic and foreign investments differently.

United States, I first describe taxation in the source country and then taxation in the home country.

1. Foreign-Source Taxation of Inbound Investment

There is no universal system of international taxation. Each country has its own tax system, and thus each country taxes inbound investment in a somewhat different way. In the discussion that follows, I make some broad generalizations that are aimed at describing in a highly stylized manner the basic principles that generally apply to inbound taxation of foreign investment outside the United States. As with the discussion of inbound investment into the United States, I focus on three classes of assets: debt, equities, and real estate.

Debt Obligations. Most countries follow the practice, which the United States has only more recently adopted, of not taxing foreign recipients of interest from domestic payors.⁹² Thus, there is generally no taxation at the source on the income from cross-border holdings of debt instruments.

Equities. Many foreign countries do not follow the U.S. practice of treating capital gains as sourced where the investor resides. Rather, in contrast, these countries assert the right to tax capital gains on domestic equities.⁹³ Thus, many countries seek to tax overseas investors on their capital gains and dividends from holding equities. However, asserting the right to tax and actually enforcing that right and collecting taxes are not the same. The large and growing international market in derivatives makes it feasible for overseas investors to avoid source country taxation on capital gains and dividends generated from investments in equities by holding derivatives instead of the underlying securities. Of course, a derivative is only a good substitute for the underlying security when the investor is looking to hold the security as a passive portfolio investor and not as an active investor. However, because my focus is on how and where investors with capital invest that capital, the usual assumption is that most capital is invested as portfolio investment. Thus, I assume there is generally no taxation at the source of cross-border portfolio investments in equities.

Real Estate. Many countries assert the right to tax investments in real

92. Since 1984, the United States has exempted most foreign persons from withholding taxes on U.S.-source interest. JOSEPH ISENBERGH, *INTERNATIONAL TAXATION* 82 (2d ed. 2005).

93. See Karen Richardson, *Foreign Funds Audited in Asia—Tax Man Revisits Treaties that Spurred Investment After Crisis*, WALL ST. J., June 23, 2004, at A15 (noting that Japan and South Korea tax foreigners on capital gains).

estate located within that country.⁹⁴ Because real estate is fixed and derivatives markets in real estate are not highly developed, I assume that countries are able to enforce and collect taxes imposed on the incomes of overseas investors in local real estate. Thus, in contrast with the taxation of debt obligations and equities, overseas investments in real estate are taxed at the source. Moreover, it is my understanding that many countries tax real estate at a relatively high rate because investors cannot escape such taxes.⁹⁵

2. U.S. Taxation of Outbound Investment

U.S. investors who invest abroad are subject to taxation on their worldwide income.⁹⁶ In order to mitigate the effects of double taxation, U.S. investors receive a foreign tax credit for the taxes they pay.⁹⁷ Because U.S. investors pay no source country tax on their income from holding foreign debt instruments and equities, it follows that such investors pay tax at U.S. tax rates on that income.⁹⁸ The situation is more complicated for real estate because the income from overseas real estate investments is taxed at the source. That income will generate a foreign tax credit. Depending on tax rates in the source country and the taxpayers' other operations, the incremental tax rate on foreign source real estate income might be the tax rate in the source country, the tax rate in the United States (the home country), or something in between.⁹⁹

IV. TAXES AND COMPETITIVENESS

The U.S. taxation of inbound investment in general, and § 892 in

94. See, e.g., 1 WALTER H. DIAMOND & CHARLES C. LUTKE, FOREIGN TAX & TRADE BRIEFS, at Japan-20, China-27 (2008); 2 *id.* at Spain-19.

95. The assumption that cross-border investments in real estate are taxed at the source, whereas other cross-border investments are not plays a substantial role in this Article. Because the tax treatment at the source is not the same for all cross-border portfolio investments, I need to calculate who has a tax-induced advantage in investing in any particular class of U.S. assets; I cannot simply deduce who has the advantage from general principles.

96. See I.R.C. §§ 1(h), 11, 61 (2006) (illustrating that taxable income is not limited to U.S. source income).

97. *Id.* § 901.

98. However, because the United States no longer divides income into baskets based on source country and the nature of the income, it is relatively easy to use excess tax credits from one country or one type of income to soak up untaxed foreign income from other foreign countries and on other types of income. When excess foreign tax credits are usable, the effective tax rate is lower than the statutory tax rate.

99. If the U.S. investor does not have foreign-source income, or has excess foreign tax credits, then the marginal tax rate on foreign real estate income is the rate imposed at the source. Alternatively, if the U.S. investor has other foreign-source income that can absorb all of the foreign tax credits, then the investor, in effect, pays tax at the U.S. tax rate.

particular, raise a range of competitiveness questions: Do SWFs have a tax-induced advantage relative to U.S. investors for any specific class of investments? Relative to private foreign investors? What advantage, if any, do private foreign investors have relative to U.S. investors? In this part of the Article, I develop a framework to begin to answer those questions.

This part is divided into three sections. In the first section, I describe how taxation affects the competition to acquire assets in an environment without risk. In the second section, I describe how taxation affects the competition to acquire assets in a risky environment. In the third section, I develop a simple analytical tool that describes how tax considerations affect the relative competitiveness of different investors competing for the same asset in a risky environment. A central feature of that tool is that competitiveness depends not only on how the specific asset under consideration is taxed, but also on how it is taxed relative to a benchmark portfolio.

A. UNDERSTANDING HOW TAXES AFFECT COMPETITIVENESS IN A RISKLESS ENVIRONMENT

Policymakers have long been concerned with the impact that taxes can have on competitiveness. Many economists, however, are reluctant to talk about competitiveness because the term does not have a precise economic meaning.¹⁰⁰ Elsewhere, I have argued that competitiveness can be interpreted in two different ways, each of which has a precise economic meaning directly related to economists' concept of efficiency.¹⁰¹ Under the first definition, a competitively neutral tax system does not distort the location of capital.¹⁰² Under the second definition, a competitively neutral tax system does not distort the ownership of capital.¹⁰³ Those two

100. See Eckhard Siggel, *International Competitiveness and Comparative Advantage: A Survey and a Proposal for Measurement*, 6 J. INDUSTRY COMPETITION & TRADE 137, 137–38 (2006).

101. Knoll, *Corporate Income Tax*, *supra* note 14, at 5–8.

102. *Id.* at 5–7 & n.16. Such a conception of competitiveness is closely associated with the concept of capital export neutrality. *Id.* at 7 n.23; Knoll, *Reconsidering International Tax Neutrality*, *supra* note 14, at 9–13.

103. Knoll, *Corporate Income Tax*, *supra* note 14, at 7–8. Such a conception of competitiveness is closely associated with economists' conception of capital ownership neutrality and the traditional interpretation of capital import neutrality. *Id.* at 7 n.21; Knoll, *Reconsidering International Tax Neutrality*, *supra* note 14, at 16–28. The argument that the international tax system should try to achieve capital ownership neutrality is closely associated with Mihir Desai and James Hines. See, e.g., Mihir A. Desai & James R. Hines Jr., *Evaluating International Tax Reform*, 56 NAT'L TAX J. 487, 494–99 (2003); Mihir A. Desai & James R. Hines Jr., *Old Rules and New Realities: Corporate Tax Policy in a Global Setting*, 57 NAT'L TAX J. 937, 956–57 (2004); Mihir A. Desai, *New Foundations for Taxing Multinational Corporations*, TAXES, Mar. 2004, at 39, 45–46.

definitions, I believe, match up closely with noneconomists' intuitions about competitiveness and general usage of the term in public discourse.

The debate about how SWFs are taxed relates to the second definition of competitiveness—ownership. One way of making the connection between competitiveness and ownership is to think of an auction in which investors compete to acquire assets. The most competitive investor for any asset is the one who places the highest value on that asset. Viewed from this perspective, the tax system affects competitiveness by changing relative bid prices across investors. Thus, the tax system promotes the competitiveness of a group of investors with respect to a class of assets if it provides them with an advantage in acquiring those assets. What it means to have a tax-induced advantage can therefore be conceptualized as follows: among equally efficient owners or users of an asset,¹⁰⁴ an investor with a tax-induced advantage will outbid other investors for that asset.¹⁰⁵

It is often suggested that such a tax advantage can be ascertained by directly comparing tax rates. Thus, an investor who has a lower tax rate on a specific investment has a tax-induced advantage in acquiring that investment over another investor with a higher tax rate on that asset. That simple and intuitive reasoning is the logic behind several tax provisions, such as the unrelated business income tax ("UBIT").¹⁰⁶ It is also often wrong.¹⁰⁷

The reason why it is wrong is because investors with capital must decide where to invest their capital. An investor who has a lower tax rate on every asset cannot acquire all assets. Such an investor still has to allocate that capital.¹⁰⁸ In deciding to make a specific investment, an

104. This assumption implies that the cash flow from owning an asset does not depend on the identity of the owner. I also assume that there are no benefits or costs of ownership other than the cash flow.

105. See Mitchell A. Kane, *Ownership Neutrality, Ownership Distortions, and International Tax Welfare Benchmarks*, 26 VA. TAX REV. 53, 59 (2006); Knoll, *Taxes and Competitiveness*, *supra* note 14, at 3–4.

106. I.R.C. § 511 (2006).

107. See Knoll, *UBIT*, *supra* note 14, at 866–71; Knoll, *Taxes and Competitiveness*, *supra* note 14, at 27–30.

108. Throughout this Article, I treat SWFs not as conduits, but as investors with large pools of money to invest. In order for an SWF to escape taxation under § 892, the assets must come solely from the government, and no portion of the income can inure to the benefit of any private person. Rev. Rul. 75-298, 1975-2 C.B. 290 (setting out standards for an advanced ruling for taxation under § 892). Those rules would preclude SWFs openly operating as private investment vehicles from escaping tax under § 892. However, SWFs might indirectly operate as such vehicles. If a government chooses to increase its investment in an SWF rather than pay off outstanding government obligations, then the government is, in effect, borrowing to finance its SWF investments. In that case, the SWF is a conduit for investment, not a pool of investment capital. When the SWF is viewed as a conduit for investment, the

investor is implicitly deciding to forego other investments. The return that the investor can earn on these other investments, but is forgoing, is the cost of making a specific investment. Under reasonable assumptions, these two effects offset one another. For example, nonprofits, in spite of their tax exemptions, do not generally value productive assets more highly than equally efficient for-profit entities.¹⁰⁹ Also, with global adoption of worldwide taxation, investors from low-tax countries do not generally value productive assets more than do investors from high-tax countries.¹¹⁰ Similarly, with global adoption of territorial taxation, investors from different countries generally place the same value on productive assets.¹¹¹

The standard argument to the effect that low-tax investors do not have an advantage in competitiveness relative to high-tax investors is based on the assumption that each investor is taxed at the same rate on all possible investments. The analysis, however, is more complicated when some investors—foreign, domestic, or both—pay taxes at different rates on different investments. That is to say, when assets and investors are taxed at different rates, taxation can have a subtle impact on competitiveness. That claim is illustrated by the following example.

Consider investors from two countries: country 1 and country 2. Country 1 is the source country. There are two assets: asset A and asset B. Asset B is the benchmark asset. Investors from both countries can readily invest additional funds in asset B or withdraw funds from that asset. Asset B is a passive investment and all investors earn the same before-tax return when they invest in the benchmark asset. As a result, investors from both countries value the benchmark asset at its market price. Asset A is the alternative asset. Investors from both countries are considering whether to acquire asset A. There is only a limited amount of asset A available—one unit—and the investors compete for that asset in an auction. Moreover, investors from countries 1 and 2 are assumed to be equally efficient owners and operators of asset A. I make that last assumption not because it is realistic,¹¹² but rather in order to isolate the impact of tax considerations on

analysis and the results might change.

109. Knoll, *UBIT*, *supra* note 14, at 866–69.

110. See Desai & Hines, *Evaluating International Tax Reform*, *supra* note 103, at 494–95; Fadi Shaheen, *International Tax Neutrality: Reconsiderations*, 27 VA. TAX REV. 203, 207–11 (2007); Knoll, *Taxes and Competitiveness*, *supra* note 14, at 34–36.

111. See Desai & Hines, *Evaluating International Tax Reform*, *supra* note 103, at 492–94; Shaheen, *supra* note 110, at 226–29; Knoll, *Taxes and Competitiveness*, *supra* note 14, at 33–34.

112. In many cases, domestic owners are more productive users of an asset than are foreign owners. For a brief discussion of this issue and a survey of how this observation influenced the early literature on the economics of foreign direct investment, see EDWARD M. GRAHAM & PAUL R.

demand for the alternative asset.¹¹³

Assume the benchmark asset pays a riskless return of 10 percent per year. Assume further that investors from country 1 pay tax at 40 percent on income from the benchmark asset, whereas investors from country 2 pay tax at 20 percent. It follows that investors from country 1 earn 6 percent after tax when they invest in the benchmark asset, whereas investors from country 2 earn 8 percent after tax. Thus, for example, if the benchmark asset costs \$1000 and produces \$100 income in one year, then an investor from country 1 is left with \$60 after tax, whereas an investor from country 2 is left with \$80 after tax.

Assume that taxes on the alternative asset are lower than taxes on the benchmark asset. Assume initially that the alternative asset produces \$1100 in one year with certainty and is untaxed. Obviously, such an asset is worth more than \$1000 to both groups of investors.¹¹⁴ In fact, the asset will be worth \$1037.74 to an investor from country 1,¹¹⁵ but it will be worth only \$1018.52 to an investor from country 2.¹¹⁶ The reason why the asset is worth more to an investor from country 1, the high-tax country, is because the opportunity to avoid paying tax is worth more to a high-tax investor than to a low-tax investor. Note that this result holds even though both groups of investors pay no tax on the alternative asset.¹¹⁷

Assume instead that the country 1 investor pays tax on the alternative asset at 25 percent and that the country 2 investor is still not taxed on that

KRUGMAN, FOREIGN DIRECT INVESTMENT IN THE UNITED STATES app. B (2d ed. 1991).

113. See Kane, *supra* note 105, at 59; Knoll, *UBIT*, *supra* note 14, at 866–67.

114. In order to calculate the value of the alternative asset to a potential investor, the following notation is helpful. Denote the pretax cash flow from the alternative asset by C , the before-tax return on the benchmark asset by R , the total tax rate imposed on an investor from country i on the benchmark asset by t_b^i , the total tax rate imposed on an investor from country i on the alternative asset by t_a^i , and the price paid by an investor from country i for the alternative asset by V_i . An investor from country i will have $C(1 - t_a^i) + V_i t_a^i$ after paying taxes on the alternative asset. That same investor must receive at least $V_i(1 + R(1 - t_b^i))$ or will forgo the alternative asset for the benchmark asset. Equating those two expressions and rearranging the terms yields the maximum bid price for the alternative asset by an investor from country i : $V_i = C(1 - t_a^i) / [1 - t_a^i + R(1 - t_b^i)]$.

115. That value is calculated by using the equation in note 114 above and substituting \$1100 for C , 10 percent for R , 40 percent for t_b^1 , and 0 for t_a^1 . Thus, $V_1 = \$1100(1 - 0) / [1 - 0 + 0.1(1 - 0.4)] = \1037.74 .

116. That value is calculated by using the equation in note 114 above and substituting \$1100 for C , 10 percent for R , 20 percent for t_b^2 , and 0 for t_a^2 . Thus, $V_2 = \$1100(1 - 0) / [1 - 0 + 0.1(1 - 0.2)] = \1018.52 .

117. This is a classic example of a clientele effect. Tax clienteles arise when investors with different tax situations choose to hold differently taxed assets. An investor who prefers one investment over another because of taxes is referred to as being in the tax clientele for the preferred investment. MYRON S. SCHOLES ET AL., TAXES AND BUSINESS STRATEGY 130 (3d ed. 2005).

asset. In that case, both investors will value the alternative asset at \$1018.52.¹¹⁸ Note that investors from both countries place the same value on the alternative asset (\$1018.52) even though they are taxed at different rates (25 percent and zero) and thus receive different after-tax amounts from holding the alternative asset (\$1079.63 and \$1100).¹¹⁹ The reason why the two investors place the same value on the alternative asset is because each investor retains the same share of the before-tax return on the alternative asset relative to the share that same investor retains on the benchmark asset. Thus, after paying taxes, the country 1 investor retains 75 percent on the alternative asset and 60 percent on the benchmark asset. Thus, the country 1 investor retains 25 percent more of the before-tax return on the alternative asset than on the benchmark asset. As for the country 2 investor, after paying taxes, that investor retains 100 percent of the before-tax return on the alternative asset and 80 percent of the before-tax return on the benchmark. Thus, the country 2 investor also retains 25 percent more of the pretax return on the alternative asset than on the benchmark asset. Accordingly, because the relative amounts retained after tax are the same across the two assets for the two types of investors,¹²⁰ both investors place the same value on the alternative asset.¹²¹

It is now easy to understand why in the prior example, when both investors are exempt on the alternative asset, the investor from country 1 values the alternative asset more than the investor from country 2. That is because with a tax rate of 40 percent on the benchmark asset, the investor from country 1 keeps proportionately more of the pretax return on the alternative asset relative to the benchmark asset as compared to the investor from country 2. With a tax rate of 40 percent on the benchmark asset, the investor from country 1 retains 67 percent more of the income on the alternative asset relative to the benchmark asset,¹²² whereas the investor

118. That value is calculated by using the equation in note 114 above and substituting \$1100 for C , 10 percent for R , 40 percent for t_b , and 25 percent for t_a . Thus, $V_i = \$1100(1 - 0.25) / [1 - 0.25 + 0.1(1 - 0.4)] = \1018.52 .

119. Investors from both countries purchase the asset for \$1018.52 and receive \$1100. Thus, investors from both countries earn \$81.48. An investor from country 2 retains the full \$81.48 earned because that investor is not taxed. An investor from country 1 pays \$20.37 in tax and is left with after-tax earnings of \$61.11.

120. Additionally, and by hypothesis, both investors place the same value on the benchmark asset.

121. Viewed from this perspective, the standard result that worldwide taxation is neutral with respect to ownership is a special case of the general result described in the text. When each investor is taxed at the same rate on all investments (with the rate differing across investors), then the ratio of the amount retained across different assets is the same for different investors.

122. The investor from country 1 pays tax at 40 percent on income from the benchmark asset and is exempt from tax on income from the alternative asset. Thus, the investor from country 1 retains 100 percent of the income from an investment in the alternative asset and 60 percent of the income from an

from country 2 retains only 25 percent more.¹²³

By that same logic, if the country 1 investor pays tax on the alternative asset at 28 percent, whereas the country 2 investor is still exempt from taxation, then the investor from country 2 will value the alternative asset more than will the investor from country 1. The country 2 investor will still value the alternative asset at \$1018.52, whereas the country 1 investor will value that asset at only \$1015.38.¹²⁴ The reason why the investor from country 2 values the alternative asset more than the investor from country 1 is that the investor from country 2 still retains 25 percent more of the before-tax return on the alternative asset than on the benchmark asset, whereas the investor from country 1 retains only 20 percent more of the return on the alternative asset than on the benchmark asset.¹²⁵

Once one has seen the above example, it is easy to grasp the intuition behind the results. An investor has a tax-induced advantage relative to another investor if the first investor is taxed at a lower rate on the alternative asset relative to the benchmark asset as compared with how the second investor is taxed on the alternative asset relative to the benchmark asset, and conversely. That is to say, the first investor has a tax-induced advantage in acquiring a specific asset relative to the second investor if the first investor retains a higher portion of the return on the alternative asset relative to the benchmark asset than does the second investor. Having seen this example, it is also easy to understand how one who has not seen and worked through a similar example could fall into the trap of believing that a simple comparison of tax rates on a specific asset determines which investor has a tax-induced advantage in the competition to acquire that asset.¹²⁶ Thus, it is incorrect to assume that an investor has a tax-induced

investment in the benchmark asset. The investor therefore retains an additional 40 percent of the before-tax income with an investment in the alternative asset. Expressed as a ratio of the percentage of the before-tax income that is retained from investing in the benchmark asset, the country 1 investor keeps 67 percent more, or $(1 - 0.6) / 0.6$, with the alternative asset than with the benchmark asset.

123. The investor from country 2 pays tax at 20 percent on income from the benchmark asset and is exempt from tax on income from the alternative asset. Thus, the investor from country 2 retains 100 percent of the income from an investment in the alternative asset and 80 percent of the income from an investment in the benchmark asset. The investor therefore retains an additional 20 percent of the before-tax income with an investment in the alternative asset. Expressed as a ratio of the percentage of the before-tax income that is retained from investing in the benchmark asset, the country 2 investor keeps 25 percent more, or $(1 - 0.8) / 0.8$, with the alternative asset than with the benchmark asset.

124. That value is calculated by using the equation in note 114 above and substituting \$1100 for C , 10 percent for R , 40 percent for r'_b , and 28 percent for r'_a . Thus, $V_2 = \$1100(1 - 0.28) / [1 - 0.28 + 0.1(1 - 0.4)] = \1015.38 .

125. The additional 20 percent is calculated as follows: $(0.72 - 0.6) / 0.6 = 0.2$.

126. In the language of economics, it is not first differences, but second differences, that determine competitiveness.

advantage relative to another investor with respect to a specific asset merely because the first investor is taxed less heavily than the second investor on that asset.¹²⁷

B. UNDERSTANDING HOW TAXES AFFECT COMPETITIVENESS IN A RISKY ENVIRONMENT¹²⁸

In an environment in which all assets are risk free, investors select from among a range of assets that are perfect substitutes for one another. Each investor calculates his or her after-tax rate of return on each asset, and every investor holds only the asset that pays that investor the highest after-tax rate of return. In a simple model with two assets and numerous investors with different tax situations, most investors will gravitate toward one or the other asset and hold that asset exclusively. However, there will be a group of investors who hold both assets. Such investors earn the same after-tax rate of return on both assets. In the tax literature, these investors are identified as marginal investors. They are the ones who set the market price for the two assets.¹²⁹ The rest of the investors specialize by holding either one or the other asset, but not both assets.

In contrast, in a world where assets are risky and where combining assets into portfolios will reduce the overall risk of the portfolio, it no

127. An analogy can be drawn to comparative as opposed to relative advantage in international trade, an idea first advanced by David Ricardo. A discussion of comparative advantage can be found in most international economics texts. *See, e.g.,* PAUL R. KRUGMAN & MAURICE OBSTFELD, *INTERNATIONAL ECONOMICS* 1–8 (6th ed. 2003).

128. The discussion in this section owes a great deal to the comments and suggestions of Mihir Desai, Dhammika Dharmapala, Robert McDonald, and Richard Sansing. They suggested that I use the after-tax capital asset pricing model (“CAPM”) to generate the benchmark portfolio.

129. A simple and well-known example is where there are two risk-free assets: Assume, for example, that all bonds, both taxable and tax free, are risk free. Assume also that there are investors with tax rates ranging from, say, zero to 40 percent. Tax-exempt investors will hold only taxable bonds as long as they pay a higher interest rate than tax-free bonds. And taxpayers in the highest bracket will hold only tax-free bonds unless the tax-free bonds pay a return that is less than 60 percent of that on taxable bonds. Equilibrium in the bond market requires that all bonds offered for sale are held by investors. Accordingly, if tax-exempt investors do not have enough capital to purchase all of the taxable bonds, and if investors in the highest tax bracket do not have enough capital to hold all of the tax-exempt bonds, then some taxable investors will hold taxable bonds, and some investors not in the 40 percent bracket will hold tax-exempt debt. Low-bracket investors will gravitate toward taxable debt, and high-bracket investors will gravitate toward tax-exempt debt. Assume that tax-exempt debt will pay interest at 80 percent of the rate as taxable debt. It follows that investors with a tax rate less than 20 percent will hold only taxable debt and investors with a tax rate greater than 20 percent will hold only tax-exempt debt. Investors taxable at 20 percent are indifferent between the two classes of bonds because they, and only they, earn the same after-tax return on both taxable and tax-exempt debt. Investors taxable at 20 percent are said to be marginal investors because they determine the relative price for bonds in the market.

longer makes sense to think of investors holding only one type of asset.¹³⁰ In such an environment, each investor holds a diversified portfolio in order to reduce the aggregate risk that investor bears.¹³¹ When carried to the logical conclusion, the desire of investors to reduce risk, which can only be accomplished through diversification, leads each investor to hold the market portfolio of assets.¹³²

When combining assets into portfolios reduces risk, differential tax rates across investors (but with each investor paying tax at the same rate on all investments) will not distort investment decisions.¹³³ Each investor will continue to hold the market portfolio.¹³⁴ However, differential taxation across both investors and assets will distort ownership patterns.

In an environment where risk decreases as diversification increases, the benchmark is the market portfolio of assets. Thus, the after-tax rate of return on each asset is measured relative to the after-tax rate of return on the market portfolio.¹³⁵ In this environment, when taxation distorts the

130. Nowhere in this Article do I address the complicated and oft-studied issue of how the tax system taxes the return to risk. In effect, I assume throughout this Article that neither the ex ante nor the ex post return to risk bearing is effectively taxed. That assumption has a basis in economic theory, where it is known as the Domar-Musgrave result. See Evsey D. Domar & Richard A. Musgrave, *Proportional Income Taxation and Risk-Taking*, 58 Q.J. ECON. 388 (1944).

131. In these models, there is no longer a single group of marginal investors. Instead, every investor is marginal.

132. This is the principal result from CAPM-type models. It is also the principal result from many after-tax CAPM models. The after-tax CAPM was first developed by M. J. Brennan, *Taxes, Market Valuation and Corporate Financial Policy*, 23 NAT'L TAX J. 417 (1970). It has been further developed and employed by, among others, Roger H. Gordon & David F. Bradford, *Taxation and the Stock Market Valuation of Capital Gains and Dividends*, 14 J. PUB. ECON. 109 (1980); David A. Guenther & Richard Sansing, *The Effect of Tax-Exempt Investors and Risk on Stock Ownership and Expected Returns* (2008) (unpublished manuscript, on file with author). Much of the work employing the after-tax CAPM focuses on the dividend tax penalty. As far as I know, its first use to study international tax policy is Mihir A. Desai & Dhammika Dharmapala, *Investor Taxation in Open Economies* (2009) (unpublished manuscript, on file with author).

133. The taxation of different investors at different tax rates can cause low-taxed investors to invest proportionately more of their portfolio in the risk-free asset, if one is available, and less in risky assets. The effect is reversed for high-taxed investors. See generally Guenther & Sansing, *supra* note 132. I generally ignore this effect or assume there is no risk-free asset available.

134. *Id.* (manuscript at 4).

135. A more sophisticated analysis would allow for different levels of risk tolerance across investors. Such differences can come from differences in nonmarket (human) capital or differences in consumption bundles. A more sophisticated analysis would also allow for the possibility of different tax treatments for similar assets (such as for the existence of both tax-exempt and taxable bonds). It would also account for the possibility of structuring transactions in sophisticated ways to achieve multilateral tax advantages. For example, in this Article, I do not take into account alternative structures for controlling an asset without holding title. That topic is taken up in Knoll, *Taxes and Competitiveness*, *supra* note 14. I also do not look at the potential tax and other benefits from having SWFs hold securities that are treated as debt for tax purposes, but as equity for regulatory purposes. For a

ownership of assets, it does not generally cause tax-disadvantaged investors to avoid the asset completely and tax-advantaged investors to hold the entire stock of the asset. Instead, tax-disadvantaged investors hold less of an asset than they otherwise would, and tax-advantaged investors hold more than they otherwise would.¹³⁶ That is to say, tax-advantaged investors will overweight the asset (hold a larger share of their wealth in that asset than the mean investor), and tax-disadvantaged investors will underweight it (hold a smaller share of their wealth in the asset than the mean investor).

Consider a simple example. The first investor is taxed at 20 percent on all investments except investment A, and the second investor is taxed at 40 percent on all investment except investment A. On investment A, both investors are taxed at 30 percent. Assuming that none of the other assets that constitute the market portfolio are a good substitute for asset A, both investors will want to hold asset A in their portfolio. Although both investors pay tax at 30 percent on their income from asset A, taxation distorts their holdings of asset A because both investors are taxed differentially on asset A relative to their other investments. Specifically, the lower-taxed investor will underweight asset A, whereas the higher-taxed investor will overweight it. The reason why is because for the lower-bracket investor, asset A is overtaxed relative to other investments, whereas for the higher-bracket investor, asset A is undertaxed relative to other investments.

As in the preceding section dealing with riskless assets, the impact of taxation on demand for any particular asset depends not only on how competing investors are taxed on that asset, but also how they are taxed on the benchmark. Only when the parties are taxed the same on the benchmark does their demand depend solely on how they are taxed on the asset under consideration. When they are taxed differently from one another on the benchmark, however, then differential taxation on the asset under consideration can have unexpected and counterintuitive results. Thus, in a world with differential taxation of risky assets and investors, it is crucial to select the appropriate benchmark.

C. A MEASURE OF THE IMPACT OF TAXES ON COMPETITIVENESS

The discussion in the last two sections suggests a simple three-step approach that can be used to determine how taxation affects the

discussion of some of the securities SWFs acquired when they invested in financial services firms, see STAFF OF J. COMM. ON TAXATION, *supra* note 1, at 63–72.

136. I ignore the possibility of short sales, which might occur with either model.

competitiveness of two investors relative to one another with respect to any specific investment. Those steps are as follows:

1. determine what the benchmark is;
2. calculate the tax rate for each investor on the benchmark;¹³⁷ and
3. calculate the tax rate for each investor on the alternative asset.

Based on the above information, the competitiveness of the two investors with respect to the alternative asset can then be determined using the four tax rates. The rest of this section develops a measure using those four tax rates for the impact of taxation on competitiveness.

The portion of the return on an investment that an investor keeps is one minus the investor's tax rate on that asset. Thus, for any investor, the ratio of the after-tax return on an alternative asset and the benchmark yields how much more or less of the total return the investor retains on the alternative asset relative to the benchmark.¹³⁸ If this retention ratio is one, which occurs only when the investor's tax rate is the same for both investments, then the investor retains the same portion of the before-tax return on both assets. As a result, the investor will value the same before-tax cash flow from either investment equally.¹³⁹

If the investor's tax rates differ across assets, then the same before-tax

137. Throughout this Article, I speak of the tax rate on an asset or a portfolio. The conceptually correct tax rate to use is the effective marginal tax rate ("EMTR"). The EMTR is the change in the present value of the tax liability from a \$1 increase in income. It can be roughly thought of as the statutory tax rate adjusted for timing differences. (This is sometimes called the explicit EMTR, as distinguished from the implicit EMTR or the total EMTR. The total EMTR is the sum of the explicit and the implicit EMTRs.) For discussions of EMTRs and how they are calculated, see SCHOLES ET AL., *supra* note 117, at 186; Alex Brill & Alan D. Viard, *Effective Marginal Tax Rates* (pt. 1), 120 TAX NOTES 969 (2008). To avoid further complicating the discussion, I generally use a statutory or assumed tax rate. A more thorough analysis would use EMTRs.

138. I call that ratio the retention ratio. The retention ratio, a concept which I have not seen used before, is closely related to the well-known concept of an investor's hurdle rate for an investment—the minimum return that an investor must earn for the investment to have a positive net present value. Hurdle rates and retention rates are inversely related. More specifically, an investor's hurdle rate for a given investment equals the product of the investor's expected after-tax rate of return on the benchmark, the inverse of the investor's retention ratio for that investment, and a factor that adjusts for the riskiness of the investment. According to the CAPM, the risk adjustment factor is the ratio of the specific risk on the given investment to the specific risk on the benchmark. In the finance literature, specific risk is denoted by the Greek letter beta (β). For discussions of specific risk and beta, see RICHARD A. BREALEY, STEWART C. MYERS & FRANKLIN ALLEN, *PRINCIPLES OF CORPORATE FINANCE* 186–91, 193–97 (9th ed. 2008); STEPHEN A. ROSS, RANDOLPH W. WESTERFIELD & JEFFREY JAFFE, *CORPORATE FINANCE* 296–99, 304–07 (8th ed. 2008).

139. If the asset is a constant perpetuity, then the ratio of the valuations will equal the ratio of the retention ratios. If the asset is a constant annuity, then the ratio of the valuations will be smaller than the ratio of the retention ratios.

cash flow will have a different value to the investor depending on which asset produces that cash flow. If the retention ratio is less than one, then the investor keeps proportionately more from the benchmark; if it is more than one, then the investor keeps proportionately more from the alternative asset.

The retention ratio for the other investor can be calculated in the same manner: divide one minus the second investor's tax rate on the alternative asset by one minus the second investor's tax rate on the benchmark. Then calculate the ratio of those two retention ratios, which yields the relative retention ratio.¹⁴⁰ Because both investors are assumed to value the benchmark at its market price, the relative retention ratio determines the investors' relative valuations of the alternative asset.

If the relative retention ratio is less than one, then the first investor (the investor in the numerator) is taxed relatively more heavily on the alternative asset (as compared to the benchmark) than is the second investor (the investor in the denominator). Accordingly, the first investor will not be willing to bid as much for the alternative asset as the second investor.¹⁴¹ In such circumstances, tax considerations discourage the first investor from holding the alternative asset relative to the second investor. Conversely, if the ratio is more than one, then the first investor is willing to bid more than the second investor. In such circumstances, tax considerations encourage the first investor to hold the alternative asset relative to the second investor.

As the discussion in the previous two sections implies, the impact of differential taxation across investors on the alternative asset and the benchmark depends on how good of a substitute the alternative asset is for the benchmark. If they are perfect or near perfect substitutes—their before-tax returns are very highly correlated—then the parties will specialize by holding one or the other asset, but not both. Alternatively, if they are not very good substitutes—their before-tax returns are not highly correlated—then the parties will continue to hold both assets. In that case, differential taxation will not cause parties to specialize in their asset holdings, but instead to overweight and underweight different assets. Holding other factors equal, the magnitude of the effect of differential taxation is greater the higher the correlation between the alternative asset and the benchmark.

140. The numerator is the first investor's retention ratio, and the denominator is the second investor's retention ratio.

141. Again, the analysis in the text assumes that both investors are equally efficient users of the alternative asset.

V. TAXES AND THE COMPETITIVENESS OF SWFS: THE GENERAL MODEL

This and the next part are the heart of this Article. In these two parts, I examine how taxes affect the competition among SWFs, private foreign investors, and U.S. investors to acquire U.S. bonds, equities, and real estate. For each asset category, I seek to determine the relative advantage or disadvantage each group of investors has compared with the other groups. The following discussion draws on the analysis of taxes and competitiveness in Part IV and the stylized descriptions of how different holders are taxed on various classes of investments in Part III.

In this part, I assume that the before-tax rate of return on U.S. bonds, U.S. equities, and U.S. real estate, and on foreign bonds, foreign equities, and foreign real estate, are not closely correlated with one another. Specifically, I assume that the before-tax returns within each of the above six asset categories are highly correlated, but that the before-tax return on any such category of assets is not significantly more or less correlated with the before-tax return on any other such group. Thus, for example, I assume that U.S. equities is no better or worse of a substitute for U.S. real estate than it is for foreign real estate. In the next part, I relax that assumption. I then consider two special cases. In Part VI.A, I assume that the returns on assets of different classes are highly correlated within a country, but that the returns on assets of the same class are not highly correlated across countries. Thus, for example, I assume U.S. real estate is an excellent substitute for U.S. equities, but it is not a good substitute for foreign real estate. In Part VI.B, I assume that the returns on assets are highly correlated within asset classes, even across borders, but assets within a country and across classes are not substantially more highly correlated than are assets across countries. Thus, for example, I assume that U.S. real estate is a very good substitute for foreign real estate, but it is a poor substitute for U.S. equities. As shown in the this and the next part, the results are sensitive to assumptions about asset correlations.

A. BENCHMARK PORTFOLIO

In this part, I assume that returns on assets vary both because of their class (bonds, equities, and real estate) and their location (U.S. and foreign). That assumption implies that there are six categories of assets—U.S. bonds, U.S. equities, U.S. real estate, foreign bonds, foreign equities, and foreign real estate—none of which are a good substitute for any other. In order to reduce risk, investors will want to hold all six categories of assets. That

implies that the benchmark portfolio consists of all the assets available to all investors in all locations. Thus, the benchmark portfolio is a weighted average of the six categories of assets, where the weights are the relative global market values for each asset class in each location.

Data on stock market capitalization suggests that total foreign stock market capitalizations are roughly double that of the U.S. markets.¹⁴² To keep the computations simple, I assume throughout this Article that total rest-of-world (“ROW”) assets are double that of U.S. assets. In the United States, real estate market values exceed stock market capitalization, but much of that real estate is owner-occupied housing.¹⁴³ Also, total bonds exceed total stock market capitalization.¹⁴⁴ Staying with my goal of keeping the calculations simple, I assume somewhat arbitrarily that each asset class—bonds, equities, and real estate—accounts for one-third of total assets, and that within each class one-third of total assets are located in the United States and two-thirds are located outside. Thus, U.S. bonds, U.S. equities, and U.S. real estate each account for one-ninth of the benchmark portfolio, and ROW bonds, ROW equities, and ROW real estate each account for two-ninths of the benchmark portfolio. These market shares are shown in table 1.

142. Compare Bespoke Investment Group, World Equity Market Declines: -\$25.9 Trillion, <http://bespokeinvest.typepad.com/bespoke/2008/10/world-equity-ma.html> (Oct. 8, 2008) (noting that worldwide market capitalization decreased from a peak of \$62.5 trillion in October 2007 to \$36.6 trillion in October 2008), with Michael Pollick, *Boomers Find It's Time for a Change of Plans*, SARASOTA HERALD-TRIB., Jan. 11, 2009, at A1 (noting that U.S. stock market capitalization reached \$24 trillion in October 2007 and decreased to \$15 trillion in January 2009).

143. Compare John Browne, *Champagne, Caviar & Creeps*, PITTSBURGH TRIB. REV., Feb. 1, 2009 (noting that the value of U.S. real estate in 2007 was \$24 trillion), with Alex J. Pollock, *Your Guide to the Housing Crisis*, AMERICAN, May/June 2008, at 36, 37 (“At the peak, the aggregate value of U.S. residential real estate was about \$22 trillion.”).

144. See Frank Schiavone, *Economic Bubble, Toil and Trouble*, SAN BERNARDINO COUNTY SUN, Feb. 18, 2009 (“The market capitalization of all the world’s stock markets is roughly \$51 trillion. All the bonds in the world are valued at \$68 trillion.”).

TABLE 1. Market Share for Each Asset Category

	<i>Bonds</i>	<i>Equities</i>	<i>Real Estate</i>
United States	1/9	1/9	1/9
ROW	2/9	2/9	2/9

Because the benchmark portfolio is the global supply of assets, and because the after-tax return on any asset must be compared to the after-tax return on the benchmark portfolio, it follows that assessing how taxation affects the ownership of assets requires an analysis of the tax treatments of not only U.S. assets, but also of foreign assets. Thus, in order to calculate each group of investors' after-tax return on the benchmark portfolio, it is necessary to specify how each group of investors is taxed on each of the six categories of investments. That requires specifying how such investments are taxed at their source and in the country where the investor resides.¹⁴⁵

It is clear from the discussion in Part II how most investments in the United States are taxed. U.S. investors pay tax at 35 percent on their income from U.S. bonds and at 15 percent on their gains from U.S. equities and real estate. SWFs and private foreign investors taxed on a territorial basis are exempt from tax on portfolio investments in U.S. bonds, equities, and real estate. Private foreign investors taxed at home are taxed at their home country tax rate on investments in U.S. bonds, equities, and real estate. In order to keep the calculations manageable, I assume that countries other than the United States that tax their residents on their worldwide income tax all of their income at the same rate. That is to say, the tax rate is the same regardless of the asset that generates the income or the location of the investment. Arbitrarily, I have set the tax rate for all worldwide countries besides the United States at 40 percent. Thus, the tax rates for portfolio investments in the United States are given by table 2.

145. Most investors are likely to come from countries with relatively small home markets. Thus, such investors will hold only a small share of their wealth at home if they are trying to minimize portfolio risk. For such investors, therefore, most of their investments outside the United States will also be foreign. Again, in order to keep the discussion simple and the calculations tractable, I ignore the possibility of non-U.S. investors making investments in their home countries and assume such investors make all of their investments outside their home—either in the United States or other foreign countries.

TABLE 2. Tax Rates on Portfolio Investments: U.S. Investments

<i>Investor Group</i>	<i>Bonds</i>	<i>Equities</i>	<i>Real Estate</i>
U.S. Investors	35% ¹⁴⁶	15%	15%
SWFs	0%	0%	0%
Private Foreign Investors (Territorial)	0%	0%	0%
Private Foreign Investors (Worldwide)	40%	40%	40%

I begin my calculation of the tax rates on foreign investments outside the United States by describing how such investments are taxed at their source. As described in Part II, because many foreign countries do not tax overseas holders of domestic bonds, the source tax rate on interest is zero outside the United States, the same as it is within the United States.

As for equities, the U.S. practice of treating capital gains on equities as sourced where the seller resides, rather than where the issuer is located, is not regularly followed abroad. However, the large and growing market in derivatives likely makes it very difficult for foreign countries to collect much tax on overseas portfolio investments in domestic equities.¹⁴⁷ Accordingly, I assume that the effective tax rate at the source on portfolio investments in equities in the rest of the world is zero. That is also the same for portfolio investments in U.S. equities held by non-U.S. residents.

That brings us to real estate. In contrast with financial investments, investments in real estate can be taxed by the source jurisdiction and are readily taxed.¹⁴⁸ Thus, I assume that foreign countries impose and collect taxes on the income from real estate. Of the six categories of assets, this is

146. The 35 percent tax rate on bonds is the statutory tax rate on taxable (commercial and Treasury) bonds. Municipal bonds are tax-exempt. I.R.C. § 103 (2006). Such bonds pay lower interest rates, which is a type of tax called an implicit tax. If the implicit tax rate on municipal bonds is less than the statutory tax rate—which it often is—and if municipal bonds are a good substitute for taxable bonds, then the implicit tax rate should replace the rate of 35 percent in the top left cell of table 2. That would change many results throughout this Article. However, returns on municipal bonds do not appear to be closely correlated with returns on corporate or treasury bonds. See Asset Correlations: Bond Sector, <http://www.assetcorrelation.com/user/bonds/366> (last visited May 1, 2009) (providing a matrix showing the return correlations for different bond types over the past year). See also *infra* note 204 (providing an asset correlation matrix that shows that municipal bonds are not closely correlated with either U.S. bonds or ROW bonds).

147. See STAFF OF J. COMM. ON TAXATION, *supra* note 59, at 4. For data on the size and growth of the swaps and derivatives market, see International Swaps and Derivatives Association, Market Survey Annual Data (2007), <http://www.isda.org/statistics/pdf/ISDA-Market-Survey-annual-data.pdf>.

148. See, e.g., 1 DIAMOND & LUETKE, *supra* note 94, at Japan-20, China-27; 2 *id.* at Spain-19.

the only category in which foreign investors pay tax at the source.

As a result, the tax treatment of ROW real estate plays a significant role in this Article. The fact that there is one category of investments in which everyone pays tax at the source implies that investors taxed on a territorial basis, including SWFs, do not have a retention rate of 1 on the benchmark portfolio. That, in turn, implies that in order to assess how taxation affects the competition among investors for assets, I have to calculate the retention rate on the benchmark portfolio for all groups of investors. However, before I can calculate retention rates on the benchmark portfolio, I have to specify the share of the world portfolio attributable to each asset (which is done in table 1 above) and various tax rates.

Alternatively, if portfolio investments in foreign real estate were not taxed at the source, the impact of taxation on competitiveness could be deduced without resorting to extensive calculations of retention ratios for all assets and investors. That is because all investors other than U.S. investors would have a retention ratio of 1 for all portfolio investments. Taxation, then, would not impact competitiveness among non-U.S. investors for any class of portfolio investments. U.S. investors would have a tax-induced advantage with respect to equities and real estate and a tax-induced disadvantage with respect to debt because they were taxed at a higher rate on the income from debt than on the income from equity and real estate. It is, however, because ROW real estate is taxed at the source that I need to calculate retention ratios, which in turn requires that I make assumptions about market shares and tax rates, including the tax rate at the source on ROW real estate.

Accordingly, in the calculations below, I assume somewhat arbitrarily that the tax rate at the source on ROW real estate is 30 percent. I also assume that U.S. investors pay tax on their income from investments in ROW real estate at 30 percent.¹⁴⁹ However, I assume private foreign investors taxed at home on a worldwide basis pay tax on their income from investments in ROW real estate at 40 percent.¹⁵⁰ Thus, the resulting tax rates for investments in the rest of the world are given in table 3.¹⁵¹

149. If the income from foreign real estate is taxed as ordinary income to U.S. investors, then they are taxed on such income at an effective rate of 35 percent. If that income is taxed as capital gains at 15 percent in the United States, and if the remaining foreign tax credit can be used to offset other foreign-source income, then the effective tax rate on such income can be as low as 15 percent. For U.S. investors, the income from foreign bonds can absorb the excess foreign tax credits from foreign real estate.

150. Thus, foreign taxation of real estate does not change the tax rate paid by foreign investors from worldwide countries on investments in real estate.

151. Recall that the definition of territorial countries includes those that do not claim to tax the

TABLE 3. Tax Rates on Portfolio Investments: ROW Investments

<i>Investor Group</i>	<i>Bonds</i>	<i>Equities</i>	<i>Real Estate</i>
U.S. Investors	35%	15%	30%
SWFs	0%	0%	30%
Private Foreign Investors (Territorial)	0%	0%	30%
Private Foreign Investors (Worldwide)	40%	40%	40%

It is clear from tables 2 and 3 that U.S. investors are taxed at higher rates than SWFs and private foreign investors from territorial countries on five of the six categories of investments. The only exception is ROW real estate where those three groups of investors are all taxed at 30 percent.

By putting together the information in tables 1, 2, and 3, it is possible to calculate for each group of investors the retention rate on the benchmark portfolio—the proportion of the before-tax payment on the benchmark portfolio that an investor retains after paying taxes. For each class of investor, the retention rate is the weighted sum of one minus the tax rate on each of the six categories of investments, where the weight is the investment's share of the global market portfolio. Thus, for each group of investors, the after-tax retention rate is given in table 4.

TABLE 4. Retention Rates on the Benchmark Portfolio: General Case

<i>Investor Group</i>	<i>Retention Rate</i>
U.S. Investors	0.75
SWFs	0.93
Private Foreign Investors (Territorial)	0.93
Private Foreign Investors (Worldwide)	0.6

As is clear from table 4, U.S. investors have a lower retention rate on the benchmark portfolio than do SWFs and private foreign investors taxed on a territorial basis. The retention rate for U.S. investors—0.75—implies an average tax rate of 25 percent. The average tax rate for U.S. investors is greater than their tax rate on U.S. real estate (15 percent) and U.S. and ROW equities (15 percent) and is less than their tax rate on U.S. and ROW bonds (35 percent). Those differences in relative rates will play an

worldwide portfolio income of their residents and those that claim to tax that income, but for one reason or another do not do so.

important role in understanding U.S. investors' tax-induced advantages and disadvantages relative to foreign investors.

In contrast with U.S. investors, SWFs and private foreign investors taxed on a territorial basis have a retention rate close to 1 on the benchmark portfolio. That rate falls below 1, to 0.93, only because those investors cannot escape tax on portfolio income from real estate held outside the United States (retention rate of 0.7). Private foreign investors taxed on a worldwide basis have the lowest retention rate (0.6) on the benchmark portfolio. They, however, are assumed to be taxed at the same rate on all of their investments.

B. DEBT INSTRUMENTS

For many U.S. investors, the federal income tax rate on bonds is 35 percent. Thus, U.S. investors retain 65 percent of the before-tax return on debt instruments.¹⁵² For foreign investors, the tax rate on U.S. debt instruments is, with a few exceptions, zero. The tax rate is zero for SWFs because § 892 exempts SWFs from taxation on their income from debt instruments,¹⁵³ and it is zero for most private owners taxed on a territorial basis because § 871 exempts portfolio interest from taxation.¹⁵⁴ Thus, these foreign investors retain 100 percent of the before-tax return on U.S. debt instruments.¹⁵⁵ Private foreign investors taxed on a worldwide basis are taxed at home. Thus, assuming a 40 percent home country tax rate, they retain 60 percent of the before-tax return.

As explained in Part IV, whether one investor has a tax-induced advantage over another investor in acquiring a specific asset depends not only on how those investors are taxed on that asset, but also on how they are taxed on the benchmark asset. As described above, the retention ratio for the alternative asset is calculated relative to the benchmark portfolio. Because SWFs and private foreign investors from territorial countries retain 93 percent of the before-tax return on the benchmark portfolio and 100 percent of the before-tax return on corporate bonds, their retention

152. U.S. nonprofits, however, retain 100 percent of their income from investing in U.S. debt instruments. *See* I.R.C. § 501(a) (2006).

153. *Id.* § 892(a)(1)(A)(i).

154. *Id.* § 871(h).

155. In the discussion that follows, I ignore capital gains, which are exempt for foreign holders, *id.* § 865(a), and are taxed at long-term capital gains rates if held for longer than one year by U.S. holders, *id.* § 1222(3).

ratio on U.S. debt instruments is slightly greater than 1, at 1.07.¹⁵⁶ By assumption, private foreign investors from countries with worldwide tax systems have a retention ratio of 1 for all investments. Because of the high tax rate that U.S. investors face on bonds relative to other investments, their retention ratio for U.S. debt instruments is 0.87.¹⁵⁷ Thus, all groups of foreign investors enjoy a substantial advantage over U.S. investors in the market for U.S. debt instruments, as illustrated in table 5.

TABLE 5. Retention Ratios for Investments in Debt: General Model

<i>Investor Group</i>	<i>Portfolio Investments</i>
U.S. Investors	0.87
SWFs	1.07
Private Foreign Investors (Territorial)	1.07
Private Foreign Investors (Worldwide)	1.00

The conclusion above—that SWFs and private foreign investors from territorial jurisdictions value U.S. debt instruments the most, followed by private foreign investors from worldwide jurisdictions, and then by U.S. investors—does not imply that U.S. investors will hold no such bonds, nor does it imply that SWFs and private foreign investors from territorial jurisdictions will hold them all. Instead, the higher retention ratio for SWFs and private foreign investors from territorial countries implies that they will hold more than their share of such bonds: the portion of their wealth held in U.S. bonds will exceed the share of total wealth represented by those bonds. That is to say, SWFs and private foreign investors not taxed at home will overweight their holdings of U.S. debt instruments. Thus, each such investor will have more than one-ninth of its portfolio in U.S. bonds. The converse is true for U.S. investors. Because they have the lowest retention ratio on U.S. debt instruments, they will not avoid them entirely, but they will reduce their holdings of such bonds. That is to say, they will underweight their holding of such bonds, and so in terms of the example, each U.S. investor will hold less than one-ninth of his or her portfolio in U.S. bonds. They will, therefore, overweight other assets.

156. That retention ratio is calculated as the quotient of their retention rate on debt (1) and their retention rate on the benchmark portfolio (0.93).

157. That retention ratio is calculated as the quotient of U.S. investors' retention rate on debt (0.65) and their retention rate on the benchmark portfolio (0.75).

C. EQUITIES

U.S. investors are taxed at 15 percent on investments in U.S. equities.¹⁵⁸ Their relative retention ratio is therefore in excess of 1. In the example, it is 1.13.

SWFs are untaxed on portfolio investments in U.S. equities. Thus, their retention ratio is slightly greater than 1, at 1.07.¹⁵⁹ Hence, because their retention ratio is less than that of U.S. investors, SWFs have a tax-induced disadvantage relative to U.S. investors for portfolio investments in U.S. equities. Thus, even though SWFs are taxed at a lower rate than U.S. investors on investments in U.S. equities—tax exemption as opposed to a tax rate of 15 percent—SWFs do not have a tax-induced advantage over U.S. investors in that market. Instead, U.S. investors have a tax-induced advantage over SWFs in the market to acquire U.S. equities. The reason is that, compared with SWFs, U.S. investors are taxed at a lower rate on U.S. equities relative to the benchmark portfolio.

For controlling investments in U.S. equities, SWFs are taxed at corporate rates on their dividends and capital gains. Thus, for such investments, their U.S. tax rate is 35 percent. That yields a retention ratio of 0.7.¹⁶⁰ SWFs, therefore, are at a tax-induced disadvantage relative to U.S. investors for portfolio investments in equities, and they are at a greater disadvantage for controlling investments.¹⁶¹

Private foreign investors taxed on a territorial basis are not taxed on portfolio investments in U.S. equities. That is because they can avoid the dividend withholding tax by investing through derivatives. Thus, their retention ratio for such investments is 1.07.¹⁶² Such investors, however, pay withholding tax on dividends from strategic investments—investments in which they actually hold shares. Accordingly, their tax burden depends on how much of their profit is ordinary income and how much is long-term

158. U.S. nonprofits are exempt from taxation on most investments in U.S. equities. I.R.C. § 501.

159. SWFs have a retention ratio on U.S. equities greater than 1 because they pay tax on foreign real estate. That retention ratio is calculated as the quotient of their retention rate on equities (1) and their retention rate on the benchmark portfolio (0.93).

160. That retention ratio is calculated as the quotient of SWFs' retention rate on controlling investments (0.65) and their retention rate on the benchmark portfolio (0.93).

161. Direct investments, especially when they take the form of 100 percent ownership, introduce an additional complication—the possibility of stripping earnings out of the U.S. corporation to avoid U.S. taxation.

162. That retention ratio is calculated as the quotient of private foreign investors' retention rate on investments in U.S. equities through derivatives (1) and their retention rate on the benchmark portfolio (0.93).

capital gains.

If the stock they hold produces only capital gains, then they are not taxed on their gains, and their retention ratio is 1.07. Alternatively, if the stock they hold produces only dividends, and those dividends are taxed at the statutory withholding tax rate of 30 percent, then their retention ratio is 0.75.¹⁶³ Assuming that the effective tax rate on such holdings is 15 percent—the midpoint between the two extremes—then private foreign investors taxed on a territorial basis have a retention ratio of 0.91.¹⁶⁴ In the discussion that follows, I generally assume a source tax rate of 15 percent on foreign investments made directly in U.S. equities (not through derivatives) by investors other than SWFs.¹⁶⁵

It thus follows that U.S. investors have a tax-induced advantage over private foreign investors that are not taxed at home (or anywhere else other than the United States) with respect to investments in U.S. equities. SWFs will also have an advantage over such private foreign investors with respect to noncontrolling strategic investments in U.S. equities because SWFs escape tax, whereas the private foreign investors do not. However, private foreign investors (retention ratio of 0.91) will have an advantage over SWFs (retention ratio of 0.70) with respect to controlling interests, where both are taxed. That is because SWFs pay tax at corporate rates, whereas private foreign investors pay tax at standard U.S. tax rates (with reduced rates for dividends and long-term capital gains) if they elect to be taxed on their net income or at withholding rates if they do not make that election. Standard U.S. tax rates and withholding tax rates are both generally less than the top corporate tax rate.

As for private foreign investors taxed on a worldwide basis, they are assumed to have a retention ratio of 1 on all investments. Thus, they are also disadvantaged relative to U.S. investors, and are at a smaller disadvantage relative to other foreign investors when those foreign investors are not taxed by the United States. They have an advantage over such investors when the other foreign investors are taxed by the United States. These results are summarized below in table 6.

163. That retention ratio is calculated as the quotient of private foreign investors' retention rate on stock that pays dividends only and produces no capital gain (0.7) and their retention rate on the benchmark portfolio (0.93).

164. That retention ratio is calculated as the quotient of private foreign investors' retention rate on equities taxed at 15 percent (0.85) and their retention rate on the benchmark portfolio (0.93).

165. A more thorough analysis would allow for sorting by investors across U.S. equities based on dividend yield and withholding tax rates.

TABLE 6. Retention Ratios for Investments in Equities: General Model

<i>Investor Group</i>	<i>Portfolio Investments</i>	<i>Strategic Investments</i>	<i>Controlling Investments</i>
U.S. Investors	1.13	1.13	1.13
SWFs	1.07	1.07	0.7 ¹⁶⁶
Private Foreign Investors (Territorial)	1.07	0.91 ¹⁶⁷	0.91
Private Foreign Investors (Worldwide)	1.0	1.0	1.0

As table 6 illustrates, U.S. investors enjoy a tax-induced advantage over foreign investors, both SWFs and private investors, in acquiring U.S. equities. That advantage comes from a surprising place: the generous tax treatment of foreign investors in debt (which is one of the assets that makes up the benchmark portfolio), as compared with the substantially harsher tax treatment of U.S. investors in that same asset.¹⁶⁸ That is to say, even though foreign investors in equities are generally taxed less heavily than are U.S. investors, that difference by itself does not provide foreign investors with a tax-induced advantage over U.S. investors. Because foreign investors are taxed less heavily than are U.S. investors on interest income, the tax system raises the hurdle rate for foreign investors on alternative assets, such as corporate equities, turning an apparent tax-induced advantage into a disadvantage.¹⁶⁹

166. SWFs are subject to tax at the corporate tax rate (35 percent) only on controlling investments. For strategic, but not controlling, investments, they are exempt from U.S. tax. *See supra* notes 61–62 and accompanying text.

167. Private foreign investors pay dividend withholding tax on strategic investments. I.R.C. § 871 (2006). Their effective tax rate on investments in U.S. equities depends on how much of the gain is capital and how much is in the form of dividends, and on the dividend withholding tax rate, which can range from 5 to 30 percent. *See* DIAMOND & SZYKITKA, *supra* note 58, at N. Am.-22 to -25.

168. The conclusion in the text might be different if tax-exempt bonds were very good substitutes for taxable bonds and the implicit tax rates on such bonds were low. If U.S. investors faced low implicit tax rates on tax-exempt bonds, that would reduce their retention rate on bonds, and hence their retention rate on the benchmark portfolio. The evidence, however, shows that municipal bonds are not a good substitute for taxable bonds. Municipal bonds and taxable bonds have only a mild positive correlation. *See infra* note 204.

169. U.S. investors' tax-induced advantage over SWFs is offset somewhat in a way that is not obvious. Although SWFs and private foreign investors from territorial countries pay tax at a lower rate on U.S. equities than do U.S. investors, their tax rate on such equities relative to their tax rate on all other assets in the benchmark portfolio is higher than, or as high as, the rate imposed on U.S. investors—except for one category of assets. Only for foreign real estate, where U.S. investors and foreign investors pay tax at the same rate—30 percent—do U.S. investors pay tax at a higher rate on U.S. equities relative to another category of assets than do SWFs. Because U.S. investors pay tax on

The argument has been made that Congress should repeal the exemption in § 892 as it applies to SWFs, which would subject SWFs to tax on the same terms as foreign corporations.¹⁷⁰ One of the reasons offered for such a proposal is that it is needed in order to eliminate the tax-induced advantage SWFs supposedly have relative to U.S. investors in acquiring U.S. equities. As described above, such a change is not necessary in order to level the playing field. SWFs are not at a tax-induced advantage, but are instead at a tax-induced disadvantage, relative to U.S. investors in the market for U.S. equities.

As for the relative tax treatments of SWFs and private foreign investors, which group of investors currently has a tax-induced advantage and how repeal of § 892 would affect competition between SWFs and private foreign investors depend on how the private foreign investors are taxed at home. SWFs and private foreign investors taxed on a territorial basis are likely on par at least for portfolio investments. That is because private portfolio investors pay no tax on U.S. equities held indirectly through derivatives. Thus, a likely effect of repealing the dividend exclusion in § 892 is to induce SWFs to shift from holding shares of U.S. companies to holding derivatives on such shares. However, when it comes to making strategic, but noncontrolling, investments in U.S. companies, SWFs have a tax-induced advantage over private foreign investors by virtue of the dividend exclusion in § 892. Accordingly, the advantage enjoyed by SWFs increases with the dividend payment and the dividend withholding tax rate. It, thus, follows that repealing the dividend exclusion in § 892 will place SWFs on par with private foreign investors from their country of residence (assuming their home country uses a territorial tax system) for strategic investments in U.S. equities.¹⁷¹ SWFs, however, will

their income from U.S. equities at 15 percent, their tax burden on U.S. equities is 15 percent (the difference between 30 percent and 15 percent) less than their tax burden on ROW real estate. The 15 percentage point difference translates into a 3.3 percentage point increase (the product of 15 percent and two-ninths) in the tax rate on the benchmark portfolio relative to the tax rate on U.S. equities. In contrast, for SWFs and private foreign investors taxed on a territorial basis, because they pay no tax on their income from U.S. equities, their tax burden on U.S. equities is 30 percent (the difference between 30 percent and 0) less than their tax burden on ROW real estate. That translates into a 6.6 percentage point increase (the product of 30 percent and two-ninths) in the tax rate on the benchmark portfolio relative to the tax rate on U.S. equities. Thus, source country taxation of ROW real estate tends to encourage U.S. investors to invest in ROW real estate and to discourage them from making other investments. This effect is greater if U.S. investors can use the excess foreign tax credits generated by the 30 percent tax rate on ROW real estate (the tax rate imposed by the United States on real estate is 15 percent) to offset other income.

170. *E.g.*, Fleischer, *supra* note 1, at 503–04.

171. This is the example considered by Fleischer and is the basis for his claims that SWFs have a tax-induced advantage relative to private foreign investors and that § 892 should therefore be repealed

not be on par with SWFs from other countries with respect to such investments. Investors from countries that are subject to lower U.S. withholding tax rates will have an advantage over SWFs from countries subject to higher U.S. withholding tax rates. That advantage is greater the larger the difference in withholding tax rates and the larger the dividend payment.

As for the relative tax treatments of SWFs and private foreign investors taxed on a worldwide basis, under current law, SWFs have an advantage with respect to both portfolio and strategic investments in U.S. equities, whereas private foreign investors have an advantage with respect to controlling investments. Repealing the dividend exclusion in § 892 would provide private investors with an advantage with respect to strategic investments.¹⁷²

D. REAL ESTATE

U.S. investors in real estate are taxed at ordinary tax rates on operating income and at long-term capital gains rates on appreciation. For the reasons given above, I assume that all profit from owning U.S. real estate is taxed as long-term capital gain at 15 percent. U.S. investors thus retain 85 percent of the before-tax return on domestic real estate.¹⁷³ Therefore, U.S. investors have a retention ratio when they invest in domestic real estate greater than 1, at 1.13.¹⁷⁴

Foreign investors in U.S. real estate are subject to FIRPTA.¹⁷⁵ Prior to its enactment, foreign investors could avoid paying tax on their gains from owning U.S. real estate by holding that real estate through a corporation and selling the corporation, instead of the real estate itself. FIRPTA subjects such gains to tax on the same terms as if the underlying real estate had been sold. That raises the question whether FIRPTA is necessary in order to level the playing field between U.S. and foreign investors. In order

to level the playing field. *Id.* at 494.

172. This is the example described by Desai and Dharmapala and the basis for their claims that under current law SWFs are not at a tax-induced advantage relative to private foreign investors, and therefore that repealing the dividend exclusion in § 892 would place SWFs at a tax-induced disadvantage relative to private foreign investors. See Desai & Dharmapala, *supra* note 13; Desai & Dharmapala, *supra* note 132, at 38–40.

173. U.S. nonprofits are exempt from taxation on the income from most investments in U.S. real estate. See I.R.C. § 501(a) (2006).

174. The retention ratio for investment in domestic real estate is calculated as $0.85 / 0.75 = 1.13$.

175. U.S. investors are not subject to FIRPTA, because they are taxed directly on their gains from the sale of real estate. U.S. investors are taxed whether they sell the real estate itself or sell an interest in an entity that holds the real estate.

to answer that question, I first must determine whether, without FIRPTA, foreign investors would enjoy a tax-induced advantage relative to U.S. investors.

Without FIRPTA, foreigners investing in U.S. real estate (both private investors taxed on a territorial basis and SWFs) would be able to avoid paying any tax on the appreciation in value of their U.S. real estate.¹⁷⁶ Thus, without FIRPTA, the tax rate on U.S. real estate for such foreign investors would be zero. Since the tax rate on the benchmark portfolio for such investors is close to zero—less than 7 percent¹⁷⁷—they would be taxed roughly the same on U.S. real estate as on the benchmark portfolio. Without FIRPTA, those foreign investors would have a retention ratio on U.S. real estate of 1.07.

If FIRPTA had not been enacted, foreign investors taxed on a territorial basis and SWFs would be taxed at a lower rate on U.S. real estate than would be domestic U.S. investors. Nonetheless, without FIRPTA, those foreign investors would not enjoy a tax-induced advantage relative to domestic investors. Instead, without FIRPTA, foreign investors would still be at a tax-induced disadvantage relative to U.S. investors in acquiring U.S. real estate. As with equities, a big reason is the higher tax rate U.S. investors pay on their income from debt instruments than on their income from equity and real estate. U.S. investors have a retention ratio of 1.13 on U.S. real estate. Without FIRPTA, foreign investors would have a retention ratio of 1.07.

Of course, the effect of FIRPTA is to increase the tax paid by foreign investors in U.S. real estate.¹⁷⁸ Given a tax rate of 15 percent for private foreign investors from territorial countries, the retention ratio when FIRPTA applies is 0.91. For SWFs with a tax rate of 35 percent under § 892, the retention ratio on U.S. real estate is 0.7 when FIRPTA applies. It follows that FIRPTA does not level the playing field, but further disadvantages foreign investors, who are already at a tax-induced disadvantage, relative to U.S. investors with respect to investments in U.S. real estate. These results are summarized below in table 7.

It follows, therefore, that if Congress wants to level the playing field between SWFs and U.S. investors, there is no need to extend FIRPTA to

176. Foreign investors taxed on a worldwide basis would pay the same total amount of tax whether they paid or avoided the U.S. tax.

177. See *supra* tbl.4.

178. That is of course only for investments that are taxed by virtue of FIRPTA. As described above, some real estate investments escape tax under FIRPTA. See *supra* note 79.

cover more transactions. Instead, if Congress wants a level playing field, it should repeal FIRPTA. That, however, would not be sufficient. As table 7 illustrates, even without FIRPTA, SWFs are at a tax-induced disadvantage relative to U.S. investors. To level the playing field fully, the U.S. government must either raise the tax paid by U.S. investors on U.S. real estate, lower the tax paid by U.S. investors on bonds, or subsidize SWFs' investments in U.S. real estate.

TABLE 7. Retention Ratios for Investments in U.S. Real Estate: General Model

<i>Investor Group</i>	<i>Without FIRPTA</i>	<i>With FIRPTA</i>
U.S. Investors	1.13	N/A
SWFs	1.07	0.7
Private Foreign Investors (Territorial)	1.07	0.91
Private Foreign Investors (Worldwide)	1.0	1.0

In contrast with their competition with U.S. investors, SWFs enjoy a tax-induced advantage relative to private foreign investors from territorial countries when FIRPTA covers private investors but not SWFs. Thus, for noncontrolling investments in U.S. real estate, the retention ratio is 1.07 for SWFs, but it is 0.91 for private foreign investors.¹⁷⁹ Hence, if Congress wants to place SWFs on par with private foreign investors from territorial countries, FIRPTA should apply either to both groups of investors or to neither, but it should not apply to one group and not the other.¹⁸⁰ There is, however, no way for the United States acting alone to level the playing field between private foreign investors from worldwide countries and other investors.

E. SUMMARY

The analysis in this part estimates how taxation affects the competitiveness of SWFs, private foreign investors, and U.S. investors relative to one another. Under the assumption that the global market portfolio is the benchmark, which is the most general case, U.S. investors

179. I am not aware of any data on how much investment occurs in this category.

180. Under current law, for a noncontrolling interest in a USRPHC, FIRPTA applies to SWFs but not to private foreign investors. *See supra* note 80 and accompanying text. It also should subject SWFs and private foreign investors to tax at the same rate if the goal is to place the two on par.

have a tax-induced advantage over SWFs with respect to U.S. equities and real estate. Also, that advantage increases when SWFs are taxed by the United States, which is what happens for controlling investments in U.S. equities and real estate. Furthermore, the tax-induced advantage enjoyed by U.S. investors exists in spite of the higher tax rates paid by such investors on U.S. equities and real estate. That advantage arises in large part because of the high tax rate faced by U.S. investors on both U.S. and ROW bonds relative to the other assets that constitute the benchmark portfolio.¹⁸¹

In comparison with private foreign investors taxed on a territorial basis, SWFs are on par with such investors for portfolio investments in all U.S. asset classes. SWFs, however, enjoy a tax-induced advantage over such private foreign investors when the latter are taxed but the former are not, which occurs with noncontrolling strategic investments in U.S. equities and real estate. That advantage is reversed when SWFs are also taxed because SWFs are taxed at the corporate rate, which exceeds the withholding tax rate and does not contain a capital gains preference.¹⁸²

The analysis in this part also estimates how taxation affects the competitiveness of SWFs relative to private foreign investors taxed on a worldwide basis. Under the assumptions made throughout this Article—that private foreign investors taxed on a worldwide basis pay tax at the same rate on all assets regardless of where those investments are sourced—such private foreign investors have a retention ratio of 1 on all investments. It follows, therefore, that SWFs are at a tax-induced advantage relative to such investors in the acquisition of U.S. debt instruments and noncontrolling strategic investments in U.S. equities and real estate. However, when the exemption contained in § 892 does not apply—that is, with controlling investments in U.S. equities and real estate—SWFs are subject to tax in the United States at the corporate rate, and so then SWFs are at a tax-induced disadvantage relative to such private foreign

181. That effect is also somewhat, but not fully, offset by U.S. investors and SWFs facing the same tax rate on ROW real estate. Compared with their tax rates on other assets, the 30 percent tax rate on ROW real estate is a larger increase in tax rate compared with other investments for SWFs (zero percent for everything else) than for U.S. investors (mostly 15 percent). That advantage would be reduced if the tax paid at source on ROW real estate generated foreign tax credits that could be used to offset U.S. tax on foreign debt instruments. The advantage would be further reduced, and possibly eliminated, if municipal bonds were very good substitutes for corporate bonds and the implicit tax rate on municipal bonds was low. In effect, such changes would reduce the tax paid by U.S. investors on bonds, which is the source of their tax-induced advantage in acquiring equities and real estate.

182. That SWFs and private foreign investors are on par when they are taxed the same, but not otherwise, is essentially the conclusion reached by Fleischer, who proposes to equalize their tax treatments. See Fleischer, *supra* note 1, at 449.

investors.¹⁸³

VI. TAXES AND THE COMPETITIVENESS OF SWFS: TWO SPECIAL CASES

In Part V, I examined how taxation affects the competitiveness of SWFs relative to private foreign investors and U.S. investors in an environment in which all investors seek to hold all six categories of assets—U.S. debt, U.S. equities, U.S. real estate, foreign debt, foreign equities, and foreign real estate—in order to minimize their risk. In this part, I look at two special cases, where each category of assets is an especially close substitute for one or two other categories of assets, but not for the remaining categories of assets. In the first section, I assume that all assets within a country are good substitutes for one another even when they are in different asset classes. In the second section, I assume that all assets of a particular class, regardless of the nation in which they are located, are good substitutes for one another.¹⁸⁴

A. ASSETS FROM THE SAME COUNTRY, BUT IN DIFFERENT CLASSES, ARE HIGHLY CORRELATED

In this section, I assume that returns are highly correlated for assets of different classes located in the same country, but that the correlation of returns across countries within asset classes is much lower. The assumption that the returns on assets across classes, but within countries, are high, whereas the returns within asset classes, but across countries, are low, implies that U.S. bonds, equities, and real estate are good substitutes for one another, but that foreign assets are not good substitutes for domestic assets. Thus, a well-diversified portfolio should hold assets from different countries; it is less important that such a portfolio be diversified across asset classes. That, in turn, implies that every investor will gravitate toward holding the class of U.S. assets for which that investor's relative retention ratio is highest. In such circumstances, there are separate benchmark portfolios for U.S. and foreign investments. The benchmark portfolio for U.S. investments is all U.S. assets, and the benchmark portfolio for foreign investments is all foreign assets.

183. This is close to the conclusion reached by Desai and Dharmapala, who conclude that SWFs and private foreign investors are on par when SWFs are not taxed and that SWFs are disadvantaged when both are taxed. They argue against increasing taxes on SWFs. Desai & Dharmapala, *supra* note 132, at 38–40.

184. As in Part V, the discussion in this part draws on the analysis of taxes and competitiveness in Part IV, and the stylized descriptions of how different holders are taxed on different assets in Part III.

Because all three U.S. asset classes are assumed to be very good substitutes for one another, and because two of those asset classes (U.S. equities and real estate) are assumed to be taxed the same for all investors (whereas U.S. bonds are taxed differently than U.S. equities and real estate for some investors), there are, in effect, two types of U.S. investments: bonds and everything else. Moreover, investors from outside the United States are taxed the same on all portfolio investments in U.S. assets. Thus, SWFs and private foreign investors not taxed at home are exempt from tax on portfolio investments in U.S. assets. And private foreign investors taxed on a worldwide basis are taxed at their home country tax rate on all U.S. investments. In contrast with foreign investors, U.S. investors are taxed at 15 percent on U.S. equities and real estate, whereas they are taxed at 35 percent on U.S. bonds. Thus, U.S. investors have a retention rate of 0.78 on the U.S. benchmark portfolio, SWFs and private foreign investors not taxed at home have a retention rate of 1 on that portfolio, and private foreign investors taxed on their worldwide income have a retention rate of 0.6.

Expressed in terms of retention ratios, SWFs and private foreign investors (from both territorial and worldwide countries) have a retention ratio of 1 on each U.S. asset class relative to the benchmark portfolio of all U.S. investments. In contrast, U.S. investors have a retention ratio of 0.83 on U.S. bonds relative to the U.S. benchmark portfolio and a retention ratio of 1.09 on U.S. equities and real estate relative to the U.S. benchmark portfolio.¹⁸⁵ It follows that U.S. investors will gravitate toward holding U.S. equities and real estate. In contrast, private foreign investors and SWFs will gravitate toward holding U.S. bonds. These effects are exacerbated where SWFs and private foreign investors taxed on a territorial basis pay taxes to the U.S. government on investments in U.S. equities and real estate.

Moreover, if U.S. investors are the marginal investor and set the market prices for U.S. bonds, equities, and real estate, then they will hold all U.S. equities and real estate and some U.S. bonds. In that case, foreign investors will hold (or should hold) only U.S. bonds and will not hold (or should not hold) either U.S. equities or real estate. Alternatively, if foreign investors are the marginal investor and set market prices, they will hold all U.S. bonds and some U.S. equities and real estate. In that case, U.S.

185. U.S. investors have a retention rate on U.S. bonds of 0.65 and on U.S. equities and real estate of 0.85. Hence, their retention rate on the U.S. portfolio of assets is 0.78. Accordingly, their retention ratio on domestic debt relative to the U.S. benchmark portfolio is calculated as $0.65 / 0.78 = 0.83$. Similarly, their retention ratio on domestic equities and real estate relative to the U.S. benchmark portfolio is calculated as $0.85 / 0.78 = 1.09$.

investors will hold (or should hold) only U.S. equities and real estate and will not hold (or should not hold) U.S. bonds. Once again, the results in this section are driven by the high correlation across the three classes of U.S. assets and the high tax rate that U.S. investors face on bonds relative to the low tax rate they face on equities and real estate, whereas foreign investors face the same rate on all U.S. assets.

B. ASSETS IN THE SAME CLASS, BUT FROM DIFFERENT COUNTRIES, ARE
HIGHLY CORRELATED

In the preceding section, I assumed that returns on assets from the same country are highly correlated regardless of asset class, whereas returns on assets from the same class, but located in different countries, are poorly correlated. As a result, assets of different classes are good substitutes for one another when they are located in the same country. Assets of the same class, however, are not good substitutes for one another, when they are located in different countries. Thus, a well-diversified portfolio needs to be diversified across countries, but it does not have to be diversified across asset classes. Accordingly, the benchmark portfolio is determined on a country-by-country basis.

In this section, I make the polar opposite assumption that the correlation is much higher within asset classes across countries than it is within countries across asset classes. As a result, assets of the same class are very good substitutes for one another even if they are located in different countries. A well-diversified portfolio, consequently, needs to be diversified across asset classes; it is not as important for such a portfolio to be diversified geographically. Accordingly, within each asset class, investors will gravitate toward holding either U.S. or ROW investments, but not both. Only the marginal investor, the investor who sets the price between U.S. and ROW investments, will hold both. Expressed using the concept of a benchmark portfolio, it follows that the benchmark portfolio is different for each asset class. For each asset class, the benchmark portfolio is the global stock of that asset. Thus, the benchmark portfolio of debt is the global stock of debt; for equity, it is the global stock of equity; and for real estate, it is the global stock of real estate. Accordingly, because the benchmark portfolio differs with each class of investment, I calculate the after-tax return on the benchmark portfolio in each subsection for each specific asset class.

1. Bonds

U.S. investors pay tax at ordinary income tax rates on interest from bonds. Because most governments do not tax interest paid by domestic issuers to foreign holders, and because the United States generally has a worldwide tax system, U.S. investors pay tax on the interest from bonds—whether from U.S. or foreign issuers—at the U.S. ordinary income tax rate. Thus, assuming an ordinary income tax rate of 35 percent, the retention rate for U.S. investors on the benchmark portfolio of bonds is 0.65.¹⁸⁶ Moreover, because U.S. investors pay tax at the same rate on both domestic and foreign bonds, their retention ratio on U.S. bonds compared with the global supply of bonds is 1.¹⁸⁷

Furthermore, because most governments refrain from taxing foreign portfolio interest, SWFs and private foreign investors not taxed at home are rarely taxed on their income for holding overseas bonds. Thus, their retention rate on both U.S. and foreign bonds is 1. Private foreign investors taxed on a worldwide basis pay tax at the same rate on their bonds regardless of where the issuer is based. Thus, for both SWFs and private foreign investors (from both territorial and worldwide countries), their retention ratio on U.S. bonds compared with the global supply of bonds is also 1.

It therefore follows that when the returns on bonds are highly correlated regardless of where they are issued so that bonds from the United States and the rest of the world are very good substitutes for one another, but bonds are not good substitutes for equities and real estate, then the current tax laws do not distort the ownership of bonds. That is to say, in spite of the exemption granted foreign investors and the high tax rate imposed on U.S. investors, U.S. tax rules do not encourage foreign investors to hold U.S. bonds over U.S. investors. In such a circumstance, all investors are on an equal footing in the competition to hold U.S. debt instruments. Thus, we would expect each category of investor to have the same share of wealth invested in debt instruments. Moreover, if U.S. and ROW debt instruments are very close substitutes, then we would expect the distribution of each investor's wealth between U.S. and ROW debt

186. The benchmark portfolio of bonds contains two-thirds foreign bonds and one-third U.S. bonds. Because U.S. investors pay tax on the income from both categories of bonds at 35 percent, the retention rate for U.S. investors in bonds is 0.65.

187. This conclusion in the text ignores tax-exempt bonds. In effect, that conclusion assumes tax-exempt bonds are not a good substitute for taxable bonds. If taxable and tax-exempt bonds are good substitutes for one another, then investors for whom the implicit tax on tax-exempt bonds is less than their statutory tax rate on taxable bonds will hold only tax-exempt bonds, with the converse true as well.

instruments to be close to random.¹⁸⁸

2. Equities

U.S. investors who hold domestic equities are taxed at the reduced rates that apply to long-term capital gains and qualified dividends. U.S. investors who hold foreign equities might be subject to tax in the country where the issuer is based. Regardless of whether U.S. investors in foreign equities are taxed by the source nation, they will be taxed by the United States. Moreover, U.S. tax law generally taxes U.S. investors at the same rate on domestic and foreign equities.¹⁸⁹ Thus, when the benchmark portfolio is global equity investments, U.S. investors are taxed at the same rate on the two classes of investments—U.S. equities and foreign equities—that constitute the benchmark portfolio. Thus, when U.S. and ROW equities are very good substitutes for one another, U.S. investors have a retention ratio of 1 on U.S. equities as compared to the global portfolio of equities.¹⁹⁰

SWFs and private foreign investors can generally avoid paying any U.S. tax on portfolio investments in U.S. equities. Throughout this Article, I assume that overseas investors can use derivatives to avoid any source country tax on portfolio investments in equities. It follows that for SWFs and private foreign investors not taxed at home, the benchmark portfolio for investments in equities is exempt from taxation. Thus, for such investors, their retention ratio for U.S. equities is 1 so long as the U.S. investment is untaxed. That implies that SWFs are on par with U.S. investors for portfolio investments. SWFs are at a disadvantage relative to U.S. investors only when the SWF controls the issuer and so the SWF is taxed in the United States. Similarly, private foreign investors taxed on a territorial basis are on par with both SWFs and U.S. investors so long as the private foreign investor holds derivatives instead of actual dividend-paying stock. Thus, private foreign investors taxed on a territorial basis are

188. Once again, if tax-exempt bonds are a very good substitute for taxable bonds, and if the implicit tax rate on such bonds is less than the statutory rate paid by U.S. investors, then U.S. investors would gravitate toward tax-exempt bonds and away from taxable bonds.

189. See I.R.C. §§ 1(a), 11, 61 (2006). Not all dividends of foreign payors are eligible for the reduced rate on qualified dividends. See *id.* § 1(h)(11). However, because a portfolio investor can generally avoid receiving dividends by holding derivatives, which are taxed as capital assets, it is reasonable to assume that foreign equities are taxed to U.S. residents at the U.S. long-term capital gains rate.

190. The benchmark portfolio of equities is comprised of U.S. equities (one-third) and foreign equities (two-thirds). U.S. investors are assumed to pay tax at 15 percent on both U.S. and foreign equities. Thus, U.S. investors have a retention rate of 0.85 on the benchmark portfolio of equities. Because their retention rate on U.S. equities is also 0.85, their retention ratio on U.S. equities is 1.

disadvantaged relative to SWFs when it comes to strategic, but noncontrolling, holdings of U.S. equities.

As for private foreign investors taxed on a worldwide basis, I assume throughout this Article that they pay tax at the same rate on all investments regardless of the source or class of the investment. Thus, private foreign investors from worldwide jurisdictions have a retention ratio of 1 on all investments in U.S. equities. That implies that they are on par with U.S. investors, SWFs, and private foreign investors from territorial countries for portfolio investments in U.S. equities. However, private foreign investors from worldwide jurisdictions have an advantage relative to private foreign investors from territorial countries in making strategic investments and an advantage relative to SWFs in making controlling investments.

It thus follows, because all groups of investors have a retention ratio of 1 for portfolio investments in U.S. equities, that there are no tax clienteles for portfolio investments in equities. Investors will not have a tax justification for specializing in either U.S. or foreign equities. Under such circumstances, the percentage of an investor's portfolio invested in U.S. equities as opposed to foreign equities will likely vary randomly across investors. When, however, an overseas investor pays tax to the U.S. government, which tax is not offset by foreign tax credits, the affected taxpayer will be disadvantaged. SWFs thus will be discouraged from making controlling investments in U.S. corporations, and private foreign investors taxed on a territorial basis will be discouraged from directly holding dividend-paying U.S. stocks.

3. Real Estate

The stylized view of investments in real estate that I have been using throughout this Article assumes that such an investment produces no income over its lifetime, only long-term capital gain upon sale. That gain, however, might be subject to tax, depending on the form of the investment, by virtue of FIRPTA. For individuals, the tax rate is 15 percent;¹⁹¹ for corporations, it is 35 percent.¹⁹²

For U.S. investors, the income from U.S. real estate is taxed at 15 percent, and the income from foreign real estate is taxed at 30 percent.¹⁹³ Thus, U.S. investors have a retention rate of 0.75 on the global portfolio of

191. I.R.C. § 1(h).

192. *Id.* § 11(b).

193. The rationale for setting a 30 percent tax rate on foreign real estate is described above. See *supra* text accompanying notes 148–49.

real estate.¹⁹⁴ Accordingly, on investments in U.S. real estate, U.S. investors have a retention ratio of 1.13 as compared to the benchmark portfolio of global real estate.¹⁹⁵

Because SWFs are assumed to be exempt from taxation on portfolio investments in U.S. real estate and to be taxed at 30 percent on all investments in foreign real estate (other than real estate investments in their home country, which I ignore), their retention rate on the global portfolio of real estate is 0.8.¹⁹⁶ Therefore, their retention ratio on U.S. real estate as compared to the benchmark portfolio is 1.25.¹⁹⁷ Thus, with respect to portfolio investments in U.S. real estate, SWFs have a tax-induced advantage over U.S. investors. That advantage arises because both groups of investors pay tax at the same rate on foreign real estate investments, so SWFs' lower tax rate on U.S. real estate translates into an advantage over U.S. investors. However, when FIRPTA applies to SWFs, then SWFs—with a retention ratio of 0.81¹⁹⁸—are at a tax-induced disadvantage relative to U.S. investors.

Not surprisingly, the advantage SWFs enjoy in this example over U.S. investors in making portfolio investments in U.S. real estate is offset by a disadvantage with respect to foreign real estate. The two effects offset one another because with two assets a party's relative advantage on one asset equals its relative disadvantage on the other.

As for private foreign investors taxed on a territorial basis, they are on par with SWFs with a retention ratio of 1.25 on portfolio investments in U.S. real estate. Thus, they too enjoy a tax-induced advantage over U.S. investors in the market for U.S. real estate. Similarly, they are at a tax-induced disadvantage relative to U.S. investors when FIRPTA applies—retention ratio of 1.06.¹⁹⁹ When FIRPTA applies to both SWFs and private

194. The retention rate is calculated as $1/9 \times 0.85 + 2/9 \times 0.7 = 0.75$.

195. The retention ratio is calculated as $0.85 / 0.75 = 1.13$.

196. The calculation of the retention rate on the global portfolio of real estate held by SWFs ignores the retention rate of 1 on real estate in the SWF's home country. In effect, I assume that the country in which the SWF is based is such a small share of the global marketplace that it can be ignored without substantially changing the results.

197. The retention ratio is calculated as $1 / 0.8 = 1.25$.

198. The retention ratio is calculated as $0.65 / 0.8 = 0.81$.

199. The conclusion above assumes that private foreign investors choose to be taxed as individuals rather than as corporations. Assuming an effective tax rate of 15 percent, and hence a retention rate of 0.85 on a strategic investment in U.S. real estate, such a private foreign investor has a retention ratio of 1.06, calculated as $0.85 / 0.8$, and thus has an advantage over U.S. investors. Some foreign investors choose to pay the corporate income tax rather than file an individual U.S. income tax return. They will then be at a tax-induced disadvantage relative to U.S. investors, with a retention ratio of 0.81, calculated as $0.65 / 0.8$.

foreign investors, the latter have an advantage because of their lower tax rate.²⁰⁰

Once again, because I assume private foreign investors who are taxed on a worldwide basis pay tax at the same rate on all investments regardless of the investment's source, such investors have a retention ratio of 1 on all investments in U.S. real estate. Thus, they are at a tax-induced disadvantage relative to U.S. investors, SWFs, and private foreign investors from territorial countries for portfolio investments in U.S. real estate. They have, however, a tax-induced advantage relative to all other investors for investments in ROW real estate.

It thus follows that when U.S. and foreign real estate are very good substitutes for one another, but there are no good substitutes for real estate, SWFs and private foreign investors not taxed at home will specialize in holding U.S. real estate.²⁰¹ Foreign investors taxed on a worldwide basis will specialize in holding foreign real estate, and U.S. investors will either set the price between U.S. and foreign real estate or will hold whichever one offers them a higher after-tax rate of return, assuming that another group of investors sets the market rate between U.S. and ROW real estate.

C. ASSET CORRELATIONS

As the discussion above suggests, whether an investor has a tax-induced advantage or disadvantage relative to another investor with respect to a specific asset is a function of the two investors' tax rates on the specific asset and on other assets and on correlations in rates of return across assets. As suggested above, assets that tend to move together—that is, their returns are highly correlated—are good substitutes for one another. When assets are very good substitutes, investors will tend to hold one or the other asset. In such circumstances, small differences in relative tax rates will have large effects on the relative quantities of the assets held. In contrast, assets that tend not to move together—their returns are poorly correlated—are not good substitutes. Investors will tend to hold both assets because holding both assets reduces the variance of the investors' total portfolio. In such circumstances, large differences in relative tax rates will have small impacts on the relative quantities of the assets held. In this

200. Again, the conclusion in the text assumes private foreign investors choose to be taxed as individuals. If the investors choose to be taxed as corporations, then SWFs and private foreign investors are on par with one another.

201. For direct investments in U.S. real estate and other investments that trigger FIRPTA, U.S. investors will generally have an advantage over foreign investors.

section, I look at actual correlations of asset returns and then reconsider how taxation is likely to affect asset allocations for different groups of investors.

In order to get an idea of what actual asset correlations are for different categories of assets, I used a website, Asset Correlations, which provides correlation coefficients among pairs of different categories of assets using recent trading prices.²⁰² As proxies for various categories of assets, the website uses exchange-traded funds (“ETFs”).²⁰³ The correlation matrix that I constructed shows that domestic and foreign bonds are only slightly correlated (correlation coefficient of 0.22).²⁰⁴ Domestic and foreign real estate are more closely correlated, but they are not highly correlated (0.65). Also, the returns on real estate are not closely correlated with the returns on bonds.²⁰⁵ However, domestic and foreign equities are highly correlated (0.93). In addition, ROW equity and ROW real estate returns, and U.S. equity and U.S. real estate returns, are both highly correlated (0.86 ROW and 0.83 U.S.). Moreover, U.S. equity and ROW real estate returns are highly correlated (0.82).

Taken together, what the above brief survey of asset correlations suggests is that U.S. and ROW equities are good substitutes for foreign real estate. That, in turn, implies that investors can avoid the detrimental tax

202. Asset Correlations, <http://www.assetcorrelation.com>.

203. The use of ETFs rather than actual asset returns raises the question whether ETF prices tend to move more like other exchange-traded assets, such as publicly traded stocks and bonds, and hence differently than the underlying assets they represent. I do not address that question. Instead, I assume the price of an ETF is the same as that of an underlying asset.

204. The correlation matrix below was produced by the author using Asset Correlations, <http://www.assetcorrelations.com>, on April 28, 2009. The data used to produce the matrix are from September 10, 2007 through April 27, 2009. The start date was determined by when the exchange-traded U.S. municipal bond fund, ticker symbol MUB, started trading.

<i>Asset Category</i>	<i>Ticker</i>	MUB	AGG	FAX	VTI	EFA	VNQ
U.S. Municipal Bonds	MUB						
U.S. Investment Grade Bonds	AGG	0.34					
ROW Bonds	FAX	0.20	0.22				
U.S. Stocks	VTI	0.12	-0.02	0.59			
ROW Stocks	EFA	0.11	0.04	0.60	0.93		
U.S. Real Estate	VNQ	0.00	-0.17	0.34	0.83	0.73	
ROW Real Estate	RWX	0.10	0.01	0.58	0.82	0.86	0.65

205. The correlation between U.S. bonds and U.S. real estate is -0.17; the correlation between U.S. bonds and ROW real estate is 0.01; the correlation between ROW bonds and U.S. real estate is 0.34; and the correlation between ROW bonds and ROW real estate is 0.58.

treatment from investing in ROW real estate with little loss in diversification by investing in foreign equities (through derivatives).²⁰⁶ It therefore follows that it is reasonable to treat overseas portfolio investors as not being taxed at the source.

If the above description of the international market for portfolio investments is reasonably accurate, it simplifies the analysis of how taxation impacts the ownership of U.S. assets by various investors. In effect, the benchmark portfolio for U.S. investors, SWFs, and private foreign investors not taxed at home is comprised of U.S. debt, U.S. equities, U.S. real estate, ROW bonds, and ROW equities, with the weights on U.S. and ROW equities increased.²⁰⁷ The assumption of no source country taxation on overseas portfolio investment implies that SWFs and private foreign investors from territorial countries have a retention rate of 1 on the benchmark portfolio. SWFs and private foreign investors from territorial countries therefore have a retention ratio of 1 on all portfolio investments in the United States. Similarly, private foreign investors have a retention ratio of 1 on all U.S. investments because they are assumed to be taxed at the same rate on all investments.²⁰⁸ As for U.S. investors, because they are taxed at a higher rate on bonds than on other investments, their retention ratio is less than 1 on bonds and greater than 1 on U.S. equities and real estate. Therefore, U.S. investors have a tax-induced advantage over other investors, which are on par with one another, in the acquisition of U.S. equities and real estate. In addition, that advantage is increased when a foreign private investor pays tax to the United States that is not offset by a foreign tax credit.

As in Part V, where no category of assets is a good substitute for any other category of assets, a tax-induced advantage for holding an asset does not imply that the investor will hold only that asset, and a tax-induced disadvantage does not imply that the investor will hold none of that asset.

206. If there are very good substitutes for ROW real estate, then foreign investors taxed on a territorial basis (including SWFs) and U.S. investors will avoid investing in ROW real estate. In that case, ROW real estate will be held by domestic investors and foreign investors taxed on a worldwide basis. The returns on ROW real estate would have to rise to induce investment first by U.S. investors and then by foreign investors not taxed at home.

207. Because all investors are taxed the same on U.S. equities, ROW equities, and U.S. real estate, the results are not affected by how close substitutes those asset categories are for one another. What is significant is that both U.S. and ROW equities are good substitutes for ROW real estate, so investors can avoid the high tax on ROW real estate with little impact on their overall risk.

208. Private foreign investors taxed on a territorial basis are exempt from tax on all portfolio investments. Private foreign investors taxed on a worldwide basis are assumed to be taxed at their home country tax rate on all portfolio investments. Thus, both groups of foreign investors have a retention ratio of 1 on portfolio investments in U.S. assets.

Instead, investors will overweight assets for which they have a tax-induced advantage and underweight assets for which they have a tax-induced disadvantage. Thus, U.S. investors will overweight U.S. equities and real estate and underweight U.S. bonds. For foreign investors, the effect is reversed: they will overweight U.S. bonds and underweight U.S. equities and real estate. In addition, when it comes to making strategic, controlling, or other investments in U.S. equities and real estate where foreign firms pay U.S. taxes, then those foreign firms that cannot offset those taxes with foreign tax credits will find themselves at a greater disadvantage relative to U.S. investors.

VII. TOWARD A NEUTRAL TAX SYSTEM FOR SWFS AND PRIVATE FOREIGN INVESTORS

For many years, the avowed policy of the United States has been one of neutrality toward foreign investment. The United States has long taken the public position that government policy should neither encourage nor discourage foreign investment. However, as the discussion above illustrates, the current tax treatment of portfolio investment is not ownership neutral. Moreover, that nonneutrality is due in part to some unexpected, nonintuitive, and subtle effects that arise from principles deeply embedded in U.S. and foreign tax systems. In addition, as the previous discussion makes clear, the United States cannot unilaterally adopt a tax system that will ensure that taxes do not distort the ownership of assets. Instead, it requires coordination of tax policies across countries to design such a tax system. Accordingly, in this part I describe what such a nondistortive tax system might look like.²⁰⁹ My goal in this part is to describe a global tax system that does not distort the ownership of assets, but that still provides each country with flexibility. Specifically, I am seeking to describe a tax system that does not distort ownership without requiring global harmonization of tax rates or global adoption of either territorial or worldwide taxation.²¹⁰

209. Desai and Dharmapala have recently proposed a standard of global portfolio neutrality ("GPN"). See generally Desai & Dharmapala, *supra* note 132. The proposal described below satisfies GPN.

210. Although such a system would promote ownership neutrality, a country such as the United States might not want to provide such generous treatment for foreign investment unilaterally. Instead, a country might want to extend such benefits through treaties or only to other countries that follow certain international tax norms and adopt certain practices. I thank Victor Fleischer for this observation.

Before describing what such a tax system might look like, however, it is worthwhile to step back for a moment and explain why it is desirable that the tax system not distort ownership. There are at least three reasons.²¹¹

First, as described in Part IV.B, in an environment where assets are risky, investors seek to diversify their portfolios so as to minimize the total risk that they bear. When taxes distort the ownership of assets, investors will overweight undertaxed assets and underweight overtaxed assets.²¹² The underweighting and overweighting of investments, although rational from an individual perspective, trades off taxes and risk, thereby increasing the aggregate risk of the investor's portfolio—a real cost—but the tax savings is merely a transfer from tax collectors to taxpayers. Thus, a neutral tax system that did not distort portfolio selection would minimize the aggregate level of risk borne by investors.²¹³

Second, some investors purchase assets not intending to be passive investors, but instead planning to actively manage those assets. Such investors often believe that they can use those assets more efficiently than other potential owners. (One example is an investor who manages his own real estate.) Under these circumstances, a tax system that distorts the ownership of assets might prevent a specific asset from being used as efficiently as possible.²¹⁴

Third, different categories of owners have different rights with respect to the underlying asset. The amalgamation of those rights, often described collectively as governance rights, plays an important role in disciplining management and encouraging investment. A tax system such as that of the United States, which changes the tax rate on an investment as the form of the investment changes²¹⁵ and ownership shares change,²¹⁶ will influence

211. There are additional reasons to be concerned about the tax system distorting the ownership of assets by firms. Throughout this Article, however, the focus is on ownership of assets not by firms, which raise money from investors and invest that money, but by the investors themselves. Those investors are likely to be mostly individuals and foundations with capital to invest. As described in other work, ownership neutrality across legal entities (for example, corporations) that are taxed separately from their investors requires that the tax cost of investing through each entity be the same. See Knoll, *Taxes and Competitiveness*, *supra* note 14, at 6–17. In the international context, this will usually imply territorial taxation of separately taxed entities. See Knoll, *Business Taxes and International Competitiveness*, *supra* note 14.

212. As described throughout this Article, whether an investor is overtaxed or undertaxed on an asset cannot be ascertained by simply comparing tax rates across investors, but instead depends on a comparison of how each investor is taxed on that asset relative to a benchmark.

213. See Desai & Dharmapala, *supra* note 132, at 17–19.

214. See Desai & Hines, *Evaluating International Tax Reform*, *supra* note 103, at 499.

215. For example, some foreign investors are taxed differently on direct investments than on indirect investments through derivatives. See *supra* text accompanying notes 55–60.

ownership structures. Even if the parties do not intend to use the assets differently, and so the effect described in the preceding paragraph is not present, taxation that distorts ownership patterns can still be harmful.²¹⁷ Acting on their own, the parties have an incentive to adopt efficient governance structures. Thus, the tax system, by discouraging some ownership patterns while encouraging other patterns, has the potential to interfere with corporate governance.

In summary, a tax system that distorts the ownership of assets can impose welfare costs on society by hampering diversification, by leading to the inefficient use of some assets, and by interfering with corporate governance. In the rest of this part, I describe a tax system that does not distort ownership. That tax system divides the right to tax any income stream between the source country and the home country in a specific and novel manner.

The source country has the primary right to tax. However, any tax imposed by the source country must be independent of the identity or location of the investor who owns the asset. Thus, the source country tax can differ across investments, but not across investors. The home country has the secondary right to tax. However, the home country must tax each investor at the same rate on all of that investor's investments, regardless of asset class or location. It is not, however, necessary for the home country to tax all of its resident investors at the same rate. It is only necessary that each investor's marginal tax rate be independent of the nature or the location of that investor's investments. In addition, the home country—regardless of whether or not it is also the source country—must allow a deduction (not a credit) for taxes paid to the source country. These two requirements—that the source country assess tax on investments sourced within its borders in a manner that is independent of the identity and location of the investor that holds that investment, and that the home country tax its residents after deducting the taxes paid to the source country at the same rate, regardless of the nature and the location of the investments—are the keys to designing an ownership-neutral tax system in

216. For example, some foreign investors are taxed differently on portfolio investments than on controlling investments. *See supra* text accompanying notes 61–62.

217. Many of the large investments by SWFs in U.S. financial institutions in 2008 fell just below 10 percent to avoid the risk of obtaining control and subjecting the income on those investments to tax. Also, nontax regulations discouraged many potential bidders, including private equity firms, from making substantial investments. *See* STAFF OF J. COMM. ON TAXATION, *supra* note 1, at 2; Fleischer, *supra* note 1, at 482, 484 n.171. Thus, the likely combined effect of tax and other laws was to change who controlled these firms and the size of the ownership stake that the controlling investor holds.

which each country has substantial flexibility to pursue its own policies. Such a system has several implications, not all of which are obvious.

First, and most obviously, each investor pays tax to his or her home country at the same rate, regardless of asset class. A point made repeatedly throughout this Article is that the U.S. government's differential tax treatment of U.S. investors on investments in different classes of assets is a major cause of the lack of neutrality between U.S. and foreign investors. Specifically, the high tax rate U.S. investors pay on bonds relative to equities and real estate provides U.S. investors with a tax-induced advantage relative to foreign investors with respect to investments in U.S. equities and real estate. Thus, in order to achieve an ownership-neutral tax system, home countries should equalize tax rates across investments. That is to say, although source countries can impose taxes at different rates depending on the asset that produces that income, home countries cannot.²¹⁸ Thus, each country should tax its residents at the same rate on their income from bonds, equities, and real estate.

Second, all countries tax their residents' worldwide investment income.²¹⁹ As described above, the competition for assets located in a country is a function not only of taxes assessed by that country, but it is also a function of other countries' taxes. Thus, for example, the relatively high tax rate imposed at the source on investments in ROW real estate tends to reduce (and under some assumptions, eliminates) the tax-induced advantage U.S. investors enjoy with respect to investments in U.S. equities and real estate. In order for the tax system not to distort ownership patterns across investors, the tax system must not only provide for equal tax burdens across asset classes, but also across locations. Each country thus should tax its residents on their worldwide income.

As is widely recognized throughout the tax literature, no country has a pure worldwide tax system.²²⁰ The reason usually given is that such a system would be very expensive to operate. For tax-exempt entities (in the United States, this would include many nonprofits, such as universities, religious organizations, and foundations), the home country government

218. Deviations in home country tax rates across investments would have to be coordinated globally. Because that is not feasible, I ignore the possibility.

219. At the firm level, it is not necessary to have worldwide taxation. I have argued elsewhere that territorial taxation at the firm level (assuming that firms are taxable entities and that individual investors do not receive foreign tax credits for corporate-level taxes paid on their behalf) will avoid distorting ownership patterns at the level of the firm. See Knoll, *Business Taxes and International Competitiveness*, *supra* note 14.

220. See OFFICE OF TAX POLICY, U.S. DEP'T OF THE TREASURY, *supra* note 83, at 55.

would, in effect, have to pay the source country's taxes. And for SWFs, which are an arm of the home country government, it is not clear who could pay the tax so that the home country tax system would function as a worldwide tax system. More generally, countries are reluctant to offer unlimited foreign tax credits because they recognize that doing so would encourage source country governments to raise taxes on foreign investors. That leads to the next requirement.

Third, source countries cannot impose taxes only on foreign investors or at different rates on foreign and domestic investors.²²¹ Instead, source countries can only impose taxes that fall equally on both domestic and foreign investors.²²² Moreover, such taxes have to be assessed in a manner

221. Conceptually, the reason why eliminating such taxes tends to encourage ownership neutrality is as follows. It is known that global adoption of either a territorial or worldwide tax system is ownership neutral. With global adoption of a territorial tax system, the before-tax rate of return differs across jurisdictions because equilibrium pushes the after-tax rate of return across jurisdictions into equality. Thus, investors everywhere earn the same after-tax rate of return on their investments. Such a system is ownership neutral because all investors earn the same after-tax rate of return, regardless of where they invest. With global adoption of a worldwide tax system and with an unlimited foreign tax credit, equilibrium in the market to attract investment capital requires that the before-tax rate of return in every country be equal. An unlimited foreign tax credit implies that the after-tax rate of return earned by any investor is the same wherever the investment occurs. Such a system is also ownership neutral because all investors earn the same after-tax rate of return regardless of where they invest.

However, a tax system where some countries adopt worldwide taxation and other countries adopt territorial taxation is not ownership neutral. That is because after-tax rates of return will vary with location for some investors. For example, if territorial countries dominate, and so the after-source-country-tax rate of return is equal across countries, then investors from territorial countries will have achieved ownership neutrality with respect to one another. Investors from worldwide countries, however, will not be on par with such investors. Such investors will earn a higher after-tax rate of return in high-tax countries than in low-tax countries. Conversely, if investors from worldwide countries set market prices so that the before-tax rate of return is equal everywhere, then investors from territorial countries will earn more after tax in low-tax countries than in high-tax countries.

It is, however, still possible for a tax system to be ownership neutral when some countries tax foreign-source income (and grant a foreign tax credit) and others do not. What is required is that the source country tax not be creditable anywhere—either in worldwide countries or at home. If the source country tax is, in effect, deductible, it will have the same effect everywhere. All investors will be taxed on a territorial basis with respect to that portion of the return that goes to pay the source country tax. They will also be taxed on a worldwide basis with respect to the remaining return because there is no source country tax. On this portion of the return, investors from (effectively) territorial jurisdictions are not harmed relative to investors from worldwide jurisdictions.

222. Commentators have identified a trend in international taxation whereby countries are moving toward taxing active income where that income arises, and passive income on a worldwide basis. *E.g.*, Reuven S. Avi-Yonah, *The Structure of International Taxation: A Proposal for Simplification*, 74 TEX. L. REV. 1301, 1306 (1996). *See also* Graetz & Grinberg, *supra* note 85, at 547–49 (noting that while “source countries exercise their right to tax international business income . . . [they] rarely exercise any right to tax interest income earned by foreign portfolio lenders”). The proposal advanced in this Article continues that trend. As described in this Article, such a tax system is likely to be competitively neutral when active income is taxed to separately taxed corporations and that income is not credited by the investor's country of residence, and when passive income is taxed by the investor's country of

that is independent of the residence or any other characteristic (such as income or wealth) of the owner. Classic examples of such taxes are the corporate income tax²²³ and real estate taxes.²²⁴ These taxes are (largely) independent of the identity of the owner. Source countries, thus, cannot assess foreign withholding taxes, which fall only on foreign investors. It might be thought that such a prohibition is superfluous in light of the requirement that all countries tax their investors' worldwide income. For investors taxed on a worldwide basis, foreign withholding taxes generally have no impact on the investor. As long as the investor's country of residence grants the investor a foreign tax credit for the full amount of the tax (and the investor can use the credit immediately), then the only effect of the withholding tax is to transfer revenue from the treasury of the home jurisdiction to the treasury of the source jurisdiction. The rationale for prohibiting withholding taxes is twofold. First, for tax-exempt investors, the cost to the home country of providing worldwide taxation might be prohibitive. Second, for SWFs, it is not clear who is available to pay the tax on behalf of the SWFs.²²⁵

Fourth, source country taxes cannot be creditable anywhere—either by domestic investors investing at home or by foreign investors investing overseas. Instead, both domestic and foreign investors can deduct their source country taxes for the purpose of calculating their home country taxable income.

The requirement that the tax imposed by the source country be deductible everywhere means that the incremental impact of any tax assessed by the source country will be the same for all investors. This is what makes it possible for source countries to tax different assets at different rates without distorting ownership. There are two implications that follow from the requirement that all taxpayers deduct their source country taxes. First, it is still possible for a country to have what is, in effect, a territorial tax system. A territorial tax system is effectively a zero-rate tax on foreign-source income. The decision to exempt foreign-source

residence. In contrast with the proposal, the U.S. dividend withholding tax and FIRPTA cut against this trend. They thus tend to interfere with such neutrality. See Knoll, *Business Taxes and International Competitiveness*, *supra* note 14, at 23–26.

223. Under U.S. tax law, the indirect foreign tax credit is only available to corporations with a 10 percent share of the corporation paying the dividend. I.R.C. § 902(a) (2006).

224. The United States requires that, in order to be creditable, taxes paid must be foreign income taxes. *Id.* § 901(b)(1).

225. The requirement that all countries eliminate their withholding taxes is not likely to be in the interest of any country acting alone, but it will be in the joint interest of all countries together if done collectively.

income from taxation, however, implies under the first requirement above that domestic source income is also exempt from residence-based taxation. Second, the source country tax on the asset cannot substitute for the residence country tax imposed on domestic investors. Investors resident in the source country must pay the same investor-level tax on their income from that asset (after what is, in effect, a deduction for the tax collected by the source government from all investors) as they pay on all other sources of income.²²⁶

In summary, the proposed tax system divides the power to tax between the home country and the source country. The home country taxes the investor and the source country taxes the investment. The home country has flexibility in designing its investor-level tax system so long as the tax burden is the same across investments and locations. The source country also has flexibility in designing its investment-level tax system so long as the tax does not depend on the residence or any other characteristics of the investor.²²⁷ With the proposed tax system, every investor pays both home and source country tax on every investment, with source country taxes deductible for the purpose of calculating home country taxable income. With overseas investments, the taxes are paid to two separate countries; with domestic investments, both taxes are paid to the same country. Such a system might seem unusual, but it will achieve ownership neutrality while maintaining substantial flexibility for each country to develop its own tax policies.

VIII. CONCLUSION

The large size, rapid growth, numerous high-profile investments, and lack of transparency of SWFs have put them into the headlines.²²⁸

226. This provision distinguishes the above approach from national neutrality, in which foreign taxes are deductible. Under national neutrality, foreign taxes are deductible, but domestic taxes are, in effect, credited. Under the recommendation above, however, source country taxes—whether foreign or domestic—are effectively deductible.

227. Conversely, if the United States is not looking to level the playing field, but instead seeks to discourage investment from SWFs relative to investment from private foreign investors, this Article also shows how to proceed. Raising taxes on SWFs alone will discourage investment by SWFs relative to investment from private foreign investors from both territorial and worldwide countries. In addition, raising taxes on both SWFs and private investors will discourage investment by SWFs and private foreign investors from territorial countries relative to investment from private foreign investors from worldwide countries. Also, raising taxes on U.S. investors on bonds will encourage U.S. investors to hold more of their wealth in equities and real estate.

228. See *supra* Part II. SWFs were pushed from the headlines by the financial crisis that began in summer 2008. Given the series of high-profile investments made by SWFs in financial institutions, they might play a large role in the wake that crisis and soon find themselves to be even larger players in the

Commentators and policymakers express concern that foreign governments might use SWFs to pursue national goals detrimental to the interests of the United States.²²⁹ That challenge, which is taken seriously both inside and outside the U.S. government, is not a tax issue. It does, however, have a tax dimension. Some commentators have suggested that SWFs have a tax-induced advantage over other capital providers in making investments in the United States and elsewhere. That is to say, there is a belief that the U.S. tax system provides SWFs with a tax-induced advantage relative to U.S. investors and private foreign investors in acquiring U.S. assets. If that is so, the tax system exacerbates whatever risk SWFs pose to the United States.

As this Article demonstrates, there is no single and simple answer to the question of whether taxation provides SWFs with a competitive advantage when they invest in the United States. The answer to that question depends on the party to whom the comparison is being made, the asset in question, the correlation among rates of return across asset categories, and the tax laws of the United States and of other countries. Although the answer depends on the context, some patterns do emerge.

First, and most clearly, whether one investor enjoys a tax-induced advantage relative to another investor with respect to the acquisition of a specific asset cannot be determined simply by comparing how those two investors are taxed on that asset. Although it is commonly thought that the investor who pays tax at a lower rate on any given asset necessarily has a tax-induced advantage in acquiring that asset, that simple conclusion is wrong. Investors with capital to invest allocate their capital among investments. For one investor to have a tax-induced advantage over a second investor, the first must be taxed at a lower rate on the alternative investment *relative to the appropriate benchmark* than is the second. It is thus possible for a higher-taxed investor to have a tax-induced advantage over a lower-taxed investor with respect to a specific asset because the second investor is taxed more heavily than the first on the benchmark.

Second, in most cases, tax-advantaged investors will not hold all of a specific asset, nor will tax-disadvantaged investors hold none. In general, tax-advantaged investors will tend to overweight the assets for which they are at a tax-induced advantage, and tax-disadvantaged investors will tend to

market for financial services.

229. Presumably, private foreign investors would not pursue these same harmful policies, either because private foreign investors lack the interest or power to achieve such results, or because they would not be willing to make the economic sacrifice.

underweight the assets for which they are at a tax-induced disadvantage. The magnitude of the impact on portfolio holdings from being tax-advantaged or tax-disadvantaged depends on the size of the advantage or disadvantage, the closeness of substitutes for a given category of assets, and the investors' aversion to risk.

Third, relative to U.S. investors, SWFs do not appear to have a tax-induced advantage in the competition to make portfolio investments in U.S. equities and real estate. Instead, under the most general and least restrictive assumption—that no category of assets is a better or worse substitute than any other category of assets—U.S. investors have an advantage over SWFs in making portfolio investments in both U.S. equities and real estate. Moreover, that advantage exists in spite of the lower taxes paid by SWFs on those assets. As described above, the reason for that advantage is the heavier tax burden U.S. investors face when buying debt—taxation at ordinary rates of up to 35 percent—than is faced by SWFs, who are exempt.²³⁰ Although there are situations where it is possible for SWFs to have an advantage over U.S. investors with respect to U.S. real estate—specifically, when U.S. and foreign real estate are very good substitutes for one another, but there are no good substitutes for real estate—the most likely result, taking into account current data on asset correlations, is that U.S. investors have a tax-induced advantage over SWFs with respect to both U.S. equities and real estate.

Fourth, relative to private foreign investors, whether SWFs have a tax-induced advantage depends on whether the private foreign investors are taxed in their countries of residence on foreign-source income. If the country of residence has a territorial tax system, then the only tax paid by residents who invest abroad is the tax imposed by the source jurisdiction. In that case, because SWFs and private foreign investors are both taxed the same on the benchmark portfolio,²³¹ the relative competitiveness of the two groups of investors with respect to a specific investment can be discerned by directly comparing their taxation on that investment by the source

230. The advantage is also offset somewhat by U.S. investors and SWFs facing the same tax on investments in ROW real estate. The advantage is further reduced, and might even be turned into a disadvantage, if tax-exempt bonds are a very good substitute for taxable bonds and the implicit tax rate on tax-exempt bonds is very low relative to the statutory tax rate on taxable bonds imposed on private U.S. investors. Similarly, that advantage is still further reduced if foreign real estate investments generate excess foreign tax credits that can be used to offset taxes on other income. As this discussion highlights, the advantage or disadvantage enjoyed by an investor in acquiring a class of assets can depend on aspects of the tax law and economic factors that seem far removed from how competing investors are taxed on the specific asset in question.

231. Both pay tax under some formulations only on investments in third-country real estate.

country. Thus, relative to private foreign investors, SWFs are at a tax-induced advantage for strategic, but not controlling, equity investments and noncontrolling investments in U.S. real estate (not through an REIT). Otherwise, both groups of foreign investors are on par.

It is less clear whether SWFs have a tax-induced advantage over private foreign investors when the latter are taxed by their countries of residence on their worldwide income. With a worldwide tax system, the country of residence taxes its residents on their foreign-source income at standard home country rates and provides a foreign tax credit for taxes paid to the source country. As long as the home country tax rate exceeds the source country tax rate, the source country tax has no marginal impact on the total tax paid by the private foreign investor. In effect, private foreign investors from worldwide countries pay taxes on investments made abroad at the investors' home country tax rates. Thus, whether a private foreign investor has a tax-induced advantage relative to SWFs (or U.S. investors) depends on relative tax rates on different classes of assets in the private foreign investor's country of residence. It is thus possible for either private foreign investors or SWFs to have a tax-induced advantage over the other. Moreover, private foreign investors can have a tax-induced advantage over SWFs even when the United States taxes private foreign investors more heavily than it taxes SWFs.

In general, under the assumptions made in this Article (including that worldwide countries other than the United States tax income from all six categories of assets at the same rate), SWFs and private foreign investors taxed on a worldwide basis are likely to be close to par. So long as there are very good substitutes for ROW real estate so that SWFs can avoid paying any source country taxes, taxation will not affect the competition between SWFs and private foreign investors from worldwide countries to acquire U.S. assets. However, when there are no good substitutes for foreign real estate, SWFs will have an advantage over such private foreign investors in the competition to acquire U.S. assets. That advantage is larger the weaker the substitutes for ROW real estate.

The results described in the last paragraph are based on the assumption that the United States does not tax SWFs. When the United States taxes SWFs, any advantage they enjoy relative to private foreign investors taxed on a worldwide basis is reduced, and if the U.S. tax is high enough, then SWFs will be at a disadvantage relative to private foreign investors taxed on a worldwide basis. However, a tax imposed by the United States only on private foreign investors that is fully offset by a foreign tax credit has no impact on the competition between SWFs and

such investors. In contrast, taxes imposed by the United States on both SWFs and private foreign investors—which is what some people might think of as fair treatment²³²—will discourage investments by SWFs relative to investments by private foreign investors from worldwide countries with respect to the taxed asset.

Fifth, relative to U.S. investors, private foreign investors do not have a tax-induced advantage in acquiring U.S. equities or real estate. Under the assumptions made in this Article (including source country taxation of foreign investors only on ROW real estate and home country taxation at a constant rate across asset categories for countries other than the United States that impose tax on a worldwide basis), private foreign investors from territorial countries will have a tax-induced advantage over U.S. investors in the acquisition of U.S. debt instruments and a tax-induced disadvantage in the acquisition of U.S. equities and real estate. Similarly, private foreign investors from worldwide countries will have a tax-induced advantage over U.S. investors in the acquisition of U.S. debt instruments, and will have a tax-induced disadvantage in the acquisition of U.S. equities and real estate.

As the discussion above makes clear, whether an investor has a tax-induced advantage over another investor with respect to a specific asset can be difficult to discern and might turn on factors far removed from how either investor is taxed by the source country on that asset. Moreover, there are significant economic benefits from a tax system that does not distort ownership patterns. Accordingly, the discussion above also shows how the international tax system can be redesigned in order to minimize the impact of taxation on the ownership of investments.²³³ If implemented, such a system would place all investors, including SWFs, on a level playing field with respect to the acquisition of any asset.

The key to creating such a nondistortionary tax system is to divide the authority to tax into two pieces. The source country has the right to tax income arising within its borders so long as it taxes that income without regard to the identity or residence of the owner. The home country has the right to tax its residents so long as it taxes them at the same rate on all of their income regardless of the location and the nature of the asset, and so long as the home country allows a deduction, but not a credit, for any

232. *E.g.*, Fleischer, *supra* note 1, at 467–74.

233. Elsewhere, I have described how the tax system could be redesigned so as not to distort ownership of direct investments through corporations. The key to designing a tax system that does not distort ownership patterns across corporations (and similar separately taxed entities) is to tax corporations on a territorial basis. See Knoll, *Business Taxes and International Competitiveness*, *supra* note 14. These two systems are consistent with one another.

source country taxes.

Furthermore, although this Article focuses on how taxes impact the competitiveness of SWFs investing in the United States, the methods used and the tools developed and applied in this Article are not so limited. As the discussion of FIRPTA demonstrates, the same techniques can be used to assess how various tax provisions affect the competitiveness of domestic and foreign competitors relative to one another. Exercises similar to those conducted for the United States in this Article also can be conducted for other countries.

In the coming years, the governments of the United States and other countries will have to make some difficult policy decisions about SWFs. A thorough understanding of the complex and often counterintuitive ways in which taxes affect who owns what assets should be part of any serious policy discussion about SWFs. This Article helps to pave the way, but much more work remains to be done.

